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Secondary cannabis use among London drug treatment service clients

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Background Cannabis is the second most commonly used substance after alcohol among people seeking treatment for other drug use, but no statistics are available regarding secondary cannabis use among drug treatment clients.

Objectives To investigate levels of secondary cannabis use among drug treatment clients and perceived need for support addressing this use among clients and staff.

Methods Cross-sectional surveys of clients (N=295) and staff (N=33) were conducted in 2015 at four London drug and alcohol treatment services. Client measures included recent drug use, type of cannabis used, Severity of Dependence Scale for cannabis, and views on secondary cannabis use treatment. Staff measures included definition of problem cannabis use, importance and timing for addressing secondary cannabis use.

Results Amongst clients, 39.7% reported recent secondary cannabis use, with 30.8% of these clients meeting criteria for problem use. Problem users were more likely to be interested in receiving treatment for cannabis use than non-problem users (51.4% vs 10.8%, $p<0.001$). Nearly half of staff (48.5%) thought secondary cannabis use should be addressed early in treatment.

Conclusions Two out of five drug treatment clients used cannabis and a third experienced cannabis-related problems. Many are willing to address cannabis use, but defined treatment pathways are needed.

Key words cannabis; cannabis use disorder; substance use disorder, treatment

Introduction

Cannabis is the most commonly used illicit drug worldwide (United Nations Office on Drugs and Crime, 2014). In Europe, the number of individuals seeking specialised drug treatment services for cannabis use problems has doubled between 2003 and 2014 (Montanari, Guarita, Mounteney, Zipfel, & Simon, 2017). Between 2005 and 2015, past-year cannabis use in the general population of England and Wales has decreased from 8.7% to 6.7% (Home Office, 2015). However, for the same period the number of new clients entering drug treatment for primary cannabis use problems has increased by 21%, mostly among 18-24 year-olds (Public Health England, 2016). No official statistics are available regarding secondary cannabis use among UK drug treatment service clients, and clinical guidelines do not explicitly address this issue in the formulation of treatment plans (Department of Health (England) and the devolved administrations, 2007; Independent Expert Working Group, 2017). Hence it remains unknown if cannabis use causes additional treatment needs in those receiving treatment for other drug dependence.

In Europe, cannabis is the second most commonly misused substance after alcohol among clients seeking treatment for dependency on other drugs (Montanari, Taylor, & Griffiths, 2008). A systematic review of 22 studies estimated that on average 32.9% of methadone maintenance treatment clients had recently used cannabis (Zielinski et al., 2016), and other studies report that between 29% and 79% of people in treatment for opioid and cocaine dependence also used cannabis while in treatment (Aharonovich et al., 2005; Best et al., 1999; Budney, Bickel, & Amass, 1998; Epstein & Preston, 2003; Mojarrad, Samet, Cheng, Winter, & Saitz, 2014; Nirenberg, Cellucci, Liepman, Swift, & Sirota, 1996; Saxon et al., 1993; Wasserman, Weinstein, Havassy, & Hall, 1998; Weizman, Gelkopf, Melamed, Adelson, & Bleich, 2004; Zielinski et al., 2017). UK data on secondary cannabis use among drug treatment services clients is limited, but a 1999 study of 200 methadone maintenance treatment clients found that 60% had used cannabis in the last month and 40% were daily users (Best et al., 1999). Although cannabis has been discussed as a substitute for alcohol or opioids (Reiman, 2009; Subbaraman, 2014), whether cannabis use is a help or a hindrance in the context of addiction treatment is still a subject of debate. Findings in this area are inconsistent: some studies concluded

that cannabis use might predict a relapse following substance misuse treatment (Aharonovich et al., 2005; Mojarrad et al., 2014; Wasserman et al., 1998), but the majority of research to date has not found that secondary cannabis use has an adverse impact on other drug treatment outcomes (Best et al., 1999; Budney et al., 1998; Epstein & Preston, 2003; Nirenberg et al., 1996; Saxon et al., 1993; Weizman et al., 2004). However, research in this field has sparsely investigated if cannabis use or withdrawal cause harm or create additional treatment needs (Budney et al., 1998; Chauchard, Goncharov, Krupitsky, & Gorelick, 2014; Dennis, Babor, Roebuck, & Donaldson, 2002; Hesse & Thylstrup, 2013).

Given the small and inconclusive evidence base, the lack of consensus regarding the need to address secondary cannabis use during addiction treatment is not surprising. Very few services focus exclusively on the treatment of cannabis use (National Collaborating Centre for Mental Health, 2008), and while drug treatment guidance advises cannabis use should be monitored throughout a treatment episode, no clear instruction is provided for how to identify or support problem secondary cannabis users (Department of Health (England) and the devolved administrations, 2007; Independent Expert Working Group, 2017). Patient-initiated treatment is also rare: only 7% of those with 12-month cannabis use disorder and 14% with lifetime cannabis use disorder seek treatment. (Hasin et al., 2016). Cannabis misusers mostly look for support prompted by dependence symptoms, induced or aggravated mental health problems, or past treatment experience (Agosti & Levin, 2004; van der Pol et al., 2013). Among secondary cannabis users treatment-seeking may be even lower as primary drug use harms might obscure negative cannabis use effects (Budney et al., 1998; Chauchard et al., 2014; Hesse & Thylstrup, 2013).

Therefore, we aimed to investigate (i) the level of secondary cannabis use among drug treatment service clients; (ii) perceived need for, and availability of, support for secondary cannabis use from client and staff perspectives.

Methods

Study design and participant recruitment

Multi-site cross-sectional anonymous questionnaire surveys of clients and staff were administered in four South London and Maudsley NHS Trust (SLaM) community drug and alcohol treatment services between July and August 2015. The questionnaires were completed by participants, with a member of the research team available to read questions aloud and provide clarification for clients with literacy difficulties. Client participants were recruited via convenience sampling, with all clients approached and given a verbal explanation of the study purpose and content, assured of confidentiality and anonymity, and that their responses will not affect their current treatment. The questionnaire was provided to those who gave verbal consent. Staff participants were recruited by a member of the research team presenting an overview of the study during a staff meeting and distributing the surveys to staff in attendance. Staff could return the questionnaire to the research team member at that time, or at another time of their choosing. No members of the research team had existing professional or personal relationships with potential participants. In total, 295 drug treatment service clients (response rate 85.8%) and 33 staff members participated in the survey. The study was approved by the local SLaM NHS Foundation Trust Audit Committee in May 2015.

Measures

Client questionnaire

Sociodemographics: Gender was collected as a binary variable indicating male or female. Age was collected as continuous and then divided into four categories: 20-29, 30-39, 40-49, 50+ years.

Treatment substances: Clients were asked to indicate the substances they were currently receiving treatment for, with options including alcohol, tobacco, cannabis, crack, opiates/opioids, amphetamines, benzodiazepines, cocaine, novel psychoactive substances, cannabinoids/synthetic cannabinoids, and other substances with an option to specify. This was converted into a series of binary variables, and participants could report receiving treatment for more than one substance.

Where patients reported receiving treatment for two or more substances, they were categorised as being enrolled in polysubstance treatment.

Drug use frequency: For the same list of drugs described above, frequency of use in the last 30 days (continuous) was collected.

Cannabis use: Clients who reported using cannabis at least once in the past 30 days were characterised as cannabis users. Those who reported using cannabis every day in the past 30 days were characterised as daily cannabis users. Clients who reported currently receiving treatment exclusively for cannabis use problem were treated as primary cannabis users and were excluded from analyses pertaining to secondary cannabis use.

Cannabis type: All cannabis users were asked about preferred cannabis type ('skunk, high potency herbal cannabis', 'hash, resin, solids', or 'normal weed, grass, bush')(Tom P Freeman et al., 2014).

Problem cannabis use: Problem users were identified by Severity of Dependence scale (SDS) adapted for cannabis use (Gossop et al., 2006; Martin, Copeland, Gates, & Gilmour, 2006). SDS for cannabis use has been shown to have a good test-retest reliability of 0.88 and a validity of 0.76 when comparing to number of DSM-IV cannabis dependence symptoms (Martin et al., 2006). SDS questions refer to last three months' cannabis use and have response options 'never or almost never' (scored 0), 'sometimes' (1), 'often' (2), and 'always or nearly always' (3):

- (1) 'Did you think your use of cannabis was out of control?'
- (2) 'Did the prospect of missing cannabis or not chasing make you anxious or worried?'
- (3) 'Did you worry about your use of cannabis?'
- (4) 'Did you wish you could stop?'
- (5) 'How difficult did you find it to stop or go without cannabis?'

The sum of scores provides a measure of cannabis dependence severity; clients who scored 3 or more were identified as problem cannabis users (Swift, Copeland, & Hall, 1998).

Interest in changing cannabis use: Clients were asked whether they were interested in altering their current cannabis use, with response options including ‘reduce’, ‘stop’, ‘no’, and ‘don’t know’.

Interest in receiving support for changing cannabis use: Interest in receiving support was assessed by asking participants if they would be interested in receiving treatment or getting advice for their cannabis use. Response options were ‘yes’ or ‘no’.

Offered support for cannabis use: Participants were asked if they have ever been offered support by a clinician to stop their cannabis use. Response options were ‘yes’ or ‘no’.

Staff questionnaire

Sociodemographics: Gender was collected as binary variable indicating male or female. Age was collected as continuous and then divided into four categories: 20-29, 30-39, 40-49, 50+ years.

Professional status: Staff role was collected in line with the categories that had been used in similar survey (Cookson et al., 2014), but due to the small sample this was collapsed to: registered nurse; drug worker; manager; administrative and support staff; training grade doctor; other.

Professional area(s) of interest: Staff were asked to indicate their professional areas of interest, which were listed as ‘alcohol’; ‘tobacco’; ‘drugs’ (not mutually exclusive).

Definition of problem cannabis use: Staff were asked what frequency of client cannabis use they would consider problematic. Options were: daily; 2-3 times per week; weekly; monthly; less than monthly.

Importance of addressing secondary cannabis use: To assess the magnitude of the importance of addressing secondary cannabis use, staff were asked to report how important they viewed addressing cannabis use where it is not a clients’ primary drug using a ten-point scale (with 10 equivalent to highest level of importance).

When in treatment secondary cannabis use should be addressed: Most appropriate timing for addressing secondary cannabis use was investigated by asking staff when they thought cannabis use should be addressed in treatment. Response options were: ‘Early in a client’s primary addiction treatment’; ‘Late in a client’s primary addiction treatment’; ‘After primary addiction treatment is

completed'; 'Cannabis use does not need to be addressed during treatment for other drugs'; 'Other (please specify)'.

Analysis

Standard descriptive statistics were used to report characteristics of client and staff participants. Proportions, means, standard deviations, and 95% confidence intervals were used to describe clients' cannabis use patterns, attitudes to cannabis treatment, and received support. Chi squared and Student t-tests for two independent samples were used to examine differences between problem and non-problem cannabis users regarding cannabis use characteristics, desire to change their use, and support received. Chi squared test was used to investigate the association between clients' interest in receiving support for changing their secondary cannabis use and whether they had ever been offered support by clinical staff. Staff attitudes towards treatment for secondary cannabis use were described using means and proportions.

Results

Clients

The client sample consisted of 295 participants, the majority of whom were male (65.8%) and aged 40-49 years ($M (SD) = 43.0 (9.6)$, range: 21–69; see Table 1). Almost three-quarters of clients were receiving treatment for opioid dependence (70.2%). Only 9.5% ($N=28$) reported cannabis as a primary treatment drug, four of them (1.4%) were in treatment exclusively for cannabis use problems, while 39.7% ($N=117$) reported secondary cannabis use.

[Table 1 about here]

Amongst clients reporting secondary cannabis use, the average number of days using cannabis was 13.4 per month, with a quarter reporting daily use (25.6%; see Table 2). The majority of secondary cannabis users preferred skunk (58.1%), almost a third were identified as problem users by SDS score (30.8%; 12.2% of all sample). Thirty percent (29.9%) of secondary cannabis users expressed interest in stopping or reducing their cannabis use, but only a fifth (19.7%) had ever been offered support for cannabis use. Of those interested in support for secondary cannabis use, 26.9%

had been offered support by clinical staff compared to 18.3% of those who were not interested ($\chi^2 (1) = 0.9, p = .34$).

[Table 2 about here]

Compared with non-problem secondary cannabis users, problem users had used cannabis on average six days more per month, were more likely to use skunk (72.2% compared to 51.9%), were more likely to be interested in reducing/stopping their cannabis use (48.6% compared to 24.7%), and to be interested in receiving support for cannabis use (51.4% compared to 10.8%).

[Table 3 about here]

Staff

The staff sample consisted of 33 participants, the majority of whom were female (54.5%), mostly between 50 and 59 years old (36.4%), working as registered nurses (27.9%) or drug workers (18.2%), and reporting professional interest in drugs (78.8%) and alcohol (78.8%; see Table 4). Most staff members defined problem cannabis use as daily use (60.6%), but views on the importance of addressing secondary cannabis use were equivocal; the mean for the ten-point scale indicating importance was 5.68 (SD=2.4, 95% CI: 4.8 - 6.6). Almost half of the staff participants (48.5%) thought the best time to address cannabis use was early in treatment, while four participants (12.1%) reported that cannabis use should be addressed after primary addiction treatment is completed or that it does not need to be addressed during treatment for other drugs.

[Table 4 about here]

Discussion

In the sample of London drug and alcohol treatment service clients, 40% reported using cannabis as a secondary drug in the past 30 days, with nearly a third identified as problem users based on SDS scores. Although more than half of problem users were interested in receiving professional support for secondary cannabis use, only a quarter reported that they had ever been offered support. The majority of staff viewed daily (as opposed to less frequent) cannabis use as problematic, with

about half indicating that it should be addressed early during the course of treatment for other drug use problems.

Three-quarters of problem cannabis users did not recall being offered support to reduce or quit using cannabis by treatment staff. As the data were self-reported, it is possible that participants may have been offered support but did not recall this. Nevertheless, so few problem cannabis users reporting that they had been offered support suggests an unaddressed treatment need. Although nearly half of the staff participants felt that cannabis use should be addressed early in treatment, this view was not universal and suggests the need for more definite treatment guidance regarding secondary cannabis use. There is no definitive evidence that any specific treatment could be confidently suggested for problem cannabis use (Schettino, Leuschner, Tossman, & Hoch, 2015). Instead, in UK, a range of psychosocial interventions of uncertain efficacy are indicated for primary cannabis use problems (Department of Health (England) and the devolved administrations, 2007; National Collaborating Centre for Mental Health, 2008), while secondary cannabis use is not prioritised in treatment planning (Department of Health (England) and the devolved administrations, 2007; Independent Expert Working Group, 2017). Consequently, the lack of clear guidance creates discrepancies in how cannabis use is viewed by both clients and staff (Monaghan, Hamilton, Lloyd, & Paton, 2016).

More than half of the identified problem cannabis users were interested in receiving advice or treatment, when in general population samples one out of seven lifetime problem users seek professional support (Hasin et al., 2016). One explanation for this difference is that common barriers for seeking cannabis treatment, including a need for self-reliance and preference for informal help (van der Pol et al., 2013), have already been removed to some extent in those who are in drug treatment. Cannabis use has been shown to increase in clients who try to abstain from other drugs (Independent Expert Working Group, 2017); while treatment reduces harms associated with the misuse of a primary drug, it paradoxically could expose problems associated with persisting cannabis use. Daily use (Di Forti et al., 2014) and preference for high potency skunk (T. P. Freeman & Winstock, 2015) were confirmed as factors associated with negative secondary cannabis use

outcomes. The substantial proportion of clients in this study seeking support to address their cannabis use further underscores a need to reconsider the harm potential of secondary cannabis use.

A few limitations should be taken into account when interpreting study findings. Firstly, findings on secondary cannabis use were mainly presented from a harm perspective while positive effects of recreational or medical cannabis use were not covered (Duff, 2016) and could be examined in future research. Also, results of this convenience sample, cross-sectional study refer to associations rather than causal relations between variables. All data were self-reported, which could have affected validity: for instance, service users' responses about past 30 days drug use or SDS scores. SDS also covers same dimensions as other questionnaire items do (i.e. 'interest in changing cannabis use'), which could have introduced conceptual overlap issue into final results. Nonetheless, the results do indicate that a substantial minority of secondary cannabis users express a desire to reduce their cannabis use alongside other cannabis related problems. Many staff members did not return their questionnaires, resulting in small sample size, thus staff responses should be interpreted with care. However, we achieved a high response rate for clients and the estimated proportion of all cannabis users in this sample is similar to the most recent data reported from UK drug treatment services in 1999 (Best et al., 1999).

This is only the third study in the last 20 years to evaluate the proportion and patterns of secondary cannabis use among UK drug treatment service clients (Best et al., 1999; McBride, 1995) and the first to highlight the disparity between client interest in treatment and accessing treatment. Improvements in clinical guidance and practice are necessary when identifying and offering support for secondary cannabis use, which, according to these findings, is common and elicits additional treatment needs in drug and alcohol treatment service clients.

Conclusion

Two out of five drug treatment service clients are using cannabis and a third experience cannabis dependence symptoms. Problem secondary cannabis use can be successfully identified and many problem users are willing to address cannabis misuse with specialists' support. However, current drug treatment guidelines, discordant practitioners' views, and resources do not effectively

address the need for treatment of problem secondary use of cannabis alongside treatment for other substance misuse.

Disclosure of interest

The authors report no conflicts of interest.

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Tables**Table 1** Characteristics of clients who had or had not used cannabis in the past 30 days; N = 295.

Client characteristic	Total, % (<i>n</i>)	Cannabis non-users, %	
		(<i>n</i>)	Cannabis users, % (<i>n</i>)
Total		59.0 (174)	41.0 (121)
Gender			
Male	65.8 (194)	67.2 (117)	63.7 (77)
Female	29.2 (86)	27 (47)	32.2 (39)
Missing	5.0 (15)	5.8 (10)	4.1 (5)
Age group			
20 - 29	9.2 (27)	6.9 (12)	12.4 (15)
30 - 39	21.7 (64)	22.4 (39)	20.7 (25)
40 - 49	37.6 (111)	37.9 (66)	37.2 (45)
50 - 59	18.0 (53)	18.4 (32)	17.3 (21)
60+	4.4 (13)	3.5 (6)	5.8 (7)
Missing	9.1 (27)	10.9 (19)	6.6 (8)
Primary substance(s)^a			
Opioids	70.2 (207)	67.8 (118)	73.6 (89)
Alcohol	25.1 (74)	27.6 (48)	21.5 (26)
Crack	22.7 (67)	20.7 (36)	25.6 (31)
Cannabis	9.5 (28)	3.5 (6)	18.2 (22)
Tobacco	4.1 (12)	3.5 (6)	5.0 (6)
Cocaine	4.1 (12)	4.0 (7)	4.1 (5)
Benzodiazepines	3.1 (9)	1.7 (3)	5.0 (6)

Secondary cannabis use among drug treatment clients

Other	2.0 (6)	2.3 (4)	1.7 (2)
Amphetamine	1.7 (5)	2.9 (5)	0
Synthetic cannabinoids	1.4 (4)	0.6 (1)	2.5 (3)
Polysubstance ^b	30.5 (90)	27.2 (47)	35.5 (43)

Note: statistically significant differences between subsamples are bolded.

^a Multiple responses possible.

^b ≥ 2 substances were mentioned as primary.

Table 2 Patterns of secondary cannabis use and the need for support in addressing secondary cannabis use;

N=117.

Characteristic	% (n) ^a
M (SD) Average days cannabis used last month	13.4 (11.6)
Daily cannabis users	25.6 (30)
Type of cannabis	
Normal	18.8 (22)
Skunk	58.1 (68)
Hash	21.4 (25)
Missing	1.7 (2)
SDS \geq 3	30.8 (36)
Interest in changing cannabis use	
Reducing	12.8 (15)
Stopping	17.1 (20)
Doesn't know	6.0 (7)
Not interested	56.4 (66)
Missing	7.7 (9)
Interest in receiving support^a for cannabis use	
Yes	22.2 (26)
No	70.9 (83)
Missing	6.8 (8)
Ever offered support to stop cannabis use	
Yes	19.7 (23)
No	74.4 (87)

Secondary cannabis use among drug treatment clients

Missing	6.0 (7)
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^a Except where specified

^b Treatment/ advice for secondary cannabis use.

Table 3 Patterns of cannabis use and interest in support between problem and non-problem secondary cannabis users; N=117.

Characteristic	Problem users	Non-problem users	Test statistics
	(SDS \geq 3), % (<i>n</i>) ^a	(SDS < 3), % (<i>n</i>) ^a	
Total^b	30.8 (36)	69.2 (81)	
M (SD) Average days cannabis used last month	<i>n</i> =35 17.5 (12.0)	<i>n</i> =79 11.5 (11.1)	t (112) = -2.6, p = .005
Using skunk	72.2 (26)	51.9 (42)	χ^2 (1) = 4.2, p = .039
Daily users	38.9 (16)	19.8 (16)	χ^2 (1) = 4.8, p = .029
Interested in reducing or stopping cannabis use	<i>n</i> =35 48.6 (17)	<i>n</i> =73 24.7 (18)	χ^2 (1) = 6.2, p = .013
Interested in receiving support for cannabis use^c	<i>n</i> =35 51.4 (18)	<i>n</i> =74 10.8 (8)	χ^2 (1) = 21.6, p < .001
Ever were offered support to quit/ reduce	<i>n</i> =35 25.7 (9)	<i>n</i> =75 18.7 (14)	χ^2 (1) = 0.7, p = .40

Note: statistically significant differences between subsamples are bolded.

^a Except where specified.

^b Where numbers vary due to missing data, subsamples' sizes are indicated separately.

^c Treatment/advice for secondary cannabis use.

Table 4 Staff demographic and professional characteristics; N=33.

Staff characteristics	% (n)
Gender	
Male	39.4 (13)
Female	54.5 (18)
Missing	6.1 (2)
Age group	
20-29	9.1 (3)
30-39	21.2 (7)
40-49	12.1 (4)
50-59	36.4 (12)
Missing	21.2 (7)
Profession group	
Registered nurse	27.3 (9)
Drug worker	18.2 (6)
Manager	12.1 (4)
Administrative & support staff	9.1 (3)
Training grade doctor	6.1 (2)
Other	24.2 (8)
Missing	3.0 (1)
Area of interest^a	
Alcohol	78.8 (26)
Drugs	78.8 (26)
Tobacco	12.1 (4)

^a Multiple responses possible.