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ABSTRACT

Behavioral and Social Determinants of Early Childhood Caries among Palestinian Preschoolers in Jerusalem area: A Cross-sectional Study

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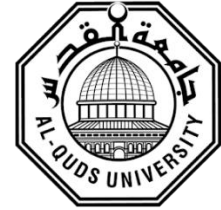
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Background: Early Childhood Caries (ECC) is a public health problem that is influenced by biological, behavioural, psychosocial, and economic determinants predisposed by children's environment.

Objectives: This study came to determine the prevalence of ECC among 4–5 year-old preschoolers in the Jerusalem Governorate and to describe the influence of behavioral and social determinants on the development of ECC in the population under study.

Methods: This is a cross-sectional study that was carried out between June 2019 and January 2020 in the Jerusalem Governorate of the Occupied Palestinian Territories (oPt). Four preschools that are located in the main four geographic areas of the Jerusalem governate outside the Separating Wall (North, Northeast, East and Southeast) and had the highest numbers of children enrolled in the academic years 2019/2020 and 2020/2021 were selected to be included in the study. All children aged four and five years old in the selected schools were screened for ECC using the



decayed, missing, and filled teeth index (deft), and plaque accumulation was quantified by the Plaque Index (PI). Data on children's feeding and oral hygiene practices, demographic characteristics, access to dental care and socio-psychological factors were collected by a validated questionnaire sent to the children's main caregivers. Descriptive statistics were generated to describe the oral health status of this sample and bivariable and multi variable analysis were used to explain the influence of different behavioral and social determinants on the prevalence of the ECC.

Results: Our final sample included 481 preschoolers who completed the questionnaire and the clinical screening. Ninety-seven percent (n=447) had experienced dental decay, with an average deft score of 6.6 ± 4.3 , which places this sample in the high caries experience category according to the World Health Organization rank of deft scores. The final linear regression model explained 29% of the variation in the deft scores. The following variables were statistically significant in the final model: "recent visit to the dentist", $\beta = -3.96$, $p < .000$, reason for the recent dental visit, $\beta = 1.98$, $p = .002$, father's irregular job, $\beta = 2.5$, $p < .000$ and Caregiver's Locus of Control, $\beta = -2.09$, $p < .000$

Conclusion: Preschoolers in the study sample suffered from extremely high dental caries. Although infant feeding habits, current diet habits, and oral hygiene practices are important factors in explaining the high level of the disease, other socio-economic determinants of health such as access to dental care, father's current employment status, and caregivers' Locus of Control were detrimental influencers in the ECC burden. Addressing behavioral and biological factors in the attempts to prevent ECC is inadequate. Policies and interventions related to socioeconomic determinants of health need to be included in any program designed to alleviate the high burden of ECC.

Research Keywords: Dental caries, Preschoolers, Social Determinants, Oral health.