

Years of education may impact drinking behavior and risk of alcohol dependence

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Higher educational attainment—spending more years in education—may impact people's drinking behaviour and reduce their risk of alcohol dependence, according to a study published in *Molecular Psychiatry*.

Alcohol consumption is a major risk factor for death and disability worldwide. Identifying factors associated with how much, how often and what people drink may be important for developing and improving intervention and treatment strategies. Previous studies have suggested that educational attainment may influence drinking, but with conflicting results.

To assess the possible effects of educational attainment on alcohol use behaviours and [alcohol dependence](#), a team of researchers at the National Institutes of Health, USA used two-sample Mendelian randomisation statistical methods. The authors used [genetic data](#) generated by international genomics consortiums and examined a set of 53 genetic variants previously associated with differences in educational attainment, and their links with certain alcohol use behaviours.

They tested which of the 53 variants associated with educational attainment in one study were present in the DNA of people who reported different alcohol use behaviours in the other study.

Dr. Falk Lohoff, the corresponding author said: "Using data from a total of approximately 780,000 study participants, we found that genetic variants associated with an additional 3.61 years of schooling were associated with an approximately 50% reduced risk of alcohol dependence. The presence of genetic variants associated with educational attainment also affected the pattern of alcohol use and type of alcoholic beverage people consumed."

The authors showed that genetic variants associated with higher educational attainment were not associated with the total amount of alcohol people drank in a week, but with a reduced frequency of binge drinking (consuming six or more units of alcohol per session), frequency of memory loss due to drinking, total drinks consumed per drinking day and weekly intake of distilled spirits, beer and cider. The association with drinking fewer spirits was more pronounced in women than it was in men, while decreased average weekly beer plus cider intake was more pronounced in men than women.

Genetic variants associated with increased educational attainment were also associated with more frequent drinking in both men and women, with drinking alcohol with meals, especially in men, and with higher consumption of wine. Dr. Lohoff said: "It is important to understand that while these genetic variants allow us to investigate the possible effect of educational attainment on [alcohol consumption](#) and alcohol dependence, this doesn't mean that educational attainment can't be modified. The possible effect of educational attainment on [drinking](#) that we show in this study, suggests that increasing educational attainment may be a useful target for [prevention programs](#) against problematic

alcohol use, alcohol dependence, and their consequences."

The authors caution that as the genetic data examined in this study was obtained from people from Anglophone countries, the applicability of the findings to other countries may be limited. Replication of the findings using data from different countries and ethnicities is necessary.

As [educational attainment](#) only measures completed years of schooling, determining how various aspects of education differently impact [alcohol](#) consumption was not possible, but should be investigated in future studies, the authors add.

More information: Educational attainment impacts drinking behaviors and risk for alcohol dependence: results from a two-sample Mendelian randomization study with ~780,000 participants, *Molecular Psychiatry* (2019). DOI: [10.1038/s41380-019-0535-9](https://doi.org/10.1038/s41380-019-0535-9)

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