

Factors Associated with ECC in WIC-Enrolled Children Aged 12-36 Months

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Purpose

Early childhood caries (ECC) is a chronic disease that remains highly prevalent in low-income children. This study evaluated risk factors associated with non-cavitated and/or cavitated lesions among children aged 12-36 months enrolled in the University of Iowa's Infant Oral Health Program (IOHP) located at a local WIC clinic.

Methods

Data from the first IOHP visit of 1,491 children seen between July 1998 and August 2018 consisted of demographic, reported oral hygiene practices, feeding/dietary habits, and clinical variables were reviewed for a cross-sectional study. Simple and multivariable logistic regression analyses were conducted ($\alpha=0.05$).

Results

Children (51% female, 72% non-Caucasian) were aged 20.6 ± 6.9 months with 13.5 ± 5 teeth. One-hundred and eighty-seven children had non-cavitated and/or cavitated lesions (ECC Group), while 1,304 were caries free (Caries-Free Group). Compared to the Caries-Free Group, univariate logistic regression analysis showed that subjects in the ECC Group were more likely not to have their teeth brushed daily (OR=1.07; $P=.012$), have cariogenic snacks more than twice daily (OR=1.62; $P=.012$), and have inadequate fluoride (OR=1.68; $P=.01$). After adjusting for number of teeth, multivariable logistic regression analysis showed that subjects in the ECC Group were more likely to have visible plaque on maxillary incisors (OR=4.09; $P<.001$), cariogenic beverages more than twice daily (OR=2.01; $P<.001$), parents with language barrier (OR=1.56; $P=.023$), as well as be bottlefed when having problems falling asleep (OR=1.70; $P=.034$) and be breastfed to sleep (OR=1.54; $P=.022$).

Conclusions

ECC associated risk factors among young WIC-enrolled children included factors from multiple domains related to the child and caregiver.