

## Severity of dental caries among 3-6 years old children in Al-Edwania village, Baghdad

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### ABSTRACT

**Background:** Dental caries is a big problem among children in rural areas. The aim of this study was to investigate the severity of dental caries in Al-Edwania village.

**Materials and methods:** A sample of 95 children aged 3-6 years of both gender was examined according to the criteria of World Health Organization 1987.

**Results:** The results showed a lower severity of dental caries than previous study done in urban areas. As for gender relation to the severity of dental caries, the data showed that girls had a higher caries severity than boys for both dentitions primary and permanent.

**Conclusion:** Decayed surfaces were higher than filled ones, therefore dental treatment and preventive measures should be applied.

**Keywords:** Dental caries, severity, urban, children. (J Bagh Coll Dentistry 2006; 18(1) 69-71)

### INTRODUCTION

Dental caries is a serious public health problem. Several studies investigated caries experience in urban areas <sup>(1-4)</sup>. However there is still a lack in knowledge concerning rural areas, therefore, the present study was designed in order to investigate dental caries experience among children in Al- Edwania village as a part of a field survey directed by the University of Baghdad. This village is about 30 km to the south of Baghdad city with a population of 6500

### MATERIALS AND METHODS

The sample composed of 95 children randomly selected of 3- 6 years of age. Caries explorer with plane mouth mirrors were used for caries diagnosis. The examination was performed according to basic methods of the oral health surveys described by World Health Organization <sup>(5)</sup>. Information concerning decayed, missing and filled surfaces was recorded to estimate caries severity. Analysis of data was carried out using T- test.

### RESULTS

Age and gender distribution of the sample is presented by Table 1. The entire sample of 95 children was distributed as 53.7 % boys and 46.3 % girls. Table 2 illustrates the high mean dmfs value for deciduous teeth which was  $6.3 \pm 8.2$ . Caries severity was found to increase with age; also the data showed that girls had a higher DMFS /dmfs values than boys (Table 2, 3)

Tables 4 reveals that ds component constituted the major part of dmfs value followed by ms, fs respectively, but the last one was found to be zero. DS component was found to be equal to DMFS value, therefore, the estimation of MS and FS were equal to zero.

### DISCUSSION

Caries experience in the present study was found to be lower than previous Iraqi studies done among same age group in urban and rural areas <sup>(4,6)</sup>. This may be attributed to the change in dietary habits which is the main etiological factor of dental caries <sup>(7)</sup> especially reduction in sugar consumption in rural areas. Concerning gender-dental caries relation, it has been found that girls had a higher mean of both DMFS / dmfs values than boys. This finding is in accordance with many studies <sup>(6,8)</sup>.

The data revealed that decayed surface was found to be the major component of DMFS / dmfs. This is in agreement with Al -Janabi et al study <sup>(6)</sup>. The mean (ms) was found to be higher than filled surface; this may be due to the restriction in therapeutic dentistry to extraction more than restoration or could be due to the poor dental knowledge and services.

Data analysis showed that there is a direct relation between caries and age, which is in accordance with many studies <sup>(2-4,6)</sup>, and may be attributed to the fact that dental caries is an incremental disease <sup>(9)</sup>. In this study, a high caries severity was observed, so in order to improve dental health, educational programs and proper diets must be preferred, as well as we need other investigations to estimate the condition of gingival health to be a baseline data in order to improve oral health in general

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of population in rural areas as a part of treatment and preventive policies.

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**Table 1: Distribution of the children according to age and gender**

Age Year	Boys		Girls		Both	
	No	%	No	%	No	%
3	8	8.4	11	11.6	19	20.0
4	20	21.1	11	11.6	31	32.6
5	13	13.7	11	11.6	24	25.3
6	10	10.5	11	11.6	21	22.1
<b>Total</b>	<b>51</b>	<b>53.7</b>	<b>44</b>	<b>46.3</b>	<b>95</b>	<b>100</b>

**Table 2: Caries experience (dmfs) among children by age and gender**

Age Year	Boys		Girls		Both		Significance
	Mean dmfs	± SD	Mean dmfs	± SD	Mean dmfs	± SD	
3	3.6	7.0	3.8	3.5	3.7	5.1	N.S
4	3.0	3.4	8.6	11.4	5.0	7.6	N.S
5	7.4	10.0	7.7	10.0	7.5	9.7	N.S
6	10.1	9.9	8.2	7.8	9.1	8.7	N.S
<b>Total</b>	<b>5.6</b>	<b>7.8</b>	<b>7.1</b>	<b>8.6</b>	<b>6.3</b>	<b>8.2</b>	<b>4.37*</b>

\*P< 0.001

**Table 3: Caries experience (DMFS) among children by age and gender**

Age	Gender	No with permanent teeth	Mean DMFS	± SD	Significance
5	Boys	4	0.0	0.0	-
	Girls	3	0.0	0.0	
	Both	7	0.0	0.0	
6	Boys	5	0.0	0.0	N.S
	Girls	7	0.14	0.4	
	Both	12	0.08	0.3	
Both	Boys	9	0.0	0.0	N.S
	Girls	10	0.1	0.3	
	Both	19	0.05	0.23	

**Table 4: Caries experience presented by (dmfs) components ds, ms, fs, by age and gender**

Age year	Boys				Girls				Both			
	ds		ms		Ds		ms		cs		Ms	
	Mean	± SD	Mean	± SD	Mean	± SD	Mean	± SD	Mean	± SD	Mean	± SD
3	3.6	7.0	0.0	0.0	3.8	3.5	0.0	0.0	3.7	5.1	0.0	0.0
4	2.5	2.9	0.5	1.5	7.9	9.9	0.7	2.4	4.4	6.7	0.6	1.9
5	4.9	4.7	2.5	6.2	6.8	7.3	0.9	3.0	5.8	6.0	1.8	4.9
6	9.1	8.6	1.0	2.1	8.2	7.8	0.0	0.0	8.6	8.0	0.5	1.5
<b>Total</b>	<b>4.6</b>	<b>5.9</b>	<b>1.0</b>	<b>3.4</b>	<b>6.7</b>	<b>7.4</b>	<b>0.4</b>	<b>1.9</b>	<b>5.6</b>	<b>6.7</b>	<b>0.7</b>	<b>2.8</b>