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Abstracts

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Dietary Based Caries Risk in the Belgian Population: Results of the First National Oral Health Survey

P. Bottenberg [a, *], *J. Carvalho* [b], *D. Declerck* [c], *C. Declerck* [c], *A. Vanden Abbeele* [d], *E. De Vos* [e], *J.P. Van Nieuwenhuysen* [b], *J. Vanobbergen* [e]

pbottenb@vub.ac.be

[a]Department of Restorative Dentistry, Free University of Brussels (VUB), Brussels, [b]IRSS, UCLouvain, Brussels, [c]Department of Oral Health Sciences, KU Leuven, [d]Department of Operative Dentistry, Free University of Brussels (ULB), Brussels, [e]Department of Dentistry, University of Ghent, Ghent, Belgium

Between 2008 and 2010, the first national oral health survey was held in Belgium. Its aim was to assess the oral health of a representative sample of the total Belgian population (age ≥5). It consisted of a health interview using a self-administered questionnaire and an oral examination, performed at home by a team of calibrated dentists using a portable headlight, mirror and probe. Moreover, the uptake of oral health care was evaluated by using social security records (Intermutualist agency). A total of 3,011 persons could be examined and from these, 2,162 complete data sets were available for dentate subjects. Dietary habits were assessed using a questionnaire reporting kind of foodstuff and drinks used as well as frequency and intake with or between meals. A caries risk profile was calculated based on the cariogenicity of foodstuffs and drinks and the reported frequency. The data showed that only 11 out of 2,162 persons were considered having no caries risk, 621 had a low, 134 a median and 1,396 a high caries risk profile. There was no clear association between dietary based caries risk and median DMFT (no risk:17.6, low risk: 7.4, median risk: 7.1, high risk: 8.3). Persons with no caries risk were less regular attenders (11%) in contrast to persons having a higher risk (low: 54%, median: 57%, high: 57%). Persons with no caries risk showed a lower use of restorative services than in the higher risk groups over the past 5 years (83% no filling versus 35 to 40%, respectively). Although cariogenic dietary habits were widespread, difference between a low or high risk showed no association with caries experience and a weak association with the use of oral health care.

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Caries Index and Oral Health Status of Students from Provence Alpes Cote D'Azur Region (France)

M.F. Bertrand [a, *], *R. Sionneau* [a], *C. Cucchi* [b], *M. Muller-Bolla* [b], *M. Bolla* [c], *L. Lupi-Pegurier* [b]

BERTRAND@unice.fr

Departments of [a]Conservative Dentistry and Endodontics, [b]Preventive Dentistry and Public Health, and [c]Anatomical Sciences, Nice-Sophia Antipolis University, France

Objectives: A report submitted to the French National Assembly in 2006 (L. Wauquiez) revealed a worrying situation for students in France. Their social coverage may be faulty and dental cares are often sacrificed. The aim of this study was to verify the alteration of the oral health status of students, especially as far as their caries index is concerned. **Methods:** Data were collected through a peer-led intervention in which our dental students (Dental School of University of Nice-Sophia Antipolis) were involved for three consecutive years from 2009 to 2011. Part of this intervention was composed of clinical screenings of dental caries and oral health status (free clinical examinations conducted on university campuses). DMFT score, presence of dental plaque or calculus and other dental care needs were recorded. **Results:** 496 students aged 21.64 ± 4.06 years were examined (males 224, females 272). 37.1% of students had never experienced dental caries but 50.0% showed poor oral hygiene with obvious presence of dental plaque or calculus. Overall, 69.8% of the observed students needed to visit a dentist. The mean DMFT score was 2.55 ± 3.07, D was 1.06 ± 1.82, M was 0.07 ± 0.39 and F was 1.43 ± 2.34. Caries treatment needs affected 41.5% of the observed students. Only 46.6% had used dental services during the previous year. 17.9% do not benefit from complementary health insurance and this factor negatively influenced their oral health ($p < 0.0001$). **Conclusion:** the results of this study suggest that a specific preventive program could be useful to improve information on risk behaviours and prevention of caries among students.

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Caries Decline Related to Its Distribution in the Primary Dentition of Brazilian Children

H.D. Mestrinho [a, *], *E.S. Freitas* [b], *J.C. Carvalho* [a, c]

hdmestrinho@uol.com.br

[a]Faculty of Health Sciences, University of Brasília, [b]Department of Statistics, University of Brasília, Brazil; [c]Faculty of Medicine and Dentistry, Catholic University of Louvain, Belgium

The aim of the study was to analyze the decline of dental caries in relation to its distribution in the primary dentition of Brazilian children. The subjects were 1 to 5 year-old children (Cohort 1996 = 1.465) and (Cohort 2006 = 2.511). The clinical examination determined whether the tooth surfaces were sound, presented non-cavitated lesions (active and inactive), cavitated lesions (active and inactive), fillings, were indicated for extraction or were

extracted. Caries experience was summarized in $d_{1,2}$efs scores (d_1 = decayed at non-cavitated level and d_2 = decayed at cavitated level, e = indicated for extraction/extracted, f = filling, s = surface). Intra-and inter-examiner reliability of caries scores showed Kappa from 0.71 to 0.93. The percentage of caries-free children increased significantly in all age groups at $d_1$efs level only ($p < 0.05$, χ^2 test); 1 year (6.2%), 2 year (26.2%), 3 year (13.7%) and 5 year (19.3%). Accordingly, significant decline in the mean $d_1$efs scores of children aged 2 years or older was observed ($p < 0.005$, Mann-Whitney test). The mean $d_2$efs scores of children aged 2 years or older also reduced, but statistical difference was only observed at the age of 5 yr. In 5-year-old children the highest reduction in caries experience, $d_{1,2}$efs scores, in maxilla was found at central incisors (21.1%) followed by second molars (19.0%). In the mandible, second molars showed the highest decline (44.1%) followed by first molars (30.2%). Occlusal surfaces showed significant decline in caries experience at $d_1$efs level in all age groups whereas the smooth surfaces at age groups of two years or older ($p<0.002$). For proximal surfaces significance was observed at age groups of 3–5 years ($p <0.002$). The same pattern was observed for tooth surfaces at $d_2$efs level, however significance was limited to the oldest group. In conclusion, caries decline in the primary dentition was related to both non-cavitated and cavitated lesions (active and inactive), to all teeth and surfaces with the molar teeth and maxillary incisors providing the main contribution.

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Association between the Sleeping Environment Characteristics and the Sleep Bruxism in Children: A Case-Control Study

*A.P. Hermont [a, *], J.M.C. Serra-Negra [a], S.M. Paiva [a], I.A. Pordeus [a], M.L. Ramos-Jorge [b], S.M. Auad [a]*

anapaulahermont@gmail.com

[a]Department of Pediatric Dentistry and Orthodontics, Faculty of Dentistry, Universidade Federal de Minas Gerais, Belo Horizonte, [b]Department of Pediatric Dentistry of Universidade Federal dos Vales Mucuri e Jequitinhonha, Diamantina, Brazil

This study aimed to evaluate the association between the sleeping environment characteristics and the sleep bruxism in children. A 1:2 matched-pairs case-control study was conducted in the City of Belo Horizonte with 8 years-old scholars. It enrolled 120 children with sleep bruxism and 240 without sleep bruxism, all of whom were paired for gender and social vulnerability as well. The Social Vulnerability Index (IVS) drawn up by the City of Belo Horizonte was employed for social classification. Written consents and ethical approval were obtained. A pretested questionnaire based on the precepts of AASM (American Academy of Sleep Medicine) was applied to parents in order to gather information on the presence of sleep bruxism among the children. Parents were advised to register in a pretested form, for three consecutive days, the presence or absence of the 'audible nocturnal teeth grinding', the period of sleep, the use of medicines and the child sleeping environment characteristics. Data were analyzed using the chi-square test and multinomial logistic regression were used with the significance level of 5% by the SPSS software (Version 15.0). It was observed that 51.6% of the children with sleep bruxism slept in an environment with the lights turned on ($p < 0.001$) and 53.3% slept in environments with noise ($p < 0.001$). The adjusted logistic model revealed that children who sleep in an environment with noise (OR = 2.8 IC 1.7–4.4) and with the light on (OR = 2.0 IC 1.3–3.0) have a greater risk of exhibiting the habit of sleep bruxism in comparison to those who do not sleep in such conditions. Light and sound stimuli in the sleeping environment might be risk factors for triggering the sleep bruxism among children.

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Dental Caries and Quality of Life of Preschool Children in Chile

*R. Cabello *, S. Faleiros, I. Urzua, B. Ruiz, G. Rodriguez*

rcabello@odontologia.uchile.cl

University of Chile, Faculty of Dentistry, Santiago, Chile

The aim of the work was to establish differences in quality of life among preschool children affected by dental caries. **Methods:** This is a cross sectional study approved by ethical committee of the faculty of dentistry of University of Chile. The sample consisted in 380 2–6 years old children attending to kindergarten in the north area of metropolitan region of Chile. A calibrated examiner did a clinical evaluation according to WHO criteria. After giving informed consent, parents or care givers answered a pre test Spanish version of the Early Childhood Oral Health Impact Scale (ECOHIS) to assess quality of life of children and parents. Prevalence of dental caries, dmft and dmfs were calculated. Differences among ECOHIS items among children with and without dental caries were evaluated using multiple comparison test (Chi^2). **Main Results:** Prevalence of dental caries was 48.95%, dmft index was 2.48 and dmfs index was 3.98. Differences were found in items of ECOHIS related to pain, difficulties in eating, problems with attending to school, family economic impact ($p < 0.01$). Differences were not found in items related to interaction with others children, the need of missing work caused by dental problem of children. **Conclusions:** In this preschool population with a caries high prevalence differences in quality of life were related to dmfs scores.

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