Sleep patterns contribute to racial differences in disease risk

August 18 2017, by Anna Williams

Credit: CC0 Public Domain

Poor sleep patterns could explain, in part, the differences in the risk of cardiometabolic disease between African-Americans and European-Americans, according to a new study published in *Proceedings of the*

National Academy of Sciences.

Mercedes Carnethon, PhD, associate professor of Preventive Medicine in the Division of Epidemiology, was a co-author of the study.

African-Americans tend to suffer higher rates of cardiovascular and metabolic diseases—such as stroke, diabetes and hypertension—compared to European-Americans, even when controlling for other factors, such as health behaviors. But the reasons behind the health disparity are not well understood.

The current study sought to explore what role sleep in particular might play in driving these racial differences.

Using data from a sleep study, the team of investigators assessed both total sleep time and sleep efficiency—the percent of time spent in bed actually asleep—among 426 African-American and European-American adults who were included in the Midlife in the United States (MIDUS) study.

Each participant's cardiometabolic risk was then calculated as a composite of seven key biomarkers, such as blood pressure, weight circumference and insulin resistance.

The investigators discovered that African-Americans obtained 40 fewer minutes of sleep per night compared to European-Americans—341 minutes, compared to 381 minutes—and further had a 10 percent lower sleep efficiency rate.

Such differences, according to the authors, may be due to elevated exposure to social stress, including socioeconomic conditions and experiences of discrimination.

Overall, the investigators concluded that more than one-half of the racial disparities in cardiometabolic risk may be explained by these sleep differences between the two groups.

The authors note that the findings highlight the importance of considering sleep as a potential intervention point in reducing racial health disparities, especially given that sleep patterns are adjustable.

"This study is one of the first to examine how disparities in sleep are contributing to differences in metabolic diseases," Carnethon said. "What we hope is that as patients and healthcare providers become aware of these associations, they will prioritize considering sleep as an essential component of a healthy lifestyle."

More information: David S. Curtis et al. Habitual sleep as a contributor to racial differences in cardiometabolic risk, *Proceedings of the National Academy of Sciences* (2017). DOI: 10.1073/pnas.1618167114

Provided by Northwestern University