AN ABSTRACT OF THE THESIS OF

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   Major: Epidemiology

Title: Assessment of dental decays and oral hygiene in elementary school children in Beirut: a comparison between private and public schools.

Objective: To assess the decays and oral hygiene status in a sample of 6-11 years elementary school children in Beirut in terms of prevalence and associated factors.

Methods: A comparative cross-sectional study of elementary school children aged from 6-11 years old, grades 2 to 5, in public and private schools in Beirut-Lebanon. The units of observation were both the child and the parents. The final study sample included 655 children from 2 public and 5 private schools in Beirut. The data were collected from 2 main sources: a dental screening of the children where the DMFT (Decayed, Missing, Filled Teeth) and plaque indices were recorded and a questionnaire completed by the parents. This survey addressed 5 sections including socio-demographic background, health status, oral hygiene habits and nutritional habits, to assess potential risk factors that could be associated with oral health. Descriptive analysis, bivariate and multivariable analyses were conducted to detect differences between schools and to test for associations between risk factors and DMFT and plaque indices.

Results: The mean DMFT was 7.50±3.98 in public school children compared to 3.50±3.41 in private school participants (p≤ 0.0001). The mean plaque index was also higher in public schools, the difference being statistically significant with private schools (p≤ 0.0001). Similarly, the educational level of the parents and the monthly family income were lower in public schools compared to private schools (p≤ 0.0001). Feeding mode, maternal smoking during pregnancy were also found to be statistically significantly different between school groups. The frequency of teeth brushing was remarkably higher in private schools, whereas the frequency of sweets and soda consumptions scored higher in public schools. The bivariate analysis showed that children from low socio-economic and educational backgrounds have greater DMFT and plaque indices compared to those of higher socio-economic and educational backgrounds who had higher frequency of teeth brushing and lower frequency of soda and sweets. The multivariable analysis showed that the oral health perception, the feeding mode and the school type were associated with the DMFT index whereby a bad oral health perception is correlation with a higher DMFT and bottle-feeding with a lower DMFT compared to breast-feeding. The plaque index was found to be associated with the oral health perception, a higher index being linked with bad oral health perception compared to a good one.
Conclusion: The DMFT score in Lebanon is high, particularly in public schools, when compared to Europe and the United States. The rather alarming number, urge early detection and early interventions to prevent further complications and their effect on oral health. Of recognized major impact would be the development of educational programs to increase awareness about oral health issues that are not followed by Lebanese children in mid-childhood, especially the disadvantaged ones and thus to decrease the prevalence of dental decays. Also, parents of limited means should be informed of the availability of clinics that provide low-cost services for dental health. Finally, more research is needed to encompass epidemiologic studies of a wider scope of children at various ages, and ultimately gauge potential implementation of third party assistance in treatment costs as part of an overhaul of public health policies regarding oral health.