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Oral Session O14 – Epidemiology 2

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## Oral Session O14/Epidemiology 2

#### O14-100

### A group of pediatricians' knowledge and practices regarding the pediatric dentistry in Turkey

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**Introduction:** Pediatricians who provide primary care for children are considered to be in a unique position to provide dental preventive care to their patients. The purpose of this study was to examine the current knowledge, attitudes, and experiences related to pediatric dentistry and some related topics in a group of pediatricians in Turkey.

**Materials and methods:** Questionnaires were given to the pediatricians in the 44th. Congress of Turkish Pediatrician's Society. 143 pediatricians answered the questions. Questionnaires included 26 closed questions.

**Results:** Pediatricians knowledge about the first appointment with dentist, the importance of pediatric dentistry, referring the patients and cooperation with a pediatric dentist, the importance and knowledge of prescribing fluorides, and opinions about using fissure sealants, xylitol and probiotics and oral health topics were evaluated. 31.46% (n = 45) of the pedatricians cooperate with pediatric dentists while 68.4% (n = 98) have no cooperation. 12.58% (n = 18) believe that childrens first dental visit should be scheduled in the first year of life while 28.67% (n = 41) believe it should be after 3 years of age. 48% (n = 69) have knowledge about the oral benefits of xylitol usage while 44% (n = 64) have no idea. And also 34.26% (n = 49) agree about the oral health benefits of probiotics and 46.85% (n = 67) have even no idea.

**Conclusion:** Results demonstrate that there is a need for better communication between pediatric dentists and pediatricians to ensure that all their patients receive timely preventive and restorative dental care.

### 014-101

Abstract withdrawn

#### O14-102

### Caries experience of schoolchildren in two industrial areas in Romania

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**Introduction:** Influences of environmental pollution upon caries activity are controversial. Aim: To evaluate caries experience in mixed dentition of schoolchildren from two Romanian urban areas with environmental pollution: Moreni (21,000 inhabitants, oil industry) and Slatina (80,000 inhabitants, aluminum manufacturer).

**Materials and methods:** A cross-sectional study was conducted on schoolchildren aged 6–12 years: Moreni sample – 134 children (69 boys, mean age  $8.83 \pm 1.3$ ); Slatina sample - 114 children (58

boys, mean age 8.41  $\pm$  1.3). Subjects were examined in classrooms according to WHO criteria (1997). Mean values and confidence intervals were calculated for: prevalence index (Ip), dmft/DMFT, SiC Index, dmfs/DMFS for the entire group and, separately, for age subgroups. Data were analysed using dedicated software. **Results:** 

**Moreni sample:** Caries-free children 7.5%; IP = 92.5%; dmft 7.2 [3.6]; SiC 9.4 [1.2]; dmfs 22.48 [14.5]; DMFT 2.1 [1.9]; SiC for age subgroups (6–8, 8–9, 9–12 years): 2.9, 3.5, 4.9; DMFS 2.9 [3.1]. Slatina sample: caries-free children 7.9%; IP=92.1%; dmft 6.6 [3.5]; SiC 5.9 [3.5]; dmfs 18.3 [13.8]; DMFT 1.2 [1.6]; SiC for age subgroups: 2.1, 2.7, 4.7; DMFS 1.5 [2.3]. There are ss differences between the two samples regarding caries experience (T-test, P < 0.05).

**Conclusions:** In both cities, the number of caries free children is very low. Lower caries experience in Slatina, especially the SiC Index values, may be related to environmental differences induced by the two industries - oil industry versus aluminum manufacturer. Further investigations are needed to help detect environmental factors that can influence caries activity. Supported by National Research Grant CNMP 41005/2007.

#### **O14-103**

### Caries incidence in adolescent's one rural and suburban area in Croatia

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**Introduction:** The aim of this study was to assess the level of dental health in permanent dentition in adolescents from one rural and suburban part of Croatia. Assessment was provided using clinical and non-clinical variables that can be obtained through everyday clinical practice.

**Patients and methods:** The research was conducted on 410 examinees (177 male and 233 female) aged between 12 and 18 years (Mean age = 15.1, SD 1.9). Each examinee was subjected to the same procedure. A questionnaire was completed for all examinees and the clinical data were collected by a well trained and calibrated researcher (intraexaminer Kappa value = 0.84). Criteria for caries recording followed WHO standards (Oral health surveys, Basic Methods, 4th edition). The study received permission of the Ethical Committee, School of Dental Medicine, University of Zagreb and written informed consent was obtained from the children's parents. Collected data were statistically processed.

**Results:** Adolescents from rural and suburban regions of Bjelovar-Bilogora County showed very high values for the DMFT and SiC indices. The mean DMFT index was 5.35 and the SiC index was 9.13. Caries prevalence was 90%. Significantly higher DMFT values were observed in subject from families with lower socioeconomic status.

**Conclusions:** From these results it can be concluded that we are still very far away from the goals set by WHO for the improvement of oral health, which expect DMFT 3 or lower for population under 19 years. In order to bring oral health to standards set by WHO it is essential to improve children's education on oral

### **Oral Presentations**

hygiene, improve the quality of their diet, as well as to make them undergo regular dental examinations, whose aim is to reduce future use of curatives in dentistry.

#### O14-104

### Dental prevalence, diagnostics and prevention of children population in Ukraine

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**Introduction:** The high prevalence of caries, gingivitis and fluorosis of children living in certain biogeochemical regions of Ukraine warranted the need for epidemiological research. The presence of general somatic diseases leads to deficiencies in the dental, periodontal and oral mucosa. In the last 10 years an increased occurrence of gastro-enteric diseases (GBS) of non-infectious origin such as gastro-duodenit, chronic hepato-cholecystitis and dyskinesia of the bilious tract has occured.

**Materials and methods:** 270 six year old and 270 twelve year old apparently healthy children were examined by 4 doctors using the DMF index for caries and Silness–Loe and Stallard indices for periodontal status. 60, six year old children presented with GBS and 65 twelve year old children with GBS. The children with GBS disorder began a 2 year prophylactic and treatment program that included lecithin, calcium and macro-and micro-elements of deep fluoridation according to Knappvost.

**Results:** Before treatment began the 6-year-old children with GBS had DMF and dmf scores of 7.0 and those without GBS 2.55. Among 12-year-old kids with GBS, DMF was 6.1 and among somatically healthy kids it amounted to 2.8. Children having GBS disorder had a reduction of caries at the rate of 53.3% for the 6-year-old group and 78.7% for the 12-year-old group, after 2 years participation in the programme. A similar reduction of periodontal disease was achieved.

**Conclusion:** The presence of chronic GBS has negative effects on the condition of the teeth, oral mucosa and periodontal tissue and necessitates improved preventive care.

### 014-105

### The impact of socioeconomic factors on dental health status of Lithuanian adolescents

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**Introduction:** The study hypothesis was that individual and areabased socio-economic factors related to variations in dental treatment needs and quality of restorations in Lithuanian adolescents.

Patients and methods: The permission was received from the Bioethical Committee of the Ministry of Health of Lithuania and written consent obtained from both adolescents and their parents. A total of 885 15–16-year-old schoolchildren participated. Dental treatment needs were assessed using the Quantitative Summative Dental Treatment Needs Index. The California Dental Association Quality Evaluation System was used for the assessment of the quality of dental restorations. Individual and area-based socio-economic status (SES) indicators were sought from self-reports and National Register. One-Way ANOVA and correlation were used to assess the relationships between dental outcomes and SES variables. Factor Analysis and Linear Multiple Regression were employed to evaluate the joint effect between different SES variables and variations in dental outcomes.

**Results:** Dental health status varied substantially among participants. However, the only significant, although weak relationship was found between demographic characteristics such as 'natural increase/decrease of population in an area' (Pearson correlation coefficient 0.075; P = 0.026) and 'net migration rate' (Pearson correlation coefficient 0.080; P = 0.018) and dental treatment needs. No statistically significant relationships between SES variables and dental restorations quality were found.

**Conclusion:** Despite the wide variation in dental treatment needs and dental restorations quality, the expected socio-economic differences in dental health outcomes in adolescents were not found.

#### **O14–106**

### **Caries pattern in small children in Riga, Latvia** <u>S. SKRIVELE<sup>1</sup>, S. BERZINA<sup>1</sup>, R. CARE<sup>1</sup>, S. KNEIST<sup>2</sup> & A. BORUTTA<sup>2</sup></u>

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**Introduction:** Previous epidemiological studies showed a high caries prevalence in Latvian children – almost 2% of children at the age of 1 year had visible caries. Aim of the study was to evaluate the risk factors of early childhood caries in toddlers of Riga, Latvia.

**Material and methods:** The study involved 110 randomly selected toddlers with a mean age of 30 months (SD–3.6). The toddlers were examined for caries, initial caries, plaque on upper incisors and gingivitis. Their mothers completed a questionnaire concerning the child's oral health behaviour, social aspects and diet protocol. Salivary Mutants streptococci of toddlers were determined by Caries Risk Test bacteria. For statistics Pearson test was used at a level of 5%.

**Results:** Of the examined children 77.3% were caries free. The mean dmft index was 1.01. The majority of carious lesions were found in the upper frontal teeth. 47% of the toddlers had visible plaque on anterior teeth. Gingivitis affected 5.6% of the toddlers. 72% of toddlers harboured Mutans Streptococci. A correlation could be found between cariogenic meals and drinks of toddlers (Pearson: P = 0.005, r = 0.27; P = 0.004, r = 0.27), between visible plaque (Pearson P = 0.005, r = 0.47) and the caries decay of upper incisors. Furthermore, a positive correlation could be found between cariogenic meals and mutans streptococci (Pearson: P = 0.013, r = 0.24). On average toddlers received cariogenic drinks and snacks more than 3 times a day. Only 16% of the parents supervised tooth brushing of their children regularly. Social status and educational level of parents were high.

**Conclusions:** The data suggest that mothers need more preventive education and diet recommendation to avoid early dental destruction of toddlers.

### 014-107

### Translation and validation of a Chinese language version of the ECOHIS

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**Introduction:** The Early Childhood Oral Health Impact Scale (ECOHIS) is an oral-health related quality of life measure. This study aimed to adapt the ECOHIS for pre-school children in a Chinese speaking community and to investigate its psychometric properties (validity and reliability).

**Materials and methods:** A Chinese language version of the ECOHIS was derived through a forward-backward translation and tested for content validity among a focus group. A convenience sample of pre-school children (n = 111) was recruited (included sub-samples with early childhood caries and caries-free children). Parents of the children self-completed the derived Chinese-ECOHIS measure. Validity of the measure was assessed by investigating the relationship between dental caries status and the Chinese-ECOHIS scores (construct and criterion validity). A sub-sample of the parents repeated the measure to facilitate test-retest reliability assessment.

**Results:** A Chinese version of ECOHIS was derived with minor modification to the original version. Chinese-ECOHIS scores were

associated with caries experience (dmft) (r = 0.66, P < 0.05) supporting convergent validity. In addition, variations in ECOHIS scores were apparent with respect to the caries and caries-free groups (P < 0.001), supporting the measure's ability to distinguish between patient groups. Cronbach's alpha values (internal reliability) for total ECOHIS score were 0.91 and the intra-class correlation coefficient value (test-retest reliability) was 0.64.

**Conclusion:** The Chinese version of the ECOHIS that was developed demonstrated acceptable validity and reliability, indicating that these findings can successfully access the oral health-related quality of life of pre-school children in Chinese speaking communities. Copyright of International Journal of Paediatric Dentistry is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. Copyright of International Journal of Paediatric Dentistry is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.