

DETERMINATION, IN KAMYARAN CITY, IRAN, OF THE DRINKING WATER FLUORIDE CONTENT AND THE dmft and DMFT INDICES IN ELEMENTARY AND JUNIOR SCHOOL STUDENTS

A Maleki,^a B Mansouri,^a Z Rezaei,^b M Ali-Hossaeni,^c N Azadi,^d MA Pourdel,^a H Elhami,^b
S-G Fakhrolkonaini,^b S Sharifzadeh,^b R Hoseini,^b B Davari^a
Sanandaj, Iran

SUMMARY: Oral health and dental caries are among of the most important aspects of individual health and collecting prevalence data is necessary to determine a community's oral health status. The aims of this 2014 study were to determine, in Kamyaran city, Iran: (i) the fluoride content in the drinking water and (ii) the status of the dmft and DMFT indices in the elementary and junior school students. The fluoride concentrations were detected by the Ion Chromatography (IC) method. The oral health status data, including the dmft and DMFT indices, were collected, in a descriptive cross-sectional study, on 217 students aged 6 to 14 years old, through an interview and a dental clinical examination using a disposable dental explorer, a dental mirror, and a flash light. Data were analyzed by T-test using SPSS software. The results showed the concentration of fluoride in the city drinking water was 0.2 mg/L. The mean dmft indices in the elementary students for boys and girls were 4.76 and 6.20, respectively. The mean DMFT indices in the junior students for boys and girls were 5.40 and 7.95, respectively. Moreover, significant inverse relationships were present between the amount of brushing and the dmft and DMFT indices in the elementary and junior students ($p < 0.05$). The dmft and DMFT indices among the elementary and junior school students in Kamyaran city were higher than the WHO standards and those in some other areas. To improve the current situation, proper planning is essential, including more attention to educating families about tooth brushing and oral health.

Key words: Dental caries; dmft; DMFT; Drinking water; Fluoride; Kamyaran city, Iran; Tooth brushing.

^aKurdistan Environmental Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran; ^bSchool of Health, Kurdistan University of Medical Sciences, Sanandaj, Iran; ^cSchool of Dentistry, Kurdistan University of Medical Sciences, Sanandaj, Iran; ^dSchool of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran. For correspondence: A Maleki, Kurdistan Environmental Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran. E-mail: maleki43@yahoo.com