Oral Health Condition in Relation to Nutritional Status among Kindergarten Children aged (4-5) years old In Karbala City/Iraq.

A Thesis
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Abstract

Back ground: Dental caries and periodontal disease followed by enamel defect were the most prevalent and widely spread diseases influencing children. The nutrition may be one of the factors affecting the severity of oral cavity diseases.

Aims of study: The present study was carried out to estimate the occurrence and severity of the dental plaque, gingivitis, dental caries as well as enamel defects. Furthermore, oral diseases were studied in relation with nutritional status.

Materials and methods: A sample consisted from 658 children (350 males, 308 females) aged four and five years old was selected randomly from the fourteenth kindergartens in Karbala city. Dental plaque was estimated using plaque index of Silness and Loe, 1964. The gingival health condition was estimated using gingival index of Loe and Silness, 1963. Diagnosis and recording concerning dental caries followed the criteria of WHO 1987, while enamel anomalies followed the criteria of WHO1997. The assessment of nutritional status was performed using anthropometric measurement (height and weight) according to Body mass index indicator with -2SD cutoff point.

Results: The result showed that 17% of the total sample was caries –free children. From the total sample, mean rank value of dmfs was higher within boys than girls with statistically no significant difference (P>0.05). Value of dmfs increased with age with statistically highly significant difference (p<0.01). When study the values of plaque index and gingival index for total girls were found to be lower than total boys with statistically highly significant differences (P<0.01). Recording of this study demonstrated that 100% of children had dental plaque and gingival inflammation. For the total sample, the mild type of gingivitis was the most distributed type (80.1%). Positive highly significant correlations were recorded between caries experience with plaque and gingival

indices. In general, the percentage of enamel anomalies was found to be (39.8%). The mean rank values of any type of enamel defect were found to be higher among boys than girls with statistically significant differences (P<0.05). Hypoplasia was found to be the most prevalent type of enamel defect followed by diffused opacities and then demarcated opacities. The most affected teeth with enamel defect were the maxillary central incisors. The prevalence of malnutrition described by Body mass index indicator was (3.2%). According to nutritional status indicator Body mass index-for-age, it was found that the wasted children had higher value of dmfs than well nourish children with statistically no significant differences (P>0.05). The plaque index and gingival index were found to be higher within well nourish children than wasted children with statistically highly significant differences (P<0.01). When study the values of any type of enamel defect, the values were found to be higher among well nourish children than wasted children with no statistically significant differences (P>0.05). The correlation coefficient of malnutrition with dental caries, plaque index, gingival index and enamel defect were very weak and not significant (p>0.05).

Conclusion: High prevalence of dental caries and gingivitis of these children was reported demonstrating the need of public and preventive plans among kindergarten children in Karbala city/Iraq.