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Young unarmed nonsuicidal male victims of fatal use of force are 13 times more likely to be Black than White

 Ulrich Schimmack and Rickard Carlsson

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A recent PNAS article reports “no evidence of anti-Black or anti-Hispanic disparities across [fatal] shootings” by police officers (ref. **1**, p. 15877). This claim is based on the results of a regression model that suggested “a person fatally shot by police was 6.67 times less likely (odds ratio [OR] = 0.15 [0.09,

0.27]) to be Black than White” (ref. **1**, p. 15880). The article also claims the results “do not depend on which predictors are used” (ref. **1**, p. 15881). These claims are misleading because the reported results apply only to a subset of victims and do not control for the fact that we would expect a higher number of White victims simply because the majority of US citizens are White.

The published odds ratio of 0.15 is based on a regression model that made the intercept correspond to a county with 4 times more White (50%) than Black (12%) citizens. In addition, the intercept of the model corresponds to a country where White homicide rates equal 1) Black homicide rates and 2) Hispanic homicide rates and where victims are 3) average age (36.71 y) and White and Black victims are equally likely to 4) have mental health problems, 5) be suicidal, 6) be armed, and 7) attack an officer. We found that including suicidal as a predictor had the strongest effect on the intercept, which doubled the odds of the victim being White ($OR = 0.24$ vs. 0.49). In contrast, adjusting only for differences in Black and White homicide rates left the intercept unchanged ($OR = 0.48$ vs. 0.49). Thus, the main contribution of the regression analysis is to show that the odds of a victim being White double when the percentage of suicidal victims increases from 11% in the actual population to 50% in a hypothetical population. The fact that older suicidal victims are disproportionately more likely to be White shows that not all victims of lethal use of force are violent criminals.

Although use of force with citizens who suffer from mental health problems is an important issue, another important issue is use of force for young, unarmed, mentally healthy (nonsuicidal) men. To examine racial disparities in this group, we specified an alternative model that focused on young (age 20 y), unarmed male victims that showed no signs of mental health problems and were not suicidal in a county with equal proportions of Black and White citizens. The intercept of this model suggested that victims with these characteristics are 13.67 times more likely to be Black than White, 95% confidence interval = 6.65, 28.13 (<https://osf.io/hm6f2/>).

The stark contrast between the published finding and our finding contradicts Johnson et al.’s (**1**) claims that their results hold across subgroups of victims. Contrary to this claim, their data are entirely consistent with the public perception that young male victims of fatal use of force are disproportionately Black. Importantly, neither the original finding nor our finding addresses the causes of racial disparities among victims of deadly use of force. Our results merely confirm other recent findings that racial disparities exist and that they are particularly large for young males (**2**).

Footnotes

↵¹To whom correspondence may be addressed. Email: ulrich.schimmack@utoronto.ca.

Author contributions: U.S. and R.C. wrote the paper.

The authors declare no competing interest.

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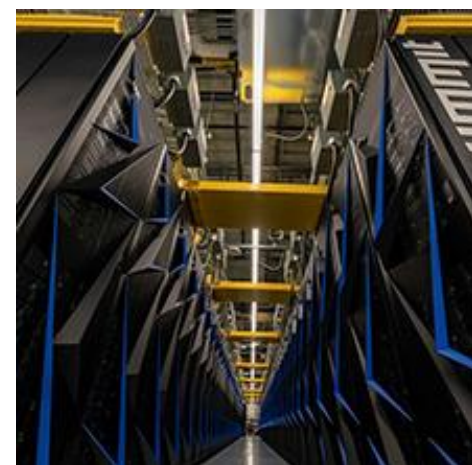
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References

1. ↵ D. J. Johnson, T. Tress, N. Burkel, C. Taylor, J. Cesario, Officer characteristics and racial disparities in fatal officer-involved shootings. *Proc. Natl. Acad. Sci. U.S.A.* **116**, 15877–15882 (2019). [Abstract/FREE Full Text](#) [Google Scholar](#)
2. ↵ F. Edwards, H. Lee, M. Esposito, Risk of being killed by police use of force in the United States by age, race-ethnicity, and sex. *Proc. Natl. Acad. Sci. U.S.A.* **116**, 16793–16798. (2019). [Abstract/FREE Full Text](#) [Google Scholar](#)

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