

On dental caries and socioeconomy in Swedish children and adolescents

Clinical and register-based studies

Akademisk avhandling

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av

Ann-Catrin André Kramer

Fakultetsopponent:

Professor Eeva Widström

Institute of Clinical Dentistry, Arctic University of Norway

Avhandlingen baseras på följande delarbeten

- I. André Kramer AC, Skeie M, Skaare A, Espelid I, Östberg AL. Caries increment in primary teeth from 3 to 6 years of age: a longitudinal study. *Eur Arch Paediatr Dent* 2014;15(3):167-173.
- II. André Kramer AC, Hakeberg M, Petzold M, Östberg AL. Demographic factors and dental health of Swedish children and adolescents. *Acta Odontol Scand* 2016;74(3):178-175.
- III. André Kramer AC, Petzold M, Hakeberg M, Östberg AL. Multiple socioeconomic factors and dental caries in Swedish children and adolescents. *Caries Res* 2018;52(1-2):42-50.
- IV. André Kramer AC, Pivodic A, Hakeberg M, Östberg AL. Multilevel analysis of dental caries in Swedish children and adolescents in relation to socioeconomic status. *Pending revision.*

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On Dental Caries and Socioeconomy in Swedish Children and Adolescents

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Ann-Catrin André Kramer

Department of Behavioral and Community Dentistry, Institute of Odontology,

The Sahlgrenska Academy, University of Gothenburg, Sweden, 2018

Abstract

The overall aim was to analyze the dental caries experience among Swedish children and adolescents and explore it with respect to demographic and socioeconomic factors. **Study I** is a longitudinal clinical study of 271 children, followed from three to six years of age (2003-6), with the aim to analyze initial and manifest caries in the primary dentition. **Studies II-IV** are cross-sectional registry studies of 300,988 children and adolescents, 3-19 years of age (2007-9). **Study II** investigated caries with reference to age, gender and geographical area. **Study III** explored the associations of individual multiple socioeconomic factors on the caries experience. **Study IV** analyzed the variability in caries experience at different area levels with respect to individual demography and socioeconomics. The results showed that young children with an early caries experience had a high risk of disease progression and initial carious lesions constituted a large share of the disease burden (**Study I**). Among 18- and 19-year-olds, only one-third had no manifest caries experience. The disease burden was highly skewed at all ages. Females had a higher risk of a caries experience than males before their teens, with a reverse pattern during the teenage years (**Study II**). Multiple socioeconomic factors had a significant association with the caries experience among children and adolescents, especially the youngest children (**Study III**). Small geographical areas explained more of the variance in caries experience compared with the more aggregated level dental clinics (**Study IV**).

In conclusion, disparities in caries experience among Swedish children and adolescents were found with a skewed distribution, within age groups, between genders, between residential areas and in relation to individual socioeconomic status. The findings may serve as a basis for allocating resources in dentistry with the goal/ambition to achieve greater equity of dental health.

Keywords: DMF indices, demography, epidemiology, gender, incidence, parents, preschool child, prevalence, residence characteristics, socioeconomic factor