Racial and ethnic disparities in pain prevalence in the U.S. are far larger than previously realized, according to the results of a new study co-written by a University at Buffalo medical sociologist.

The current research represents the first portrait of U.S. pain prevalence across six major racial and ethnic groups, as defined by the U.S. Census Bureau. While earlier studies of pain disparities have focused on Black, white and Hispanic groups, the current study also includes Native Americans (American Indians/Alaska Natives), Asian Americans, and the "multiracial" category. The study also uses six measures of increasing severity of pain to test whether the findings are sensitive to a specific definition of pain.

The findings, based on data provided by nearly 274,000 participants and published in the journal *Pain*, indicate that Native Americans and multiracial Americans have by far the highest pain prevalence, while Asian Americans have the lowest pain prevalence, regardless of which specific pain measure is being assessed.

For example, compared to Asian Americans, Native Americans are over four times as likely to experience severe pain, and multiracial Americans are over three times as likely. Meanwhile, those who self-identify as white, Black or Hispanic have intermediate levels of severe pain. Similar racial/ethnic patterns are observed across other pain measures as well.

The findings on pain prevalence among Native Americans, multiracial Americans and Asian Americans substantially expand the limited previous research documenting pain levels for these groups.

"This research identifies the groups that have the highest unmet need for pain prevention and management," says Hanna Grol-Prokopczyk, Ph.D., associate professor of sociology in the UB College of Arts and Sciences, and co-author of the study, which was led by Anna Zajacova, Ph.D., professor of sociology at Western University in Canada.

"We also want to learn from the groups that are doing well in terms of pain in order to understand why they're doing well. We want to identify protective factors like good health practices, medical care and social support, and conduct further research to determine why these groups are not experiencing chronic pain as much as other groups."

The Centers for Disease Control and Prevention's (CDC) National Health Interview Survey (NHIS), which the researchers used for their analysis, estimates that more than 50 million people reported pain on most days or every day. That's slightly more than 1 out of every 5 American adults, with a
cost to the economy greater than heart disease, cancer and diabetes combined.

"There is growing literature showing that pain reflects both physical and mental health," says Grol-Prokopczyk. "A mix of factors might be at play, some having to do with health behaviors, physical fitness and quality of medical care, but some having to do with social stress, financial stress and other things that are negatively impacting people's psychological well-being."

Yet most research on pain prevalence has focused on comparisons between Black and white people. More limited research attention has been given to Hispanic people, despite being the country's largest non-white group, representing about 21% of the population. Even less research on pain prevalence has been devoted to Asian American and Native American adults, while pain among multiracial Americans, a population expected to double by 2050 to more than 20 million people, has never been systematically studied.

The current study uses NHIS data from 2010—the first survey wave to include global pain questions—to 2018, the most recent year data were available at the time the paper was being written. A different group of participants was surveyed each year.

Because of its large sample size, the study was able to include a representative sample of more racial and ethnic groups than previous research, which relied on smaller samples.

"Our results can be useful for both clinicians and public health researchers, now that we realize that Native Americans and multiracial adults, groups neglected in previous research, have extremely high rates of pain," says Grol-Prokopczyk. "We recommend further research in this area to help better understand the factors driving pain prevalence."


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