The Correlation Between DMFT and OHI-S Index among 10-15 Years Old Children in Kosovo

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INTRODUCTION

- Dental caries remains a common disease among school-aged children and is thought to be increasing worldwide, especially in developing countries. The DMFT and OHI-S indexes are two of the most important quantitative factors, measuring tooth health and oral hygiene.

AIM

- The aim of this study was to determine the correlation between DMFT and OHI-S indexes in 10-15 years old children treated at the University Dentistry Clinical Center of Kosovo - Pediatric Dentistry Clinic.

METHODS

- The study has been carried out during 2 years period (2013-2014) on 695 children (51.7% females and 48.3% males), ages 10-15 years from urban and rural areas, included in this cross-sectional study.

- Every child was examined separately in our clinic using dental mirror and explorer. The questionnaire included their demographic data, age, gender, residence and dental status.

METHODS

- Children's oral health status was evaluated using the WHO caries diagnostic criteria for Decayed, Missing and Filled teeth (DMFT), and simplified oral hygiene index by Green-Vermilion (OHI-S).

- Primary teeth present were ignored and their carious status not recorded.

STATISTICAL ANALYSIS

- Mean DMFT index values were compared between boys and girls using Student's t-test and P <0.01 was considered for statistical significance. Percentages were compared by using the chi-square test (P<0.05). Statistical software was used for data entry (Microsoft Office Excel 2007 for Windows, Microsoft Corporation, Redmond, WA, USA) and all statistical tests were conducted using IBM SPSS sofware (ver.20.0; IBM, Chicago, IL, USA).

RESULTS

- The findings of our study demonstrated that children aged 10-15-year-old living in the urban areas had higher prevalence of caries than those in rural areas for $P<0.01(t=2.75;Df=639)$

Table 1. Patients analyzed based on gender and

Residence	Gender				Total	
	Female		Male			
	N	%	N	%	N	%
Rural	182	50.7	153	45.5	335	48.3
Urban	177	49.3	183	54.5	360	51.7
Total	**359**	**100.0**	**336**	**100.0**	**695**	**100.0**
	51.7	**-**	**48.3**	**-**	**100.0**	**-**

Patients analyzed based on gender and residence

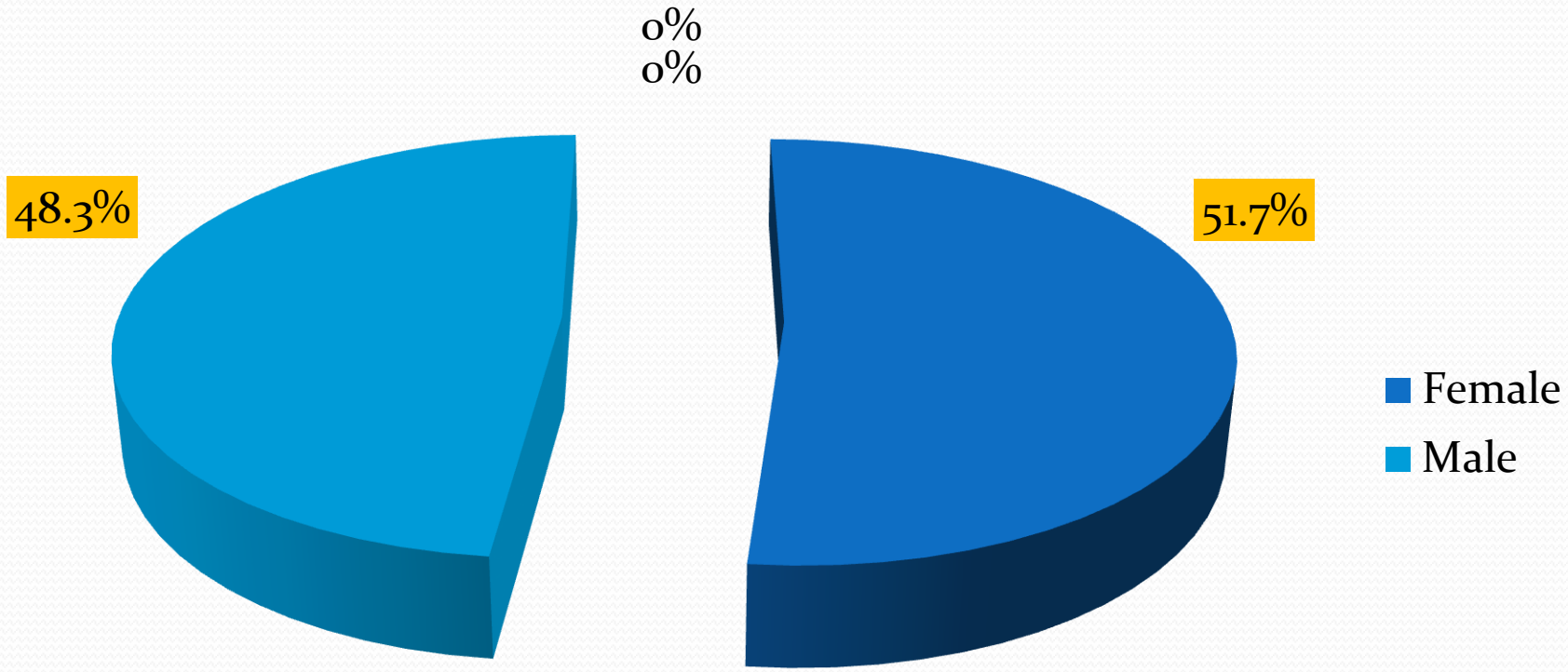


Table 2. The average and standard deviation of DMFT in children from urban areas was 2.8 and 2.1, respectively the average and standard deviation of DMFT was 2.4 and 1.7, for children from rural areas.

Residence	N	Average of DMFT	SD of DMFT
Rural	335	2.4	1.7
Urban	360	2.8	2.1
Total	**695**	**2.6**	**1.9**

The average and standard deviation of DMFT in children from urban areas was 2.8 and 2.1, respectively the average and standard deviation of DMFT was 2.4 and 1.7, for children from rural areas.

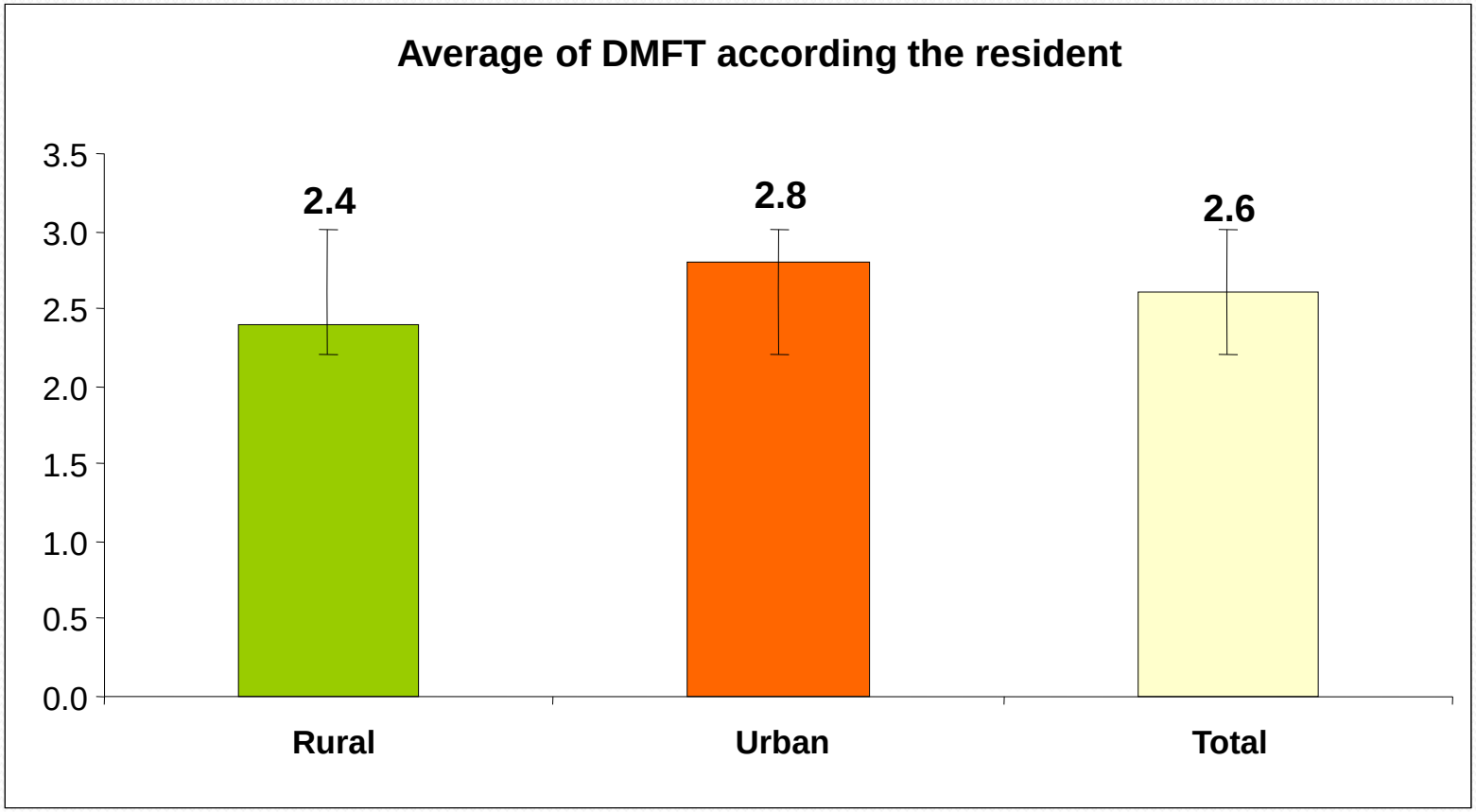


Table 3. DMFT was evaluated based on age. It was noticed that with increase of their age, increases DMFT, so from for 1.8 in a 10 year old group in 4.2 in 15 years old group.

Age	N	Average of DMFT	SD of DMFT
9 year	2	1.5	0.7
10 year	113	**1.8**	1.4
11 year	123	2.1	1.4
12 year	142	2.3	1.7
13 year	146	3.2	2.1
14 year	128	3.0	2.1
15 year	28	**4.2**	2.7
16 year	8	3.4	2.5
17 year	3	4.7	0.6
18 year	2	2.5	0.7
TOTAL	**695**	**2.6**	**1.9**

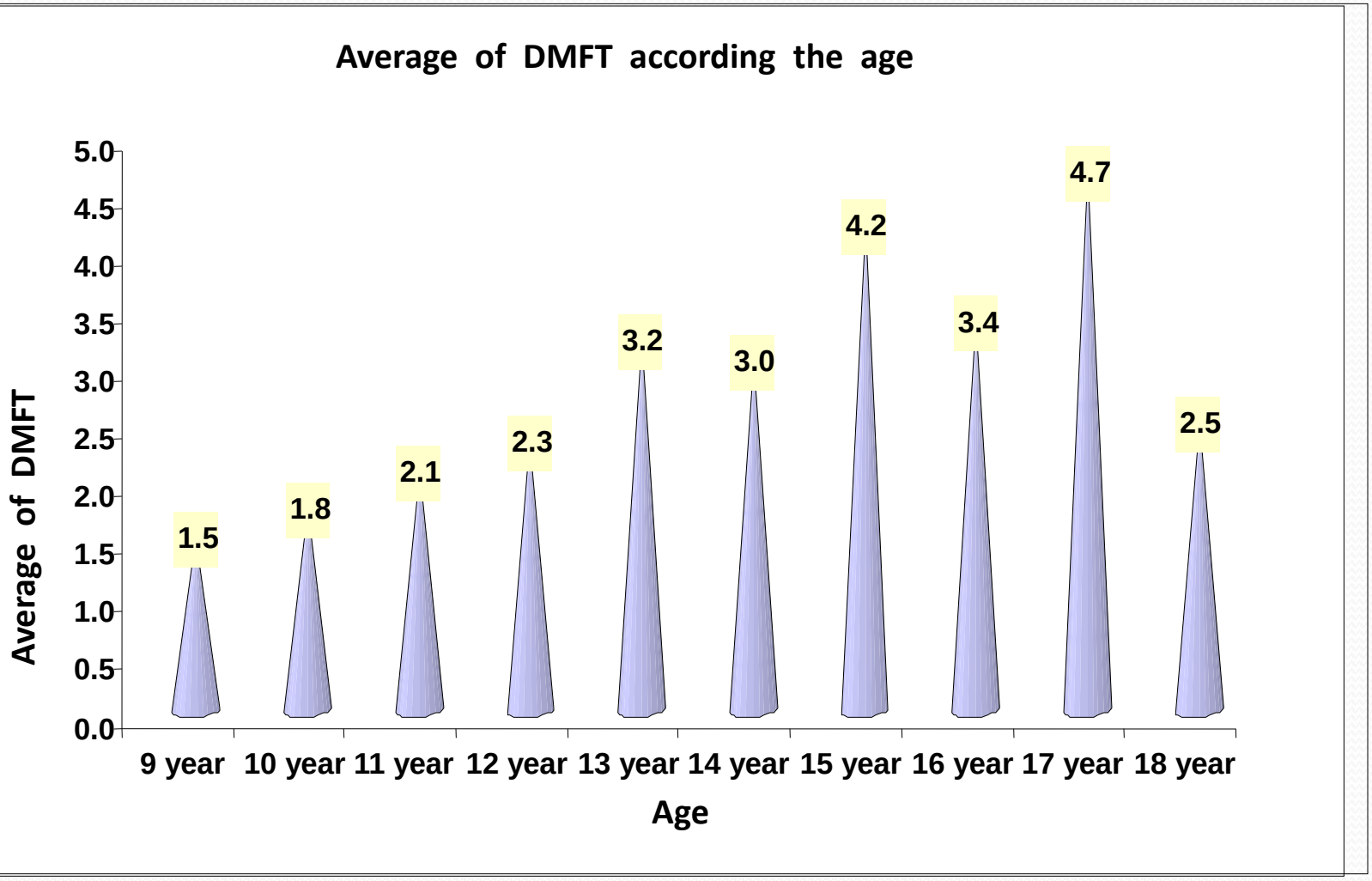
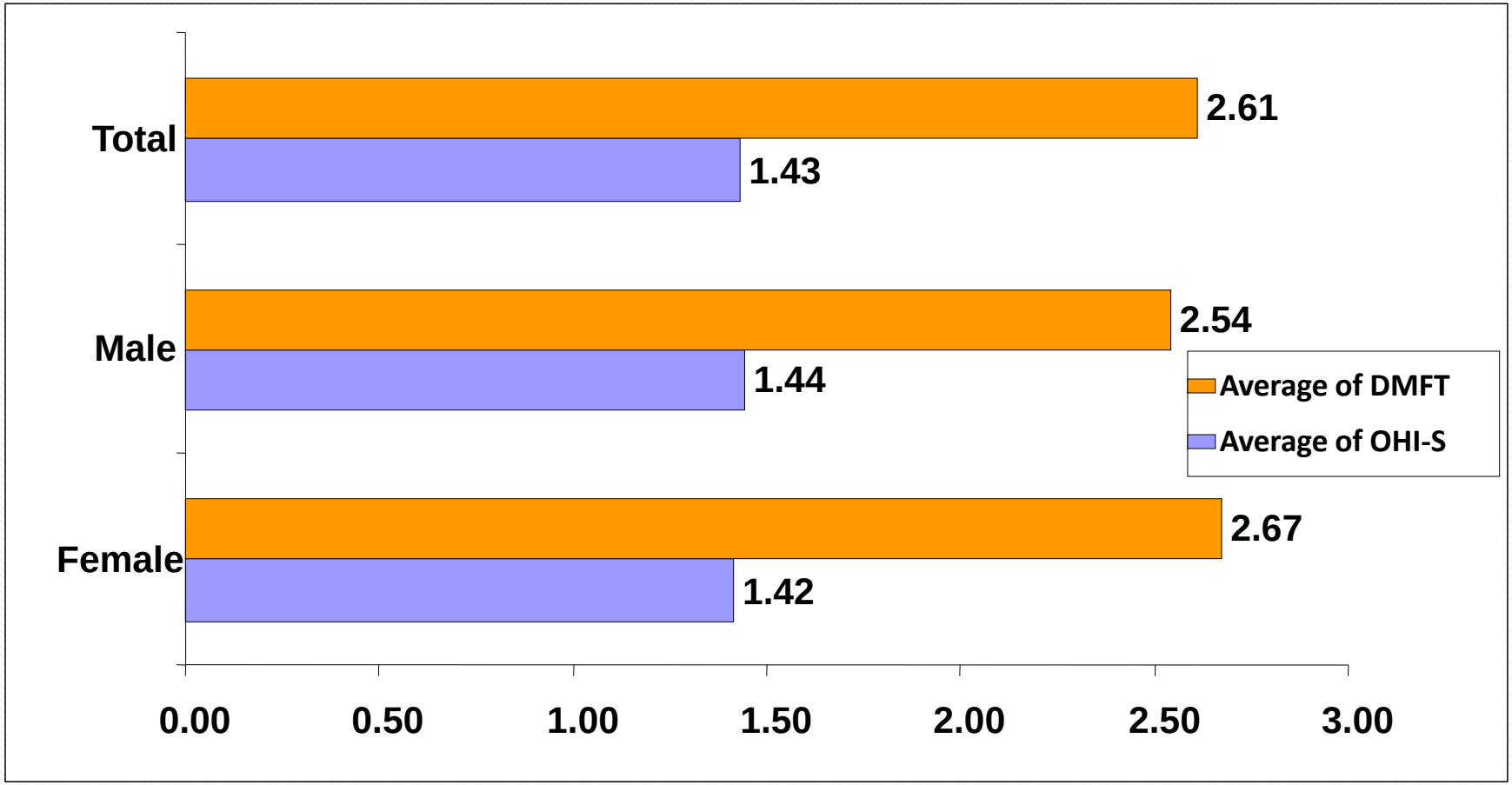

Average of DMFT according the age
Average of DMFT
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1.5
1.8
2.1
2.3
3.2
3.0
4.2
3.4
4.7
2.5
9 year
10 year
11 year
12 year
13 year
14 year
15 year
16 year
17 year
18 year
Age

Table 4. OHI-S index, on the other hand, showed an average 1.42 for female and 1.44 for male.

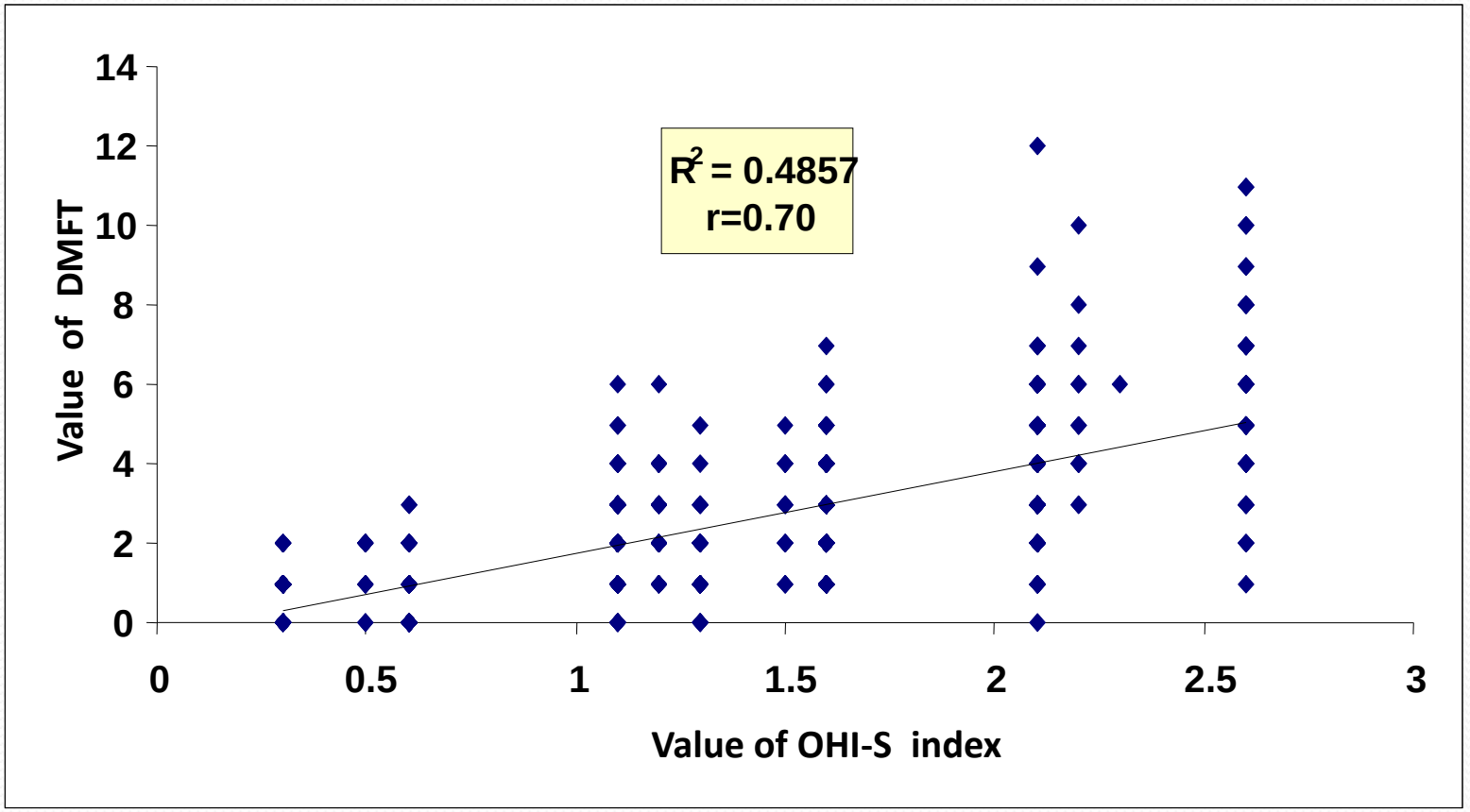
Gender	N	Average of OHI-S	Average of DMFT
Female	359	1.42	2.67
Male	336	1.44	2.54
Total	**695**	**1.43**	**2.61**

OHI-S index, on the other hand, showed an average 1.42 for female and 1.44 for male.



Coeficient of corelation is **r = 0.70** which is considered as a strong correlation between DMFT and OHI-S index value. If one increases, increases the other one too.

Graphic correlation between DMFT and OHI-S index value.



CONCLUSION

- Based on the result of the t-test, the correlation coefficient was r= 0.70. We have concluded that there is a strong correlation between DMFT and OHI-S index in children 10-15 years old, but they had high caries prevalence. Preventive approach and measures are recommended for children due to higher caries prevalence, related to their diet and poor oral health maintenance.

Thank you for your attention!

