

# Anterior tooth relations in Kenyan Africans

## Abstract:

Dental plaster casts of 235 Maasai, 116 Kikuyu and 61 Kalenjin children aged 3-16 yr were studied to determine the incidence and magnitude of diastemas, overbite, overjet and anterior open bite. The highest prevalence of diastema was amongst the Maasai (61.3%), of overbite (84%) and overjet (99%) amongst the Kikuyu, and of anterior open bite amongst Kalenjin (24%), with values greater than 0.4 mm up to 11.5 mm. Comparison of the mean values showed that diastema (1.77 mm) and overjet (4.4 mm) were greatest in Maasai, overbite (3.53 mm) in Kalenjin, and anterior open bite (3.50 mm) in Kikuyu. In the total sample, the prevalence and mean of diastema were 49%, 1.68 mm; of overbite 77.4%, 2.96 mm; of overjet 88.6%, 3.83 mm; and of anterior open bite 16.5%, 2.69 mm (with values between 0.4-11.5 mm), while 5.5% had an edge-to-edge bite (-0.5-0.5 mm). The prevalence of diastema decreased whilst its magnitude increased with age. The mean values of overbite and overjet increased, while those for anterior open bite decreased with age. The mean values of diastema, overbite and overjet were greater amongst the females, but the difference was significant only for overjet. The high prevalence and greater values of measurements of anterior tooth relations may be related to variable growth of the bimaxillary dentoalveolar complex and soft tissue influences. This may be important in orthodontic treatment planning, dental prostheses and other clinical dental treatments in Kenyan populations.