

## A New Index of Tooth Wear Reproducibility and Application to a Sample of 18- to 30-Year-Old University Students

Type:

Article

Abstract:

A modified wear index, in which the wear of enamel and dentine are recorded separately, is described. The index was applied to estimating the prevalence and extent of tooth wear in a single convenience sample of 18- to 30-year-old students attending a university in London. The subjects were examined under good lighting in a dental chair away from a dental school. A total of 707 females and 303 males were recruited with a mean age of 21.9 years (standard deviation = 0.1, range = 18-30) and examined by 3 trained and calibrated examiners. Intra-examiner intra-class correlation coefficients showed a range of 0.44-0.88. The unweighted kappa scores were above 0.88 for enamel and dentine. The presence of enamel wear was common to all subjects, but 6.1% of the participants had more than one third of the tooth surface affected. Dentine was exposed on 5.3% of all surfaces, with the largest proportion accounting for less than 10% of the tooth surface (grade 1). The proportion of subjects with at least 1 surface with dentine exposed was 76.9% of the total population. The males had significantly more wear in dentine than the females ( $p = 0.001$ ). The inter-examiner intra-class correlation coefficients for enamel and dentine were 0.87 and 0.92, respectively. The reproducibility of the index was comparable to other analyses and provides an opportunity to assess the prevalence of enamel wear in large population-based studies. Copyright (C) 2009 S. Karger AG, Basel

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