

EVALUATION OF THE PREVALENCE OF DENTAL CARIES IN CHILDREN AGED 6 TO 12 YEARS AND ITS RELATIONSHIP WITH THE CHILDREN ECONOMIC AND SOCIAL STATUS

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ABSTRACT

Introduction: Tooth decay is a transmissible bacterial infectious disease that many pathologic agents play in it. The most important etiologic factors of this disease are: cariogenic bacteria, fermented carbohydrates, dental susceptibility, host and time. Tooth decay occurs early in life and simultaneously with the growth of the teeth in the child, causing problems and disturbances in the nutrition, developmental and physical development of speech and communication with the environment. The risk of this condition also threatens the baby's permanent teeth, which, if not prevented and treated, can lead to loss of teeth.

Materials and methods: This research is a descriptive cross-sectional study. 362 students from 6-12 years old in 2017 were randomly selected from three high schools, downtown and Yasuj city center as the sample. The tool was a collection of questionnaires and a checklist prepared from before.

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Finding: The status of teeth brushing between boys and girls was statistically significant, and regular brushing in girls is more than boys. There was no significant difference between the economic statuses of the girls' families in the boys.

Discuss: In this study, the prevalence of tooth decay in children aged 6 to 12 years in Yasuj was 95%. The rate of caries and indicators of decay severity in Boyer Ahmad city was higher than the average World Health Organization (WHO).

Keywords: Dental Caries, Children Dental

INTRODUCTION

Tooth decay is a transmissible bacterial infectious disease that many pathologic agents play in it. The most important etiologic factors of this disease are: cariogenic bacteria, fermented carbohydrates, dental susceptibility, host and time (1,2).

Tooth decay occurs early in life and simultaneously with the growth of the teeth in the child, causing problems and disturbances in the nutrition, developmental and physical development of speech and communication with the environment. The risk of this condition also threatens the baby's permanent teeth, which, if not prevented and treated, can lead to loss of teeth (3,4).

Over the past few decades, the prevalence of dental caries has decreased in children living in many industrialized countries. Several factors, including oral hygiene, sugar restriction, fluoride application and preventive programs in schools, have been mentioned. However, tooth decay in these countries, especially in areas where preventive programs are not implemented, remains a major public health problem (5, 6). According to World Health Organization reports, dental caries have affected 60 to 90 percent of students and more adults (7-8). According to recent studies, the prevalence of dental caries in children in the United States, China, Croatia and Turkey was 20.1, 84.3, 67.82, 84.9%, respectively (5-6). The prevalence of dental caries in Iranian children is 75.5%. Considering the prevalence of dental caries of 3.83% in children aged 6-12 years and the necessity of controlling and preventing dental caries to improve the quality of life of individuals, we decided to do a study. Upon examining the prevalence of decay, guidelines should be given to the relevant institutions for controlling this localized infectious disease.

MATERIALS AND METHODS

This research is a descriptive cross-sectional study. 362 students from 6-12 years old in 2017 were randomly selected from three high schools, downtown and yasuj city center as the sample. The tool was a collection of questionnaires and a checklist prepared from before. The probable economic situation of children was also assessed through questions in the questionnaire and some information on the method of work was received from school officials.

FINDINGS

Table 1. Comparison of DMFT average in children examined by gender

Sex	N	Mean $\pm$ SD	
Girl	225	6 $\pm$ 4	P<.0001
Boy	137	7.05 $\pm$ 3	

Table 1 shows the number of 362 children aged 6-12 years old with 225 girls and 137 boys.

Table 2. Status of home ownership, automobile

Sex -Indicator		Boy	Girl	Total	Test
Homeowner	Personal	81(59.1)	135(60)	216(59.7)	Chi ² =2.2 P=0.5
	Leasing	46(33.6)	80(35.6)	126(34.8)	
	Free (corporate)	10(7.30)	10(4.4)	20(5.5)	
	Total	137(100)	225(100)	362(100)	
Car owner	does not have	25(18.2)	46(20.4)	71(19.6)	Chi ² =6.4 Df=4 P=0.17
	1	21(15.3)	44(19.6)	65(18)	
	2	30(21.9)	53(23.6)	83(22.9)	
	3	41(29.9)	42(18.7)	83(22.9)	
	4	20(14.6)	40(17.8)	60(16.6)	
جمع		137(100)	225(100)	362(100)	

Table 2 shows the status of economic indicators of households in the children surveyed including home ownership and automobile.

Table 3. Status of referral to the nurse, possession of the toothbrush and frequent brushing

Sex - Indicator		Boy	Girl	Total	Test
Refer to the dentist	No referral	30(21.9)	41(18.2)	71(19.6)	Chi ² =10.4 Df=3 P=0.015
	Irregular	60(43.8)	136(60.4)	196(54.1)	
	Statistics for the year	28(20.4)	28(12.4)	56(15.5)	
	Six months once	19(13.9)	20(8.9)	39(10.8)	
	Total	137(100)	225(100)	362(100)	
Owning a toothbrush	has it	127(92.7)	198(88)	325(89.8)	Chi ² =2 Df=1 P=.15
	does not have	10(7.3)	27(12)	37(10.2)	
	Total	137(100)	225(100)	362(100)	
Brushing times	No use	13(9.5)	47(20.9)	60(16.6)	Chi ² =26.7 Df=2 P=.0001
	Irregular	99(72.3)	100(44.4)	199(55)	
	More than once	25(18.2)	78(34.7)	103(28.5)	
		137(100)	225(100)	362(100)	

Table 3 shows the status of referring to the dentist, having a toothbrush and the condition of brushing in the children examined by sex. According to the data of this table, there was a significant difference between the condition of brushing the boys and girls, and the regular brushing in girls, more than boys (34.7 vs. 18.2, $p < 0.0001$)

Table 4. Mean and standard deviation of DMF and the percentage of dental caries in children under study

IndicatorDMF	Number	Standard deviation + average DMFT	Cavies%
6-7	11	6±3	100%
8	41	8±4	95%
9	74	8±3	97%
10	77	6±3	77%
11	95	5±4	76%
12	64	5±2	87%
Total	362	6±4	85%
		F=10 p<0.0001	

DISCUSS

In this study, the prevalence of tooth decay in children ages 6 to 12 years old in Yasuj was 95%, which is more than the reported rate in domestic studies such as Nematollahi et al, Sadeghi, Bagherian, Yousefi et al., And also the rate of caries In foreign countries such as Brazil, the United States and Croatia. However, although most domestic studies have shown that the status of economic indicators of households in children includes home ownership, car ownership, educational status and the educational status of parents of children with dental caries, there was no significant difference in this study. It was shown in this study that gender is significantly correlated with regular brushing and the number of rotten, filled and drawn teeth, and brushing in girls was more frequent, and the number of rotting teeth in girls was lower than that of boys. It was also observed that the mean DMFT was found in this study, which is consistent with most studies.

In order to reduce the prevalence of dental caries in elementary school students in Boyer Ahmad, we should encourage and raise awareness, especially in timely boys, regarding the vulnerability of children to dental caries in families, education and promotion of oral health and removal of dental caries. Hydrocarbon substances are essential from the diet.

CONCLUSION

As it was seen, the rate of decay and indicators of decay severity in Boyer Ahmed city was high compared to the average countries of the World Health Organization. Also, the prevalence of caries in boys is higher and it has been observed that observance of the principles of dental care such as brushing and teething of teeth and proper food intake in girls are considered to be better and cause reduction of their tooth decay.

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