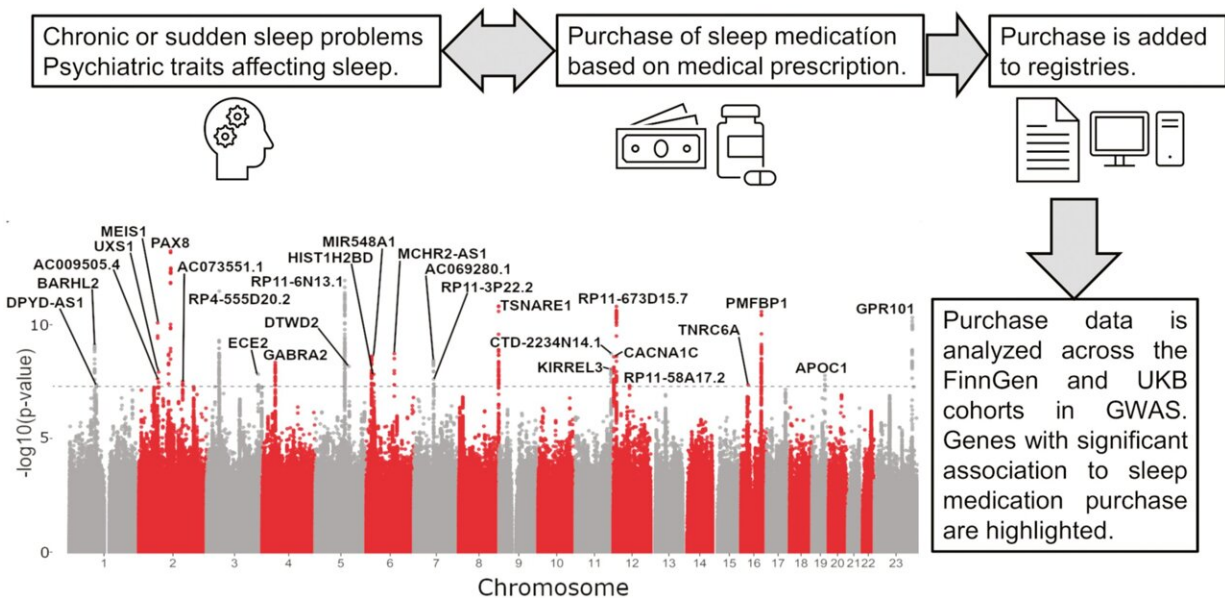


Genetic study unlocks new connections between sleep problems and mental health

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Credit: *SLEEP* (2023). DOI: 10.1093/sleep/zsad279

A massive genetic study involving almost 800,000 participants has uncovered genetic factors that contribute to the use of sleep medications, shedding new light on the intricate relationship between sleep problems and psychiatric conditions.

The study, led by researchers from the University of Helsinki, identified 27 genetic areas significantly associated with sleep medication

purchases. Many of these regions contain genes related to sleep and psychiatric traits.

Prolonged sleep problems, often referred to as chronic insomnia or long-term sleep disorders, affect approximately 10% to 15% of the adult population. Chronic sleep problems are associated with numerous physical health issues and can significantly diminish quality of life. However, the biological mechanisms leading to insomnia are not well understood.

To get to grips with the genetic basis of sleep problems, FIMM-EMBL Group leader Hanna Ollila and her team analyzed data from more than 300,000 Finnish individuals from the FinnGen study and almost 500,000 individuals from the UK Biobank. [The results of the study](#) were recently published in the journal *SLEEP*.

Diagnosing and studying sleep problems based on electronic health registry data can, however, be challenging. To overcome this issue, the research team used information on sleep medication purchases to capture people with insomnia.

By comparing the genome variation of individuals who had purchased sleep medication one or several times with those individuals who had never purchased sleep medication, the researchers were able to highlight genetic areas associated with medication use.

Not surprisingly, some of the identified genomic areas contain genes that are connected to sleep. In addition, the results highlighted several genes that, based on earlier studies, are connected to psychiatric and [personality traits](#).

Further analyses conducted suggest that conditions such as anxiety, depression, and schizophrenia are risk factors for increased sleep

medication purchases.

"Our results illustrate that the relationship between sleep medication purchases and psychiatric traits is causal, so that sleep problems captured by sleep [medication](#) purchases increase the risk of psychiatric traits," says the first author of the study, Dr. Martin Broberg from the Institute for Molecular Medicine Finland (FIMM), University of Helsinki.

The identification of specific genetic markers associated with [sleep problems](#) can lead to more personalized and effective treatment strategies for individuals suffering from both sleep and [psychiatric disorders](#).

"Our finding underscores the importance of addressing sleep issues as part of the overall management of psychiatric diseases," says Dr. Hanna Ollila from FIMM, who led the study.

More information: Martin Broberg et al, Genetics of sleep medication purchases suggests causality from sleep problems to psychiatric traits, *SLEEP* (2023). [DOI: 10.1093/sleep/zsad279](https://doi.org/10.1093/sleep/zsad279)

Provided by University of Helsinki

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