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Program and Abstracts

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## ASSOCIATION BETWEEN NUTRITIONAL STATUS AND EARLY CHILDHOOD CARIES IN CHILDREN AGED 4-5 YEARS

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**Background:** Early childhood caries (ECC) is one of the most common communicable, and chronic oral health issues among children. Malnutrition of children is suspected to be a triggering factor for severe ECC (S-ECC) and vice versa.

**Objectives:** This study aims to investigate this bidirectional association between nutritional status and ECC using 4 to 5-year-old 545 children attending the Dental Teaching Hospital, University of Peradeniya, Sri Lanka.

**Methods:** After obtaining consent from the children's parents, oral examination and interviews were conducted and anthropometric measurements were taken. Binary and multinomial logistic regression analyses were applied to investigate the effects of independent variables on nutritional status and ECC status.

**Results:** The decayed, extracted, filled surfaces index and consumption of bakery items, ice cream, and tea with sugar were significant and positively correlated ( $P < 0.05$ ) with poor nutritional status (Body Mass Index (BMI)-for-age Z-score  $< -2$ ). Higher maternal education and birth weight had a protective effect on poor nutritional status among children ( $P < 0.05$ ). Weight-for-age and BMI-for-age, maternal education showed a significant negative correlation with the S-ECC status of children ( $P < 0.05$ ). Consumption of bakery items, sugary spreaders, sugary soft drinks, biscuits/cookies, ice cream, chocolate, other sweets, and tea with sugar showed a significant positive association ( $P < 0.05$ ) with the prevalence of S-ECC, as shown by odds ratios of  $> 1.000$ . In contrast to that, the consumption of fish and green leafy vegetables lowered the risk of having S-ECC occurrence ( $P < 0.05$ ).

**Conclusions:** S-ECC is a potential risk factor for poor nutritional status while poor nutritional status is a potential risk factor for S-ECC among children.

**Keywords:** Early childhood caries, BMI, weight-for-age, deft index