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Caries Differences Among Sub-Saharan Africans

Abstract:

Teeth are vital for interpreting ancient lifestyles because of their high preservation potential and direct association with food. Understanding dental pathologies, such as dental caries (cavities), can provide valuable information regarding diet and health. The objective of the present study is to compare caries counts among sub-Saharan African populations to determine if any significant differences exist through space, time, economy, and between the sexes. A few small scale dental pathology studies have been done for specific populations and regions, but until now, none have considered the entirety of sub-Saharan Africa from the Late Stone Age through modern times. Data on caries counts and severity from 1963 individuals comprising 44 sub-Saharan samples are compared using Mann-Whitney U and Factorial ANOVA statistics. Results suggest: 1) major changes in diet related to widespread movement of people caused a general increase in caries, 2) there is no statistically significant difference in the frequency of caries between males and females, 3) people living in the savanna have more caries because of their dependence on high carbohydrate foods, and 4) subsistence strategy plays a role in caries frequencies. These findings reveal that global trends in caries susceptibility do not always apply and that each population should be considered in turn.