

THE NASAL APERTURE AND ANCESTRY IN SUBADULTS

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Abstract

This study considers the nasal aperture of subadult individuals and its usefulness in assessing ancestry. There is only a small body of literature utilizing the mid-facial region of subadults for assessing ancestry and this study contributes to that. Using craniometric analyses, I calculated four variables for the nasal aperture relative to the size of each individual skull by calculating the geometric mean of adult and subadult US black Americans (hereafter US black) and US white Americans (hereafter US white) from the Hamann-Todd Osteological collection. I tested for significant differences between adult and subadult ratios as an initial step for estimation of ancestry. The sample included 229 skulls of US black and US white American adults between the ages of 20 and 35 and all available subadults between 8 and 19 years of age in the collection. Previous research suggests classification of ancestry may be independent of sex. I tested for differences between the sexes in the adults and subadults and then I combined the sexes to test for differences between ancestry groups. Excluding the sex of the individual can prove beneficial because identifying the sex of a subadult is often problematic. As expected, differences between adult US white and US black groups were differed significant in at least three out of the four nasal measurements. I found similarities between adult and subadult US black populations with the adjusted nasal breadth and adjusted nasal height. However, only one out of the four nasal measurements had statistically significant differences between adult and subadult US white groups, the adjusted nasal shape. Between the subadult groups for US black and US white, only the nasal shape provided statistically significant results when compared to one another out of the four nasal measurements. There were no statistically significant differences between these two groups for the nasal breadth, adjusted nasal height, and the adjusted nasal shape. These results tell us that the nasal dimensions are not showing much variation between groups for subadults as they do in adults for US black and US white populations. These results may be linked to the sample size difference and the lack of resources to acquire more subadults. Larger sample sizes for both for US black and US white subadults will be needed to confirm if these results are accurate.