



## Education-related inequality in restorative dental treatment need over 11 years in two areas of Finland.

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Author: Eero Raittio  
Miira M Vehkalahti  
Sari Helminen  
Anna L Suominen

Author Affiliation: Institute of Dentistry, University of Eastern Finland, Kuopio, Finland.

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DMF Index  
Dental Caries - epidemiology - therapy  
Dental Restoration, Permanent - statistics & numerical data  
Educational Status  
Female  
Finland - epidemiology  
Health Services Needs and Demand - statistics & numerical data  
Healthcare Disparities - statistics & numerical data  
Humans  
Male  
Middle Aged  
Poisson Distribution  
Tooth Fractures - epidemiology - therapy  
Toothbrushing - statistics & numerical data

**Abstract:** This study aimed to analyse education-related inequality in restorative dental treatment need among adults aged 30 years and older living in Northern and Southern Finland in 2000 and 2011.

Data were taken from the Health 2000 and 2011 population-based follow-up surveys, including information gathered by interviews and clinical dental examination. Final effective sample sizes were 2423 people in 2000 and 1192 people in 2011. Restorative dental treatment need was measured with number of decayed and/or fractured teeth (DT + FrT). Education-related inequality in number of DT + FrT and factors explaining it were analysed using the Poisson regression analysis, relative index of inequality and slope index of inequality.

Average number of DT + FrT decreased from 2000 to 2011. Absolute and relative education-related inequalities in them decreased approximately 50% and 25% from 2000 to 2011, respectively. Tooth brushing frequency and time since last dental visit explained approximately 30%-40% of the education-related inequality. The contribution of time since last dental visit to the education-related inequality was smaller in 2011 than in 2000.

It seems that, from 2000 to 2011, the need for restorative dental treatment decreased simultaneously with the education-related inequality in it among adults aged 30 years and older living in Northern and Southern Finland.

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## Frequent consumption of sugar-sweetened beverages and sweets starts at early age.

<https://arctichealth.org/en/permalink/ahliterature294445>

**Author:** Marja-Liisa Laitala  
Miira M Vehkalahti  
Jorma I Virtanen

**Author Affiliation:** a Research Unit of Oral Health Sciences, Faculty of Medicine , University of Oulu , Oulu , Finland.

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**Keywords:** Age Factors  
Beverages - adverse effects  
Candy - adverse effects  
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Female  
Finland  
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Humans  
Infant  
Male  
Mothers - education  
Parents  
Surveys and Questionnaires  
Sweetening Agents - administration & dosage - adverse effects  
Toothbrushing - statistics & numerical data

Abstract: We aimed to investigate the habitual consumption of sugar-sweetened beverages (SSBs) and sweets in relation to mothers' behaviours and practices with their infants.

We targeted mothers with children 1-24 months (N=200) visiting Public Child Health clinics in Finland. During routine visits mothers (N=179) volunteered to complete a self-administered anonymous questionnaire about their child's health-related behaviours (consumption of sweets and SSBs, tooth brushing frequency). The questionnaires also included questions about the mothers' background (age, education) and health-related behaviours (consumption of sweets, tooth brushing frequency and smoking habits). The children were categorised by age, and Chi-squared tests, Fischer's exact test, ANOVA and correlation coefficient served for the statistical analyses.

Of those under 6 months, almost half (44%) received SSBs, and 45% of them more than once a week. Their use gradually increased by age such that by 19-24 months, all received SSBs at least sometimes, and 56%, frequently. Fewer than half of the mothers (33-43%) gave sweets to their children between the ages of 10-15 months, but 92% by the age of 2 years. Children's twice-a-day tooth brushing increased from 14% to 33%. The child's age and tooth brushing frequency correlated with the consumption of sugar-sweetened products ( $r=0.458$ ).

Infants frequent consumption of sugar-sweetened products begins early in childhood. Thus, tackling these common risk factors in the first years of life is essential and calls for health-promoting actions in multiple areas that target primarily the parents of infants.

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## Identification of caries risk in 2-year-olds.

<https://arctichealth.org/en/permalink/ahliterature299926>

Author: Tove Irene Wigen  
Christine Sophie Baumgartner  
Nina Johanne Wang

Author Affiliation: Department of Paediatric Dentistry and Behavioural Science, Institute of Clinical Dentistry, University of Oslo, Oslo, Norway.

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Dental Plaque Index  
Health Behavior  
Humans  
Infant  
Male  
Norway - epidemiology  
Oral Health  
Risk factors  
Surveys and Questionnaires  
Toothbrushing - statistics & numerical data

Abstract: The first aim was to describe presence of plaque, caries and oral health behaviours in 2-year-old children. The second aim was to measure increments in caries experience from 2 to 5 years of age and to study whether national background, visible plaque, caries and oral health behaviour at 2 years of age were associated with increments in caries experience.

The study population consisted of 392 children, of whom 211 were monitored from 2 to 5 years of age. At age 2 years, parents completed a questionnaire about family background and oral health behaviour. The presence of plaque and caries at tooth level was obtained from dental records. Data were tested with chi-square statistics and Mann-Whitney U test. Negative binomial regression analysis was conducted to explore the association between caries increment between 2 and 5 years of age and national background, visible plaque, caries and oral health behaviour at 2 years of age.

Caries was found in 4.6% of 2-year-olds, and 4.6% had visible plaque. More than half of these children (57.9%) brushed twice daily, toothbrushing was introduced when the child was 7 months or older in 61.0% of the children, and 15.6% consumed sugary snacks daily. Non-Western children more often had caries, visible plaque and unfavourable oral health behaviour than Western children (P

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## Impact of biannual treatment with fluoride varnish on tooth-surface-level caries progression in children aged 1-3 years.

<https://arctichealth.org/en/permalink/ahliterature293068>

Author: Maria Anderson  
Göran Dahllöf  
Fernanda Cunha Soares  
Margaret Grindefjord

Author Affiliation: Department of Dental Medicine (DENTMED), OF, Division 6, Pedodontics, Box 4064, 141 04, Huddinge, Sweden;  
Pediatric Dentistry, Public Dental Service, Eastman Institute, Dalagatan 11, SE-11324, Stockholm, Sweden.  
Electronic address: maria.anderson@ki.se.

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Child, Preschool  
Dental Caries - epidemiology - prevention & control  
Female  
Fluorides - therapeutic use  
Fluorides, Topical - therapeutic use  
Humans  
Incisor  
Infant  
Longitudinal Studies  
Male  
Maxilla  
Molar  
Oral Health  
Paint  
Sweden  
Time Factors  
Tooth, Deciduous  
Toothbrushing  
Toothpastes - therapeutic use

Abstract: This study describes caries progression at tooth-surface level in children from 1 to 3 years of age and the impact of biannual treatment with fluoride varnish.

Children who participated in a cluster-randomized controlled trial and had shown signs of dental caries were included in this study (n=801). International Caries Detection and Assessment System (ICDAS) was used to classify dental caries. The present study compared children receiving a standard yearly intervention to children receiving the same standard preventive intervention supplemented with an application of fluoride varnish every half year.

The maxillary incisors were the first teeth to develop cavitation (ICDAS 3-6) and also mostly affected. Further analyses focusing on maxillary incisors buccal surfaces showed that sound surfaces had least progression and that progression to extensive decay was more common in teeth that had exhibited moderate decay. A summarizing progression index (PI) was calculated for the buccal surfaces of the maxillary incisors. Between 1 and 2 years of age PI was 26% and between 2 and 3 years of age PI was 21%. The progression on buccal incisors and on occlusal first primary molars did not differ between intervention groups ( $p=0,05$ ).

No impact on caries progression for biannual treatment with fluoride varnish was found.

Using fluoride varnish as a complement to standard intervention in toddlers did not add in the prevention of dental caries or its progression. The education of parents in the use fluoride toothpaste as they start brushing the teeth of their children is essential.

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## Is caries equally distributed in adults? A population-based cross-sectional study in Norway - the TOHNN-study.

<https://arctichealth.org/en/permalink/ahliterature291448>

Author: Nils Oscarson  
Ivar Espelid  
Birgitta Jönsson

Author Affiliation: a The Public Dental Health Service Competence Centre of Northern Norway , Tromsø , Norway.

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Dental Care - statistics & numerical data  
Dental Caries - epidemiology  
Dental Health Surveys - statistics & numerical data  
Female  
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Male  
Middle Aged  
Norway  
Oral Health - statistics & numerical data  
Prevalence  
Toothbrushing - statistics & numerical data

Abstract: The aim of the study was to examine the prevalence and distribution of dental caries in an adult population and identify factors associated with being caries free.

Data were collected from a randomized population sample in Northern Norway (N=1932; 988 women; mean age 47.0 years, SD 15.3). The study included a structured questionnaire and a clinical examination. The sum of enamel and dentine caries, DS1-5, formed the main outcome measures for caries prevalence.

Mean DMFT was 15.1 (95% CI 14.8, 15.4), mean DFT was 12.0 (CI 11.7, 12.2), and mean DT was 1.1 (CI 1.0, 1.2). The mean value for dentine caries (DS3-5) was 0.8 (CI 0.7, 0.9), and mean DS1-5 was 3.8 (CI 3.6, 4.1). Mean DS1-5 was highest in the youngest age group (mean 6.9, 95% CI 6.3, 7.6) and in rural areas (mean 5.0, CI 4.4, 5.6). The most caries-prone 20% in the youngest age group had 52% of the total number of carious lesions compared with 80% in the two oldest age groups. Tooth brushing twice daily (p=.005), drinking sugar containing soft drink (p=.029), and attending dental services every year (p?

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## Laser fluorescence in monitoring the influence of targeted tooth brushing on remineralization of initial caries lesions on newly erupted molar teeth - RCT.

<https://arctichealth.org/en/permalink/ahliterature293095>

Author: M-L Laitala  
E Jaanti  
H Vähänikkilä  
T Määttä  
H Heikka  
H Hausen  
V Anttonen

Author Affiliation: Research Unit of Oral Health Sciences, Department of Pedodontics, Cariology and Endodontology, University of Oulu, Oulu, Finland.

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Dental Caries Activity Tests  
Dentition, Permanent  
Female  
Finland  
Fluorescence  
Fluorides, Topical - therapeutic use  
Humans  
Lasers  
Male  
Molar - pathology  
Tooth Demineralization - drug therapy  
Toothbrushing

Abstract: This study aimed to monitor mineralization changes in initial caries lesions on newly erupted second molars using laser fluorescence (LF) scanning after a 1-month targeted tooth brushing intervention. Altogether, 124 13- to 14-year-old school children were invited to participate. Of those who fulfilled the clinical criteria (at least one initial lesion with LF value >10 in second molars), 51 gave their written consent to participate. Laser fluorescence values were registered at baseline and after 1-month follow-up period. All participants were individually taught targeted tooth brushing of their second molars and randomly provided tooth paste with 0 or 1500 ppm fluoride. Brushing frequency was investigated at baseline and after the follow-up. Change in LF values was compared considering the tooth, content of fluoride in the paste and brushing frequency. In lesions with LF values =30 at baseline, change in LF values demonstrated improvement. Improvement was detected especially in upper molars. In lesions with LF values >30 at baseline, improvement was least detected. Brushing frequency increased slightly during the intervention. Laser fluorescence is a simple method and useful in monitoring remineralization of incipient lesions even in weeks. Targeted tooth brushing seems to induce remineralization even in weeks. Laser fluorescence could be a valuable motivating tool in promoting patients' self-care.

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## Preventive oral health intervention among old home care clients.

<https://arctichealth.org/en/permalink/ahliterature291908>

Author: Annamari Nihtilä  
Eveliina Tuuliainen  
Kaija Komulainen  
Kirsi Autonen-Honkonen  
Irma Nykänen  
Sirpa Hartikainen  
Riitta Ahonen  
Miia Tiihonen  
Anna Liisa Suominen

Author Affiliation: Institute of Dentistry, University of Eastern Finland, Kuopio, Finland.

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Aging - psychology  
Caregivers  
Cognition  
Dental Plaque - microbiology - prevention & control  
Dental Plaque Index  
Denture Cleansers - therapeutic use  
Dentures - microbiology  
Female  
Finland  
Geriatric Assessment  
Home Care Services  
Humans  
Male  
Mouthwashes - therapeutic use  
Nurses, Community Health  
Oral Health  
Oral Hygiene - instrumentation - methods  
Quality of Life  
Risk factors  
Time Factors  
Toothbrushing  
Treatment Outcome

Abstract:

poor oral health is common among older people dependent on supportive care and it affects their quality of life. Cognitive impairment and functional dependency may increase the risk of compromised daily oral hygiene.

to investigate the effectiveness of a tailored preventive oral health intervention among home care clients aged 75 years or over.

the intervention group comprised 151 patients ( $84.4 \pm 5.6$  years) and the control group 118 patients ( $84.7 \pm 5.2$  years). An interview and a clinical examination were carried out before a tailored intervention of oral and denture hygiene. The participants in both groups were re-interviewed and re-examined after 6 months.

the intervention significantly reduced the number of plaque covered teeth and improved denture hygiene. In addition, functional ability and cognitive function were significantly associated with better oral hygiene.

the intervention had a positive effect on oral hygiene, however the number of teeth with plaque remained high, even after the intervention. Multiple approaches based on individual needs are required to improve the oral health of vulnerable older adults, including integrating dental preventive care into daily care plan carried out by home care nurses.

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## Toothbrushing behaviour and periodontal pocketing: An 11-year longitudinal study.

<https://arctichealth.org/en/permalink/ahliterature300402>

Author: Shriraksha Joshi  
Anna L Suominen  
Matti Knuuttila  
Eduardo Bernabé

Author Affiliation: Division of Population and Patient Health, King's College London Dental Institute at Guy's, King's College and St. Thomas' Hospitals, London, UK.

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Humans  
Linear Models  
Longitudinal Studies  
Male  
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Periodontal Pocket - epidemiology - prevention & control  
Prospective Studies  
Surveys and Questionnaires  
Toothbrushing - statistics & numerical data

Abstract: To explore the association between toothbrushing behaviour and change in periodontal pocketing among adults. We pooled data from 1,025 adults, aged 30-89 years, who participated in two national surveys in Finland (Health 2000 and Health 2011, BRIF8901) and reported their toothbrushing frequency. A cumulative measure of regular toothbrushing was created by counting the number of times participants reported brushing twice or more daily across the two surveys (ranging from 0 to 2). The association between toothbrushing behaviour and the number of teeth with periodontal pocket depth (PPD) =4 mm over 11 years was assessed in linear regression models adjusting for confounders.

There was a clear dose-response relationship between toothbrushing frequency (either at baseline or follow-up) and change in number of teeth with PPD = 4 mm. There was also evidence of a cumulative effect of regular toothbrushing on change in number of teeth with PPD = 4 mm. Participants who reported brushing twice or more a day in both surveys developed 1.99 (95% CI: 1.02-2.95) fewer teeth with PPD = 4 mm than those who did not report this behaviour in any survey.

This 11-year prospective study showed that toothbrushing behaviour was associated with smaller increments in the number of teeth with periodontal pocketing.

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