Behavioural and Cognitive Psychotherapy, 1998, 26, 193–208
Cambridge University Press. Printed in the United Kingdom

Accelerated Publication

THE ROLE OF DYSFUNCTIONAL BELIEFS IN INDIVIDUALS WHO EXPERIENCE PSYCHOSIS AND USE SUBSTANCES: IMPLICATIONS FOR COGNITIVE THERAPY AND MEDICATION ADHERENCE

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Abstract. It can be argued that an individual's subjective experience and beliefs about a substance are important. Motives and expectancies regarding the use of alcohol and drugs are often that they are going to modify a cognitive state or help them cope with a particular situation. However, there are growing concerns in the U.S.A. and in the U.K. regarding individuals who experience psychosis and concurrently use substances. Correctly diagnosing individuals with dual presentation is said to be difficult, engagement in treatment is problematic, and medication adherence and prognosis poor. In this paper a cognitive-developmental model is proposed. I suggest that for individuals who experience psychosis and also use drugs or alcohol, the ability to identify the relationship between the substance use and the psychotic illness in terms of a case formulation/conceptualization would provide a good starting point for developing strategies and interventions that are most likely to succeed in treatment. Such an approach would explicitly address key cognitions. Unless the dysfunctional substance-related beliefs are addressed, adherence to medication and engagement with treatment services will be hindered and the possibility of relapsing to problematic substance use and acute psychosis remains. A cognitive treatment component, to target these beliefs, based on the cognitive model of substance misuse and the motivational interviewing approach will also be briefly outlined.

Keywords: Cognitive therapy, dysfunctional beliefs, psychosis, substance abuse, dual diagnosis, medication adherence, schizophrenia.

Introduction

"*I feel numb on the medication, my head and hand won't stop shaking, and so I've stopped taking it . . . , when I use cocaine I feel live, kicking and buzzing*".
(Ted, aged 31 years, diagnosed as schizophrenic)

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The cognitive-behavioural intervention proposed by Kavanagh (1995) is a comprehensive approach to tackling the treatment needs of individuals who experience psychosis and concurrently use substances. Many of its treatment components have been shown to be effective. However, I would like to propose that this and other treatment models do not appear to place the dually diagnosed individual's difficulties within a conceptualization nor do they explicitly address key cognitions, and thus an important treatment component has been missed. Within cognitive therapy of substance misuse, the importance of a good case formulation is emphasized (Beck, Wright, Newman, & Liese, 1993). In line with this I would like to propose that, for individuals who experience psychosis and also use drugs or alcohol, the ability to identify the relationship between the substance use and the psychotic illness in terms of a case formulation/conceptualization would provide a good starting point for developing strategies and interventions that are more likely to succeed in treatment. That is, what is the function of the drug or alcohol use?

For this client group several areas of the literature have begun to flag up the importance of an individual's beliefs and subjective experience. For example, the beliefs/perceived control over psychotic illness has been found to be related to the incidence of depression, demoralization and suicide amongst males who experience psychosis (e.g., Birchwood, Mason, MacMillan, & Healy, 1993). These authors suggest, in line with the psychological literature in the area, that "the patient is an active agent searching for meaning and control over their illness and experiences". It can therefore be proposed that the beliefs an individual holds about their psychotic illness will influence how they adjust or cope or gain control over it. Indeed, within cognitive therapy the individual's perception, subjective experience and interpretation of their distress or problem are seen to be the focal point of treatment. The central components of cognitive therapy for substance misuse are seen to be dysfunctional (substance-related) beliefs about the substance use. In this paper, based on the cognitive therapy model, an attempt will be made to identify the role of dysfunctional beliefs regarding substance use in individuals with psychosis.

Problems related to substance misuse and concurrent psychosis

Many individuals with problematic substance use tend to have co-existing mental health problems and vice versa. Current terminology for those who experience psychosis (e.g., schizophrenia, bipolar affective disorder) and misuse drugs and alcohol is "dual diagnosis". There are growing concerns both in the U.S.A. and in U.K. regarding this problem (Rorstad & Checinski, 1996). Although the estimates vary across studies, due to methodological differences, they suggest that somewhere in the region of 10–65% of people in the U.S.A. with psychiatric problems, particularly schizophrenia, have concurrent problems with substance abuse during their lifetime (e.g., Mueser, Bellack, & Blanchard, 1992; Rosenthal, Hallerstein, & Miner, 1992). The chances are seen to be higher if the substance used are drugs as opposed to alcohol. This compares with the U.S.A. general population rate of 17% (Reiger et al., 1990). There are limited U.K. prevalence data available; but a survey in south London of patients with psychotic illness found substance abuse in 36.3% (Menezes et al., 1996).

Some of the reviews of the literature would suggest that, for these individuals with dual presentation, diagnosis and treatment is problematic and compliance and prognosis poor (e.g., Buckley, Thompson, Way, & Meltzer, 1994; Kavanagh, 1995; Mueser et al., 1992; Smith & Hucker, 1993). Such people are said to have a more severe course of psychotic illness, an earlier age of onset and more severe symptoms. Treatment outcome is poorer; increased rate of hospitalizations and relapse, a longer rate of recovery, and lower treatment and medication adherence are reported (Saguinetti & Samuel, 1993). The social implications for the dually diagnosed are said to be poor social functioning, housing instability and family discord (Smith & Hucker, 1993). Much of this research has been carried out on individuals with schizophrenia. However, similar results have been found amongst those diagnosed with bipolar affective disorder who concurrently use substances (Sonne, Brady, & Morton, 1994). These individuals were found to compare unfavourably with non-users. They had twice as many hospitalizations, the onset of mood disturbance was earlier than non-users, they were more likely also to have a co-morbid axis I disorder, and be experiencing dysphoric mania at the time of interview. The service costs for those dually diagnosed are said to be higher. Bartels et al. (1993) found that individuals with psychosis who were currently using drugs/alcohol utilized emergency and institutional services more than past substance users.

The consensus in clinical settings and the literature is clear: those clients who experience psychosis and concurrently use substances are often at risk from falling between two services, and being shunted between mental health and specialist substance misuse services (Franey & Quirk, 1996; Rorstad & Checinski, 1996). There is a possibility that they are rejected by health providers in mental health services (Kavanagh, 1995), due to a lower tolerance and anxieties amongst staff about the effect of substance use on behaviour and mental health.

As a result of the perceived extent and implications of problems related to concurrent substance use and psychosis there has been a move toward developing tailored interventions. There has also been a recent emergence in the literature of the subjective reasons for substance use amongst this client group.

It can be suggested that, if the function of drug or alcohol use by an individual who experiences psychosis is, for example, an attempt at self-medication, modification or regulation of psychotic symptoms or a cognitive state, then, in treatment, the formulation and intervention has to take these dysfunctional drug-related beliefs into account if behavioural changes are to be achieved. Thus, for example, Ted, a 31-year-old man diagnosed as schizophrenic, described experiencing a ''numb and flat'' mood when he took his medication regularly. However, he reported that he used amphetamines or cocaine to help him feel ''alive and alert'' and socially accepted by his peers. In treatment he continued to firmly hold onto his positive beliefs about these drugs despite some awareness of their negative effects at times. He therefore found making changes in his substance use difficult, and was ambivalent about continuing with prescribed medication due to the perceived negative impact it had on his mood and physical presentation. It can therefore be suggested that, essentially for those individuals who experience psychosis and concurrently abuse substances, the beliefs about their illness and the dysfunctional beliefs they hold about their drug/alcohol use will have implications for relapse, whether they will engage and are adherent with treatment (e.g.,

anti-psychotic medication), and would be willing to make any changes in their drinking or drug use.

Role of dysfunctional beliefs in substance misuse and psychosis

Role of dysfunctional beliefs in emotional disorder

Within cognitive therapy it is held that our early life experiences are important in shaping and maintaining the core beliefs that we hold about ourselves. Core beliefs are said to be typically derivatives of two kinds, that is, ''I am unlovable'' and ''I am helpless'' (Beck et al., 1993). In an attempt to cope with such beliefs, individuals are said to develop a second set of beliefs in the form of assumptions or rules (e.g., ''I can't stand painful feelings'', ''If a person avoids problems, the problems will tend to go away''). These beliefs are often used in an equation to define personal worth (e.g., ''If I do things perfectly, I will be wanted and accepted by others'') and are associated with powerful emotions. They are learned ways of thinking, typically culturally reinforced and idiosyncratic, and are usually activated in situations that are congruent with an individual's specific vulnerabilities. However, they can predispose an individual to an emotional disorder such as depression or anxiety, when they are held rigidly, overgeneralized, absolute, unrealistically demanding and biased. Such beliefs are classified as dysfunctional when they interfere with an individual's achievement of goals and state of well-being (Beck, 1976; Greenberger & Padesky, 1995). Thus core beliefs and dysfunctional assumptions/beliefs are seen to have a central role in the development and maintenance of emotional disorder (Beck, 1976). However, what is their role in substance misuse?

Role of dysfunctional beliefs in substance misuse

Based on clinical impressions and the reports of individuals within treatment settings, it can be surmised that an individual's subjective experience and beliefs is that their substance use is modifying a cognitive state, particularly thoughts and images, or medicating/regulating mood or psychological distress. For example, ''I felt so down this week . . . using cocaine on the weekend really picked me up and I had a good laugh with my mates'', ''I can't relax or fall asleep if I don't smoke cannabis''. Khantzian's (1997) notion that the misuse of drugs and alcohol is an attempt on an individual's part to self-medicate psychic distress has thus been seen as one that makes intuitive sense. The regulation of cognitive states model of substance abuse has further elaborated on this idea (Toneatto, 1995). However, others (e.g., Kavanagh, 1995; Mueser et al., 1992) have argued that the misuse of drugs and alcohol can be objectively attributed to other reasons (e.g., attenuation/achievement of a particular cognitive state [e.g., ''to get high''], environmental/social context, availability of the substance, family history of substance abuse). Nevertheless, it can be argued that an individual's subjective experience and beliefs about a substance are important. Their motives and expectancies regarding using alcohol and drugs are often that they are going to modify a cognitive state or help them cope with a particular situation (drug-related beliefs) (e.g., Toneatto, 1995; Liese & Franz 1996; Mueser, Nishith, Tracy, De Girolamo, & Molinaro, 1995).

Cognitive therapy for substance misuse considers these core beliefs and dysfunctional assumptions/beliefs as pivotal. These beliefs are said in a similar process to that outlined in the cognitive model of emotional disorders (e.g., Beck, 1976) to increase an individual's vulnerability to emotional disorders and/or other difficulties. If, for example, an individual is exposed to drugs or alcohol at an important developmental or life stage drug/alcohol-related beliefs may develop. These beliefs may then become a way of coping with the core beliefs or dysfunctional assumptions an individual holds about themselves. For example, if the core belief is, ''I am inferior'' and when exposed to a drug using culture the individual begins to feel accepted and more confident, then drug-related beliefs may develop, such as, ''people will think well of me if I am generous and buy rounds or give them drugs'', ''I am the life and soul of the party after a few lines of cocaine''. However, it is suggested in this cognitive model that with time, continued drug use and positive experiences, these beliefs become ingrained and automatically activated. I would also like to suggest, therefore, that these substance-related beliefs can become dysfunctional, that is, interfere with an individual's achievement of goals and state of well-being. From clinical experience this is often the case when the beliefs take on a conditional form (i.e., ''If I don't use cannabis, then I will be unable to cope'') and when the drug/alcohol using behaviour becomes a compensatory strategy, that is a behaviour to cope with their problems or core beliefs and dysfunctional assumptions (Beck et al., 1993; Liese & Franz, 1996). In reality continued use may actually serve to do the opposite by reinforcing these underlying dysfunctional beliefs about themselves, hence maintaining the vicious circle of problematic substance use (Liese & Franz, 1996).

Over time an individual with problematic substance use is said to develop a network of idiosyncratic and substance-specific related beliefs. Such beliefs appear to be based on their core beliefs and general dysfunctional assumptions about substances. These substance-specific related beliefs are said to be activated in particular circumstances (''high risk situations'') and increase the likelihood of continued use by activating cravings/urges to use (e.g., Beck, Wright, & Newman, 1992). For example, if the dysfunctional substance-related belief is ''alcohol helps me to cope'', then initial use of alcohol may lead to the belief (anticipatory belief) that ''I can have fun with my friends when we drink at the weekends''. If the alcohol use continues in a dependent pattern beliefs (relief-oriented) may develop such as, ''I need a drink to relax and get things done''. In a situation where the individual feels tense or under pressure to perform or cope craving and urges to use alcohol may be triggered. At this point they may start to ''talk themselves'' into using or give themselves permission to use (facilitating/permissive beliefs), for example ''just one drink won't hurt'', ''I deserve a drink''.

Relief-oriented and anticipatory dysfunctional beliefs about drug or alcohol use fit in well with the self-medication hypothesis of substance misuse (Khantzian, 1997) and the regulation of cognitive states model (Toneatto, 1995). That is, the individual's subjective experience and belief is that the substance will serve to medicate, regulate, modify an emotional or cognitive state or help them cope with a particular situation. In line with the literature (e.g., Beck et al., 1993; Liese & Franz, 1996) it is clear that these substance-related beliefs, underlying core beliefs and dysfunctional assumptions, are pivotal in whether an individual responds to cravings/urges and continues to use substances, and are thus also essential targets for treatment.

Role of dysfunctional beliefs in substance misuse and psychosis

It has been established, from a cognitive perspective, that an individual's dysfunctional beliefs are central in the development and maintenance of their problems, and are therefore important targets in treatment. It has been proposed that the experience of psychosis is one that can trigger an identity disturbance. This can lead an individual in a search for meaning and control over their illness and symptoms (Birchwood et al., 1993). In this paper I would therefore further suggest that the experience of psychosis may facilitate the development of a set of beliefs that enable people to adjust, cope or gain some control over the symptoms and experience. Some of these beliefs may be delusional in nature. Others may be an attempt to self-manage or regulate symptoms and the experience. The use of drugs and alcohol has been identified as an example of a behaviour that individuals with psychosis describe engaging in to modify, regulate and self-medicate cognitive states and to cope with particular situations in a similar way to those who do not experience psychosis (Warner et al., 1994; Mueser et al., 1995).

Thus it can be suggested that the beliefs an individual generates about their psychotic illness and the self-identified methods of coping with it may, over a period of time, become associated with dysfunctional substance-related beliefs. In an attempt to illustrate this relationship and to generate a cognitive conceptualization for those who experience psychosis and concurrently use substances let us first look at the research in the area of beliefs about substance use amongst those with psychosis.

Warner et al. (1994) suggests that several reasons or rationales have been given in the research to explain why those with psychosis use drugs or alcohol. Amongst inpatients these explanations range from self-medication of painful affective states and symptoms to controlling medication side effects to relief from negative mood states to increasing energy and motivation to increasing social contact. Similarly, out-patients who were compliant with medication, cited reasons such as relief of unpleasant states, social interaction and boredom as the main reason for using drugs or alcohol. The author found that these individuals differentially used substances. For example, cannabis was used to reduce boredom, depression, insomnia and anxiety, whereas hallucinogens were used to help them feel more awake. An interesting additional reason given was feeling improved self-esteem. Similar results were found by Wolf, Ruther, Brenner, Poser, & Schmidt (1986) amongst psychiatric inpatients who used stimulant drugs (amphetamine). They noted the motivation for using this type of drug was to induce a more alert and active state and improve mood. Mueser et al. (1995) also found this differential effect for the types of substance used by schizophrenics. However, they divided the substance-related beliefs into two constructs: ''motives'' (said to operate just before the substance is used), and ''expectancies'' (said to be related to an individual's historical knowledge and beliefs about the different substances). They suggest therefore that ''motives'' will lead to a desire to use, but ''expectancies'' will actually direct which substance is chosen and preferred. They found that motives such as socialization, coping and pleasure-enhancement were more associated with alcohol use, whereas drug use was motivated by efforts to cope.

The objective research on the effects of substance use in individuals experiencing psychosis supports the notion that different substances have different effects and can

be instrumental in reducing psychotic symptoms. Lysaker, Bell, Beam-Goulet, & Milsten (1994) found that those with schizophrenia who used cocaine experienced less negative symptoms and cognitive disorganization, in comparison to non-users. It is suggested the cocaine use may function as a self-treatment of negative symptoms. Similarly, cannabis users have been found to have a lower hospitalization rate than those who used other or no substances (Warner et al., 1994).

It can be concluded, therefore, that individuals with psychosis who concurrently use substances are convinced (to varying extents) about the beneficial effects of substance use as a coping strategy. They have quite strong substance specific beliefs (motives and expectancies) that drive and maintain continued substance use as a subjective method for coping with their experiences. In an attempt to illustrate the functional role of substance using behaviour as a compensatory strategy by individuals with psychosis, three clinical case examples will be outlined. The implications for medication adherence will also be discussed.

Case studies

Case 1: Ted

Ted is a 31-year-old man who has been diagnosed as experiencing schizophrenia for five years. He has used cannabis, glue and alcohol from puberty and found that alcohol "dampened" paranoid thoughts that he begun to experience when aged 16 years. He currently regularly uses alcohol and cannabis, and cocaine on an occasional basis. He finds that he becomes more violent, angry and paranoid when he uses, but believes that his substance use makes him feel more "live, kicking and buzzing" and blocks out painful memories from the past. Most of his social network use alcohol and drugs. He is ambivalent about taking medication and often refuses his depot, as he believes it makes him feel "numb" and finds the side effects too embarrassing. Ted on occasions is able to make short-lived changes in his substance use but believes he is "substandard and not able to make changes". The evidence he uses to support this belief is that all his brothers and father experience some form of psychosis.

Case 2: Gerry

Gerry is a 32-year-old man who has been diagnosed as experiencing bi-polar-affective disorder for three years. He has a history of using cannabis and alcohol since his teens, and initially became unwell following the breakdown of a long-term relationship and increased cocaine use. He generally adheres to his medication but on occasions reduces it as he believes it makes him feel "tired" and "flat". He believes that a positive benefit of taking his medication is that he does not experience a marked "crash" in mood after a cocaine binge. He works in the family business and does quite well, but feels his efforts are not acknowledged by his family. He is currently in a relationship. In situations where he feels stressed (particularly with his father and brother and in new social situations) he has on occasions paranoid thoughts (persecution) and grandiose delusions. At age 16 years during a fight protecting his brother he received a knife cut to his face which contributed to the onset of social anxieties, and the content of his

paranoia is usually in relation to how others perceive the cut to his face. He uses cocaine and alcohol in a binge pattern and believes that after a few lines he is "the life and soul of the party", he feels "great and energetic" and is liked and accepted by others. However, his substance use causes family problems and increases his paranoid feelings. He has chosen not to use cannabis for this reason. He has had long periods of abstinence from cocaine (up to two months) but believes that a drug-free life is "boring and that everyone is using it", and thus relapses when he feels "flat" or low in mood.

Case 3: Ricky

Ricky is a 28-year-old man who has been diagnosed as experiencing schizophrenia for two years. He has a history of using a range of substances on a recreational basis since his teenage years. He currently uses several substances on an occasional and recreational basis within the gay club culture. He is aware that he typically becomes depressed the week after he has used drugs. However, he describes that he feels a "normal" part of the gay scene when he uses drugs and more accepted by his partner. He also has a "good time" when he is using, and finds having a mental illness demoralizing. When he becomes unwell he has paranoid thoughts of persecution that are related to his sexual orientation. He does not adhere to medication generally and believes that it makes him "put on weight" and "feel flat". He believes that he is more attractive if he is slim and this serves to improve his self-esteem if he believes that other men find him attractive.

Cognitive conceptualization

"The case conceptualization provides an essential framework for understanding patients and for developing and implementing appropriate treatment strategies . . . By gathering and integrating this information the therapist can address the history, development, and permissiveness of the patient's substance use problem and related maladaptive beliefs" (Liese & Franz, 1996). The case conceptualization is also said to guide the therapist to the beliefs that are important in maintaining the individual's presenting problem (Persons, 1989). In each of these three case examples the individuals believe they have no control over the psychotic illness per se. However, they do seek to control their experience of it. Although they have some awareness of the negative effects of their use (e.g., increasing violence, anger, paranoia, low mood) they still seek to regulate their cognitive and emotional state and increase their social acceptance and self-esteem through substance use. For example, "it makes me feel live, kicking and buzzing", "great and energetic", "I'm the life and soul of the party", "I feel normal, like everyone else". It has been suggested that individuals titrate the use of substances to achieve the most advantageous cost-to-benefit ratio (Kavanagh, 1995), "that is they tailor drug use to achieve maximal impact on affective symptoms with minimal increase in positive symptoms" (Warner et al., 1994). For example, Linszen, Dingemans, & Lenior (1994) found that individuals with schizophrenia who moderately use cannabis experienced less anxiety and depression than those who used heavily or not at all. It is also seen in

the case of Gerry that substances are used selectively based on the individual's subjective experience of it. His "expectancies" of cannabis use and its adverse consequences outweigh any benefits and thus he avoids using it. The opposite is true for cocaine and thus his decisional balance matrix (i.e., "pros" and "cons" of using, as outlined by Miller & Rollnick, 1991) maintains his continued use.

It is proposed in this paper that the beliefs held about the experience of psychosis and medication become associated over time with the dysfunctional substance-related beliefs. Drug and alcohol using behaviours thus begin to function as a compensatory strategy. For Ted the combined belief takes the form of; "I feel numb on the medication, my head and hand won't stop shaking, and so I've stopped taking it . . . , when I use cocaine I feel live, kicking and buzzing". In the case of Gerry, the combined belief helps him to cope with the demoralization he experiences as a result of his illness and provides him with "permission" to use, for example, "I feel so tired and flat all the time . . . I'm working hard and it doesn't get easier . . . I'm never going to get better . . . what's the point in staying clean, it's boring anyway . . . When I used this weekend I felt great and energetic and had such a laugh with my mates" (Figure 1).

Medication adherence is said to be relatively poor amongst the dually diagnosed (e.g., Awad, Voruganti, Heslegrave, & Hogan, 1996; Pristach & Smith, 1990). It can be seen from the three case studies that adherence to medication is related to an individual's beliefs about their ability to better cope with the experience of psychosis and their cognitive and emotional state through the use of alcohol and drugs. This is also supported by the research on the subjective reasons for substance use amongst this client group. This is illustrated in the case of Ricky. For Ricky the experience of psychosis has led to a drop in his self-esteem as he feels unable to achieve his personal goals (e.g., work and be independent) and fit in with his peers. In an attempt to restore his self-esteem he is preoccupied with his body-image and being perceived as attractive by others. He does not wish to see his illness as a long-term one and thus discontinues his medication when he begins to feel flat, well again, or when he begins to put on weight. However, when he uses drugs his belief is that he feels "normal . . . meets lots of people and has a good time", and thus this belief enables him subjectively to be more able to cope with his psychotic illness. Awad et al. (1996) similarly have noted from the literature that the subjective experience of neuroleptic medication, particularly the individual's early feelings about the medication, has been found to be an important predictor of adherence. For example, they found, dual diagnosis patients who used stimulant drugs were more likely to be experiencing neuroleptic dysphoria. It is thus proposed that stimulant use may be an attempt on their part to modify their negative subjective feelings.

It has been found amongst dually diagnosed clients who received comprehensive case management that substance use was not associated with increased symptoms or more frequent hospitalizations (Warner et al., 1994). It is possible that such previously held associations have been due to non-adherence with medication and treatment, rather than substance use per se. Warner et al. (1994) suggest that external factors such as close monitoring of medication compliance, reduced access to money, increased activity and work to lessen boredom will help to reduce problematic substance use amongst this group. Kemp, Hayward, Applethwaite, Everitt and David (1996) have designed a cognitive-behavioural intervention to improve medication compliance in psychotic

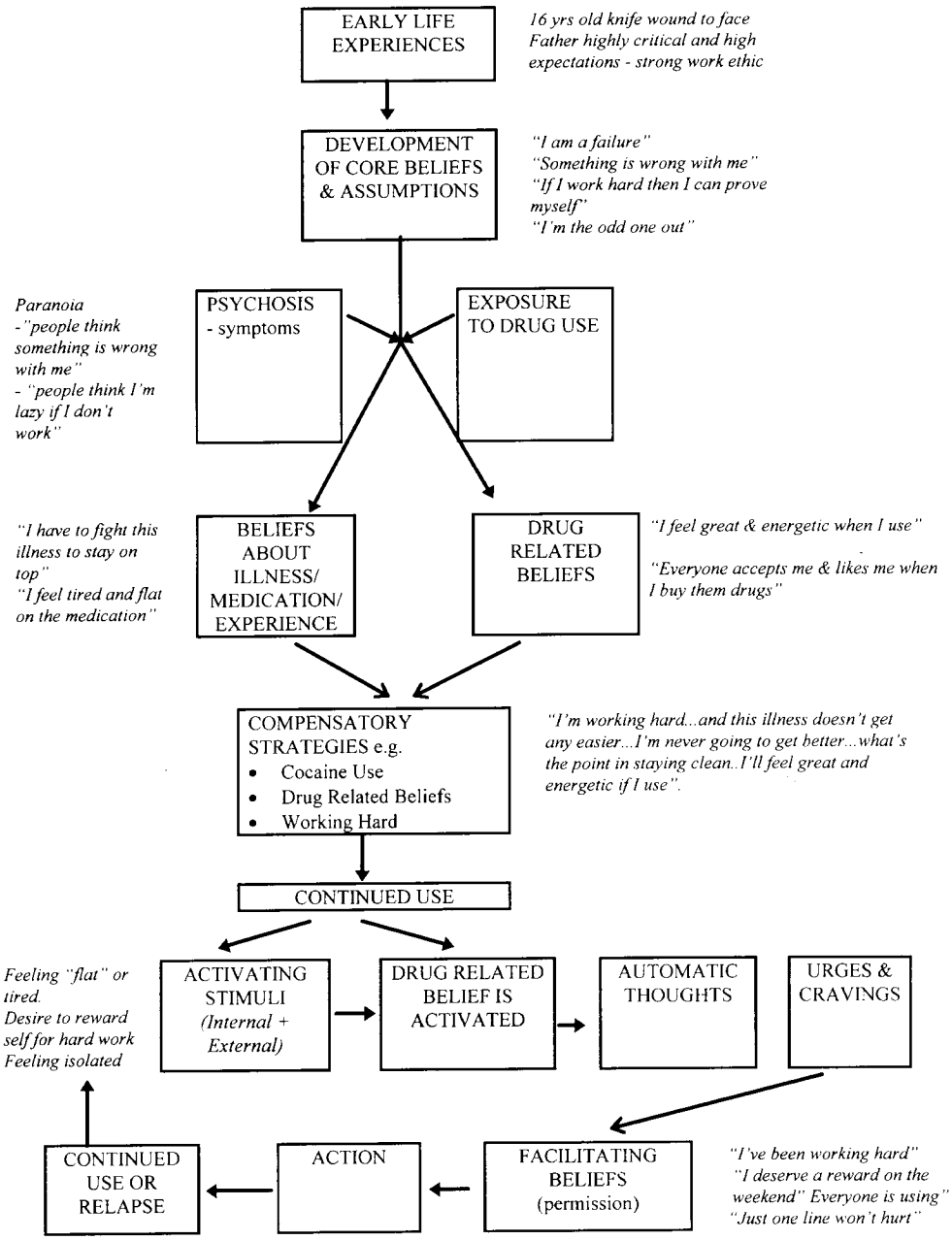

Figure 1. Cognitive-developmental case conceptualization for Gerry

individuals. They utilized motivational interviewing strategies to help clients look at the cost-to-benefit ratio and included psychoeducation. They found that those who received this treatment showed significant improvements in their attitudes to medication, insight and compliance. Thus adherence with medication is possible

https://doi.org/10.1017/S1352465898000228 Published online by Cambridge University Press

amongst this group depending on the treatment approach applied, through the use of external factors and addressing cognitive processes. However, I would suggest that unless the dysfunctional substance-related beliefs are addressed, adherence to medication and engagement with treatment services will be hindered and the possibility of relapsing to problematic substance use remains.

So far it has been argued that an individual's dysfunctional substance-related beliefs are central to the maintenance of their substance use. The formulation/conceptualization I would thus propose for individuals who experience psychosis and concurrently use substances is that the beliefs held about the experience of psychosis and medication become associated over time with the dysfunctional substance-related beliefs. Drug and alcohol using behaviours thus begin to function as compensatory strategies. The importance of these beliefs are that they also underpin the individual's attitude toward medication and engaging with services. I would therefore suggest that if these beliefs are missed they could contribute to relapse, or treatment failure. Alternative beliefs and coping strategies that are more adaptive in, for example, regulating cognitive and emotional states need to be developed/generated with the individual, potentially reducing the risk of relapse (i.e., problematic substance use and psychotic symptoms). This conceptualization may represent a possible cognitive-developmental model for concurrent psychosis and substance use, though it would require further evaluation (see Figure 2).

Proposed cognitive therapy treatment component

Based on the proposed conceptualization I would like to briefly outline a treatment component that could be used with individuals who experience psychosis and concurrently use substances (Table 1). It could be used in conjunction with already established approaches, such as the cognitive-behavioural (CBT) model proposed by Kavanagh (1995), and intensive case management and psychosocial treatments for psychosis. This treatment component seeks to target the dysfunctional substance-related beliefs that maintain problematic substance use and reduce compliance with medication. This proposed cognitive therapy treatment component is based on the literature reviewed thus far in this paper. However, the main framework is the cognitive therapy of substance abuse model (Beck et al., 1993; Liese & Franz, 1996) and motivational interviewing techniques (Miller & Rollnick, 1991). As mentioned previously, standard CBT techniques may need substantial adjustments due to the cognitive and social deficits individuals with psychosis may experience (Mueser et al., 1992; Kavanagh, 1995). For example, it may be helpful to use written summaries, cue/flash cards and written educational information. Audio-tapes of the sessions may prove beneficial as a between-session reminder and repeating the issues covered over the course of the treatment episode. The specific details of the cognitive-behavioural and motivational interviewing techniques will not be detailed here as they are comprehensively covered in the above references. To engage individuals and harness their motivation to make changes the approach should be non-confrontative and collaborative, basically an attempt to "negotiate" some behavioural change. The case conceptualization developed during the assessment would direct the implementation of these strategies/techniques and the timing.

https://doi.org/10.1017/S1352465898000228 Published online by Cambridge University Press

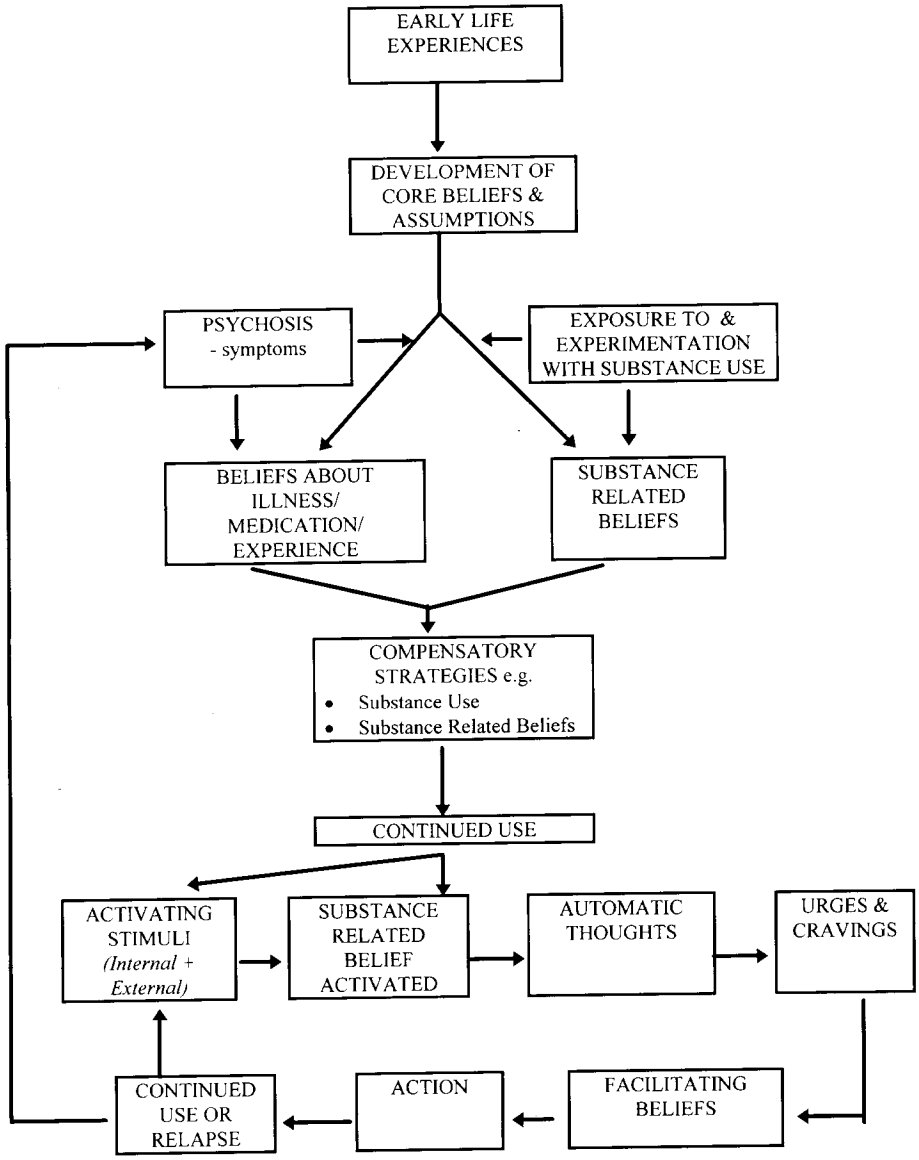

Figure 2. Proposed cognitive-development model of substance abuse and concurrent psychosis

Outlined in Table 1 are a menu of techniques that I have found clinically useful when working with this population. They have also been found to be generally effective methods. In my clinical experience these techniques have been quite useful in engaging such clients in treatment. For example, Ted has begun to recognize the function of his substance use in relation to coping with his experience of psychosis, and as a consequence he has had brief periods of abstinence from cocaine and alcohol. He has refused his depot medication but will now use oral medication when he begins to feel unwell. Gerry is not currently using cocaine and has been able to challenge his positive beliefs

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Table 1. Cognitive therapy treatment component

Aim: To enable the client to begin to understand the mediating/functional role of dysfunctional beliefs about substance use in relation to their experience of psychosis, and to identify alternative beliefs and coping strategies.

(1) **Assessment**
Assessment should not only be seen as an information gathering exercise but also an opportunity to engage the client, form a collaborative relationship, assess and harness motivation to change.
Substance use: Type of substance used, pattern, effects, problems resulting from use, reasons for substance use.
Beliefs about psychosis: subjective experience of symptoms, medication and view of self.
Developmental profile: substance use history.
Cognitive profile: Identify thought processes associated with drug use, that is, high risk situations, automatic thoughts, substance-related beliefs, facilitating/permissive beliefs, decisional balance sheet; advantages and disadvantages in short and long-term of use, elicit self-motivational statements.
Case conceptualization: formulation of an hypothesis about the development and maintenance of substance use and relationship to psychosis.

(2) **Orient the client to the cognitive model**

(3) **Identify substance-related beliefs, test beliefs and identify alternatives**
Drug/alcohol diary (functional analysis diary similar to a Daily Thought Record)
Decisional balance sheet; advantages and disadvantages in short and long-term of use (Miller & Rollnick, 1991).
Challenge beliefs regarding relationship between psychosis and substance misuse and identify alternatives (e.g., Beck et al., 1993; Liese & Franz, 1996; Thase & Beck, 1993; Greenberger & Padesky, 1995; Padesky, 1994).
Psychoeducational information regarding the substances used, psychosis and medication (Kemp et al., 1996).

(4) **Relapse prevention/management** (e.g., Marlatt & Gordon, 1985)
Identify high risk situations and activating stimuli.
Develop control beliefs and practice activation of control beliefs.
Undermine drug-related beliefs and replace them with alternative strategies for coping with certain cognitive states (thoughts/images) or mood regulation.

(5) **Monitoring symptoms and substance use** (Kavanagh, 1995)
Early signs monitoring and medication adherence.
Education about timing of substance use in relation to prodrome/early signs, types of substance used and their effects at different stages.

(6) **Strategies to improve self-concept and self-esteem**
Behavioural skills (e.g., Jerrell & Ridgely, 1995).
Lifestyles training; e.g., skills training, work, development of positive activities, non-drug-related activities.

about cocaine and now has a more realistic view of this substance and its impact upon his mental health and general functioning. He continues to feel too heavily medicated and demoralized by his illness, but has been prescribed anti-depressants and found these have helped improve his mood. Gerry has also begun a new relationship and has

decided to engage in positive non-drug-related activities such as exercise. Ricky is aware of the effect of his drug use in terms of it destabilizing his mental state and triggering early signs. However, based on his dysfunctional beliefs about his drug use the advantages of its use continue to outweigh the disadvantages thus maintaining his use and persistent psychotic symptoms. These individuals described are fairly young and still in the early stages of their illness. It is possible that this approach may best suit this client group rather than those experiencing chronic psychosis, and could be used in conjunction with early intervention strategies in psychosis that have been recently developed. The treatment literature reviewed in this paper has suggested that dually diagnosed clients should be treated in integrated services. However, some may prefer to be seen in drug/alcohol specialist services because of the stigma attached to mental health services. This may be true particularly for young males. Such an intervention would have important implications for both psychiatric and substance misuse services/organizational structures and staff training and experience. Staff would need to be familiar with both substance use and psychosis.

The treatment component and conceptualization outlined in this paper will require further refinement and proper evaluation. The prognosis for these clients does not appear to be as poor as may have been initially thought by service providers. The literature and outcome studies suggest that the primary challenge of ''dual diagnosis'' may rather be for service providers to develop more effective treatment approaches.

Acknowledgements

Camden & Islington NHS Community Trust Drug Services (Hampstead Road Centre). Gillian Butler for her scholarly advice during the early stages of this work. Luke Mitcheson, Shamil Wanigaratne, Max Birchwood and Alex Copello for their comments on earlier drafts.

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