The need for health warnings about cannabis and psychosis

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Cannabis is a popular and widely available drug nowadays. Patients and some doctors increasingly support the medicinal use of cannabis, and cannabis enthusiasts are vocal and politically active. The gradual liberalisation of cannabis laws seems inevitable. Although the internet widely touts cannabis as a panacea for a host of medical and psychiatric illnesses, information about the harmful effects of cannabis use is largely confined to scientific journals.

In this issue of *The Lancet Psychiatry* Tabea Schoeler and colleagues report a meta-analysis finding adverse effects of cannabis use in people with psychosis.[1] The authors noted that individuals who continue to use cannabis are substantially more likely to experience a psychosis relapse than non-users. Rightly, the authors acknowledge that this difference in relapse rates might stem from pre-existing group differences between cannabis users and other patients. But the Article goes one step further and compares the relapse rates of three groups of patients with psychosis: non-users who have never used cannabis, continued or current users, and discontinued or former users. Schoeler and colleagues reported that continued cannabis users had a higher rate of psychosis relapse than either discontinued cannabis users (Cohen's *d*=0·28) or non-users of cannabis (Cohen's *d*=0·36). They also reported that discontinued users and non-users had similar relapse rates (Cohen's *d*=0·02). Notably, the results of this study[1] concur with previous meta-analyses of the extent of positive symptoms in patients with psychosis that reported that current cannabis users have more severe symptoms than former users (standardised mean difference[SMD]=0·27)[2] and non-users (SMD=0·38)[3] and that non-users and former users have a similar severity of positive symptoms (SMD=0·16).[4] These results all but eliminate the possibility that pre-existing group differences between users and non-users account for the differences in observed outcomes. In real terms, this means we can now confidently tell our patients with psychosis that giving up cannabis will probably reduce positive symptoms and will help prevent relapse.

Studies comparing the outcomes of former and current cannabis users are but a single limb in a body of research leading to the conclusion that cannabis has a causal role in some cases of psychosis. Cannabis users, particularly those who start young, are more likely to develop schizophrenia than non-cannabis users.[5] Heavier and more potent cannabis users have an increased risk.[6] Cannabis users develop psychosis at an earlier age than non-cannabis users.[7] In experimental studies, a proportion of volunteers experience psychotic symptoms after taking cannabis.[8] In Austin Bradford Hill's terms, the present study lends further consistency to the research suggesting a causal association between cannabis and the symptoms and diagnosis of psychosis.[9]

Most people who become habitual cannabis users start in their teens, often under peer pressure and with little consideration as to any possible harmful effects. Almost nothing scientific was known about the side effects of cannabis when cannabis use became popular in the second half of the past century. Although nowadays teenagers have fingertip access to vast amounts of information about cannabis, most of what they find on their smartphones extolls the benefits of cannabis use. Sadly, some teenagers, who might not have used cannabis had they been better informed, will go on to experience deteriorating academic grades and various emotional disorders, and a proportion of these will have their lives permanently affected by schizophrenia. The present Article suggests that for this last group of individuals, quitting will help, but it will not cure.

Something needs to be done. I believe that the only way forward is to clearly separate the question of whether cannabis should be legalised from the issue of its toxic effects. Young people deserve the best medical information irrespective of the prevailing law. Where cannabis is legal it should be marketed with clear and unambiguous mental health warnings on the packaging and at the point of sale. Health departments should encourage the use of conventional methods of drug education in schools and in traditional media. Cannabis researchers also have a responsibility to brave the barrage of criticism from cannabis advocates on social media and engage in the ongoing debate about the harms and benefits of cannabis. There might also be a role for a degree of legal leverage. Where cannabis remains illegal, it seems appropriate to reserve criminal sanctions for those who supply cannabis to minors or do not include an approved health warning in every bag sold.

The increasing acceptability of cannabis use should not inure us to its dangers. Somehow, we need to prevent the message about the risks of cannabis use from being obscured by the hazy arguments about its legal status and medicinal qualities.

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I declare no competing interests.

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