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An intersectional multilevel analysis of mortality among minority groups in Northern Ireland

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Research consistently demonstrates substantial inequalities in physical and mental health outcomes among minority groups, yet the intersectionality of characteristics is often overlooked due to small sample sizes within these underserved populations. While health inequalities are known to contribute to elevated mortality risk, the intersectionality of multiple social identities and disadvantages remains unexplored. This study will use data from the Northern Ireland Mortality Study (NIMS), which links 2021 Census records to area-level measures and death registrations, to examine intersectional patterns in mortality risk among the entire population of NI, approximately 1.9 million people. Using a novel approach called the intersectional multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA), we will undertake an in-depth investigation of inequalities in deaths by suicide, deaths of despair, preventable deaths, and all-cause mortality. The MAIHDA model will examine intersections of characteristics such as gender, ethnicity, religion, deprivation, and sexual orientation, and then estimate the average differences in mortality risk between these 'strata'. Overall, the aim is to determine which intersectional strata are at the highest risk of mortality outcomes in NI, providing essential evidence to guide targeted interventions and reduce health inequalities among these underserved populations.

