THE ROLE OF SOCIAL AND ECONOMIC FACTORS -HYGIENE-DIET IN DETERMINING DISEASE BY DENTAL CARIES IN SCHOOLCHILDREN OF 12 YEARS IN RURAL AND URBAN

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Abstract: 12 years age is a risk group, characterized by the final stage of permanent tooth eruption in a local environment very rich in cariogenic bacteria. The present study found that the occurrence of dental caries in this age is an average of 84%, the percentage molar tooth decay in rural areas (56%) is worth twice then percentage of urban molar tooth decay (23%). The same difference between rural and urban we find in the intensity of the decay.The percentage of rural tooth filling is nearly 2 times lower than urban areas. No significant differences were found between level of education, living standards and indicators of intensity of caries in rural and urban

Cuvinte cheie: factori de risc, intensitatea cariei, mediu urban-rural

Rezumat: Grupa de vârstă 12 ani este o grupă de risc caracterizată prin etapa finalizării erupției dinților permanenți într-un mediu local deosebit de bogat în bacterii cariogene. Prin studiul de față am constatat că intensitatea cariei dentare la această vârstă are o valoare medie de 84%, procentul molarilor cariați din mediul rural (56%) are valoare dublă față de procentul molarilor cariați din urban (23%). Aceeași diferență între mediul rural și urban o regăsim și în privința intensității cariei. În schimb, procentul dinților obturați din mediul rural este de aproape 2 ori mai mic față de mediul urban. Nu au fost găsite diferențe semnificative între nivelul de educație, nivelul de trai și indicatorii de intensitate ai cariei între mediul rural și urban.

INTRODUCTION

Current paper proposes an evaluation of the caries experience of schoolchildren aged of 12 years (± 8 months) in rural and urban, in conjunction with:
- Socio-economic and educational level of parents
- Knowledge and hygienic-dietary habits in the family
- Implementation of individual measures of dental hygiena

MATERIAL AND METHOD

The research consisted in a cross clinical study realized in 2008 to a group of 139 children, 67 rural and 72 urban age 12 years (± 8 months). The rural communities were represented by the villages Poplaca and Șura Mică, Sibiu and the urban environment. Distribution of the population to the dentist was 1 to 1800 people in Poplaca, 1 to 2,000 inhabitants in Sura Mica and 1 per 5oo inhabitants in Sibiu.

The objectives of this research were communicated to school heads, head teachers and parents who have consented in writing. In addition, mothers of examined children completed a questionnaire which included in addition to personal data and the following questions: maternal age at birth, age when the child started tooth brushing, dental hygiene supervision of the child, what opportunity is presented to the child by the dentist, mother's education level and family income per month.

Children were examined in the dental Office, visual tactile method, as recommended by WHO (VHO Basic Method 1997). Datas were entered in a separate document which included caries dentograma and the treatments of injured teeth, the dental control, how brushing, the supplementary hygienic methods and food preferences.

RESULTS AND DISCUSSIONS

For studing of the caries disease according to the following factors above, we used the occurrence and intensity indicators consecrated. From the intensity indicators we have chosen indicator I1, which is the 6 years molar percentage affected by caries and indicator I2, represented by index DMF-T and DMF-S.

Following the centralization of results, we calculated the average occurrence of caries in the studied group which was 84%. In the intensity of caries in the review, indicators and DMF-T and DMF-S were higher in the rural areas of the city. Data used for these indicators are presented in Tables 1 and 2.

In the filling treatments made to the first molars, we found a rate of more than two times lower in rural areas to urban areas, data is represented in Figure 1.

The relationship between the presentation to your dentist and intensity index values shown in Table no 3 and reveal higher intensity of those who only occasionally have the dental pain / discomfort, in both environments.

Importance in determining how to brush indicators of intensity decay is given Figure 2. The analysis of data shows very clearly the importance of effective techniques for brushing at removing plaque and maintaining dental health

Table no. 1. Intensity index I1

	1-st molars examined	1-st molars decayed	1-st molars filling	1-st molars missing	% molars decayed
Rural	268	150	89	29	56%
Urban	288	66	204	18	23%
Total	556	216	293	47	79%

Table no. 2. Intensity index I2

	Examined children	Decayed teeth	Missing teeth	Filling teeth	Decayed surfaces	Missing surfaces	Filling surfaces	DMF-T	DMF-S
Rural	67	201	40	53	325	231	55	4,38	9,11
Urban	72	105	18	76	220	115	75	2,76	5,69
Total	139	306	58	129	545	346	130		

Table no. 3. Relationship between the dentist and the evidence presented to the intensity of the decay

	Occasional at pain/discomfort			With regularity		
	DMF-T	DMF-S	% decayed 1-st molars	DMF-T	DMF-S	% decayed 1-st molars
Rural	4,41	7,49	46,65%	3,60	5,80	9,33%
Urban	2,70	4,37	19,10%	2,67	5,17	3,82%

Table no. 4. The relationship between indicators of intensity and the level of education of the mother

	Secondary Education			Higher education		
	DMF-T	DMF-S	% decayed 1-st molars	DMF-T	DMF-S	% decayed 1 molars
Rural	4,9	7,9	14,23%	4,78	7,14	7,46%
Urban	3,77	4,85	13%	2,45	4,7	9%

**Table no. 5. The relationship between indicators of the intensity and of the monthly family income**

	> 1000 ron			< 1000 ron		
	DMF-T	DMF-S	% decayed 1-st molars	DMF-T	DMF-S	% decayed 1 molars
Rural	4,9	7,51	27,23%	4,4	6,9	28,73%
Urban	2,8	4,65	11,8%	2,6	3,9	11,11%

Table no. 6. The relationship between indicators of the intensity and of the maternal age

|	Mother's age < 25 years			Mother's age > 25 years		
	DMF-T	DMF-S	% decayed 1-st molars	DMF-T	DMF-S	% decayed 1 molars
Rural	4,53	7,7	30%	4,2	7	26,11%
Urban	3,33	5,3	15,3%	2,6	3,4	7,63%

The relationship between indicators of caries intensity and the level of education of the mother, the family standard of living that is reproduced in table no. 4 and 5. The values obtained are substantially equal, sometimes contradictory, what made us to say that family wealth does not affect the frequeny hose with low incomes by calling the dentist less often and those with higher incomes more frequently resort to sweets).

Figure no. 1. Graphical representation of the first molars filling
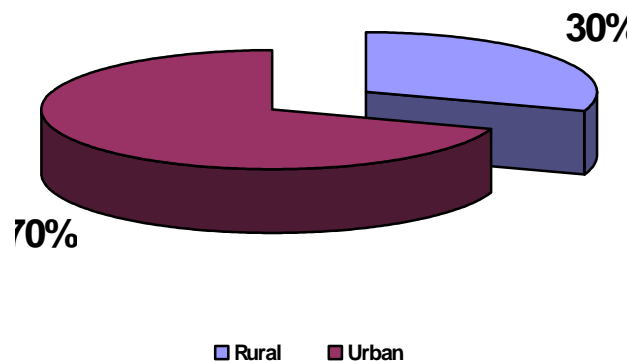
In the mother's age at the time of child birth we observed that intensity indicators were slightly higher values in children whose mothers are younger in both environments, according to table no. 6. This suggests that younger parents gave less importance to dental children surveillance.

Figure no. 2. Percentage of Ist molar cavities brushing
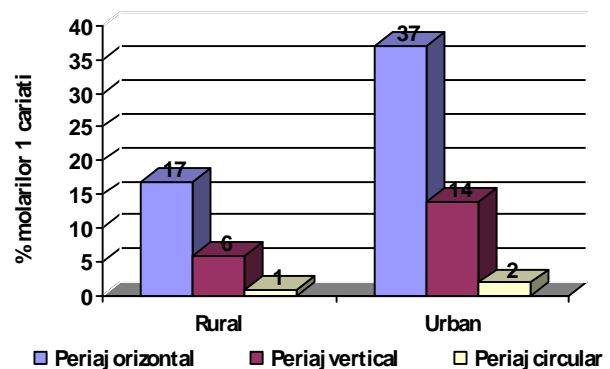
CONCLUSIONS

Analysis by groups of teeth dental caries intensity shows higher values, statistically significant in rural areas to urban areas, reflecting the missing of concern about the dental hygiene of children and parents in rural areas.

There is also a big difference between the number first molars filling to children in urban vs. rural, largely reflecting greater concern for dental health of parents of children in urban areas and also a greater accessibility to children from town to dental offices.

Regarding the standard of living indicators calculated on the basis of mother's education level and family income are very close, the differences were statistically insignificant, which leads us to conclude that they do not have a decisive importance in determining dental caries.

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