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Correlation between breadth of the footprint and the human stature, in Tamil Nadu population

Abstract

Stature estimation is a fundamental aspect of forensic Science, particularly in cases where only Footprint are available for analysis. While foot length has been widely studied, Breadth of the footprint is an equally valuable but less frequently explored parameter for height prediction. This study investigates the relationship between Breadth of the footprint and stature in the Tamil Nadu population to establish its forensic applicability. Adult male and female participants, with stature measured using a stadiometer and Breadth of the footprint recorded at the widest part of the foot.

Previous studies have demonstrated that Breadth of the footprint can serve as a reliable supplementary marker for stature estimation. Regression models specific to the Tamil Nadu population will be developed to determine predictive equations for estimating height from Breadth of the footprint. It is anticipated that a statistically significant positive correlation will be observed, indicating that individuals with greater Breadth of the footprint tend to have proportionally higher stature.

The outcome of this study is validated that Breadth of the footprint as an independent parameter for stature estimation. By generating population-specific data, this research will strengthen the forensic database and enhance the accuracy of human identification methods in South Indian contexts.

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