

How does a person's ethnicity impact their risk of death?

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Mortality. Credit: Lee et al., 2022, PLOS Global Public Health, CC-BY 4.0 (creativecommons.org/licenses/by/4.0/)

In the U.K., disparities in mortality risk factors exist between ethnic groups, with differences in overall mortality, top causes of mortality and individual mortality risk factors, according to a new study published this week in the open-access journal *PLOS Global Public Health* by I. King Jordan of Georgia Institute of Technology, U.S., and colleagues.

Despite the progress made in improving mortality rate, [life expectancy](#), and disease survival outcomes in the last century, health disparities between various population groups persist and remain a major global health issue. Both environmental and [genetic factors](#), with increasing evidence for interaction between environment and genetics through epigenetic mechanisms, have been cited as contributors of health disparities.

In the new study, the researchers analyzed data on 490,610 Asian, Black and White participants from the UK Biobank, a prospective study that enrolled 500,000 people in the U.K. aged 40 to 69 between 2006 and 2010. The UK Biobank includes data spanning physical measures, lifestyle, blood and urine biomarkers, imaging, genetic, and linked medical and death registry records.

Overall, the White ethnic group had a higher all-cause mortality rate than the Asian and Black groups. Moreover, Asian and Black females had lower risk of mortality than Asian and Black men, but that sex difference was absent among Whites. Certain causes of mortality were more common among the different [ethnic groups](#): Asians had the highest mortality from [ischemic heart disease](#), while Blacks had the highest

mortality from COVID-19 and Whites had the highest mortality from cancers of respiratory/intrathoracic organs.

In addition, some preexisting [medical conditions](#) and biomarkers showed specific associations with ethnicity and mortality. Mental health diagnoses, for instance, were a major risk factor for mortality for the Asian group, whereas parasitic diseases and C-reactive protein (CRP) serum levels were associated with higher mortality in the Black group.

"These results underscore the importance of population-specific studies that can help decompose [health disparities](#) and inform targeted interventions towards greater health equity," the researchers concluded.

The authors add, "Despite a recent decrease in the overall burden of disease mortality, ethnic disparities in mortality persist for a number of diseases. Our study of the United Kingdom Biobank revealed numerous blood biomarkers, environmental, and behavioral risk factors that explain ethnic disparities for all-cause mortality and disease-specific mortality for digestive system cancers, COVID-19, and coronary heart disease."

More information: Ethnic disparities in mortality and group-specific risk factors in the UK Biobank, *PLOS Global Public Health* (2023). [DOI: 10.1371/journal.pgph.0001560](https://doi.org/10.1371/journal.pgph.0001560)

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