



Physical Anthropology Section – 2007

H13 The Difference Between an Individual's Self-Reported, Perceived, and Actual Height and Its Forensic Significance

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After attending this presentation, attendees will understand patterns of reporting error in self-reported height, discrepancies between the ways that others perceive an individual's height, and factors that may influence these discrepancies such as diurnal variation in a person's height and how these differences may affect the positive identification of an unknown, deceased individual.

This presentation will impact the forensic community and/or humanity by providing insight into the variability between an individual's estimated stature when it is reported via different means. Using the different methods discussed in this approach may furnish investigators with a very large range for an individual's stature which could preclude a positive identification from being made.

The role of the anthropologist in death investigations has ranged from the recovery to the analysis of human remains from single cases of homicide to mass fatality incidents in all corners of the world. In many cases, the forensic anthropologist is given the task of comparing antemortem (AM) records with postmortem (PM) information. The most common characteristics usually compared include basic attributes of the biological profile of the deceased, such as age, sex, and stature. The usefulness of these attributes for identification purposes relies on the existence of AM records for comparison purposes. It has long been noted that records do not accurately reflect an individual's height because of the difference between self-reported and actual measured height (Schlichting *et al.*, 1981; Himes and Roche, 1982; Palta *et al.*, 1982; Stewart, 1982; Boldsen *et al.*, 1986; Giles and Hutchinson, 1991; Willey and Falsetti, 1991). Furthermore, how biased is an estimation of that individual's stature by others, taking into account the demographics of that population?

The sample consists of Caucasian volunteers between the ages of 18 and 45 (n=63). A wall-mounted stadiometer was calibrated and stature was measured to the nearest one-tenth of a centimeter. Volunteers arrived in groups of five and were asked to silently estimate their own height and the height of the other volunteers in the group, recording these values in the corresponding spaces on their data collection sheets. After the data sheets were collected, their standing height was measured three times per volunteer. Volunteers returned between five and eight hours later and were measured three more times. Diurnal variation, the differences between self-reported, perceived and actual height, and the range of perceived heights were calculated.

The researcher's objectives are to discover if there are any patterns and/or relationships between sex and self-reported height, how an individual's height is perceived, and the variability of actual height at both times it was measured during the day. Also, determining if an individual's height has any affect on the accuracy of how they perceive another's height will be useful when family members and friends are called upon to provide information about an individual, which frequently happens in contexts outside the developed world, when documents of the deceased are nonexistent more often than not.

When a positive identification for a deceased individual is sought, AM medical records may be one of the primary sources for providing information. Measured stature may be available from this source, although information may not be up-to-date. If medical records are not available, other forms of identification, such as a driver's license, may be used for comparison, which would supply investigators with a self-reported stature estimation. In some cases, family and friends will be asked to provide information about the deceased, although they may have different perceptions of an individual's stature. These three sources of information may generate a very large range for an individual's purported stature, which could preclude a positive identification.

Unidentified, Stature, Self-Reported