Title: Significance of temporal changes on sexual dimorphism of cranial measurements of Indian population

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Revision of discriminant function formulae has always been advocated by anthropologist to take into account the changing pattern of sexual dimorphism due to temporal/secular changes. The present study aims to track temporal changes in cranial measurements of temporally distinct North Indian population and providing updated sex discriminating formulae. A total of 483 adult (20-65yrs) crania representing contemporary and sub sub-recent populations collected from two medical colleges in North India. A total of 11 variables were measured to observe the changes in cranial dimension over time. Analysis of data demonstrated significant sexual and population (contemporary vs sub-recent sample) variations over time. The contemporary males and females exhibited larger cranial dimensions but it expressed less dimorphism than their predecessors. A trend toward brachycephalization was also observed in contemporary females. Maximum cranial length (84%) and biauricular breadth (79%) represent the most dimorphic variables for contemporary and sub-recent sample, respectively. The possible causes of such variations are discussed.

Key Words: Forensic Anthropology Population Data, Temporal changes, Cranial measurements, Discriminant function analysis, Sexual Dimorphism