

Reconsidering Cannabis Dependence

Background

- Conceptualisations of cannabis dependence are often based on the medical model of addiction
 - Dose-response relationship
 - Greater use = increased likelihood of dependence
 - Focus on physiological symptoms of addiction, with continued use despite harms
 - ‘all use is abuse’
- Does not explain many things we know about cannabis use
 - why some people become addicted to cannabis while others with similar consumption patterns do not
 - why people would continue to use a substance that is doing them harm
- Considering dependence from a ‘functional’ point of view
 - Likely to become more important in settings where cannabis is legal or decriminalised

DSM 5 Cannabis Use Disorder

A problematic pattern of cannabis use leading to clinically significant impairment or distress, as manifested by at least 2 of the following, occurring at any time in the same 12-month period:

- 1. cannabis is often taken in larger amounts or over a longer period than was intended**
- 2. there is a persistent desire or unsuccessful efforts to cut down or control cannabis use**
- 3. a great deal of time is spent** in activities necessary to obtain, use or recover from use of cannabis
- 4. recurrent cannabis use resulting in a failure to fulfil major role obligations** at work, school, or home.
- 5. continued cannabis use despite having persistent or recurrent social or interpersonal problems** caused or exacerbated by the effects of the substance
- 6. important social, occupational, or recreational activities are given up or reduced** because of cannabis use
- 7. recurrent cannabis use in situations in which it is physically hazardous**
- 8. cannabis use is continued despite knowledge of having a persistent or recurrent physical or psychological problem** that is likely to have been caused or exacerbated by the substance

9. **tolerance**, as defined by either of the following:
 - a) a need for markedly increased amounts of cannabis to achieve intoxication or desired effect
 - b) markedly diminished effect with continued use of the same amount of cannabis
10. **withdrawal**, as manifested by either of the following:
 - a) the characteristic withdrawal syndrome for cannabis
 - b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
11. **craving**, a strong desire or urge to use cannabis

Severity Scale

- The Severity of each Substance Use Disorder is based on:
 - 0 criteria or 1 criterion: No diagnosis
 - 2-3 criteria: Mild Substance Use Disorder
 - 4-5 criteria: Moderate Substance Use Disorder
 - 6 or more criteria: Severe Substance Use Disorder

ICD-11 Cannabis Dependence

Cannabis dependence is a disorder of regulation of cannabis use arising from repeated or continuous use of cannabis.

The characteristic feature is a **strong internal drive to use cannabis**, which is manifested by **impaired ability to control use**, **increasing priority given to use over other activities** and **persistence of use despite harm or negative consequences**.

These experiences are often accompanied by a subjective sensation of **urge or craving to use** cannabis. Physiological features of dependence may also be present, including **tolerance to the effects** of cannabis, **withdrawal symptoms** following cessation or reduction in use of cannabis, or repeated use of cannabis or pharmacologically similar substances to prevent or alleviate withdrawal symptoms. The features of dependence are usually evident over a period of at least 12 months but the diagnosis may be made if cannabis use is continuous (daily or almost daily) for at least 1 month.

- Procedure
 - anonymous online questionnaire
 - recruitment through online forums, social media, university student
- Participants
 - 172 adults (60% female)
 - 18-71 years ($M=30.9$; $SD = 10.6$)
 - Had used cannabis within past 3 months
 - Education
 - 29% high school
 - 28% vocational/trade qualification
 - 25% undergraduate degree
 - 17% postgraduate qualifications
 - Employment
 - 24% student
 - 40% employed full-time
 - 26% employed part-time
 - 10% unemployed

Measures

- Severity of Dependence Scale (SDS; Gossop et al., 1995)
- Marijuana Motives Measure (MMM; Simons et al., 1998)
- Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995)
- Cannabis use items
 - History of use: age at initiation, reasons for not using earlier, reasons for commencing use
 - Current patterns of use: frequency, quantity, strength, intoxication, type of cannabis, method of consumption, context of use, time since last use
 - Future use: reasons for continued use, thoughts on quitting
- Tobacco and alcohol use
- Socio-demographic items
- Psychosocial variables

Cannabis use – Severity of Dependence Scale (SDS)

These are the questions that make up the Severity of Dependence Scale.
Tick the patient's response and add up the score out of 15.

In the last three months:

1 Did you ever think your use of cannabis was out of control?

- Never or almost never 0
Sometimes 1
Often 2
Always or nearly always 3

2 Did the prospect of missing a smoke make you very anxious or worried?

- Never or almost never 0
Sometimes 1
Often 2
Always or nearly always 3

3 Did you worry about your use of cannabis?

- Not at all 0
A little 1
Quite a lot 2
A great deal 3

4 Did you wish you could stop?

- Never or almost never 0
Sometimes 1
Often 2
Always or nearly always 3

5 How difficult would you find it to stop or go without?

- Not difficult 0
Quite difficult 1
Very difficult 2
Impossible 3

SDS Score	Dependence rating
0-3	nil or negligible
4-6	mild
7-9	moderate
10-12	substantial
13-15	severe

Cannabis Use

- History of use
 - Age at first use: $M=16.8$; $SD = 3.6$; range: 11-30 years
 - Duration of use: $M=13.9$; $SD = 11.0$; range: 0-48 years
- Frequency of use in past 12 months
 - 8% once per year
 - 14% two to three times a year
 - 19% less than monthly
 - 15% monthly
 - 13% weekly
 - 13% four to six days a week
 - 18% daily
- Usual no. of joints/cones
 - Range: 0.25 – 50.0
 - Mean: 4.18 ($SD = 6.80$)
 - Median: 2.00

VARIABLES	<i>r</i>
History of use	
Age at first use	-.01
Duration of use	.01
Current use	
Frequency	.44***
Quantity	.31***
Strength	.02
Intoxication	.25**
Uses alone	.35***
Administration	
Joint	-.01
Bong	.19*
Pipe	-.01
Vaporiser	.02
Eaten	.03
Herbal	.16*
Resin/hash	.23**
Oil	-.03

MMM Enhancement	.24**
Conformity	-.08
Expansion	.19*
Coping	.46***
Social	.04
Sociodemographic	
Age	.02
Sex	.06
Partnered	.04
Parent	.04
Education	-.01
DASS Depression	.06
Anxiety	.08
Stress	.11
Lifetime diagnoses	
Depression	.18*
Anxiety	.20*
Other MH issue	.21**
Alcohol Frequency	-.20**
Tobacco Frequency	.21**

$$R^2 = .54, \text{Adj.}R^2 = .46, F_{(15,98)} = 6.51, p < .001$$

VARIABLES	β	p	sr^2
Frequency of Cannabis use	.24	.030	5.5%
Quantity (joints/cones)	.27	.005	9.2%
Usual level of intoxication	.37	<.001	18.3%
Uses alone	.23	.011	6.6%
Bong	.15	.116	3.0%
Herbal	.11	.210	1.9%
Resin/hash	.16	.065	4.0%
Enhancement Motives	-.10	.307	1.3%
Expansion Motives	.04	.673	0.2%
Coping Motives	.26	.028	5.7%
Lifetime Depression	-.01	.916	0.0%
Lifetime Anxiety	.28	.029	5.7%
Lifetime Other Mental Health	-.16	.192	2.0%
Frequency of Tobacco use	-.10	.220	1.8%
Frequency of Alcohol use	-.16	.062	4.1%

Thoughts

- Intoxication: *On the days you used cannabis in the last 12 months, approximately how intoxicated did you usually get?*
 - I didn't get intoxicated at all
 - Just enough to feel relaxed
 - A little bit stoned/high (e.g., less inhibited than usual, but with full control over actions)
 - Fairly stoned/high (e.g., a little uncoordinated, but not completely uninhibited)
 - Very stoned/high (e.g., uninhibited, loss of coordination)
 - Extremely stoned/high (e.g., passing out)
- To understand dependence, need to understand what cannabis does for users – what is it's function?
 - Motives & reasons for use, and for not cutting down/quitting
 - Differences by user types (recreational, problematic, medicinal)
 - Emotion regulation & coping skills/strategies
 - Mental health & trauma
 - Triggers & consequences/reinforcement