Decisional Balance Regarding Substance Use Among Persons with Schizophrenia

Kate B. Carey, Ph.D., **Daniel M. Purnine, Ph.D.**, **Stephen A. Maisto, Ph.D.**, **Michael P. Carey, Ph.D.**, and **Kristin L. Barnes, M.A.**
Department of Psychology, Syracuse University, Syracuse NY.

Abstract

State-of-the-science treatment of substance abuse relies on decisional balance activities (weighing pros and cons of continued substance use) to enhance motivation for change. Few data are available regarding the feasibility of these activities among persons dually diagnosed with schizophrenia and substance use disorder. To address this lacuna in the literature, we completed focus groups with 21 participants, all of whom had a schizophrenia-spectrum diagnosis and lifetime substance abuse or dependence. These key informants discussed the pros and cons of substance use as well as the pros and cons of quitting in response to a structured group interview. Our qualitative data indicate that persons living with schizophrenia can generate rich and diverse decisional balance information. We describe salient themes, contrast complementary perspectives (i.e., the pros of using and cons of quitting), and suggest treatment implications based on these findings.

Decisional balance techniques represent a powerful strategy to aid decision making (Janis and Mann, 1977). These techniques involve identifying the anticipated gains (benefits) and anticipated losses (costs) associated with any given course of action. In the context of substance abuse treatment, decisional balance techniques entail evaluations of the cost and benefits (also referred to as pros and cons) of continuing to use a substance (e.g., Velicer, DiClemente, Prochaska, and Brandenburg, 1985). Adaptations of this approach expand the cost-benefit analysis to changing an alcohol or drug problem (Cunningham, Sobell, Gavin, Sobell, and Breslin, 1997; Miller, DiClemente, Rychtarik, and Zweben, 1992).

The central role given to the decisional balance construct in theoretical models of change (e.g., Prochaska and DiClemente, 1984) attests to its importance in the field of motivational psychology. Empirical evidence suggests that costs and benefits can be measured reliably for many health-related behaviors, including smoking cessation, dieting, condom use, and use of sunscreens (Prochaska et al., 1994). Research indicates that, for persons uninterested in change, the costs of changing exceed the benefits; however, when people are ready to change their behavior, the benefits exceed the costs (Prochaska et al., 1994). Scores on decisional balance measures predict who will subsequently quit smoking (Prochaska et al., 1985) and stop drinking (Cunningham et al., 1997).

Because of the theoretical and empirical links between a person's cost-benefit analysis and readiness to change, decisional balance exercises have become a central component of motivational enhancement interventions for substance abusers (e.g., Miller and Rollnick, 1991). As motivational interventions are adapted for use among persons dually diagnosed with schizophrenia and substance use disorders, decisional balance activities have been recommended (Carey, 1996; Smyth, 1996; Ziedonis and Trudeau, 1997). These authors suggest that decisional balance activities may be useful therapeutic tools for dually diagnosed persons who are contemplating quitting but who remain ambivalent about behavior change.

Decisional balance exercises adapt well to work with psychiatrically impaired substance abusers for several reasons. First, the exercises can be initiated within an ongoing therapeutic

relationship, without the need to redefine the activity as "substance abuse treatment." Second, the nature of generating both pros and cons helps to avoid polarizing therapist and client on opposing sides of the issue. Polarization can happen when the therapist forcefully advocates change and the client experiences psychological reactance and takes the opposite position. Third, decisional balance exercises can also help clients to contextualize their substance use in the "bigger picture" of their life; the technique balances the immediate and salient rewards of substance use against the costs of using and the potential benefits of changing. Finally, the pros and cons can be generated at either concrete or abstract levels, an advantage for individuals with impaired abstract reasoning abilities.

Despite the theoretical merits of decisional balance activities, little is known about the capability of persons with schizophrenia to engage in such a cognitive-motivational task. Furthermore, clinicians interested in applying this technique with dually diagnosed clients may be concerned about the content that may emerge from these cost-benefit analyses. The purpose of this qualitative study was to elicit decisional balance information from clients with schizophrenia and substance use disorders. We summarize the content themes for both the pros and cons of continuing to use substances, as well as the pros and cons of quitting. We also discuss the relationships among these two approaches to decisional balance.

Method

Participants

Participants were recruited from 3 outpatient psychiatric clinics and a psychosocial club. Inclusion criteria included (a) diagnosis in the schizophrenia spectrum (schizophrenia, schizoaffective disorder, or psychotic disorder NOS), (b) a lifetime diagnosis of substance abuse or dependence, (c) 18 years of age or older, and (d) ability to engage meaningfully in a discussion group.

Participants ($\underline{n} = 21$) ranged in age from 28 to 59 years old (median = 38). The sample was predominantly male (90%) and Caucasian (86%), and 71% had at least a high school education. Chart review revealed that 11 persons were diagnosed with schizophrenia, 8 with schizoaffective disorder, and 2 carried other psychotic disorder diagnoses. All participants had at least one lifetime substance use diagnosis. Eighteen participants (86%) had a diagnosis of alcohol abuse or dependence. Other substance-related diagnoses involved cannabis ($\underline{n} = 9$), cocaine ($\underline{n} = 6$), amphetamines ($\underline{n} = 2$), hallucinogens ($\underline{n} = 2$), and polysubstance use ($\underline{n} = 2$); inhalants, sedatives, and MDA were each listed once. According to stage-of-change algorithms, most ($\underline{n} = 17$; 81%) had taken action toward quitting their most problematic substance (10 were abstinent for at least 6 months), and 4 individuals were still actively using.

Global Assessment of Functioning (GAF) scores ranged from 21 to 65, with a median of 48. Thus, at the time of last admission, the average participant had "serious symptoms (or) serious impairment in social, occupational, or school functioning" (American Psychiatric Association, 1994, p. 32). This is consistent with the fact that 86% ($\underline{n} = 18$) were not working. All had a history of psychiatric hospitalization; number of previous hospitalizations ranged from at least 1 to at least 14 (median = 3).

Procedures

All participants were referred by clinical staff. Once referred, potential participants were told that a series of small groups would convene for 90 minutes to discuss topics related to substance use and people's experiences with trying to change their use patterns. Of the 27 invited to participate, 21 agreed to join a group and signed a statement of consent. Before meeting in groups, individuals responded to demographic questions and two separate stage-of-change

algorithms for alcohol and drug use. A research assistant consulted their hospital chart to obtain participants' psychiatric history.

Focus groups followed standard procedures (Morgan and Krueger, 1998). They were facilitated by a clinical psychologist, with the aid of a masters-level research assistant, who maintained detailed process notes. Facilitators set a tone of respect for all opinions and established a supportive environment for discussion. Participants were treated as expert informants whose experiences with substance abuse could help to educate others. To maximize participant comfort, no group had more than 4 participants. Groups began with an introduction, including rules to protect participants' confidentiality. The facilitator followed a semi-structured outline, designed to assess positive and negative effects of using drugs and alcohol, and positive and negative effects of quitting or trying to use less of a drug or alcohol. The outline was based on our prior experience with decisional balance strategies in substance abuse research and treatment (e.g., Carey, Maisto, Kalichman, Forsyth, Wright, and Johnson, 1997; Stasiewicz, Carey, Bradizza, and Maisto, 1996). Standard probes regarding effects relevant to cognition, affect, behavior, somatic, and psychosocial factors were used to help participants elaborate their statements. Groups were audio-recorded and later transcribed. Participants received refreshments during the focus group and $10 for their participation.

Data Analysis Strategy

Data analyses involved several stages. First, we reviewed summary notes from each focus group to identify themes that arose during each group in each of following categories: pros of using, cons of using, pros of quitting, cons of quitting. Second, we reviewed each transcript in detail for additional themes that were not mentioned in the summary notes. The number of participants who mentioned each theme was recorded. Third, themes were sorted according to organizational patterns within each topic.

Results

Positive Effects of Using Alcohol and Other Drugs

Positive consequences of substance use sorted into two categories: (a) the reduction of negative emotional or cognitive states, and (b) the augmentation of positive states. The most common expression of the former ($n = 10$) involved references to "forgetting your problems," "escaping your problems," or easing suffering. The responses that expressed positive mood enhancement ($n = 11$) included feeling "happy," "euphoric," "comfortable," or "high". The complementary nature of these two response categories is apparent (i.e., one may avoid a negative state by inducing a more positive one), and was illustrated by one participant's description of why people use substances: "They're out there suffering; they grab anything they can to feel better."

More specific responses regarding the negative reinforcing properties of substance use included references to easing depression ($n = 2$), easing paranoia ($n = 2$), relieving pressure ($n = 1$), relaxing the user ($n = 3$), and facilitating sleep ($n = 2$). Easing loneliness was also cited by one individual: "You have nobody to talk to, you have nobody to do things with. All you have is that drug, that drug is what keeps you company."

Social and interpersonal benefits were also identified. Improved social skills and less social inhibition were frequently cited ($n = 9$): "It improved the way I talked and acted" or "…it increases your ability to mix socially." Substance use also seems to provide a social activity in itself, a shared pursuit that requires no special skills. This was a salient factor that was generally met with assent by other focus group members when it was expressed ($n = 4$). In addition to "being part of the crowd," one person described this as follows: "When I was with other people, I would feel comfortable with them because they were doing the same thing I

was doing." Substances were also said to improve one's confidence (e.g., "like Arnold Swarzenneger or Bruce Willis," $\underline{n}$ = 2), increase one's energy ($\underline{n}$ = 2), help one feel more secure ($\underline{n}$ = 2), and act as an aphrodisiac ($\underline{n}$ = 1). Two individuals said that they "just like the taste" (of alcohol). Group members often agreed with others' statements that substances provide an activity to do ($\underline{n}$ = 4); for example, "It fills your time. It's not constructive, but it fills your time, occupies your mind." The absence of alternative activities was a frequent theme across focus groups.

Negative Effects of Using Alcohol and Other Drugs

The negative effects of using substances can be classified according to bio-psycho-social factors. The most common response ($\underline{n}$ = 17) included references to physical problems (e.g., hangovers, throwing up, weakness, destroying brain cells, cirrhosis, coma) associated with substances. As one person put it, "You feel weak, you've got the shakes, you're nervous, run down. You don't want to get up in the morning." Six participants referred to overdosing and the possibility of death. Only one person mentioned the possibility of contracting a sexually transmitted disease, such as HIV. Two types of responses incorporated both physical and psychological effects; that is, two participants noted that negative interactions with medications may make one feel physically sick, or may increase one's paranoia. Addictive craving ($\underline{n}$ = 2) was also described in mental and physical terms (e.g., "Your body craves for it.").

The most common psychological effect mentioned ($\underline{n}$ = 8) involved exacerbation of psychotic symptoms such as auditory hallucinations, paranoia, and delusions (e.g., "I thought people were trying to kill me…I had a gun in my house.") Changes to one's temperament or personality ($\underline{n}$ = 6) were also cited frequently (e.g., "Alcohol makes me very aggressive. When someone gets mouthy to me, you know, gives me a bad stare or something, I react violently."). Cognitive difficulties were also mentioned ($\underline{n}$ = 6), including increased confusion and deficits in attention, and concentration (e.g., "It was tougher to concentrate when I was hungover the next morning."). Four people acknowledged that problems are not solved with drug use, but must be faced once the "high" is gone. Guilt or shame were mentioned three times (e.g., "The bad thing about [using drugs] is that it left me…a cold feeling in the pit of my stomach, like I just did something I'm not too proud of doing."). Increased anxiety was described by two group members, including reference to phobias and panic attacks. Finally, participants cited depressed feelings ($\underline{n}$ = 2) and the soporific effects of some drugs ($\underline{n}$ = 1).

Social problems associated with substance use most often involved family conflict ($\underline{n}$ = 6). One person stated, "I lost my wife and kids…I lost them because of drugs." Another stated that his parents refused to let him stay in their house if he drank. "A couple of times, my mother called the police." Financial problems were also commonly cited ($\underline{n}$ = 5), as substance use "inflicts pain on your wallet." One individual described selling his television set and stereo just the night before, to pay for drugs. Legal problems and contact with the police ($\underline{n}$ = 5) included driving while intoxicated, time in jail, and being taken to the psychiatric hospital by police, subsequent to drug use. Participants described becoming assaultive, getting involved in bar fights, burglary, and being robbed ($\underline{n}$ = 4). Finally, social isolation was described ($\underline{n}$ = 2) in connection with marijuana use (e.g., "I smoked [marijuana] down in my basement and never got out of the basement. I wouldn't go out, I'd just stay right in the cellar.").

Positive Effects of Abstaining from Alcohol and Other Drugs

The positive effects of quitting may also be described according to a bio-psycho-social framework. Relief of physical symptoms ($\underline{n}$ = 10) included absence of headaches, better appetite, and improved health of the liver, stomach, and pancreas. Feeling more energetic or less lazy ($\underline{n}$ = 3) and sleeping better ($\underline{n}$ = 3) were also reported. One person noted that psychiatric medications seemed to be more effective. On a psychological level, cognitive improvement

was described ($\underline{n} = 8$) in terms of more focused and clear thinking, and improved imagination (e.g., "It kind of clears the fogginess out of your head…"). Improved living skills and daily functioning were reported in various ways. These included being more productive or getting more accomplished ($\underline{n} = 3$), attending to one's appearance and cleaning one's home ($\underline{n} = 2$), living independently ($\underline{n} = 1$), and getting off the streets and away from crime ($\underline{n} = 1$). Improved self-esteem, "feeling better about yourself," was another effect of quitting or using less ($\underline{n} = 3$). A number of psychiatric symptoms and mood-related items were mentioned, including decreased paranoid thinking ($\underline{n} = 3$), feeling more relaxed ($\underline{n} = 1$) less depressed ($\underline{n} = 1$), happier with life ($\underline{n} = 1$), and having a more even temper ($\underline{n} = 1$). On a social level, several participants described having more money to spend ($\underline{n} = 6$). Three people reported involvement in new activities or new social relationships (e.g., "I work with a different bunch of people…I go to educational programs…"). Regaining people's trust ($\underline{n} = 1$) and becoming more sociable ($\underline{n} = 1$) were also mentioned.

Comparisons

Across individuals, the pros of quitting are related to the cons of using. On an individual level, however, participants often responded with benefits of quitting that were quite different from the costs of using. For example, none of the three people who mentioned the benefit of increased energy from quitting had described low energy as a negative effect of using. Only 3 of the 8 participants who described cognitive benefits of quitting were among those who had mentioned cognitive problems associated with substance use. The majority of those individuals describing negative physical effects of using substances did not mention physical benefits of quitting. The same was true regarding the financial costs of using and benefits of quitting. These findings suggest that use of a decisional balance exercise therapeutically should attend to both, using and quitting, in order to take full advantage of the method. A pro or con that is not salient to an individual in one context may emerge if considered through the other context. At the group level, some responses were highly dependent on the contextual frame. The possibility of overdosing was described as a risk of using ($\underline{n} = 5$), but eliminating such risk was not discussed as a benefit of quitting. On the other hand, seven participants described improved living skills or increased productivity as a positive result of quitting, though no one spontaneously associated substance use with decreased productivity or self-care.

Negative Effects of Abstaining from Alcohol and Other Drugs

Many of the responses to "negative effects of quitting" reflect the <u>process</u> of quitting and the challenges inherent to such a dramatic change, rather than representing negative features of a substance-free lifestyle. Negative effects that are specific to the quitting process will be described first, followed by consequences of having quit, and then responses relevant to both areas.

The physical effects of withdrawal ($\underline{n} = 6$) were summarized well by one focus group member: "I felt like my whole body was ready to fall apart…nothing was left to me…your stomach aches, your ulcer starts bothering you…" A cycle of relapse ($\underline{n} = 6$) is another unfortunate consequence that may result from trying to quit (e.g., "…the anxiety that I'm under all the time just forces me right back to drink again"). Irritability ($\underline{n} = 3$), anxiety and restlessness ($\underline{n} = 2$), and psychiatric hospitalization ($\underline{n} = 1$) were also associated with quit attempts. Replacing one substance with another was described by one participant (e.g., "It seems like when you quit doing drugs, you drink more alcohol and when you quit alcohol you do more drugs").

The most frequently cited ($\underline{n} = 8$) negative result of successful quit attempts was loss of relationships with substance-using friends. One group member referred to the need to "get rid of a lot of people, a lot of friends, just eliminate them from my life." Another noted that "you have nobody to talk to, nobody to do things with (when you quit)." On a related note, one may

need to avoid places (i.e., bars) that are a "good place to meet people," as they are associated with substance use ($\underline{n} = 1$). Additional consequences of quitting may include boredom ($\underline{n} = 1$) and "missing the high" ($\underline{n} = 1$).

Whether a person is trying to or has quit, pressure to use or relapse is commonly cited ($\underline{n} = 6$, e.g., "they want you to have a drink, you say you're trying to quit, that's about all I can take"). Pressure may come from social situations as well as from individuals (e.g., "going to parties and trying to fit in without drinking, it's kind of tough"). Continued cravings ($\underline{n} = 6$) may persist from the early stages of quitting to much later (e.g., "you're still an addict 50 years down the road… …people slide"). Additional responses included missing the taste ($\underline{n} = 1$) and feeling sad ($\underline{n} = 1$) without substances.

Comparisons

Some of these negative consequences of quitting are the inverse of the benefits of using. For example, loss of friends or social outlets ($\underline{n} = 9$) after quitting is the opposite of fitting in with a social crowd ($\underline{n} = 4$) or having behaved in a more sociable manner ($\underline{n} = 7$). Anxiety, irritability, and feeling pressure to use represent the complements of the relaxation, tension relief, sleep facilitation, and eased paranoia that were associated with substance use. Other themes do not appear to be reciprocal. Although the most commonly cited benefit of substance use was the "high" or good feelings it induces, only one group member described missing the high. The next most frequently cited benefit of using was the ability to escape one's problems ($\underline{n} = 10$); yet no one complained of having to face one's problems as a result of quitting.

Discussion

These data demonstrate four points. First, outpatients with comorbid schizophrenia and substance use disorders can participate in decisional balance exercises, even in group settings. Our process notes reflected the need for facilitators to be active and engaging in order to elicit multiple responses for each pro and con, and to encourage balanced levels of participation among group members. However, decisional balance activities in a group context provide each member with a rich diversity of information that would not be possible in individual sessions.

Second, our participants perceived costs and benefits in multiple domains of their lives. Responses addressed biological, psychological and social dimensions of substance use and its consequences. The rich yield of these decisional balance exercises is consistent with other examples in the literature. Prochaska and colleagues (1994) suggest that the following categories may be considered for each pro and con: (a) consequences to self, (b) consequences to others, (c) reactions of self, and (d) reactions of others. These prompts are designed to enhance awareness of the many ways in which using or not using substances can affect a person's health, opportunities, social environment, self-image, and moods. Decisional balance exercises can serve as a useful step towards an individualized assessment of the functional role that substances play in a person's life.

Third, it is useful to address the pros and cons of continued use as well as the pros and cons of quitting. Our comparison of the complementary perspectives (e.g., pros of using and cons of quitting) revealed that the reciprocal themes were not always mentioned. Each perspective yielded unique information that contributed to a fuller understanding of the process of change for these participants. This finding is consistent with a pattern observed in the broader problem solving literature; specifically, how problems are framed (in terms of gains or losses) can influence problem perception and resulting decisions (Tversky & Kahneman, 1981). Hence, we recommend structuring the exercise around the pros and cons of both continuing to use and quitting. Therapists may want to take an active role in supplementing an individual's decisional balance inventory, suggesting particular pros and cons that generally go unmentioned (e.g.,

that quitting eliminates the risk of overdose, and that use is associated with poorer productivity and self-care). From a psycho-educational perspective, therapists may use information from this research to suggest that certain pros of using will not necessarily be missed in the substance's absence (e.g., despite the ubiquitous pro, "escaping my problems," this research suggests that people having quit will not complain of having to face their problems). In addition, it may be noted that certain cons of quitting (e.g., cravings) are not unique to quitting, but are also associated with using.

Finally, the value of this activity in therapy still needs to be examined. Regarding treatment implications, for example, the social benefits of using and social costs of quitting were surprisingly salient among the groups. As strong and repeated themes such as these emerge, treatment providers may be able to address them within formal treatment options. Regarding use of these exercises as an intervention strategy, Ziedonis and Trudeau (1997) recommend decisional balance activities for persons with schizophrenia who are at the "contemplation" level of change-readiness. Implicit in this recommendation is a matching between level of motivation and a decisional balance intervention. Further investigation of the effectiveness of decisional balance as both an assessment and an intervention strategy is warranted.

Acknowledgements

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