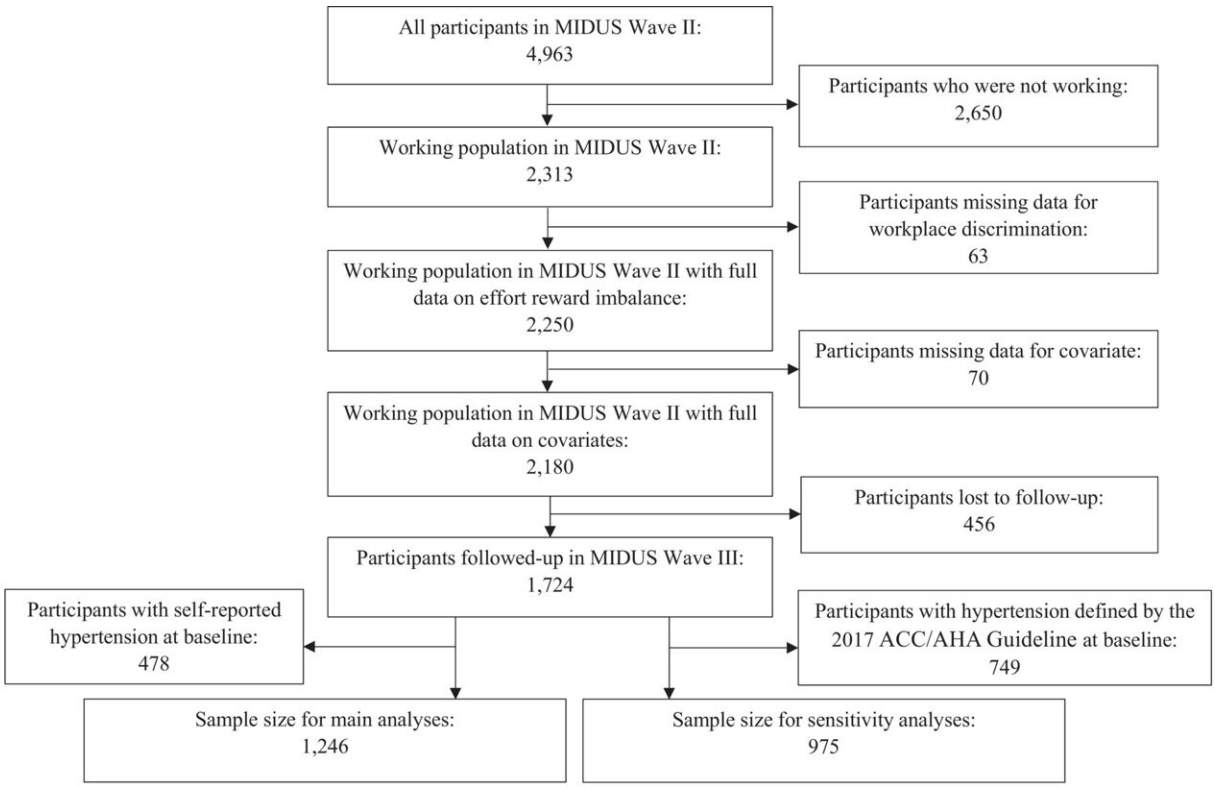
U.S. adults who felt discrimination at work faced increased risk of high blood pressure

April 26 2023



ACC, American College of Cardiology; AHA, American Heart Association; MIDUS, Mid-life in the United States

Sample size selection. ACC/AHA indicates American College of Cardiology/American Heart Association; and MIDUS, Midlife in the United States. Credit: *Journal of the American Heart Association* (2023). DOI: 10.1161/JAHA.122.027374

U.S. adults who reported feeling discriminated against at work had a higher risk for developing high blood pressure than those who reported low discrimination at work, according to new research published today in the *Journal of the American Heart Association*, an open access, peer-reviewed journal of the American Heart Association.

According to the 2023 American Heart Association statistics, high blood pressure, which impacts nearly half of U.S. adults, is a major risk factor for cardiovascular disease—the leading cause of death among Americans. There is growing concern among people about the health impacts of systemic racism and discrimination on cardiovascular and other diseases, note the study authors.

"Scientists have studied the associations among systemic racism, discrimination and health consequences. However, few studies have looked specifically at the health impact of discrimination in the workplace, where adults, on average, spend more than one-third of their time," said lead study author Jian Li, M.D., Ph.D., a professor of work and health in the Fielding School of Public Health and the School of Nursing at the University of California, Los Angeles.

"To the best of our knowledge, this is the first scientific evidence indicating workplace discrimination may increase people's long-term risk of developing high blood pressure."

Researchers for this study and others have defined workplace discrimination as unfair conditions or unpleasant treatment at work because of personal characteristics, particularly race, sex or age. Li and colleagues analyzed information from the Midlife in the United States Study (MIDUS), which reviewed a national sample of U.S. adults across a broad range of occupations and education levels.

1,246 adults who were free of high blood pressure at the start of the

study, between 2004-2006 (baseline), were followed for about 8 years, until 2013-2014. The participants were mostly white, and about half were women. About 1/3 of the participants were in each of the following age groups: younger than age 45; ages 46-55; or 56 and older.

At the start of the study, most participants self-reported they were non-smokers; had no to moderate alcohol consumption (low to moderate drinking = up to two drinks per day for men and one drink per day for women; heavy drinking = more than moderate drinking); and engaged in moderate-to-high physical exercise (low = never; moderate = once a week to once a month; high = several times a week) at the start of the study.

To assess discrimination at work, participants answered survey questions about their workplace experiences, such as whether they felt they were unfairly treated, watched more closely than others or ignored more often than others. The survey also asked about frequency of ethnic, racial or sexual slurs or jokes at work, as well as if respondents felt job promotions were given fairly.

Researchers calculated discrimination scores based on the participants' responses to the survey, and participants were then divided into three groups based on perceived discrimination scores: low (score 6-7), intermediate (score 8-11) or high (score 12-30). All items and responses were weighted equally.

The analysis found:

- Of the 1,246 people in the study, 319 reported developing high blood pressure after approximately eight years of follow-up (blood pressure noted twice: at the start of study and during follow-up period).
- Compared to people who scored low workplace discrimination at

the beginning of the study, participants with intermediate workplace discrimination exposure scores were 22% more likely to report high blood pressure during the follow-up.
- Compared to people who scored low workplace discrimination at enrollment in the study, participants with high workplace discrimination exposure scores were 54% more likely to report high blood pressure during the follow-up.

"There are several implications from these findings," Li said. "First, we should increase public awareness that work is an important social determinant of health. Second, in addition to traditional risk factors, stressful experiences at work due to discrimination are an emerging risk factor for high blood pressure."

Possible solutions to eliminate workplace discrimination include organizational policies and interventions. These potential approaches, when used in tandem with stronger anti-discrimination employer policies may improve workers' coping skills, according to the research authors.

Some limitations of this study include that participants who did not take part in the follow-up session were more likely to be non-white, have lower education levels, work in positions with lower job control, and, unfortunately, they were found to have higher hypertension prevalence. In addition, high blood pressure was self-reported as doctor-diagnosed via survey.

A future study with medical examinations to measure diastolic blood pressure and systolic blood pressure may improve validity of the research findings. Furthermore, the measure of workplace discrimination in the MIDUS was generic, and a future study could explore specific, different types of workplace discrimination, such as racial-, sex- or age-related discrimination at work.

"This study adds to the growing body of science finding that discrimination of any kind may significantly increase the risk of cardiovascular disease including high blood pressure. It also underscores the importance of the American Heart Association's commitment to addressing health equity in the workplace and among the workforce to improve individual health," said Eduardo Sanchez, M.D., M.P.H., FAHA, FAAFP, the American Heart Association's chief medical officer for prevention. Dr. Sanchez was not involved in this study. "As part of the Association's overarching work to break down barriers to health equity and improve the health of all Americans, we are building strong collaborations that will drive real change in the workplace."

Sanchez outlined several ways the Association is working toward meeting those commitments, including the release of the American Heart Association CEO Roundtable report, "Driving Health Equity in the Workplace," and the recently launched Health Equity in the Workforce initiative with the Deloitte Health Equity Institute and the Society for Human Resource Management Foundation.

More information: Jian Li et al, Workplace Discrimination and Risk of Hypertension: Findings From a Prospective Cohort Study in the United States, *Journal of the American Heart Association* (2023). DOI: 10.1161/JAHA.122.027374

Provided by American Heart Association