

**Republic of Iraq
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Dental Health Condition in Relation to Nutritional Status among Kindergarten Children in Tikrit City –Iraq

A Thesis

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Abstract

Back ground : Dental caries followed by enamel defects and traumatic dental injuries were the widely spread oral conditions affecting children , and nutrition is one of the important factors affecting oral cavity health in addition to other factors including educational level of parents , feeding pattern of children and household crowding .

Aim of the study : This study was carried out to estimate the occurrence and severity of dental caries , dental trauma , enamel defects , teeth alignment and its relation to the nutritional status , educational level of parents , feeding pattern of children , and household crowding .

Materials and methods : A cross sectional study was conducted in Tikrit city (urban area) . A representative sample of (580 child) was taken from kindergartens children of 4 and 5 years old (329 males and 251 females) , they were randomly selected (stratified random selection) from 11 kindergartens (all kindergarten in Tikrit city) . Diagnosis and recording of dental conditions were recorded according to criteria of each one : dental caries (WHO , 2013) , enamel defects (WHO , 1997) , traumatic dental injuries (Garcia-Godoy , 1981) ,teeth alignment (WHO , 1997) and treatment need for dental caries (1987) . In addition to the assessment of nutritional status was achieved using anthropometrics measurement (height and weight) according to body mass index indicator (CDC, 2000) , educational level of parent according to criteria index of (WHO , 2013) and assessment of household crowding according to criteria index of (American Crowding Index , 2000) .

Results : The prevalence of dental caries of total sample was 86.03 % . The dmfs value was higher among 5 years than among 4 years children , and higher among

females than among males , with statistically no significant difference between both age and gender ($P > 0.05$). The higher percentage of examined children were in need of one surface filling followed by two surface filling and pulp care . The percentage of children with underweight was 11.89 % of the total sample . According to nutritional status (BMI indicator) , the mean value of dmfs and ds were higher among children with underweight than among other children , with no significant difference ($P > 0.05$) . The prevalence of enamel defects in this study was (22.76 %) , enamel defect prevalence in 4 years was more than 5 years , and in male was more than female , although the differences found to be statistically not significant . The percentage of demarcated and diffuse opacities were more in children with normal weight while hypoplasia was more in children with underweight . The percentage of dental trauma was (1.72 %) for the total sample , data of this study revealed three classes of dental trauma among total sample (enamel fracture , concussion and avulsion) . Children with normal weight had higher percentage of teeth crowding , while obese children had higher percentage of teeth spacing . The differences between different grades of nutritional status and teeth alignment have been found statistically not significant. The children who their parents with low educational level had higher percentage of dental caries , and the children with bottle feeding had higher caries experience than those with natural and mixed feeding . Children who lived in the house with crowding index (3) had higher caries percentage than other children .

Conclusion : The current study reported a high prevalence of dental caries and enamel defects among kindergartens children in Tikrit city (urban area). Although there is no significant association between nutritional status and dental condition , it was found that nutritional status have an effect on the prevalence and severity of dental conditions , thus there is a need for public dental health care and preventive programs among those children .