

## ASSESSING THE RELATIONSHIP BETWEEN HEI INDEX AND EARLY CHILDHOOD CARIES

ENIDA PETRO, ERGYSEJDA HOXHA, MANOLA KELMENDI,  
DIANA BROVINA

### Abstract

**Introduction:** Early Childhood Caries (ECC) is a form of dental caries occurring in the primary dentition of young children and includes noncavitated lesions as well as cavitated lesions. ECC is commonly associated with incorrect feeding habits such as putting a child to bed with a bottle, bottle feeding with sweetened beverages and prolonged breastfeeding. Eating habits and diets used by children from the first year of life are also risk factors for development of Early Childhood Caries. The Healthy Eating Index (HEI) is one index of overall diet quality based on the food pyramid. The HEI is used to assess adequacy, moderation, and diversity of food choices. HEI is used for the first time in this study. It was not known in our pediatric dentistry literature and not used in any other study before.

**The aim:** This study assess the relationship between dietary quality measured by the Healthy Eating Index (HEI) and Early Childhood Caries (ECC), in children 3-5 years old in Tirana, Albania.

**Materials & Methods:** This study was carried out in University Dental Clinic and in 4 private dental offices for a period of 2 years. A total of 120 preschool-children, aged 3-5 years were selected for this study and divided in two equal groups. The criterion for selection was the presence of ECC for the first children group and non ECC children were selected in the second group. ECC evaluation

was made by clinical examination as defined by the American Academy of Pediatric Dentistry. Evaluation of feeding habits and measurement of HEI was realized by analyzing the information taken from parents about infant feeding habits and the daily diet that their children consume after the first birthday.

**Results:** The study found that HEI values were lower in children affected by ECC in comparison with non ECC children.

**Conclusion:** The method of nutrition and dietary habits are closely related to the spread and development of Early Childhood Caries. HEI is an indicator that reflects the quality of the diet used by children. Based on our study low values of this indicator are associated with the presence of ECC, so the diet and eating habits of infants need to be improved.

**Key words:** *Early Childhood Caries; Healthy Eating Index; dietary habits.*

### Introduction

Early Childhood Caries (ECC) is a form of dental caries occurring in the primary dentition of young children and includes non-cavitated lesions as well as cavitated lesions (1,2). ECC is commonly associated with incorrect feeding habits such as putting a child to bed with a bottle, bottle feeding with sweetened beverages, and prolonged breastfeeding (3,4). It is well known that certain feeding practices, such as bedtime bottle feeding, prolonged breast feeding, frequent intake of sugary snacks and drinks contribute to the development of ECC (14). Even though prolonged baby bottle use seems