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Assessing Intraobserver and Interobserver Error in Osteometric Analysis of Skeletal Remains.

The purpose of this research was to analyze intraobserver and interobserver error in osteometric analysis of skeletal remains. Intraobserver error is the difference between interpretations of an individual making observations of the same phenomenon at different times. Interobserver error is a difference occurring between at least two individuals preforming the same task. In a clinical setting, interobserver reliability is the degree of agreement between two or more independent observers. Osteometric measurements are important when determining sex, age, and ancestry of a skeleton and error could skew results. Once skeletal remains are repatriated the only data left would be the osteometric analysis. In this study four observers with different levels of osteological training conducted osteometric analyses on three different skeletal remains. Three observers were forensic science majors with one semester of extensive osteological training while the other was an exercise science major with two years of osteological research and advanced musculoskeletal training. All observers collected data using The Standards for Data Collection from Human Skeletal Remains. The data was collected over multiple days of observation for each observer and was analyzed using ANOVA. Preliminary results showed intraobserver error was not significant for each single individual's results on one set of remains. Interobserver error however was significant when data from the same set of remains was compared against two different observer's measurements.