Sex determination using discriminant analysis of hand dimensions among adult population in Ghana.

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Objectives
The study aimed at using discriminant analysis in the determination of sex from hand dimensions. It specifically, determined the hand dimensions of both male and female participants. The hand index was also estimated as well as derived an equation for the determination of the sex.

Methods
A sample of 150 participants made up of 79 females and 71 males aged between 18 and 90 years were recruited. The hand length and breadth of both hands of each participant were measured. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 20 for Windows.

Results
There was significantly different between male and female heights and hand dimensions. The male participants have higher hand dimensions than the female participants. The mean right hand length was 17.5± 1.17 cm (females) and 19.1 ± 1.38cm (males) while the left hand length was 17.7± 1.18cm (females) and 19.0 ± 1.38 cm (males). The predominant hand type among the participants was mesocheri. The accuracy of sex determination using the formula derived was 74.0%.

Conclusion
Hand dimensions are smaller in females as compared to the male participants. The predominant palmer type was the mesocheri and demonstrated high accuracy for the determination of sex. This serves as a preliminary study and further study in larger sample size would be helpful in sex discrimination among Ghanaians.