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Emotional Avoidance Among Alcohol and Opiate Abusers: The Role of Schema-Level Cognitive Processes

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Abstract. This study considered the role of schema-level cognitive processes in alcohol and opiate abuse. It examined the hypothesis that alcohol abuse will be associated with the use of "blocking" behaviours to reduce the experience of emotions (secondary avoidance of affect), while opiate abuse will be associated with a tendency to avoid emotions being activated in the first place (primary avoidance of affect). The sample consisted of 30 patients who abused alcohol, and 30 who abused opiates. Each completed the Young Compensatory Inventory (YCI) and the Young-Rygh Avoidance Inventory (YRAI). There were no differences between the groups in their absolute levels of schema processes (YCI and YRAI scores). However, they differed in the way in which the severity of use was associated with the level of YRAI behavioural-somatic avoidance. Among alcohol abusers only, severity of use was greater in those who were more likely to avoid affective arousal in this way. This association with severity was not found among opiate abusers. Implications are discussed for existing treatments and for the use of schema-level cognitive behavioural interventions with substance-using populations.

Keywords: Emotional avoidance, cognitive process, schema, alcohol abuse, opiate abuse.

Introduction

There is substantial evidence that individuals who abuse substances have characteristic patterns of cognitive content and processes. Most of that literature has focused on negative automatic thoughts, conditional beliefs/dysfunctional assumptions, and attentional biases to disorder-related information (e.g. Franken, Kroon, Wiers and Jansen, 2000; Johnsen, Laberg, Cox, Vaksdal and Hugdahl, 1994; Lusher, Chandler and Ball, 2004). More recent research has demonstrated that substance-abusing patients also have characteristic patterns of negative core beliefs (Brotchie, Meyer, Copello, Kidney and Waller, 2004). These are unconditional schema-level cognitions, related to broad patterns of psychopathology (e.g. impulsivity, personality disorders), rather than specifically to the pathology of substance abuse. Those cognitions are unhealthy in substance abusers as a whole, but they do not clearly and unequivocally distinguish an alcohol abuse group from opiate abusers (Brotchie et al., 2004).

Given the nature of these cognitive representations (e.g. Young, 1999), it can be suggested that schema-level representations will distinguish these two groups in another way–through different patterns of cognitive processing of affect. Waller, Kennerley and Ohanian (in press) have suggested that compulsive and impulsive behaviours differ in their functional role with

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respect to intolerable affect. Compulsive behaviours (e.g. exercise, obsessional-compulsive behaviours, restriction, compulsive self-harm) can be hypothesized to serve the function of primary avoidance of affect–reducing the likelihood that such emotions will be triggered. Impulsive behaviours (e.g. impulsive self-harm, bulimia, risky sexual behaviour) appear to serve the function of secondary avoidance of affect–blocking the experience of emotions that have already been triggered. Luck, Waller, Meyer, Ussher and Lacey (2005) have provided preliminary evidence of such patterns among women with eating disorders, showing that bulimia is distinguished by secondary avoidance of affect, while restrictive patterns are associated with both primary and secondary avoidance of emotion.

Even prior to the stage of physical dependence, opiate use has characteristics that serve a similar function to compulsive behaviours. Such substance misuse is a relatively stable behaviour, where the individual strives to keep a level of the substance at an effective level in the bloodstream in order to avoid negative affect. In contrast, alcohol misuse has more in common with the function of impulsive behaviours – the individual responds to immediate negative affective states by self-medicating in order to reduce awareness of them. Given these different patterns of use of alcohol and opiates, it can be hypothesized that alcohol misuse will be associated with the blocking of intolerable negative emotions (secondary avoidance of affect), while opiate misuse will be associated with the avoidance of such emotional states being triggered (primary avoidance of affect).

This study examines the association of cognitive processes (schema-level patterns of processing affect) with alcohol and opiates. Given the model of emotional functionality of substance abuse outlined above, it was hypothesized that different processes would be associated with the two forms of substance use. First, it was hypothesized that alcohol use would be positively linked with secondary avoidance of affect, but unrelated to primary avoidance of affect. Second, it was hypothesized that opiate misuse would be positively associated with primary avoidance of affect, but unrelated to secondary avoidance of affect. These hypotheses were tested categorically (comparing groups on overall levels of cognitive process) and dimensionally (correlating the severity of substance use with the level of cognitive processes).

Method

Participants

The participants were two series of patients referred to a United Kingdom National Health Service substance misuse clinic. The alcohol misuse group consisted of 30 patients (17 male, 13 female) who met DSM-IV criteria for alcohol abuse or dependence. None had any other pattern of substance misuse. The opiate misuse group consisted of 30 patients (25 male, five female) who met DSM-IV criteria for substance abuse or dependence, and where their drug of abuse was heroin (27 cases) or methadone (three cases). None of this group reported any other pattern of drug misuse, though some also used alcohol. The proportion of females was significantly higher in the alcohol misuse group ($X^2 = 5.08$; $df = 1$; $p < .025$).

Measures and procedure

Informed consent was obtained in all cases. No-one declined the request to participate. The participants each completed two measures of schema-level processing (primary and secondary avoidance of affect).

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Table 1. Levels of substance use and schema processes among patients abusing alcohol or opiates

	Alcohol abusers		Opiate abusers		Mann Whitney	
Clinical group	*M*	(*SD*)	*M*	(*SD*)	*z*	*p*
N	30	30				
YRAI scores						
Behavioural-somatic	2.10	(1.02)	1.96	(1.03)	0.60	NS
Cognitive-emotional	3.67	(1.21)	3.69	(0.87)	0.22	NS
YCI scores						
Social control	3.04	(0.93)	3.05	(1.03)	0.24	NS
Individuality	3.28	(1.06)	3.24	(0.90)	0.13	NS
Personal control	3.46	(1.31)	3.02	(1.11)	1.38	NS

Young Compensation Inventory (YCI; Young, 1994). The YCI is a 48-item self-report questionnaire, which measures primary avoidance of affect (schema compensation). Answers are rated on a 1–6 scale, with higher scores suggesting more use of the individual avoidance strategy. The YCI has three scales, each with good psychometric properties (Luck et al., 2005): *Social control* – control over social settings and demands, in order to avoid being distressed; *Individuality* – separation from other people, in order to avoid being emotionally aroused; and *Personal control* – control over the self, in order to avoid negative affect being triggered.

Young-Rygh Avoidance Inventory (YRAI; Young and Rygh, 1994). The YRAI is a 40-item questionnaire, which measures secondary avoidance of affect (schema avoidance). Answers are rated on a 1–6 scale, with higher scores suggesting more use of the individual avoidance strategy. The YRAI has two scales (Luck et al., 2005) with acceptable psychometric properties: *Behavioural/somatic avoidance* – the use of behaviours and somatic strategies to block affect that is being experienced; and *Cognitive/emotional avoidance* – the use of cognitive and emotional strategies to block awareness of affect.

Data analysis

Two-tailed non-parametric analyses were used throughout. The groups' scores on the YCI and YRAI were compared using Mann-Whitney tests. The YCI and YRAI scores were correlated with the indices of substance abuse (number of days used, units of alcohol consumed) using Spearman's rho tests.

Results

Group comparisons

The alcohol abuse group had a mean age of 41.3 years ($SD = 8.89$), reported using alcohol on a mean of 4.30 days per week ($SD = 3.01$), and reported consuming a mean of 94.0 units per week ($SD = 102.2$). None reported using opiates. The opiate abuse group had a mean age of 29.3 years ($SD = 6.87$), and reported using opiates on a mean of 5.93 days per week ($SD = 2.13$). They also reported using alcohol on a mean of 1.27 days per week ($SD = 2.22$), consuming a mean of 6.36 units per week ($SD = 12.2$).

Table 1 shows the groups' cognitive processes (YRAI and YCI scores). The Mann-Whitney tests showed no significant differences between the groups in their scores on these measures.

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Table 2. Association (one-tailed Pearson's r) of schema processes with alcohol and opiate use

	Alcohol users		Opiate users		
	Total units of alcohol drunk	Number of days of alcohol use	Number of days of opiate use	Total units of alcohol drunk	Number of days of alcohol use
YRAI scores					
Behavioural-somatic	.37*	.26	−.19	.07	.04
Cognitive-emotional	−.12	−.15	−.04	−.26	−.26
YCI scores					
Social control	.05	.17	.01	.13	.12
Individuality	.16	.09	.01	.27	.26
Personal control	−.15	.07	−.03	−.20	−.19

* $p < .05$

Dimensional associations of substance use behaviours with cognitive processes

Table 2 shows the correlations (Spearman's rho) between the cognitive processes (YRAI and YCI scores) and alcohol use variables (each group) and opiate use (opiate misuse group only). The key difference was that the alcohol abuse group showed a positive association between their level of alcohol abuse and their YRAI Behavioural-Somatic score, while there was no comparable link among the opiate users group. There were no associations among either group with primary avoidance of affect (YCI scores) or with cognitive-emotional secondary avoidance strategies (YRAI scores).

Discussion

There has been a recent emphasis on schema-level cognitions among those who abuse substances (e.g. Ball, 1998; Brotchie et al., 2004). This study has examined two schema processes among patients who misuse alcohol or opiates – primary and secondary avoidance of affect. Contrary to the hypothesis, there were no differences between the two clinical populations in the overall levels of these processes. However, the groups differed in the associations between the schema processes and the level of substance abuse in a way that was consistent with the hypothesis. More specifically, among those who misuse alcohol, higher levels of drinking were associated with behavioural/somatic blocking of affect (secondary avoidance). However, the remainder of that hypothesis was not supported, as opiate users' level of use was not associated with primary avoidance of affect.

In clinical terms, these findings suggest that alcohol abuse is part of a broad behavioural-somatic strategy that focuses on blocking negative emotional states, while opiate abuse is not. In contrast to patients with restrictive eating (Luck et al., 2005), primary avoidance of emotion was not relevant to these substance abuse disorders in any way. While it is not possible to reach causal conclusions from such cross-sectional data, these findings are compatible with a model where those who are high in behavioural-somatic avoidance are more likely to go on to develop alcohol use problems, but not opiate use problems. This pattern of association with emotional blocking is similar to that found among those with bulimic disorders (Luck et al.,

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2005), supporting the functional equivalence of alcohol abuse and bulimic behaviours (e.g. Lacey and Evans, 1986).

While these findings suggest that an understanding of schema processes is a necessary element in explaining differences in patterns of substance misuse, they also demonstrate that this cognitive element does not offer a sufficient explanation for those differences. There is clearly a need to consider other factors that differentiate those who misuse specific substances. Conrod, Pihl, Stewart and Dongier (2000) have demonstrated links between four personality types and the use of specific substances. Their model would suggest that the alcohol misusers in this study would fit to their "sensation-seeking" personality subtype, while the opiate misusers would fit to their "introverted-helpless" subtype. Conrod and colleagues have also demonstrated that treatment for substance misuse is more likely to be effective if it involves personality-specific motivational elements (Conrod, Stewart et al., 2000). In addition to the cognitive factors in this study and the personality factors identified by Conrod and colleagues, substance misuse can be conceptualized as a pattern of safety behaviours, reducing anxiety in the short term but enhancing it in the longer term (e.g. Butler and Rouf, 2004). Hayes, Wilson, Gifford, Follette and Strosahl (1996) have suggested that a wider perspective is also helpful-the development of broad patterns of experiential avoidance. They suggest that this pattern of behaviour and cognition (serving the function of avoiding memories, cognitions and emotions) is a factor that underpins many aspects of psychopathology. However, because that model was developed across a range of domains, it remains to be tested in the field of substance misuse. A further consideration is the potential role of metacognitive beliefs about emotional states (Wells, 2000), since those beliefs underpin many behaviours designed to reduce such emotional activation, including substance misuse.

It has been suggested that proneness to substance abuse develops into self-medication prior to the onset of physical dependence (e.g. Sbrana et al., 2005). Future research will need to address the issue of whether such physical dependence has an influence on the use of these cognitive strategies. For example, it would be valuable to examine these clinical processes among those who have overcome their substance use (e.g. those in a relapse prevention group), in order to determine whether those individuals show a lower level of such unhealthy core beliefs. In a similar vein, longitudinal research would assist in identifying the ways in which different cognitive levels change across time and with treatment. For example, it can be hypothesized that other cognitions will change before schema-level representations, but that the change in negative automatic thoughts and dysfunctional beliefs might be only temporary if the schema processes and core beliefs are not modified.

While clinical recommendations will depend on the research outlined above, these findings indicate the importance of assessing and formulating around the schema-level processes that lead individuals to engage in (or to eschew) blocking behaviours. Without such an understanding, it is possible that treatments that prioritize behavioural change (e.g. abstinence-based programmes) will be less effective in the short- or long-term. Thus, behavioural change might be less robust if the schema-level cognitions and cognitive processes are not modified. Such modification might need to be part of the motivational work that precedes the central clinical intervention (e.g. cognitive-behavioural work, or abstinence). A schema-focused approach to substance abuse might be an important element in the treatment of such cases (e.g. Ball, 1998; Young, Klosko and Weishaar, 2003).

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