

“Genetic Admixture, Self-identification, and Obesity-related Phenotypes in New Mexico”

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Abstract:

The relationship between ethnicity and biology is of interest to anthropologists and biomedical scientists, in understanding how human groups are constructed, and how population differences contribute to health disparities. Populations in New Mexico are ideally suited for genetic admixture analysis because of an admixture process that occurred between two well-defined and highly differentiated groups, relative geographic isolation, and a complex history of social interactions between groups. Previous studies have shown a relationship between health-related phenotypes and the degree of genetic admixture, indicating that there may be a genetic component to the population differences in these phenotypes. However, these relationships may be driven to a large extent by the environmental differences that co-vary with admixture differences between and within groups. We examine the relationships between genetic admixture and various measures of self-identification, skin pigmentation, BMI, and percent body fat among Hispanics and Native Americans in New Mexico. We also attempt to assess the influence of some environmental covariates on the obesity-related traits. We compare our findings to previous research, and discuss their implications for understanding the relationship between genetic and social measures of group identity, and the causes of health disparities.