If cannabis is getting stronger, why aren't cases of schizophrenia rising?

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Credit: AI-generated image (disclaimer)

Most people who smoke pot enjoy it, but a smaller proportion experience psychotic-like symptoms, such as feeling suspicious or paranoid. The question that polarises researchers is whether smoking cannabis is associated with a risk of developing psychotic problems, such as schizophrenia, in the long term.

Of course, cannabis use is common, while schizophrenia is relatively rare, affecting less than one per cent of the population. Even if cannabis use were to double the risk, over 98% of cannabis users would not develop schizophrenia. Researchers have to tread carefully in evaluating the evidence and avoiding scaremongering.

Although several studies suggest that cannabis users have a higher risk of developing schizophrenia, one key point remains hotly contested. Since the 1960s, cannabis potency and rates of use have risen in many Western countries with high-potency strains now dominating the market. If cannabis were a cause of psychosis, we would expect that, as this increased, rates of schizophrenia would increase alongside it. But this has not happened.

Still not settled

Although this topic was debated by two eminent British psychiatrists, David Nutt and Robin Murray, in The Guardian and by others in Nature, it remains contested whether a cause-and-effect relationship between smoking cannabis and schizophrenia truly exists.

Perhaps we lack sufficient records of schizophrenia cases to show a robust correlation. It has also been argued that not all effects follow causes. For example, although obesity in the West is increasing and is a known cause of heart disease, the risk of suffering fatal heart disease is going down. The reason for this is a third factor: treatments for heart disease have improved and are saving more lives. If cannabis potency is increasing and rates of schizophrenia are not, a similar third factor may explain this.

Perhaps the answer is in those brief experiences we have when we use cannabis. This week results from our online survey thecannabissurvey.com are published in Psychological Medicine.

We asked 1,231 cannabis users about their experiences when they used cannabis and calculated a "pleasurable experiences score" and a "psychotic-like experiences score". We then asked the participants if they were continuing to use cannabis, or if they were thinking of quitting in the future.

Those who reported the most pleasurable experiences continued to use the drug and had no intention of quitting. Those with higher psychotic-like experiences had either stopped or were thinking of quitting in the future. The experience you have with the drug determines whether you continue to use it or not, regardless of your age, sex, mental health history or other drugs you have used.

Interestingly, this might mean that the people at highest risk are the very ones who are quitting. Other studies suggest that, compared with healthy controls, people with schizophrenia have more psychotic-like experiences when they use cannabis. And those at higher risk of schizophrenia – that is, people with genetic or psychological risk factors for the disease – tend to have more psychotic-like experiences. If these are the people who are stopping using cannabis, they may offset their risk of developing schizophrenia from cannabis use.

The cannabis discontinuation hypothesis

We could think of the experience as a warning sign to which they are responding. This could be the third factor that explains why the link between cannabis potency and schizophrenia rates is not direct. We call this the "cannabis discontinuation hypothesis" and propose it in more detail in our paper.

This hypothesis is more nuanced than simply being pro- or anti-cannabis. On the one hand, if you believe that cannabis causes psychosis, this may explain why the rates of cannabis and schizophrenia are not directly

correlated. On the other hand, you could argue that since those at highest risk heed the body's warning system, why does any of this matter. People who are at highest risk will stop in any case. Of course, it is likely that not everyone does, and we need to make sure that we offer the right support to that small group at highest risk who continue to use.

It is important to remember that, at this stage, this is a hypothesis, not a fact. The survey was taken at a single point in time and the online sample we had may be different from the average cannabis user. But this group were moderate to heavy users, drawn from activist sites and social media – those that we need to engage the most in this kind of work.

The best study to confirm the hypothesis would be a long-term study mapping cannabis experiences to schizophrenia risk, drawn from the general population, but this would be a long and expensive study to do. In the meantime, we are continuing to work at thecannabissurvey.com looking at what causes the different experiences we have. Improved knowledge of these factors will lead to more nuanced understanding in the future.

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