

*Republic of Iraq  
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**Dental Caries and Treatment Needs among 16-18 Years  
Old High School Girls, in Relation to Oral Cleanliness,  
Parent's Education and Nutritional Status, in Al-Mussayb  
City/ Babylon Governorate/ Iraq.**

**A thesis**

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By

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## ***Abstract***

**Background:** Dental caries is a quite prevalent disease in Iraqi community however, baseline data concerning this disease and related etiological and risk factor are limited, concerning in selected geographic area in Iraq.

**Aims of study:** This survey was made to investigate the prevalence and severity of dental caries in Al- Mussayb city/ Babylon governorate, the co-relation of this disease was studied with nutrition status and dietary analysis, oral cleanliness and parent's education among (16-18) years old in high school girls.

**Materials and Methods:** The survey was conducted among high school girls, with a total sample of 900. Diagnosis and recording of dental caries and treatment needs were done according to the criteria of WHO. Dental plaque was assessed by using Plaque Index following the criteria of Silness and Loe. Nutritional status was recorded according to Body Mass Index indicator by applying anthropometric measurement. Dietary analysis was according to Dietary Guidelines in primary health centers in Iraq. Parent's education was divided in to five levels according to modification to educational status of Kuppuswamy's scale.

**Results :** The prevalence of dental caries was (70.5%). The DMFS mean value was (4.94  $\pm$ SE 0.161) and the median was equal to (4.00) for the total sample. The DMFS value increased with ages with statistically highly significant difference ( $P < 0.01$ ), The highest percentage of examined girls were in need of one surface filling (60.8%), followed by those in need of two or more surface filling (36.6%). Result showed a weak positive highly significant correlation between plaque index and DMFS ( $r = 0.315$ ,  $P < 0.01$ ). A statistically highly significant difference in DMFS was recorded by different level of parent's education as a lower value of DMFS was seen among girls with high level of parent's education. Results showed statistically highly significant differences in the value of DMFS between different grade of Body Mass Index

indicator ( $P < 0.01$ ,  $df=3$ ), for total sample (11.7%) was malnourished and (65.77%) of girls was with normal weight. Statistically highly significant weak negative correlation was seen between DMFS and different food groups (fruits, vegetable, meat, grain and diary). A weak positive highly significant correlation between DMFS and sweet consumption was seen ( $r=0.155$ ,  $P < 0.01$ ).

**Conclusions** : Girls in high schools in Al- Mussayb city/ Babylon Governorate demonstrated a high prevalence of dental caries. Nutritional status, dietary habits, oral cleanliness and parent's education were found to affect the severity of this disease, thus there is a need for public and school preventive programs among those population.