

Residential segregation associated with black-white disparity in firearm homicide rates

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Residential segregation is linked to many racial disparities in health, including cancer, high blood pressure, and diabetes. Now, a new study led by Boston University School of Public Health (BUSPH) researchers suggests the likelihood of dying from gun violence can be added to the list of adverse health outcomes associated with structural racism in the US.

The study, published in the *Journal of the National Medical Association*, finds states with greater residential segregation of black and white populations have higher racial disparities in firearm [homicide](#) fatalities. The study is one of the first to examine the relationship between racial residential segregation and firearm homicide fatalities at a state level over a 25-year period, and controlled for multiple race-specific measures of deprivation in education, employment, economic status, and housing.

"It was important for us to analyze this at the state level, because in the past we've found that a black person living in Wisconsin has a 22-fold higher risk of being fatally shot compared to a white person, but in New Mexico a black person has a 2-fold higher risk of being fatally shot compared to a white person," says BUSPH pre-doctoral fellow Anita Knopov, the study's lead author.

The researchers used data on annual state-specific firearm homicide rates from the Centers for Disease Control and Prevention (CDC) from 1991 through 2015. To measure [racial segregation](#) at the state level, the researchers used a well-established measure called the "index of

dissimilarity," which reflects the degree of racial integration within neighborhoods across a state. The scale runs from 0 to 100, with higher numbers representing higher levels of racial residential segregation.

For every 10-point increase in the index of dissimilarity, the researchers found the ratio of black to white firearm homicide fatality rates increased by 39 percent. After controlling for levels of white and black deprivation, greater racial segregation continued to be associated with lower white [fatality](#) rates and higher black [fatality rates](#).

"Racial residential [segregation](#) is independently linked with the racial disparity in firearm homicides, even when other racial inequalities are accounted for, including unemployment, poverty, income, wealth, and single-parent families," says study co-author Michael Siegel, professor of community health sciences at BUSPH.

"These findings show that a history of structural racism over decades in the past has significant implications for the lives of black people today."

More information: Anita Knopov et al, The Role of Racial Residential Segregation in Black-White Disparities in Firearm Homicide at the State Level in the United States, 1991-2015, *Journal of the National Medical Association* (2018). [DOI: 10.1016/j.jnma.2018.06.002](https://doi.org/10.1016/j.jnma.2018.06.002)

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