

Socioeconomic Effects on the Stature of Nineteenth-Century US Women



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How tall were people in the US during the nineteenth century? Did their statures vary as the country developed? Much data exist to answer these questions about men, but little is known about how the statures (heights) of African American and white women varied over the nineteenth century in the US. This information matters, since average adult height – the outcome of the difference between calories consumed and those required for work and to fend off disease – can be considered a measure of well-being, thereby providing insights into women's capabilities to live healthy lives. Average stature increases when nutritional intake is greater than calories required for work and other claims on the diet and decreases when the opposite is true. In the absence of modern material-welfare measures, Scott Carson contrasts the effects of nineteenth-century economic and social conditions on the stature of comparable African American and white women during US economic development.

Using prison records and quantile regression, Carson assesses how nineteenth-century women's statures varied with demographic characteristics, socioeconomic status, region or country of birth, occupations, and birth period. Data from US prisons are for 7,624 women born between the late 1700s and 1899; 4,573 are African American and 3,051 are white. Prisons sampled were in Arizona, California, Colorado, Idaho, Illinois, Kansas, Kentucky, Maryland, Missouri, Mississippi, Montana, Nebraska, New Mexico, Ohio, Oregon, Pennsylvania, Tennessee, and Texas.

Across the resulting stature distribution for US women in the nineteenth- and early twentieth centuries, those from Great Lakes, Plains, and Southern states were taller than women with other US and international origins, and women from the Northeast and Middle Atlantic regions were the shortest within in the US but were taller than women born in the then-more industrialized United Kingdom and Europe. White women were consistently taller than black women.

Stature also varied with industrialization and, for black women, with emancipation and occupation: before and after the US Civil War, black women may have benefited from house-servant positions that gave them access to nutritious

diets as well as from favorable sex ratios that provided the same benefits. (Women outnumbered men in the early-nineteenth century US and, after the Civil War, the hundreds of thousands of Confederate deaths deeply skewed Southern sex ratios) Across the nineteenth-century stature distribution, women in outdoor, unskilled occupations were taller than women in indoor and skilled occupations.

These results demonstrate that women's average stature reflects net nutritional conditions that are not available in traditional measures for economic well-being. They may also illustrate how net cumulative calories were allocated within nineteenth-century households, where women were in weaker household bargaining positions (since they rarely had their own incomes). This study provides new information on the health of US women during the nineteenth century and demonstrates the value of previously neglected archival sources. Further comparison will be possible once the dataset is enlarged. For example, the dataset is sufficiently large to consider stature variation across the women's stature distribution, but the sample is too small to assess how the stature of African American and white women varied separately across their distributions. As further data from US prisons become available, this comparison and others will be possible.

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