

# Evidence that tobacco smoking increases risk of depression and schizophrenia

November 6 2019

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A new study published today [6 Nov] in *Psychological Medicine* and led by University of Bristol researchers has found that tobacco smoking may increase your risk of developing depression and schizophrenia.

It is well known that [smoking](#) is much more common amongst people with mental illness—especially depression and schizophrenia. However, most studies that have looked at this association have not been able to disentangle whether this is a cause-and-effect relationship, and if so in which direction. Does mental illness increase the likelihood of smoking, or is smoking itself a risk factor for mental illness?

Researchers from the University's Tobacco and Alcohol Research Group (TARG) with support from Bristol's MRC Integrative Epidemiology Unit (IEU) and the NIHR Bristol Biomedical Research Centre (BRC), used UK Biobank data from 462,690 individuals of European ancestry, comprising 8 per cent current smokers and 22 per cent former smokers.

The team applied an analytic approach called Mendelian randomisation, which uses genetic variants associated with an exposure (e.g. smoking) to support stronger conclusions about cause-and-effect relationships. They found evidence that [tobacco smoking](#) increased risk of depression and schizophrenia, but also that depression and schizophrenia increase the likelihood of smoking (although the evidence was weaker in this direction for schizophrenia).

The study adds to a growing body of work suggesting that smoking can have adverse effects on mental health. The same group published a similar study in *British Journal of Psychiatry* earlier this year in collaboration with the University of Amsterdam, showing evidence that tobacco smoking increases the risk of bipolar disorder.

The UK government's mental health task force made the recommendation in their 2016 review that psychiatric hospitals should be smoke free by 2018. This new evidence adds further weight to support the implementation of smoke-free policies. Not only is there evidence that smoking can be detrimental for mental health, but much of the excess mortality associated with mental illness is due to smoking.

Dr. Robyn Wootton, Senior Research Associate in the School of Experimental Psychology and the study's lead author, said: "Individuals with [mental illness](#) are often overlooked in our efforts to reduce smoking prevalence, leading to health inequalities. Our work shows that we should be making every effort to prevent smoking initiation and encourage smoking cessation because of the consequences to mental health as well as physical health."

Marcus Munafò, Professor of Biological Psychology in Bristol's School of Psychological Science and senior author on the study, added: "The increasing availability of genetic data in large studies, together with the identification of genetic variants associated with a range of behaviours and [health](#) outcomes, is transforming our ability to use techniques such as Mendelian randomisation to understand causal pathways. What this shows is that genetic studies can tell us as much about environmental influences—in this case the effects of smoking on [mental health](#)—as about underlying biology."

**More information:** "Evidence for causal effects of lifetime smoking on risk for depression and schizophrenia: A Mendelian randomisation study" by Robyn Wotton, Marcus Munafò et al in *Psychological Medicine*

Provided by University of Bristol

Citation: Evidence that tobacco smoking increases risk of depression and schizophrenia (2019, November 6) retrieved 19 April 2024 from <https://medicalxpress.com/news/2019-11-evidence-tobacco-depression-schizophrenia.html>

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