



## Cannabis withdrawal among adults seeking treatment for cannabis dependence

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### ABSTRACT

**Aim** To find out the incidence and severity of perceived cannabis withdrawal symptoms in a clinical sample of cannabis dependent adults.

**Method** fifty people attending outpatient clinic of a tertiary centre for cannabis dependence were enrolled. Substance-use behavior and dependence were measured via self-report questionnaires Daily Marijuana Questionnaire (DMQ) and a 15-item version of the Marijuana Withdrawal Checklist to assess the withdrawal symptoms was used.

**Results** Seventy percent reported two or more symptoms, 55% reported four or more symptoms, and 40% reported six or more symptoms.

### I. INTRODUCTION

Epidemiological studies of drug-use patterns consistently report that cannabis is the most common used illicit drug in most of the developed countries[1]. Though not considered as clinically significant in the DSM and also not well defined in the ICD, recent neurobiological, behavioral, and clinical studies have raised concern about the potential role of a cannabis withdrawal syndrome in the development, maintenance, and treatment of chronic cannabis use and dependence[2,3]. Controlled studies with humans have characterized a valid and reliable cannabis withdrawal syndrome in adults with heavy (daily or almost daily) cannabis use[4,5,6,7]. Commonly observed withdrawal symptoms include anger, anxiety, decreased appetite/weight loss, irritability, restlessness, and sleep difficulty. Depressed mood, stomach pain/physical discomfort, shakiness, and sweating have also been reported, but occur less frequently. Most symptoms onset within 24 hrs of abstinence, peak within the first week, and last for approximately 1–2 weeks[5,7].

The majority of adults presenting for treatment of cannabis dependence experience withdrawal symptoms during periods of abstinence[8,9,10].

The present study assessed the prevalence and magnitude of cannabis-withdrawal symptoms in adults presenting for outpatient treatment of substance abuse where cannabis was identified as the primary substance being used.

Methods

### II. PARTICIPANTS

Participants were adults seeking outpatient treatment for substance abuse problems at a tertiary health care centre. Inclusion criteria was cannabis was the primary drug of abuse, and that the self-reported pattern of cannabis-use was at least 15 days of use per month for at least one of the 3 months prior to interview. Exclusion criteria patients dependent on a second drug other than tobacco, or having severe psychiatric problems (e.g. active psychosis or acute high risk of suicide).

A total of fifty adults who came for treatment and met the criteria were enrolled in the study. Participants were between 20 and 50 years old (M = 34.5, S.D. = 1.1 years), and primarily male (90%). Participants reported using cannabis on a mean of 18.1 (S.D. = 7.8) of the 30 days prior to the intake assessment, smoking cannabis on average 3.5 (S.D. = 2.6) times on those days.

Data were collected during an interview assessment by a psychiatrist. Written informed consent was obtained from all participants. Substance-use behavior and dependence were measured via self-report questionnaires and interviews. The Daily Marijuana Questionnaire (DMQ) was adapted from the Daily Drinking Questionnaire[11] and is a self-report measure of the frequency, quantity, and pattern of cannabis-use during the 3 months prior to interview. A general drug history interview was used to corroborate cannabis-use as assessed by the DMQ, and to assess recent use of alcohol, tobacco, and other illicit drugs.

A 15-item version of the Marijuana Withdrawal Checklist (MWC)[8] lists common as well as less frequently observed cannabis-withdrawal symptoms (items: craving for marijuana, depressed mood, decreased appetite, increased aggression, increased anger, headache, irritability, nausea, nervousness/anxiety, restlessness, shakiness, sleep difficulty, stomach pains, strange dreams, and sweating). Participants rated each item on a 0–3 scale (0 = not at all, 1 = mild, 2 = moderate, and 3 = severe) based on their experience the last time they stopped using cannabis. A composite withdrawal discomfort score (WDS) was created by summing the severity ratings of all 15 items.



Data collected using the measures described above were double entered and checked for accuracy. The primary analyses comprise descriptive statistics regarding the prevalence and severity of withdrawal symptoms reported on the MWC.

### III. RESULTS

Prevalence and severity

Participants reported an average of 5.3 (S.D. = 4.1) discrete symptoms from the MWC of at least mild severity. Seventy percent reported two or more symptoms, 55% reported four or more symptoms, and 40% reported six or more symptoms. The most commonly reported symptoms were craving for marijuana, depressed mood, irritability, restlessness, sleep difficulty, increased anger, decreased appetite, increased aggression, nervousness/anxiety, and headache. Four of these symptoms (craving for marijuana, depressed mood, irritability, and sleep difficulty) were rated as being of moderate severity or greater by at least 30% of the sample.

### IV. DISCUSSION

This study indicates that many cannabis-abusing adults who present for outpatient substance abuse treatment experience various symptoms when they discontinue cannabis use. The most common symptoms reported were affective and behavioral in nature, although a subset of adults also experienced physical symptoms (e.g. headache, nausea, sweating). These findings are consistent with prior reports of cannabis withdrawal in clinical samples.

### V. LIMITATIONS

Symptom reports were collected retrospectively, thus, responses were subject to memory and attribution biases. Given the prevalence and magnitude of these symptoms, it is concerning that a withdrawal syndrome could contribute to continued use of cannabis and negatively impact abstinence attempts among adults who use cannabis regularly. Moreover, studies examining the impact of cannabis withdrawal on cessation attempts are clearly needed, as well as those that evaluate whether treatments targeting cannabis withdrawal enhance treatment outcome.

### VI. CONCLUSION

It could be concluded that withdrawal symptoms lead to negative treatment outcome for cannabis dependence, hence studies concerning

cannabis withdrawal symptoms are clearly needed to target a good outcome.

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### CONFLICT OF INTEREST

No conflict of interest.

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