Reasons for substance use in dual diagnosis bipolar disorder and substance use disorders: a qualitative study.

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Abstract

Background: Few systematic studies have examined the reasons why patients with bipolar disorder and substance use disorders misuse alcohol and drugs of abuse. Such reasons may depend heavily on context so qualitative research methods that made no prior theoretical assumptions were employed. We explored the reasons patients give for misusing drugs and alcohol and how these relate to their illness course.
Method: Qualitative semi-structured interviews and thematic analysis with a purposive sample of 15 patients with bipolar disorder and a current or past history of drug or alcohol use disorders.
Results: Patients based their patterns of and reasons for substance use on previous personal experiences rather than other sources of information. Reasons for substance use were idiosyncratic, and were both mood related and unrelated. Contextual factors such as mood, drug and social often modified the patient's personal experience of substance use. Five thematic categories emerged: experimenting in the early illness; living with serious mental illness; enjoying the effects of substances; feeling normal; and managing stress.
Limitations: The prevalence of these underlying themes was not established and the results may not apply to populations with different cultural norms.
Conclusions: Patterns of substance use and reasons for use are idiosyncratic to the individual and evolve through personal experience. Motivating the patient to change their substance use requires an understanding of their previous personal experience of substance use both in relation to the different phases of their bipolar disorder and their wider personal needs.

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Introduction

The lifetime prevalence of alcohol abuse and drug abuse in people with bipolar disorder are known to be three to nine times that of the general population (Regier et al, 1990; ten Have et al, 2002; Merikangas et al, 2007). Among patients hospitalised for mania or mixed affective episodes, nearly 60 per cent had a lifetime diagnosis of substance use disorder (Cassidy et al, 2001). Negative outcomes have been reported in patients with bipolar disorder and comorbid substance use disorders including suicide (Isometsa, 2005), suicide attempts (Hawton et al, 2005; Simon et al, 2007), poor insight and denial of illness (Salloum and Thase, 2000), and treatment non-adherence (Keck et al, 1998). Therefore patients with dual diagnosis bipolar disorder and substance use disorders form an important group of patients to study from clinical and public health perspectives. .

There have been no previous systematic qualitative analyses of substance use in bipolar disorder, and few systematic studies of any design concerning the reasons why patients with bipolar disorder abuse alcohol and illicit drugs. Reasons for substance use in bipolar disorder include the self-medication hypothesis, an attempt by patients to reduce the intensity of their symptoms through alcohol and street drugs (Strawkowski and DelBello, 2000; Weiss et al, 2004; Bizzarri et al, 2007a). Strakowski and DelBello (2000) also found some evidence to suggest that substance use may be a symptom or precipitant of bipolar disorder, and that bipolar disorder and substance use disorders may share common risk factors such as impulsivity (Swann et al, 2005), comorbidity with anxiety disorder (Mitchell et al, 2007; Goldstein and Levitt, 2008) or sensation seeking (Bizzarri et al, 2007b). Substance use can be a coping mechanism for managing the early symptoms or prodromes of manic and depressive episodes before the full episode of mania or depression appears (Lam and Wong, 1997; Lam and Wong, 2005).

A clinical approach to tackling the co-occurrence of bipolar disorder and substance use disorders involves motivational interviewing to modify the substance abuse and a formulation of how the reasons for substance use relate to the phase of illness and the person with bipolar disorder (Weiss et al, 2007). An understanding of the patient's perspective is key to therapeutic success because this information can be used both in the formulation of the patient's problems, and to communicate and motivate the

patient to change their substance use behaviour. We explored how patients with dual diagnosis bipolar disorder and substance use disorders viewed the relationship between substance use and bipolar disorder in an inductive qualitative study that made no assumptions about the relationship between mood and substance use.

Method

Study sample.

All patients included in the study were adults with a diagnosis of bipolar 1 disorder and current and/or past alcohol or drug abuse or dependence. Inclusion criteria were: 1. a SCID-DSM-IV diagnosis of bipolar disorder (First et al, 1997); 2. a SCID-DSM-IV diagnosis of substance use disorder (First et al, 1997); 3. 18 years of age or older; 4. willing to give written informed consent. Exclusion criteria were: 1. bipolar disorder secondary to an organic cause; 2. a current DSM-IV mood episode (mania, mixed affective episode, hypomania or major depression) (American Psychiatric Association, 1994). The study had ethics approval from a local research ethics committee and also local institutional research governance approval.

Purposive sampling was used to achieve maximum variance in terms of sociodemographic, clinical diversity and experience of substance use. We wished to explore the relationship of both phase of illness and type of substance use on the reasons given for substance use. Therefore we sampled for the following patterns of current or past alcohol and drug abuse or dependence: heavy regular alcohol dependence, binge drinking alcohol dependence, alcohol abuse and similar patterns of heavy regular and irregular use of opiates, cannabis, stimulant, hallucinogen and non-alcoholic sedative drugs. We also sampled to obtain a diverse clinical sample in relation to bipolar disorder: patients with fewer or more than five previous episodes; bipolar disorder with a history of psychosis; bipolar disorder with a history of rapid cycling; bipolar disorder with comorbid anxiety disorder; and bipolar disorder with comorbid personality disorder. The sample was also selected to provide diversity in terms of gender, age (18-30, 31-45, 46-65, over 65 years), marital status (married, single, divorced or separated, widowed), and social class (professional or managerial, skilled, semi-skilled, unskilled, unemployed). Patients were recruited from out-patients, community mental health teams or specialist drug and alcohol services serving two mental health trusts in north-west England.

Procedure.

Semi-structured interviews were conducted (by CH) with each patient. A topic guide provided a flexible interview framework starting with an outline of the course the patient's illness and their experience of substance use. The interviewer prompted the patient about their experience of substance use at each phase of the bipolar illness, prior to diagnosis of bipolar disorder and during periods when the patient was well in relation to their bipolar disorder. This enabled changes in the nature, pattern of and reasons for substance use that were unrelated to the phase of bipolar disorder to emerge. All interviews were audiotaped and transcribed. Participants were recruited until all clinical and sociodemographic features were represented in the sample and thematic saturation was achieved.

Analysis.

The analysis was inductive, using a grounded theory approach (Glaser and Strauss, 1967), allowing themes to emerge only if there was data in the transcript to support the presence of the theme and not seeking to support or disconfirm existing proposed hypotheses for the co-occurrence of bipolar disorder and substance use disorders. Transcripts were read and discussed by the multidisciplinary research team comprising of mental health social worker (CH), a health psychologist (SP), experienced in qualitative analysis and an academic psychiatrist (RM). The data were coded and categorised according to continuing analysis. Emerging patterns were tested and modified by constant comparison, 'cycling' between sets of data, the developing analysis and further sampling and interviewing. Where possible deviant cases were sought to test emerging findings. For example, early on it became apparent that participants had learnt when to abstain from particular substances in relation to their illness and personal circumstances. This was very apparent for opiates. Hence participants were actively sought who were current users of each substance group and, specifically, a heroin addiction service was approached. Initially every reason for alcohol and drug use was categorised and after the first five interviews we had identified 20 categories of reasons for alcohol or drug use. No further new themes emerged after the first five interviews. However, the categories identified in initial interviews were explored and tested in subsequent interviews where disconfirmatory

evidence was sought. As more interviews were conducted and analysed, the number of categories was reduced. For instance, initially we identified a theme of experimenting with alcohol when in a manic phase but subsequent interviews showed that experimentation with alcohol and illicit drugs occurred when feeling depressed, when euthymic or to control other symptoms. Therefore we subsumed these four categories into one concerning 'experimenting in the early course of the illness'.

Results

Patterns of substance use in relation to phase of illness

Table 1 about here

Table 1 shows the clinical and sociodemographic features of the sample. All patients had a history of past DSM-IV alcohol or drug dependence. Six (40%) patients had current DSM-IV alcohol or drug use disorders; only one was abstinent from alcohol and illicit drugs while the remaining eight reported occasional or regular moderate alcohol or drug consumption. Each patient showed a pattern of substance use that varied with their phase of illness (pre-diagnosis, depressive prodrome, manic prodrome, depressive episode, manic episode or euthymic state after diagnosis). A prodrome is the period from the start of symptoms of a bipolar episode to the development of the episode (Perry et al, 1999). The median number of different phases of illness with a different pattern of substance use in each patient was 4 (range 3-6). Overall there was more alcohol and drug misuse before the diagnosis of bipolar disorder than after it, and more in the euthymic state, manic prodromes and manic episodes than in depressed prodromes and episodes.

Thematic analysis of reasons for substance use

Five themes were identified as reasons for substance use.

1. *Experimenting in the early course of the illness*

Patients described experimenting with alcohol and drugs, mostly before they received a diagnosis of bipolar disorder or in the early course of the illness after a diagnosis. The substance use was sometimes out of control because they often did not know they

had a mental disorder at the time and/or did not understand what effects the substances had on their mood. The substances used included ecstasy, cannabis, amphetamines, heroin, cocaine and alcohol. Patients reported four distinct periods when experimenting took place. Firstly, on the way to becoming high in mood when the experimentation reflected risk taking and excesses when elated, and the amount of substance use might increase dramatically.

"What I used to do when I was manic…I'd go out and virtually drink myself to death… to the point of collapse. If you're high you know something's wrong, you know that. But you don't seem to be able to control it. I was drinking and not eating to the point where I'd virtually shut down" (Participant 10).

Secondly, experimenting also took place on the way to becoming low in mood but when they were more severely depressed they would stop the substance use.

"You know, when I was depressed I didn't drink. I was drinking more when I was sort of in the middle, the late first or second stages of being depressed" (Participant 2).

Thirdly, patients would experiment with substance use in an attempt to control their mood states, in particular to sustain periods of elation.

"When I was in that manic phase, I did dabble back into having coke [cocaine]. *The coke was to keep up the happy. I liked coke more when I was high. The coke just kept that feeling going. Whatever feeling you got would last that bit more" (Participant 2)*

Alternatively they would use substances as a way of coping with depression.

"To be honest I tried to ignore them [symptoms of depression] *in the hope they would go away. I was drinking at that point. Just kind of relaxed me and alcohol blotted things out" (Participant 15)*

Fourthly, patients also experimented with substance use to alleviate symptoms of elation using cannabis or sedatives.

"I was doing cannabis not to get high. I was doing it to bring me down a bit. I always had a vision of cannabis as something you chill out with" (Participant 1)

However, once mania was reached, participants reported that substance use had little effect on controlling or alleviating the symptoms of mania.

"Before that [in an elated state] *you'd be smoking cannabis and drinking. Once you're on that high mood…err…you're satisfied. You're not on this planet and you don't need cannabis specifically" (Participant 7).*

In this experimental period most of these participants experienced a period where alcohol or illicit drug use became habitual leading to increased tolerance and dependency. The use may or may not have been initially associated with a mood episode but usually then continued even when the mood episode resolved.

"I drank a hell of a lot; about half a bottle of sherry a day and that is a lot if you don't normally drink. And then it was getting stronger, I was wanting whiskey. It was getting more and more" (Participant 12)

2. *Living with a serious mental illness*

As a result of the experimentation in the early course of their illness, patients learned to use alcohol and illicit drugs in a more controlled way whilst at the same time managing a serious mental illness. They learned the influence that substances could have on their mood and conversely the effect of the mood state on their substance use. They described the confidence with which they knew when no adverse effects would be experienced from substance use, what, when and how much of a substance to take, and when to completely abstain from substance use. The pattern of substance use and the context in which they are used was therefore idiosyncratic, based only on past personal experience. For some, substance use is an equally valid way of controlling mood as prescription medication.

"Tried largactil, haloperidol but that had horrid side-effects. I've learned to self-medicate now. For me, valium works for the highs. It's the ultimate chill pill". (Participant 2)

For others, prescription medication provided more control overall and substance use had either limited benefits in terms of their mood disorder or no benefits at all. In these situations patients chose to abstain.

"But then I started to feel very depressed again. It was very anxious and well, everything was very close, everything hurt. And I was like that for quite a while and I thought, god, I can't be dong with this. That's when I knocked it in the head and stopped smoking the weed as well". (Participant 1)

Patients considered the possible effects of substances on their prescribed medications. For example, some patients used alcohol to induce elation during a period of stability in mood but knew there was a limit when the risks of illness outweighed any benefits.

"With excess alcohol…then sometimes I can bring on a bit of a high on. Whether it knocks the medication out of your system or what, I don't know, but it's a bit dangerous. With an all night drinking session that has happened in the past" (Participant 1)

Conversely, some patients self-medicate with alcohol or illicit drug use to control their symptoms of elation, but participants described how they had learnt that this is not always a reliable method.

"Only drinking a few times now, but it can work sometimes, it sort of puts a lid on the high. People have said don't take these things, but then you can be too clear headed. Seems to start with or be related to mania sometimes. I think it helps to bring yourself down a bit" (Participant 13)

In terms of managing depression, patients would often decrease or stop drinking but they may take cannabis instead.

"I recognised that the alcohol, after so many episodes, wasn't really helping so I wouldn't drink when depressed. I'd smoke pot but I wouldn't really drink" (Participant 5)

Alcohol or cannabis was used to control anxiety as well.

"Well I drink two or three times a week now. I drink to quell my anxiety when I am in a depressive mode and get anxiety" (Participant 14).

Cannabis was not always seen to be helpful when depressed.

"But pot is something you smoke and just drift off. It's a mood enhancer. I'm mindful that on a downer you know, it is not the time to be using something like that" (Participant 9)

3. *Enjoying the effects of substance use.*

One of the most common reasons for alcohol and illicit drug use was enjoyment of its effects irrespective of any effect on mood.

"I think it's just a really 'feel good' factor [cocaine]. *It just felt dead good…like all is well" (Participant 5)*

"I was on me medication but I was smoking cannabis and enjoying it". (Participant 1)

4. *Feeling normal again*

Patients would drink alcohol or use illicit drugs because they had an overriding desire to feel normal without the sedative effects of medication or to recapture how they used to feel before the diagnosis of bipolar disorder.

"I still drink two nights per week and miss my medication. I've told the psychiatrist that. They have told me as long as you don't drink too much and take your medication. But I've told them I don't. Two nights off a week for me, well it's psychological, I feel a bit normal" (Participant 1)

A feature of feeling normal again is using alcohol or cannabis to relax.

"Well alcohol just makes you feel good. It just like dulls all your senses and puts things on the back burner just for a few hours like, you know. You try to feel normal. Well, that's what I think anyway" (Participant 10)

Another way of feeling normal through substance use was being able to mix and socialise with other people. Sometimes this took part in venues where substances were widely available such as bars and nightclubs, and at other times with the patient's family and friends at people's homes.

"Very occasionally like, if I was sat next to some bloke in the pub and he offered me speed I'd find it really hard to say no. I don't go out and buy it. It's generally in that situation. It is by its nature like, coke, a drug you don't want to be taking on your own" (Participant 13)

"Lately I've thought to meself…I wonder if I have been drinking a lot lately. I mean it's just that we get in social situations with me family and that. And when we get together we'll have a couple of bottles of wine" (Participant 3)

5. Managing stress

Alcohol in particular was used to manage stressful life situations at work and home, and coping with rarer major losses such as bereavement.

"In bereavement, not after my daughter died but after my brother, for about a year after losing him, I did drink a hell of a lot" (Participant 12)

In particular, alcohol was used to help manage sleep difficulties that were associated with these events.

"Cause I was experiencing all this when I was in a stressful job. I remember I couldn't sleep. The only way I could cope with it, well one of the things, was drinking" (Participant 3)

When the main stressor was removed, many patients no longer craved alcohol

"I remember discussing it with colleagues at work you know friends, saying 'do you think I have a problem with alcohol?' because I did used to crave it. But luckily cause I don't have that stress I don't have that craving now" (Participant 5)

Alcohol was also used to manage the emotional distress of an unhappy childhood.

"I was not diagnosed but clinically depressed for three years. Between the ages of fourteen and seventeen, I was drinking excessively to blot out emotional pain" (Participant 15)

Discussion

In order to engage patients with dual diagnosis bipolar disorder and substance use disorder into a discussion about the merits and problems of substance use it is important to understand the patient's perspectives, even if they appear misguided to the clinician. The current report explored patients' own reasons for substance use in a sample characterised by the presence of both bipolar disorder and current or past alcohol or other substance use disorder. We employed an inductive approach because the aim of the study is to understand the patient's perspective on substance use in dual diagnosis bipolar disorder for clinical purposes rather than examine aetiological or epidemiological relationships. In this regard context is important and it is especially important that patients are allowed to express themselves freely, without judgement or theoretical imposition, and in as much detail as required. The aim was to go beyond upon mere description to explore similarities and differences in patients reasoning and the sources of information that informed their reasoning.

The first main finding is that patients' reasons for substance use and their pattern of use arise mostly out of personal experience. Patients talked about clinicians and family members or friends advising them to cut down but their decisions concerning

their substance use were based on what they had learnt from their own experience. Therefore everything a clinician says will be judged in this light and patient may only take heed of advice if it fits with their own personal experience. Clinicians will have to persuade patients of adverse effects of substance use by pointing to confirmatory personal experiences the patient has had or set behavioural experiments to test whether substance use has detrimental effects on their mood. Otherwise additional information about the harm caused by substance use is likely to be seen as hypothetical and hence irrelevant to the individual and their experience.

The second main finding is that patients' experiences with alcohol and drugs are idiosyncratic. For instance some patients reported using alcohol and other drugs to enhance or prolong periods of mania while others used alcohol and other drugs to dampen down the effects of mania. Therefore, discussion of patients' experiences by drawing on other people's experiences of substance use in bipolar disorder may be hampered if they have very different experiences of the effects of alcohol and specific drugs on their mood. This again suggests the most effective form of persuasive communication will require discussion around the individual's own concrete experiences of substance use.

The third main finding is that early in the course of bipolar disorder or before the diagnosis of bipolar disorder, substance use was uncontrolled but patients believed they had learnt about the effects of substance use from these experiences. Some patients had learnt to abstain or markedly reduce their substance use. Others perceived that they learned how to control the adverse effects by setting limits on their consumption and by being aware of their mood and other important contextual factors such as stress and whether they were in social company or not. In this latter group the controlled use of alcohol and illicit drugs was as valid a way of controlling their mood disorder as prescription medication. Nevertheless, even in the latter group, there were plenty of examples where too much consumption of alcohol or illicit drugs had led to problems with mood, and might be used clinically as a basis for a discussion about reducing or moderating their substance use.

The fourth finding is that although some patients clearly self-medicated, the reasons that patients with bipolar disorder consume alcohol or illicit drugs are often similar to

people without mental illness. Thus patients described enjoying the effects of alcohol and drugs, consuming them to manage stress, to socialise and fit in with peer groups. A few patients regularly briefly stopped taking prescribed maintenance medication that was sedating and consumed non-prescribed drugs to feel like they used to before the diagnosis of bipolar disorder. They believed from their previous personal experience that such a strategy had no adverse effect and it would be difficult to change their mind until there is disconfirmatory personal experience such as becoming manic or depressed shortly after stopping the medication and drinking an excessive amount of alcohol. Furthermore, like other people who consume heavy amounts of alcohol and street drugs, many of these patients with bipolar disorder and substance use developed problems of habitual use, tolerance and dependency.

At first glance, three themes, namely enjoying the effects of substances, feeling normal and managing stress may seem similar. While they are closely related, there are important differences between them in terms of the function these reasons serve: feeling normal is about fitting in with others and has implications for managing social situations, which is not necessarily a requirement for enjoying the effects of substances; managing stress is not usually pleasurable and may not necessarily involve managing social situations.

The main strength of this study is that the study was designed to systematically explore the range and context of patient experiences with substance use in patients with bipolar disorder and substance use problems. A thorough examination of the issue requires qualitative methods to understand the responses to questions in their correct context. For instance in some patients' alcohol and cannabis have the opposite effect on their mood than in other patients, and may have different effects in the prodrome leading to mania or a major depressive episode than in the full manic or major depressive episode. Previously there have been case reports or studies based on theoretical perspectives but we know of no previous systematic qualitative study of reasons that patients with bipolar disorder give for substance use. There may be many other examples of early experimentation and self-medication that we do not have data on given the almost infinite possible combinations of different types of substance, mood state and comorbidity in bipolar disorder (Mitchell et al, 2007). However, these are variations on two broad themes in our analysis (experimenting in the early course

of illness and living with a serious mental illness). We reached saturation in our analysis because later interviews were not generating new themes, only further examples of the five themes that had already emerged.

There are limitations to the study. The sample was purposively selected to provide as wide a range of views as possible; this included seeking some extreme cases in a range of demographic and clinical factors. Employing a theoretical, rather than statistical approach to sampling means we did not intend to recruit a representative or typical sample of patients. A number of steps were taken to ensure the trustworthiness of the analysis including a comprehensive sampling strategy, seeking deviant cases to test emerging patterns in the data, use of researchers from different disciplinary background (Henwood and Pidgeon 1992). Nevertheless, findings from this grounded theory study need to be complemented by quantitative research to determine the correlates of these themes in representative clinical samples. It is not possible to say from our data how common these themes are in a population of patients with both bipolar disorder and substance use disorders. The findings cannot be extrapolated to the use of alcohol and drugs in bipolar disorder patients without substance misuse disorders. We included only patients with bipolar 1 disorder so the findings do not necessarily generalise to patients with bipolar 2 or atypical bipolar disorders. Care should be taken also in extrapolating our data to populations where there are quite different cultural and religious taboos on alcohol and drug use such as in some Muslim countries (Ustun and Sartorius, 1995). Another limitation is that the data collection is based entirely on patient self report and was not verified against relative reports or case notes in relation to their consumption of alcohol and drugs, nor to verify their consequences. There is the possibility that subjects who were willing to talk to us were patients who were more adherent to treatment and accepted that substance use was harmful than other dual diagnosis patients, a form of selection bias. Furthermore, without longitudinal samples, many of the patients' observations of past experiences of the harmful or beneficial effects of substance use may be subject to recall bias or effort after meaning.

Our findings provide important implications for understanding how to communicate with patients who have dual diagnosis bipolar disorder and substance use disorder about their substance use. Our results are compatible to some extent with a self-

medication hypothesis (Weiss et al, 2004; Bizzarri et al, 2007a,b), but this hypothesis fails to entirely explain participants' substance use. Our data also suggests a social conformity model where patients with bipolar disorder use alcohol and drugs to try to follow a pattern of their life that is similar to their peers (Stein et al, 1987).

The main clinical implications of our research are that patients with bipolar disorder and substance use disorders may be motivated to change their behaviour if evidence from their own personal experience can be used to demonstrate adverse effects of substance use. In clinical approaches employing motivational interviewing, evidence from the person's recent experience that their attempts to self-medicate have not been successful, or that their substance use resulted in behaviour that might be embarrassing or not conform to the social norms that the patient aspires to, may be particularly powerful in terms of motivating the patient to change their substance use. Approaches such group treatment should still take an individualised approach to understanding the function and consequences of substance use in relation to their mood disorder based on that patient's individual experience because patients may have very different experiences of the effects of such substances on their mood or life. Assumptions should not be made about the effect of substance on the patient's mood on the basis of the predicted properties of the particular substance involved. Furthermore, the motives of patients with bipolar disorder for substance use vary considerably from direct effects on their mood to issues that are typical of patients with substance use but without mood disorder. Careful history taking concerning the reasons for substance use over a person's life in relation to their mood disorder and other life issues is required whatever treatment approach is adopted. Most patients have found that mood and substance use are intimately connected so a formulation of the patient's problems should consider the links between mood and anxiety symptoms and substance use rather than consider them as unrelated comorbid clinical problems (Weiss et al, 2007). Although there are pharmacological treatments such as valproate that may modify the course of alcohol use in bipolar disorder (Salloum et al, 2007), other substance use such as cannabis may complicate the course of alcohol use in bipolar disorder (Salloum et al, 2005). Therefore, even in clinical practice where pharmacological treatments are the main therapeutic intervention, there is a need to engage the patient and to understand and communicate with the patient in the light of the perspective on and recent experience of their substance use. Research is required

to examine how common these themes are and how these themes may be further integrated into effective clinical interventions.

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Table 1. Clinical and sociodemographic features of the sample

Factor	**Number (%)**
Gender, female	9 (60)
Age, 18-30 years	3 (20)
Age, 31-45 years	6 (40)
Age, 46-64 years	5 (33)
Age, 65 years or more	1 (7)
White	13 (86)
Afro-Caribbean	2 (14)
Married or co-habiting	6 (40)
Single	4 (27)
Divorced or separated	4 (27)
Widowed	1 (7)
Professional or managerial	1 (7)
Skilled	6 (40)
Semi-skilled	2 (13)
Unskilled	1 (7)
Unemployed	4 (27)
Retired	1 (7)
Few relapses (<5)	10 (67)
Many relapses (>6)	5 (33)
Past psychotic symptoms	12 (80)
Rapid cycling disorder	2 (13)
Comorbid anxiety disorder	4 (27)
Comorbid personality disorder	2 (13)
Past alcohol use disorder: regular heavy binge-drinking	14 (93) 10 (67) 4 (27)
Current alcohol use disorder	6 (40)
Past substance use disorder	12 (80)
Current substance use disorder	3 (20)
Cannabis, regular heavy Cannabis, irregular use	7 (47) 6 (40)
Stimulants, regular heavy Stimulants, irregular use	6 (40) 3 (20)
Hallucinogens, regular heavy Hallucinogens, irregular	1 (7) 2 (13)
Sedatives, regular heavy Sedatives, irregular	4 (27) 1 (7)
Opiates, regular heavy Opiates, irregular	1 (7) 1 (7)