عنوان مقاله:

Effective factors on the number of decayed and filled teeth using the Conway-Maxwell-Poisson count model

محل انتشار:

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

BACKGROUND AND AIM : Recognizing the factors affecting the number of decayed and filled teethhas a major role in oral health. Dental data usually suffer from over-dispersion and excess zero frequencies. The purpose of this study was to use theConway-Maxwell-Poisson (COM-Poisson) model to determine some of the factors affecting the number of decayed and filled teeth. METHODS : In this cross-sectional study, a sample of ۱۰۰۰ people from a cohort study in Shahrekord City, Iran, aged ۳۵-۷۰ years, was selected through systematic sampling. The data were analyzed using the Bayesian approach through Markov chain Monte Carlo (MCMC) simulation by OpenBUGS. Zero-inflated Poisson (ZIP), COM-Poisson model, and zero-inflated Com-Poisson (ZICMP) model were fitted on the data and compared using the deviance information criterion (DIC). RESULTS : The mean numbers of decayed and filled teeth were ۰.۷۷ ± ۱.۶۳ and ۴.۳۷ ± ۴.۶۲, respectively. The Com-Poisson and ZICMP showed to be better fit for the number of decayed and filled teeth, respectively. Those people who were younger, male, smokers, diabetics, did not floss, and did not use mouthwash had significantly more number of decayed teeth (P < ۰.۰۵). Those people who were younger, female, non-diabetics, non-smokers, employed, literate, had less body mass index (BMI), flossed, and got higher score of quality of life had significantly more number of filled teeth (P < ۰.۰۵). CONCLUSION : By controlling such factors as education, BMI, flossing, using mouthwash, smoking, diabetes, and quality of life, we could improve the oral health.

کلمات کلیدی:

Bayes' Theorem, Conway-Maxwell-Poisson Distribution, Decayed, Missing, and Filled Teeth, Zero-inflated

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