



## Response

## Trends in cannabis use, is cannabis use disorder a valid diagnosis?

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The pan European increase in demand for treatment where cannabis is the primary problem at a time when population use of the substance is declining is intriguing and difficult to explain. We agree with Jakob Manthay's attempt to explain this paradox and would like to add some further thoughts (Manthey, 2019). We first noticed this change in treatment demand in the United Kingdom back in 2014 and suggested that beyond rising potency other factors could be influencing this rise (Hamilton, Lloyd, Monaghan, & Paton, 2014). First, a rise in criminal justice screening interventions which might have brokered referrals into specialist treatment (McCulloch, 2017). Second as problem drug use has declined in the general population it is possible that specialist treatment services have been more accepting of referrals where cannabis is deemed to be the primary problem. Third, a growing but not uniform acceptance among those using cannabis as well as treatment staff that cannabis use can be problematic. Fourth, some people using cannabis and staff assessing them are not always aware or able to distinguish between organic cannabis and synthetic forms of cannabis such as synthetic receptor agonist cannabinoids (SCRA's). Follow up research revealed that presentations did not fit the image of cannabis that many people have, e.g. as a relatively benign substance, but service providers suggested that for some clients, there were problems of impulse control (Monaghan, Hamilton, Lloyd, & Paton, 2016). Although small-scale, the investigation also confirmed that services were more willing to accept referrals for problems due to cannabis, although the view that cannabis was benign and a 'lesser drug' than opiates still persisted among some treatment staff.

As Manthay suggests it is plausible that demand for treatment is in part due to a rise in cannabis use disorder. However the criteria used to reach this diagnosis are problematic in several ways. The assessment relies on self-reports of use so are subject to recall bias and biological testing does not improve validity beyond the binary positive / negative result (Guyatt et al., 2011). Cannabis metabolites can be detected for a significant period following exposure (Sharma, Murthy, & Bharath, 2012). There are also concerns over specific gender bias in diagnostic manuals (e.g. Jane, Oltmanns, South, & Turkheimer, 2007). Where cannabis is concerned this relates to questioning around the impact of cannabis use on certain occupations that are likely to be performed by men (such as operating heavy machinery and truck driving) meaning that women are less likely meet the threshold and this is before issues of

the stigmatisation of female substance use is taken into consideration (Agrawal and Lynskey, 2007).

There is a further distortion in that higher income countries not only report higher prevalence of cannabis use in their populations but are also more likely to explore and report rates of cannabis use disorder than lower income countries (World Health Organisation, 2018). As this is a diagnosis made by qualified clinicians clearly it relies on ensuring there is an adequate workforce compliment and treatment infrastructure to facilitate assessment.

It is likely that we have undercounted females and both sexes from some countries as data generation and collection has been drawn largely from Western countries. Without a more reliable way of counting those who develop problems with cannabis we need to be cautious in our interpretation of observational trends until we improve the criteria used in the diagnosis of cannabis use disorder and which populations are included in its application.

**Author statement**

Ian Hamilton produced the first draft of this response.

Mark Monaghan provided suggestions and revisions.

**Declaration of interest**

Ian Hamilton has nothing to declare.

Mark Monaghan has nothing to declare.

**References**

- Agrawal, A., & Lynskey, M. T. (2007). Does gender contribute to heterogeneity in criteria for cannabis abuse and dependence? Results from the national epidemiological survey on alcohol and related conditions. *Drug and Alcohol Dependence*, 88(2–3), 300–307.
- Guyatt, G. H., Oxman, A. D., Vist, G., Kunz, R., Brozek, J., Alonso-Coello, P., Montori, V., Akl, E. A., Djulbegovic, B., Falck-Ytter, Y., & Norris, S. L. (2011). GRADE guidelines: 4. Rating the quality of evidence—Study limitations (risk of bias). *Journal of Clinical Epidemiology*, 64(4), 407–415.
- Hamilton, I., Lloyd, C., Monaghan, M., & Paton, K. (2014). The emerging cannabis treatment population. *Drugs and Alcohol Today*, 14(3), 150–153.
- Jane, J. S., Oltmanns, T. F., South, S. C., & Turkheimer, E. (2007). Gender bias in diagnostic criteria for personality disorders: An item response theory analysis. *Journal of*

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- Abnormal Psychology*, 116(1), 166.
- Manthey, J. (2019). Cannabis use in Europe: Current trends and public health concerns. *The International Journal of Drug Policy*, 68, 93–96.
- McCulloch, L. (2017). Why did cannabis treatment presentations rise in England from 2004-2005 to 2013-2014? *Drugs and Alcohol Today*, 17(4), 218–231.
- Monaghan, M., Hamilton, I., Lloyd, C., & Paton, K. (2016). Cannabis matters? Treatment responses to increasing cannabis presentations in addiction services in England. *Drugs Education Prevention & Policy*, 23(1), 54–61.
- Sharma, P., Murthy, P., & Bharath, M. S. (2012). Chemistry, metabolism, and toxicology of cannabis: Clinical implications. *Iranian Journal of Psychiatry*, 7(4), 149.
- World Health Organisation (2018). *WHO expert committee on drug dependence, critical review, cannabis and cannabis resin*. Accessed 2nd of May 2019 <http://www.who.int/medicines/access/controlled-substances/Cannabis-and-cannabis-resin.pdf?ua=1>.