Dental health and its association with BMI and dietary intake in overweight and obese children

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Introduction: Obesity is now one of the most common health problems in all countries. Childhood obesity may lead to serious diseases such as type 2 diabetes and cardiovascular diseases and general poor health. Although, the association between weight, BMI, and dental health has not been examined widely in children but some risk factors such as a one-sided diet, e.g. a diet high in sugar, may play a role in the development of these characteristics. The objective of this study was to examine a possible relationship between the presence of caries lesions and BMI in overweight and/or obese children.

Material and method: Prevalence of DMF teeth (Decayed, Missed and Filled teeth) among 120 obese and/or overweight children (4-10 years) was assessed by a questionnaire which filled out by their parents at the time of admission in the nutrition counseling clinic from August 2014 to September 2015. Dietary intake was assessed by 3-day food record questionnaire which was gathered from the parents of obese children about their children food intake. Anthropometric measurements was done by a trained nurse.

Results: 40% of participants were obese (BMI were at or above the 95th percentile) and 60% were overweight (BMI were at or above the 85th percentile and lower than the 95th percentile for children of the same age and sex). Results showed that above 75% of these overweight and/or obese children aged 4-10 years had poor oral health and dental carries which may affected by additional consumption of sugary foods (more than 20% of their daily calorie needs) and low consumption of fruits and vegetables based on the food guide pyramid (less than 2 servings fruit and vegetable per day) in their diet.

Conclusion: Obese children had high sugary foods in their daily diet which was related to their BMI, poor oral health and tooth decay. So, it is important that obese children should be screened to determine their risk for poor oral health and tooth decay and encourage their parents to consider more fruit and vegetables in children diet.

Key words: Obesity, Overweight, BMI, Dental health, Oral health, Tooth decay, Dietary intake, Sugary foods.

Biography
Shamin is 23 years old and studying at dentistry in the dentistry faculty of Isfahan University of Medical Sciences (IUMS) in Iran from 2011 till now.

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