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**Oral health status in relation to
nutritional status among a group of
13-15 years old intermediate school girls
in Al- Najaf City / Iraq**

A Thesis

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ABSTRACT

Background: There is a synergistic multidirectional relationship in oral health and nutrition that good nutritional health promoting good oral health. Diet and nutrition can affect the integrity and development of the oral cavity as well as the development of oral diseases such as dental caries, periodontal disease (which was the most predominant and wide spread but not life threatening human diseases especially in developing countries as in Iraq) and enamel defects.

Aim of the study: The assessment of the occurrence and prevalence of dental caries, oral hygiene (dental plaque and calculus) gingival health condition in addition to enamel anomalies and their relations to nutritional status among intermediate schools girls in Al-Najaf city in Iraq was conducted in this study .

Materials and Methods: The study was conducted among intermediate schools girls aged 13-15 years old and the total sample consisted of 754 students. The nutritional status assessment was implemented using body mass index (BMI) following criteria of Centers for Disease Control and Prevention growth chart (CDC, 2000). Dental caries and enamel anomalies were diagnosed and recorded according to World Health Organization criteria (WHO, 1987) (WHO, 1997) respectively. Plaque index (Silness and Loe's, 1964) used for plaque assessment, gingival index (Loe and Silness, 1963) used for recording gingival health condition and calculus index (Ramfjord, 1959) used for calculus assessment.

Results: The percentage of well-nourished was (96.2%) by using body mass index. Result showed that 5.17% of the total sample was caries-free. The mean dmft for deciduous teeth was equal to (1.77±0.15) and dmfs

(3.92 ± 0.39), while concerning permanent teeth The mean DMFT was equal to (4.68 ± 0.10) and DMFS (6.22 ± 0.16). Significant differences were seen between DMFT, DMFS and age while opposite was found with nutritional status.

The mean value for the total samples for plaque, calculus and gingival indices were (1.08 ± 0.01), (0.02 ± 0.00) and (0.73 ± 0.01) respectively. Gingivitis had percentage of (100%), the most prevalent type was the mild gingivitis (85.4%) followed by a moderate (14.6%) and there was no severe type. A positive highly significant correlation found between plaque, gingival and calculus indices while no significant differences was reported between all oral cleanliness and nutritional status. Positive highly significant correlations were recorded between caries-experience and plaque index. Significant differences were seen between age and plaque and gingival indices.

In general the percentage of enamel anomalies was found to be 8.8%. The most prevalent type of enamel defect was found to be diffused opacities (5.6%) followed by hypoplasia (2.5%) and then demarcated opacities (0.7%). Non-significant association between nutritional status and age with enamel anomalies was found.

Conclusion: Considering a higher prevalence of plaque, gingivitis and dental caries; it is necessary to formulate the need for an improving public and school preventive programs, and encouraged to orient health knowledge in a positive direction. The largest number of the students have normal weight and the percentage of well-nourished was higher than malnourished and this may be due to improvement in the nutritional status in Iraq.