

Study finds that genetic ancestry partially explains one racial sleep difference

August 21 2015



Credit: Vera Kratochvil/public domain

A new study clearly establishes a partial genetic basis underlying racial

differences in slow-wave sleep, suggesting that it may be possible to develop sleep-related therapies that target specific genetic variants.

Using a panel of 1,698 ancestry informative genetic markers, the study found that greater African genetic ancestry was associated with lower amounts of slow-wave [sleep](#) in African-American adults. African ancestry explained 11 percent of the variation in slow-wave sleep after adjustment for potential confounders. Although a similar association was observed for delta power, no association with African ancestry was observed for [sleep duration](#) and efficiency.

"Our data are the first to show that race differences in slow-wave sleep may have an independent and significant genetic basis," said senior author Martica Hall, professor of psychiatry at the University of Pittsburgh. "Although all humans have the same set of genes, variations within the genes sometimes follow population-specific patterns. By identifying the specific genetic variants that influence slow-wave sleep, we can eventually develop population-specific treatment approaches and therapies for sleep."

Study results are published in the August issue of the journal *Sleep*.

Led by Hall and lead author Indrani Halder, the research team analyzed data from a community-based sample of 70 African-American adults and 101 European Americans with a mean age of about 60 years. Objective sleep data were gathered by polysomnography. Blood samples for genotyping were collected, and DNA was isolated following standard protocols.

According to the authors, African-Americans have varying proportions of genetic admixture and exhibit a wide range of African genetic ancestry. Among African-American study participants, percentage of African [ancestry](#) ranged between 10 percent and 88 percent, with a mean

of 67 percent.

More information: "African Genetic Ancestry is Associated with Sleep Depth in Older African Americans,"

www.journalsleep.org/ViewAbstract.aspx?pid=30113

Provided by American Academy of Sleep Medicine

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