Abstracts from other journals

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Abstracts are presented as originally published or with only minor modifications

Clinicians' choices of restorative materials for children. Tran LA, Messer LB. *Australian Dental Journal* 2003; **48**: 221–232.

Recently, there has been an expansion in the range of tooth-coloured restorative materials available. In 1999, the National Health and Medical Research Council recommended clinicians use alternatives to amalgam in children 'where appropriate'. A three-part, 29-item questionnaire was developed, tested in a focus group, and distributed to members of the Australasian Academy of Paediatric Dentistry (AA; paediatric dentists and paediatric dentistry postgraduate students; $n = 55$), and the Australian and New Zealand Society of Paediatric Dentistry, Victorian Branch (SPD; general dentists and dental therapists; $n = 50$). Participant information, material choices, and six hypothetical clinical scenarios were addressed. The overall response rate was 74%. For both groups, the first ranked factor influencing choice of restorative material for vital primary teeth was child age, and caries experience for vital first permanent molars. For moderate-sized Class I and II restorations in primary molars, a tooth-coloured material was chosen by 92% and 84% of respondents, respectively. For restoring two separate proximal lesions in a primary molar, 65% chose a tooth-coloured material followed by a stainless steel crown (27%; all AA members), then amalgam (8%). The SPD respondents were significantly more likely to choose glass ionomer cement for Class I and II restorations, and for restoring two proximal lesions (all $P = 0{\cdot}000$) in primary molars than AA respondents, who were more likely to choose composite resins/compomers or amalgam/stainless steel crowns for these restorations. Younger respondents (21–40 years) were significantly more likely to choose composite resins/compomers or amalgam/stainless steel crowns ($P = 0{\cdot}048$) than older respondents (41–65 years), who were likely to choose glass ionomer cement. There is still a need for longitudinal studies to follow actual clinical outcomes of the matter and to allow guidelines of material choice.

A randomized controlled trial comparing mandibular local anaesthesia techniques in children receiving nitrous oxide–oxygen sedation. Naidu S, Loughlin P, Coldwell SE, Noonan CJ, Milgrom P. *Anaesth Prog* 2004; **51**: 19–23.

The aim of this study was to test the hypothesis that dental pain control using infiltration/intrapapillary injection was less effective than inferior alveolar block/long buccal infiltration anaesthesia in children. A total of 101 healthy children, aged 5–8 years, who had no contraindication for local anaesthetic and who needed a pulpotomy treatment and stainless steel crown placement in a lower primary molar were studied. A two-group randomized blinded controlled design was employed comparing the two local anaesthesia techniques using 2% lidocaine, 1:100 000 epinephrine. All children were given 40% nitrous oxide. Children self-reported pain using the Colour Analogue Scale. The study was conducted in a private paediatric dental practice in Mount Vernon, WA, USA. Overall pain levels reported by the children were low, and there were no differences between conditions at any point in the procedure. Pain reports for clamp placement were block/long buccal 2·8 and infiltration/intrapapillary 1·9 ($P = 0{\cdot}1$). Pain reports for drilling were block/long buccal 2·0 and infiltration/intrapapillary 1·8 ($P = 0{\cdot}7$). Nine per cent of children required supplementary local anaesthetic: four of 52 (7·7%) in the block/long buccal group and five of 49 (10·2%) in the infiltration/intrapapillary group ($P = 0{\cdot}07$). The hypothesis that block/long buccal would be more effective than infiltration/intrapapillary was not supported. There was no difference in pain control effectiveness between infiltration/intrapapillary injection and inferior alveolar block/long buccal infiltration using 2%

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lidocaine with 1:100 000 epinephrine when mandibular primary molars received pulpotomy treatment and stainless steel crowns.

Oral health of children with juvenile idiopathic arthritis. Ahmed N, Bloch-Zupan A, Murray KJ, Calvert M, Roberts GJ, Lucas VS. *Journal of Rheumatology* 2004; **31**: 1639–1643.

The aim of this investigation was to estimate dental disease indices and temporomandibular joint (TMJ) dysfunction in children with juvenile idiopathic arthritis (JIA). Indices were recorded for dental caries, bacterial dental plaque, gingival inflammation, and TMJ dysfunction in children with JIA and matched controls. There was no significant difference in dental caries experience or the mean plaque score between children with JIA and controls. The mean gingivitis score for the permanent teeth only was significantly greater in the JIA children compared with the controls ($P = 0{\cdot}02$). There was a significantly greater proportion of children with JIA with signs of both left and right TMJ dysfunction ($P = 0{\cdot}05$, $P = 0{\cdot}02$) and symptoms ($P = 0{\cdot}0001$, $P = 0{\cdot}0001$) compared with controls. The low caries rate was attributed to the fact that children with JIA had received preventive dental care from an early age combined with sugar-free medication.

Motivating parents to prevent caries in their young children: one-year findings. Weinstein P, Harrison R, Benton T. *Journal of the American Dental Association* 2004; **135**: 731–738.

The study was carried out to compare the effect of a motivational interviewing counselling treatment with that of traditional health education on parents of young children at high risk of developing dental caries. The authors enrolled parents of 240 infants aged 6–18 months and randomly assigned them to either a motivational interviewing, or MI, group or a traditional health education (control) group. Parents in the control group received a pamphlet and watched a video. Parents in the MI group also received the pamphlet and watched the video; in addition, they received a personalized MI counselling session and six follow-up telephone calls. After one year, children in the MI group had 0·71 new carious lesions (standard deviation, or SD = 2·8), while those in the control group had 1·91 (SD = 4·8) new carious lesions ($t_{[238]} = 2{\cdot}37$, one-tailed, $P < 0{\cdot}01$). Motivational interviewing is a promising approach that should receive further attention. Motivational interviewing may lead parents and others to better accept dental recommendations about preventing caries in their children.

Developing and evaluating an oral health-related quality of life index for children; the CHILD-OIDP. Gherunpong S, Tsakos G, Sheiham A. *Community Dental Health* 2004; **21**: 161–169.

The aim of this study was to develop an oral health-related quality of life index in Thai children and evaluate its psychometric properties. It was a cross-sectional study of children aged 11–12 years, attending the final year of primary school (grade 6). The development and evaluation process was conducted on a non-random sample in U-thong District, Suphan-buri province, Thailand. Re-evaluation of the index included all target group children in a municipal area of Suphan-buri province. The psychometric properties evaluated in this study refer to face, content and concurrent validity, and internal and test–retest reliability. In the development process, 513 children took part, and 1100 children in the re-evaluation. Throughout the development process, the CHILD-OIDP index was modified and its psychometric properties evaluated. The final test revealed excellent validity and reliability. The weighted kappa was 0·93. There was no negative correlation between any item. The index showed very significant associations with perceived oral treatment need ($P < 0{\cdot}001$) and perceived oral health problems ($P < 0{\cdot}001$). The validity and reliability of the index was confirmed by similar results in the re-evaluation study. This study has demonstrated that the CHILD-OIDP index is a valid, reliable and practical measure of oral health-related quality of life in 12-year-old Thai children.

Perceptions of desirable tooth colour among parents, dentists and children. Shulman JD, Maupome G, Clark DC, Levy SM. *Journal of the American Dental Association* 2004; **135**: 595–604.

As part of a large-scale fluoridation cessation study, standardized examiners assessed 8281 school-aged

children for dental fluorosis using the Thylstrup Fejerskov Index, or TFI, in which scores range from 0 (no fluorosis) to 9 (severe loss of enamel with change of anatomical appearance). Dentists, parents and children were asked to respond to a statement, 'The colour of these teeth (mine or my child's) is pleasing and looks nice.' Agreement or disagreement with the statement was indicated on a five-level scale, with a rating of 1 representing total agreement with the reference statement. The authors used repeated-measures analysis of variance to ascertain differences in satisfaction with the aesthetic appearance of the subject's tooth colour across dentists', parents' and subjects' perceptions. Girls were more critical of their tooth colour than were boys; however, parents and dentists were more critical of boys' tooth colour than of girls'. While younger subjects were more critical than older subjects, parents of younger subjects were less critical than those of older subjects. Dentists' ratings were not significantly associated with subjects' age group. Subjects with a TFI score of 1 or 2 were not significantly more critical than subjects with a TFI score of 0, while those with a TFI score of 3 of higher were. Similarly, only parents of subjects with a TFI score of 3 of higher had significantly different ratings. The three stakeholders in the aesthetic treatment of children, parents, dentists and patients, appear to see the potential outcome of such treatment differently. Dentists should ensure that parents and children agree about the course of treatment, the rationale for undertaking it and the results that could reasonably be expected.

The association between environmental tobacco smoke and primary tooth caries. Shenkin JD, Broffitt B, Levy SM, Warren JJ. *Journal of Public Health Dentistry* 2004; **64**: 184–186.

Environmental tobacco smoke (ETS) has been associated with a number of negative health outcomes for exposed children. The goal of this study was to assess the association between ETS and dental caries in a paediatric population. The study included 637 Iowa Fluoride Study children whose parents provided socio-economic information, completed at least three questionnaires during the first year of life, and had a primary dentition exam at age 4–7 years. Households reporting in all questionnaires that someone smoked in the home were categorized as regularly smoking homes. Socio-economic status (SES) was divided into three groups (low, middle and high) based on family income and mother's education. Children were classified as having caries if any of the primary teeth had fillings or cavitated lesions at the primary dentition exam. Overall, children residing in regularly smoking homes had a higher prevalence of caries. For the middle SES group and overall, the children from smoking homes had a significantly higher prevalence of caries compared to non-regular/non-smoking homes (52% versus 24%, $P = 0{\cdot}05$ and 44% versus 25%, $P = 0{\cdot}002$, respectively). After adjusting for age, SES, toothbrushing frequency, total ingested fluoride, and combined intake of soda pop and powdered drink beverages, the relationship of smoking and caries still remained significant (odds ratio = 3·38; $P = 0{\cdot}001$). Environmental tobacco smoke was associated with an increased risk of caries among children.

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