

Dental caries experience and related factors among a clustered random sample of students in occupied Palestinian territory: a cross-sectional study

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Abstract

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Background Dental caries is still the most prevalent chronic disease worldwide. In the occupied Palestinian territory, data about oral health status and its determinants are scarce. This study aimed to assess the prevalence of dental caries and associated factors among schoolchildren in a random sample of marginalised schools in the West Bank.

Methods Marginalised schools (according to the School Support Program [SPP] criteria) were stratified by district, gender, and grade level to select a random sample of 20 schools. Students in the sixth and ninth grades were interviewed by senior dental students about their oral hygiene and diet habits. Students' weight, height, gingival health, and dental caries experience were assessed. Senior dental students were trained and calibrated to carry out the interviews and the examinations. Parental informed consents were collected by school administrative staff. Ethics approval for the study was obtained from the Al-Quds University Scientific Research Ethics Committee.

Findings In total, 1282 students completed the interviews and the clinical screening. The mean decayed, missing and filled teeth (DMFT) index was 6.4 (SD 4.4). According to the WHO dental caries experience classification, 49% (309 of 623) of the sixth grade students and 74% (484 of 658) of the ninth grade students fell in the high and very high categories. The mother's level of education and recent visit to the dentist correlated negatively with DMFT score ($\rho=-0.06$, $p=0.029$; $\rho=-0.063$, $p=0.024$). BMI was correlated positively with DMFT ($r=0.092$, $p=0.001$). Drinking milk and fresh juices was related to lower DMFT scores ($r=-0.077$, $p=0.006$ and $r=-0.072$, $p=0.010$). In the final model, grade ($\beta=0.314$, $p<0.0001$), gender ($\beta=0.058$, $p=0.034$), recent visit to the dentist ($\beta=-0.059$, $p=0.029$) and drinking fresh juices ($\beta=-0.054$, $p=0.047$) were significant factors in explaining the high level of dental caries in this sample.

Interpretation Students in the marginalised schools of the West Bank have high DMFT scores that indicate high prevalence of dental caries. Access to dental care and bad oral health habits are associated with high disease prevalence. Interventions to improve access to care and increase awareness about healthy diet and hygiene habits are crucial to alleviate the burden of oral disease in this population.

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Contributors

EK designed the study, collected and analysed data, and drafted the Abstract. AH contributed to data collection and data entry. MH contributed to the study design. FM contributed to the study design and data collection. All authors have seen and approved the final version of the Abstract for publication.

Declaration of interests

We declare no competing interests.

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