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Letter to the Editor

Cannabis use and transition to psychosis: is interpretation of unpleasant effects a mediating variable?

The recent paper in *Psychological Medicine* by Valmaggia *et al.* (2014) provided a useful longitudinal perspective on whether cannabis use increases the risk of transition to psychosis in those who are ultra-high risk. The authors found that many in the sample stopped using cannabis due to adverse side effects such as paranoia and hearing voices. Previous research with non-clinical populations has demonstrated that cannabis use can induce acute psychotic-type experiences such as this (D'Souza *et al.* 2004; Hammersley & Leon, 2006). The authors therefore suggest that cannabis is not used for self-medication, and that those who are high risk may be more likely to link psychotic experiences to cannabis use.

Valmaggia *et al.* (2014) also showed that those with historic use were no more likely to develop psychosis, but those with frequent or early-onset use were at an increased risk. In addition, those who did not stop using cannabis over the study period were at greater risk. It is possible that the interpretation of the unpleasant effects of acute cannabis intoxication may be a mediating variable between frequency and age of onset, continuing use and subsequent transition to psychosis. Specifically, those who have been using heavily and/or for many years may be less likely to interpret the acute effects of intoxication as being the result of cannabis use (for instance, 'I've been smoking every day for 10 years and it's never made me paranoid'). An external attribution for these unusual experiences may therefore be more likely (for example, 'Someone must be trying to punish me'). In line with cognitive models of delusions and hallucinations (Garety *et al.* 2001; Freeman *et al.* 2002), such external attributions are likely to escalate an initial unusual experience into psychosis. Additionally, those who do not attribute acute psychotic experiences to cannabis use may be more likely to continue to use, possibly to self-medicate. This in turn may also exacerbate psychotic symptoms.

The authors suggest that use of cannabis during a neurologically sensitive developmental stage may account for this increased risk. Research into the role of psychological processes such as external attribution will inform theoretical explanations for the link between early cannabis use and psychosis. This would provide a framework for psychological interventions aimed at mitigating the risk posed by cannabis use.

Declaration of Interest

None.

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