



Drug Free Australia series –
Media suppression of alarming cannabis harms

Episode 8 – Cannabis and psychosis

History

- Testimony of M. El Guindy – Egyptian delegate to the 1925 League of Nations 2nd Opium Conference

Speaking of cannabis:

- “the delirium takes a violent form in persons of violent character”
- “the addict very frequently becomes neurasthenic and, eventually, **insane.**”



Early studies

- Diagnosis – cannabis induced psychoses - little has changed since 1998

“The adjusted relative risk of a diagnosis of schizophrenia for those who had smoked cannabis from one to ten times was 1.5 times, and that for those who had used ten or more times was **2.3 times**, the risk for those who had never used cannabis.”

CANNABIS AND PSYCHOSIS
Wayne Hall
NDARC Technical Report No. 55



Current studies

- 2019 Lancet study:

“The Population Attributable Fractions calculated indicated that if high-potency cannabis were no longer available, 12.2% of cases of first-episode psychosis could be prevented across the 11 sites, rising to 30.3% in London and 50.3% in Amsterdam.”



Articles

The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study

Manolis Di Forti, Diego Caetano, Tom F Freeman, Claudia Ffytz, Charlotte Coughlin, Hannah Colledge, Victoria Rodriguez, Hannah J Langley, Louise Ferrari, Catherine Le Coadic, Daniele La Barbera, Boris Turkic, Daria Grotzer, Andrei Soltes, Criselo Arango, Andrea Torricelli, Louis Verdoux, Miguel Hernandez, Cristina Morita Del Rio, Pablo Rovito Amoroso, Juan Pablo Soltes, Peter B Jones, James R Kirkbride, Stuart PF Ditcher, Louise de Haan, Paul C Sham, Jim van Os, Cathryn M Lewis, Michael Jossary, Craig Morgan, Stefan M Murray, and the EU-GEI WP2 Group*

Summary
Background Cannabis use is associated with increased risk of later psychotic disorder but whether it affects incidence of the disorder remains unclear. We aimed to identify patterns of cannabis use with the strongest effect on odds of psychotic disorder across Europe and explore whether differences in such patterns contribute to variations in the incidence rates of psychotic disorder.

Methods We included patients aged 18–64 years who presented to psychiatric services in 11 sites across Europe and Brazil with first-episode psychosis and recruited controls representative of the local populations. We applied adjusted logistic regression models to the data to estimate which patterns of cannabis use carried the highest odds for psychotic disorder. Using Europe-wide and national data on the expected concentration of Δ^9 -tetrahydrocannabinol (THC) in the different types of cannabis available across the sites, we divided the types of cannabis used by participants into two categories: low potency (THC <10%) and high potency (THC ≥10%). Assuming causality, we calculated the population attributable fractions (PAFs) for the patterns of cannabis use associated with the highest odds of psychosis and the correlation between such patterns and the incidence rates for psychotic disorder across the study sites.

Findings Between May 1, 2010, and April 1, 2015, we obtained data from 901 patients with first-episode psychosis across 11 sites and 127 population controls from those same sites. Daily cannabis use was associated with increased odds of psychotic disorder compared with never users (adjusted odds ratio [OR] 1.2, 95% CI 1.2–1.3), increasing to nearly five-times increased odds for daily use of high-potency types of cannabis (4.8, 2.5–6.3). The PAFs calculated indicated that if high-potency cannabis were no longer available, 12.2% (95% CI 3.4–16.1) of cases of first-episode psychosis could be prevented across the 11 sites, rising to 30.3% (15.2–40.0) in London and 50.3% (27.4–66.0) in Amsterdam. The adjusted incident rates for psychotic disorder were positively correlated with the prevalence in controls across the 11 sites of use of high-potency cannabis ($r=0.7$; $p<0.026$) and daily use ($r=0.8$; $p<0.010$).

Interpretation Differences in frequency of daily cannabis use and in use of high-potency cannabis contributed to the striking variation in the incidence of psychotic disorder across the 11 studied sites. Given the increasing availability of high-potency cannabis, this has important implications for public health.

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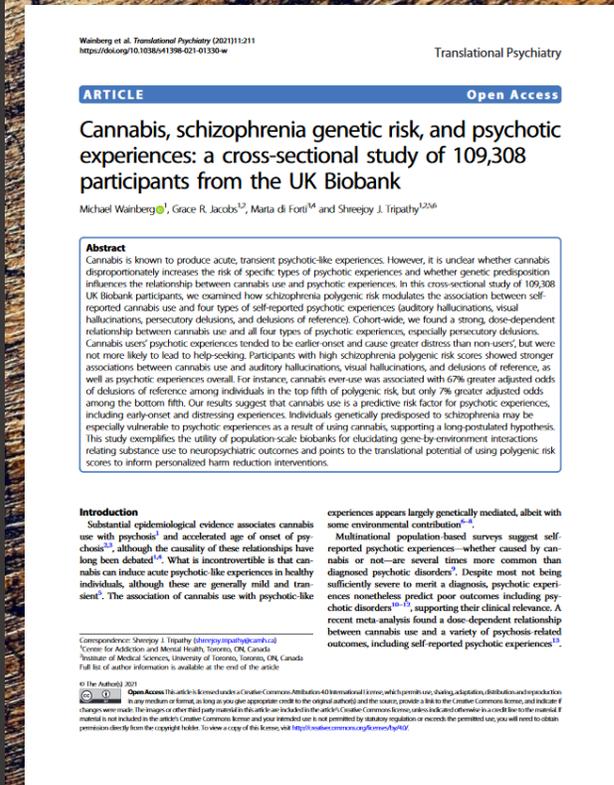
Introduction
Many countries have legalised or decriminalised cannabis use, leading to concerns that this might result in an increase in cannabis use and associated harm,^{1,2} even if the latter only affects a minority of the population.³ Cross-sectional and prospective epidemiological studies^{4,5} as well as biological evidence⁶ support a causal link between cannabis use and psychotic disorder. Meta-analysis shows a dose-response association with the highest odds of psychotic disorder in those with the heaviest cannabis use.¹ Nevertheless, it is not clear whether, at a population level, patterns of cannabis use influence rates of psychotic disorder.^{7,8} A systematic review⁹ has described a five-fold variation in the incidence of schizophrenia worldwide. A transitional case-control study (EU-GEI)¹⁰ has reported an eight-times difference in the incidence of psychotic disorder across 16 European sites plus one in Brazil.¹⁰ Differences in the distribution of risk factors for psychosis, such as cannabis use, among

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*Additional resources for this article
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Murray (P04) and Department of Addictive (see P05) (P01, P02, P03, P04, P05), Institute of Psychiatry, Psychology and Neuroscience and Department of Psychiatry, South London and Maudsley NHS Foundation Trust, (P06, P07, P08, P09, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, P39, P40, P41, P42, P43, P44, P45, P46, P47, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P62, P63, P64, P65, P66, P67, P68, P69, P70, P71, P72, P73, P74, P75, P76, P77, P78, P79, P80, P81, P82, P83, P84, P85, P86, P87, P88, P89, P90, P91, P92, P93, P94, P95, P96, P97, P98, P99, P100, P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P111, P112, P113, P114, P115, P116, P117, P118, P119, P120, P121, P122, P123, P124, P125, P126, P127, P128, P129, P130, P131, P132, P133, P134, P135, P136, P137, P138, P139, P140, P141, P142, P143, P144, P145, P146, P147, P148, P149, P150, P151, P152, 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Current studies

- 2021 - getting more detail on specifics of psychosis

“Cohort-wide, we found a strong, dose-dependent relationship between cannabis use and all four types of psychotic experiences, especially **persecutory delusions**. Cannabis users’ psychotic experiences tended to be earlier-onset and cause greater distress than non-users’, but were not more likely to lead to help-seeking. Participants with high schizophrenia polygenic risk scores showed stronger associations between cannabis use and **auditory hallucinations, visual hallucinations, and delusions of reference, as well as psychotic experiences overall.**”



<https://www.nature.com/articles/s41398-021-01330-w.pdf>



Media

- 2004–2011: strong emphasis on psychosis link by national media in UK and Australia



<https://www.smh.com.au/national/cannabis-may-trigger-psychosis-experts-20050307-gdkvi4.html>

<https://simkl.com/tv/20380/four-corners/season-2005/episode-5/>

<https://web.archive.org/web/20090628165907/http://news.bbc.co.uk/2/hi/health/6917003.stm>

<https://www.manchestereveningnews.co.uk/news/uk-news/son-who-cut-mums-head-19073367>



Media

- 2022 – excellent 60 Minutes report



<https://www.youtube.com/watch?v=5LRBqjtUMBk>



Next episode

- More detail in future episodes:

- Cannabis and cancer
- Cannabis and birth defects
- Cannabidiol (CBD), cancer and birth defects
- Cannabis and pain
- Cannabis and driving
- Hemp and psychoactive metabolites
- Cannabis and psychosis
- Cannabis and violence/homicide
- Cannabis and suicide
- Cannabis – its other harms

