

A39 Integrating the Biocultural Profile Into the Identification Process at the Louisiana State University Forensic Anthropology and Computer Enhancement Services (LSU FACES) Laboratory

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Learning Overview: After attending this presentation, attendees will understand the effective role of the biocultural profile in the process of identification for unidentified human remains at the LSU FACES laboratory.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an overview of methods and the benefits of incorporating a biocultural profile in forensic anthropology case reports.

Forensic anthropologists assess the biological profile, including estimations of age, sex, and ancestry, to assist with the identification of unidentified human remains. However, the biological profile provides a limited representation of an individual's identity and may hinder the process of identification where social identity does not align with phenotypic expression (e.g., gender versus sex, race versus ancestry). By expanding the biological profile to include information that can be socially and culturally contextualized, the possibility of identification is increased.^{1,2} The biocultural profile is used by forensic anthropologists at the LSU FACES laboratory to represent the integration of cultural, socioeconomic, and geographical information with biological assessments to assist with the process of identification. Case reports at the LSU FACES laboratory that utilize biocultural information render a more comprehensive profile capable of facilitating recognition for an otherwise abstract, biological description of unidentified remains. For long-term unidentified cases, the biocultural profile adds the potential for points of congruity between biocultural information in case reports and biographical information from missing persons profiles in the Louisiana Repository for Unidentified and Missing Persons Information Program (a database administered by the LSU FACES laboratory). Ultimately, the biocultural profile provides additional information associated with an individual and, thus, increases the possibility of profile recognition by linking biocultural data of unidentified remains with the sociocultural recognition of agencies and the public.

Attendees will be presented with examples from the LSU FACES laboratory of the identification process for cases that were resolved with the help of biocultural information from January 2015 to May 2020. Additionally, a case study regarding the significance of cultural accoutrements in the identification of decedents that were displaced from a cemetery during a natural disaster is discussed.³ Results include an overview of patterns observed in summary statistics of biocultural data collected from LSU FACES laboratory case reports that assisted with identification (e.g., tattoos, cultural dental modifications, clothing, personal items, and recovery location). Of the 104 identified cases, 48 involved a broad range of biocultural identifiers that assisted with putative and forensic identification (approximately 46% of cases). The remaining 56 cases consisted of those where anthropologists assisted with DNA sampling and postmortem dental X-rays, Combined DNA Index System (CODIS) match notifications, and trauma-only analyses.

The purpose of this presentation is to discuss how inclusion of a biocultural profile generates information that can lead to a positive forensic identification and facilitates a better understanding of the interaction between social identity and biological expression. The success of incorporating a biocultural profile in the process of identification for forensic cases at the LSU FACES laboratory suggests that cultural and social components are important not only to an individual's identity, but also to how a person may be identified by both law enforcement agencies and the public.

Reference(s):

1. Birkby W.H., Fenton T.W., Anderson B.E. Identifying Birk Southwest Hispanics Using Nonmetric Traits and the Cultural Profile. *J Forensic Sci* 2008;53(1):29-33.
2. Goad G. Expanding Humanitarian Forensic Action: An Approach to U.S. Cold Cases. *Forensic Anthropology* 2020;3(1):50-58.
3. Listi G.A., Halling C.L., Seidemann R.M., Wilson T.V. Forensic Anthropology and Identification in Natural Disaster-Related Cemetery Disruptions. *Proceedings of the American Academy of Forensic Sciences, 71st Annual Scientific Meeting, Baltimore, MD. 2019. A98.*

Forensic Anthropology, Biocultural Profile, Identification