

0425 International Perspectives on Health Inequalities in Childhood Dental Caries

C.M. PINE¹, P.M. ADAIR², A.D. NICOLL¹, G. BURNSIDE¹, P.E. PETERSEN³, D. BEIGHTON⁴, R. ANDERSON⁵, S. ANWAR⁶, S. BRAILSFORD⁴, Z. BROUKAL⁷, I.G. CHESTNUTT⁸, D. DECLERCK⁹, X.P. FENG¹⁰, R. FERRO¹¹, R. FREEMAN¹², D. GIBBONS¹³, T. GUGUSHE¹⁴, R. HARRIS¹, B. LIN¹⁵, E.C.M. LO¹⁶, G. MAUPOME¹⁷, M.H. MOOLA¹⁸, S. NAIDOO¹⁹, F. RAMOS-GOMEZ²⁰, L. SAMARANAYAKE²¹, S. SHAHID²², M.S. SKEIE²³, C. SPLIETH²⁴, B.K. SUTTON²⁵, C.-S. TEO²⁶, and H. WHELTON²⁷, ¹ University of Liverpool, United Kingdom, ² Southern General Hospital, Glasgow, United Kingdom, ³ University of Copenhagen, Denmark, ⁴ King's College London, United Kingdom, ⁵ Howard University, Washington, DC, USA, ⁶ University of Leeds, United Kingdom, ⁷ Institute of Dental Research, Prague, Czech Republic, ⁸ University of Wales, Cardiff, United Kingdom, ⁹ Catholic University of Leuven, Belgium, ¹⁰ Shanghai Second Medical University, Shanghai, China, ¹¹ Cittadella Hospital, Padova, Italy, ¹² Queen's University of Belfast, United Kingdom, ¹³ GKT Dental Institute, London, United Kingdom, ¹⁴ Medical University of Southern Africa, Pretoria, South Africa, ¹⁵ University of Texas Health Science Center at San Antonio, USA, ¹⁶ University of Hong Kong, China, ¹⁷ Center for Health Research, Portland, OR, USA, ¹⁸ University of the Western Cape, Capetown, South Africa, ¹⁹ University of Stellenbosch, Tygerberg, South Africa, ²⁰ University of California, San Francisco, USA, ²¹ Prince Philip Dental Hospital, Hong Kong, Hong Kong, ²² Bradford City Primary Care Trust, United Kingdom, ²³ University of Bergen, Norway, ²⁴ University of Greifswald, Germany, ²⁵ Department of Health and Human Services, Raleigh, NC, USA, ²⁶ National University of Singapore, Singapore, ²⁷ University Dental School, Cork, Ireland

Objectives: Dental scientists from 17 countries have collaborated in formative research to examine how development of dental caries in young children living in diverse settings relates to familial and cultural perceptions and beliefs, oral health-related behaviour and oral microflora. **Method:** A standardised measure (questionnaire) of parental beliefs and attitudes was developed using psychological models. Dentists in 29 sites in 17 countries each aimed to recruit 100 children aged 3 or 4 years, half to come from deprived backgrounds, and within deprived and non-deprived groups, half to be “caries-free” and half to have at least 3 decayed teeth. Parents were asked to complete the questionnaire and around 10% of children had plaque sampled. **Results:** 2686 children, mean age 4.02, 50% caries-free were recruited from several ethnic groups. The mean dmft of those with caries ranged from 3.5 to 7.6. In multivariate analyses, reported toothbrushing behaviours that double the odds of being caries-free were a combination of brushing before age 1, brushing twice a day and adult involvement in brushing. Composite sugar consumption behaviours increased the odds of being caries-free (by 1.7 times) were: not eating or drinking sugary drinks in bed, and not adding sugar to child's drinks. Analyses combining beliefs, attitudes and behaviours found that parents' perceived ability to implement regular toothbrushing into their child's daily routine was the most important predictor of whether children had caries and this factor persisted in children from disadvantaged communities. 90% of children with lactobacillus had caries. **Conclusions:** Parental beliefs and attitudes play a key role in moderating oral health related behaviour in young children and in determining whether they develop caries. Further research is indicated to determine

whether supporting the development of parenting skills would reduce dental caries in children from disadvantaged communities independent of ethnic origin. Supported by NIH-NIDCR grant number DE13703-02.

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