A105 Forensic Science and the Living: The Ethics of "Determining" Age From Minor Children

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Learning Overview: After attending this presentation, attendees will better understand what the ethical issues are surrounding the application of forensic anthropological and odontological methods using bone and tooth development to assign a chronological age to a living person for the purposes of determining whether they have reached the legal age of 18.

Impact on the Forensic Science Community: This presentation will impact the forensic science community and the performance of attendees moving forward as they consider whether or not to conduct cases for law enforcement that involve age determinations of living people, as the punitive consequences for such persons can be severe and methodological accuracy varies substantially.

Adverse sociopolitical developments in the global south have led to a rising number of fleeing citizens seeking refuge in more stable countries. Of the 744,000 individuals who applied for first-time asylum within European Union states in 2019, nearly 27% were under the age of 18. Once faced with an immigration official in the receiving country, there are questions to which they must respond. One of these is chronological age, important because minor children have different protections and rights than do adults (18+ years). Unaccompanied minor children are considered especially vulnerable, and in the United States, are afforded special protections by the Flores Settlement and the Trafficking Victims Protection Reauthorization Act (TVPRA). In some cases, there are questions surrounding the minor's purported age: either the documents they have brought with them cannot be verified, or they are non-existent. When officials believe a migrant claiming to be a minor is an adult, the onus is on the government to prove this—which, according to the TVPRA, they must primarily do by reviewing documents and conducting interviews. Some element of medical age evaluation is allowed, via examination of skeletal or dental markers of growth and development to estimate biological age.

When considering the application of both skeletal and dental age estimation techniques to living children, a false equivalency between chronological and biological age is assumed. Genetics, nutritional status, infectious disease exposure, and psycho-social and intergenerational stress have all been shown to affect growth and development patterns. Therefore, the lack of population-specific developmental references for unaccompanied minors born in the global south renders standard developmental references inapplicable. Further, tests of skeletal aging techniques based on European-American children, such as the Greulich-Pyle wrist method, have lower-than-acceptable accuracy for numerous populations. Similarly, dental developmental data are predominantly drawn from European-American and African-American populations whose early-life experiences are dissimilar from those in the global south. The third molar (most often examined in dental age estimations as it is the last tooth to complete development) is the most variable of all dentition; with some individuals completing root development as early as 13 years or as late as 19–20 years. Critically, it is impossible to test the accuracy of skeletal and dental age estimates among unaccompanied minors for whom chronological age is unknown. Forensic practitioners are therefore unable to assess the degree of error associated with their estimates, despite the fact that outcomes of these evaluations have critical legal implications.

Ethical issues surrounding the application of medical age estimation methods include whether voluntary consent can truly be given in circumstances related to asylum seeking, bias against individuals from countries without standardized birth registration systems, psychological (re)traumatization of minor children, and unnecessary exposure to radiation and medical testing. An increasing number of European medical and forensic professionals are taking strong stances against participation in medical age evaluations, even as the 2018 European Union Joint Research Center's Report on Medical Age Assessment of Juvenile Migrants suggests these methods are appropriate and protective against the arbitrary nature of more intuitive age assessment methods. As anthropologists, we are uniquely qualified to understand both the scientific impact of our participation in living age assessment as well as the profound socio-cultural factors impacting the lives and experiences of migrant children. Forensic practitioners may believe they are assisting in humanitarian efforts when providing age assessments, but when scientific methods are misapplied and ethical factors are not thoroughly considered, participation in medical age assessments can cause significant harm to migrant children.

Age Determination, Ethics, Migrants

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