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ESTIMATIVE OF THE SEX IN SKULLS USING PHYSICAL ANTHROPOLOGY AND DNA

Rogerio Nogueira Oliveira*, Suzana PM Carvalho, Liz M Brito, Lucilene AR Bicudo, Michel E Crosato, LuizASPaiva

**University of São Paulo, Faculty of Dentistry, Department Social Dentistry. Brazil*

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The investigation of the sex is one of the most important analyzes in the human identification. This study aimed to determine the sex in human skulls using three methodologies of Physical Anthropology, two quantitative (Forensic Data Anthropology Bank, FDB, 1986 e Oliveira, 1995) and one qualitative (Walker, 2008) and genetic analysis by amelogenin. The sample was composed by 66 skulls (34 men and 32 women) from the Center for Study and Research in Forensic Science, Guarulhos, SP. The methodologies were applied by two researchers who were unaware of the cranium's sexes. For the statistical analysis, there were performed descriptive analysis, average, standard deviation, linear discriminant analysis and logistic and logistic regression. The quantitative methodology presented an accuracy of 89.52%. The FBD method had an accuracy of 92.31%, with the development of a mathematical model using the measures Bizygomatic breadth, Nasal heigh, which showed the biggest dimorphism between the sexes, and Basion-bregma height and Maximum Cranial Length. The Oliveira's et al. (1995) methodology required adjustment for the studied population (new formula with an accuracy of 76.47% in men and 78.13% in women). For the DNA, it was possible to determine the sex in 86.15% of the sample. The different methodologies behaved similarly and with high accuracy in sex determination. Physical anthropology has the advantages of being easy to use, reliability and low cost, but needs population adjustments. The DNA is more complex, requires specific reagents and structure and may have interference from environmental condition, however, does not need to be adjusted to the population.

***KEYWORDS*:** Forensic Anthropology, Gender estimation, DNA