

Peer Review

Review of: "Understanding the United States Black-White Life Expectancy Gap, 2007-2018"

Benjamin P. Bowser¹

1. Sociology, California State University, East Bay, Hayward, United States

I was pleased to read “Understanding the United States Black-White Life Expectancy Gap, 2007 – 2018.” The article is clearly written, the analysis is straightforward, and the findings are appropriate for the analysis.

However, I do have questions about its significance and data analysis.

Significance: In the introduction, the author mentions three other closely related studies of US life expectancy done in the same time frame using education and income as covariates. One background study also looked at racial differences in life expectancy. The author does not explain how his study differs from any of the prior studies, if at all. What does this work add to our knowledge about Black-White differences in life expectancy by income and education? If this work only confirms what we already know, it should be published as a confirmatory study or abstract.

Data Analysis: Income and education are two of the only three measures of social class (occupation is the third). Income and education are highly intercorrelated when used together in analysis. They act like one variable, and it is very difficult to distinguish one variable’s variance from the others. Perhaps this issue was addressed in the data sources and statistical procedures. If so, a brief explanation of how multicollinearity was addressed would be assuring. If not, the analysis is flawed and needs to be redone, accounting for multicollinearity. The paper is not ready for publication.

Since the author appears to have modeled his analysis on the existing studies and is unaware of the issue of multicollinearity, the problem may also be endemic in the studies cited and calls them into question as well.

The simplest solution to multicollinearity is to separate income from education and do two analyses using each covariate. A more satisfying, less well-known, but complicated approach that preserves the multivariate framework is to use structural equation models.

Finally, there is a very minor point. High school graduates do not get degrees; they get diplomas.

Declarations

Potential competing interests: No potential competing interests to declare.