Strategies to cope with treatment in substance use disorder male patients with and without schizophrenia

Julia E. Marquez-Arrico [a], Irina Benaiges [b], Ana Adan [a,b,*]

[a] *Department of Psychiatry and Clinical Psychobiology, School of Psychology, University of Barcelona, Barcelona, Spain*
[b] *Institute for Brain, Cognition and Behavior (IR3C), Barcelona, Spain*

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ABSTRACT

Coping strategies (CS) are the efforts made by an individual to manage the internal and external demands of stressful situations. Studies showed that in patients with Substance Use Disorder (SUD), adaptive and problem-focused CS are related to fewer relapses and better treatment outcomes. Considering the high rates of comorbidity between SUD and schizophrenia (SZ), and the deficiencies observed in SZ patients in the use of active problem-focused CS, this study aims to explore CS used by SUD patients with and without SZ to deal with treatment. 82 males (18–55 year) under treatment for a SUD were considered in two groups: SUD without psychiatric comorbidity (SUD; $N=43$) and SUD with SZ (SZ+; $N=39$) and assessed through The Coping Strategies Inventory (CSI). Our results indicated that SUD and SZ+ patients only differed in the amount of Engagement strategies they used. Compared to SUD, SZ+ patients showed lesser use of Problem Solving, Social Support and Self-Criticism, and lower Self-Perceived Capacity to engage the Problem. Besides, compared to norms, SUD and SZ+ patients were less likely to use adaptive CS, although this was more remarkable for SZ+ group. Further studies are needed to explore possible benefits of improving CS as part of treatment outcomes.

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1. Introduction

Coping with stressful situations and adverse life events, including mental disorders, is an important personality resource and a measure of one's adaptability (Ritsner et al., 2006). The cognitive-transactional theory of stress has defined coping strategies (CS) as one's cognitive and behavioral efforts to manage the internal and external demands of a person or environment (Lazarus and Folkman, 1984). Three categories of coping have been discussed in the literature: problem-focused strategies (e.g., problem solving behaviors, seeking social support), emotion-focused strategies (e.g., self-criticism, anxiety) and avoidance strategies (e.g., wishful thinking, denial of the problem). Generally, the latter two have been considered maladaptive and the use of problem-focused strategies is associated with a better adjustment to life stressors (Lazarus and Folkman, 1984).

A particularly important distinction is between engagement CS (approach coping), which is aimed at dealing with the stressor or related emotions, and disengagement CS (avoidance coping), which is aimed at escaping the threat or related emotions (Skinner et al., 2003; Carver and Connor-Smith, 2010). Engagement CS includes

problem-focused coping and some forms of emotion-focused coping, whereas disengagement CS includes responses such as avoidance, denial, and wishful thinking (Tobin et al., 1989; Carver and Connor-Smith, 2010). In general, when the stressor needs to be targeted and requires an active participation, engagement CS are adaptive and successful, while disengagement CS are maladaptive or ineffective (Carver and Connor-Smith, 2010). Besides, while engagement CS are associated to positive affect (Blanchard et al., 1999; MacAulay and Cohen, 2013) disengagement CS increase negative mood and anxiety as they do not reduce distress in the long term (Coriale et al., 2012; Magee et al., 2012). However, coping processes are not inherently good or bad; the adaptive qualities of coping processes need to be evaluated in the specific stressful context in which they occur (Folkman and Moskowitz, 2004). Therefore, it remains unclear and there is no consensuses among researchers regarding which CS are more effective (Zong et al., 2010).

The role of CS has been studied in disorders with psychological or physical symptoms and it has been found that they can influence both illness-related behaviors and treatment outcomes (Zong et al., 2010). Regarding subjects with Substance Use Disorder (SUD), the self-medication hypothesis suggests that drugs are frequently used in the context of CS deficits (Khantzian, 2003) and maladaptive problem-solving styles in order to manage negative affect, stressful situations and depressive and anxiety symptoms (Scott et al., 2013; Blevins et al., 2014; Sorsdahl et al.,

2014). Moreover, while successful CS are related to fewer relapses preventing the recurrent course of SUD (Anderson et al., 2006; Kiluk et al., 2011), unsuccessful CS can worsen the disorder leading to poor treatment outcomes and increased severity of dependence (Hruska et al., 2011; Bowen and Enkema, 2014). In this line, studies have found that more approaching and fewer avoidance strategies were also predictors of better substance use treatment outcomes, lower alcohol consumption and drug use at 1-year and long-term follow-ups (Chung et al., 2001; Forys et al., 2007; Hasking et al., 2011).

Importantly, high rates of comorbidity have been described between SUD and several mental disorders. This comorbidity is known as Dual Diagnosis, and it is consistently associated with adverse outcomes (Degenhardt and Hall, 2001; Healey et al., 2009). One of the most prevalent mental disorders among patients with a SUD is schizophrenia (SZ). In this case, approximately 40–50% of these patients have a lifetime of SUD (Blanchard et al., 2000) and drug use has been linked to reduced medication effectiveness and exacerbation of psychiatric symptoms (Ziedonis and Nickou, 2001). Besides, Dual Diagnosis is also associated to poorer prognosis, more hospitalizations, higher suicide rates and suicidal attempts, poor treatment adherence, major symptoms severity (Benaiges et al., 2013a; Green et al., 2005; Olivares, et al., 2013), worse quality of life (Benaiges et al., 2012) and cognitive functioning impairments (Benaiges et al., 2013b), personality characteristics associated to more disruptive behaviors (Marquez-Arrico and Adan, 2013) and more relapses (Drake et al., 1991; Green et al., 2005; Linszen et al., 1994; Olivares et al., 2013) compared to patients with one diagnosis only.

Despite the high comorbidity between SZ and SUD (SZ+) and the important role of CS in this problem, very little is known about CS in SZ+ patients. Previous data have shown maladaptive CS such as using alcohol and drugs to manage stress in SZ patients, being associated to high negative affect and disinhibition (Blanchard et al., 1999). Patients endorsing this type of maladaptive CS were more likely to show a worse course of their comorbid SUD (Blanchard et al., 1999). Research on coping and SZ tends to focus on general CS used by these patients to deal with psychotic symptomatology and activities of daily life. Current data suggest that SZ patients are inflexible in their use of CS (Wilder-Willis et al., 2002). They have deficiencies in the use of active problem-focused CS (Van den Bosch et al., 1992) and tend to use emotion-oriented CS (Higgins and Endler, 1995; Thornton et al., 2012; Van den Bosch and Rombouts, 1997; Wiedl, 1992). Moreover, these patients rely more on passive-avoidant strategies and less on active problem-solving (Lysaker et al., 2004), have a limited range of CS, which are commonly avoidant or passive (Dohrenwend et al., 1998; Jansen et al., 1998) and tend to show ineffective interpersonal problem-solving strategies (e.g., submissiveness, lying, denial) when confronted with negative emotions (Bellack et al., 1992; Cooke et al., 2007).

Considering the important role played by CS in SUDs, the high prevalence of substance use in SZ patients and the coping styles used by them, the current study aims to explore CS used by SUD male patients with and without comorbid SZ to deal with treatment. Furthermore, we explore relations between CS and SUD characteristics and psychiatric variables sin both SZ+ and SUD groups.

2. Methods

2.1. Participants

Eighty-two Spanish male patients (36.37 ± 8.32 year) under treatment for SUD were enrolled in a cross-sectional design divided into two groups: one with SUD only ($N=43$) and another with SUD and SZ (SZ+; $N=39$). The treatment was provided by a multi-disciplinary clinical staff and consisted in: pharmacological treatment if needed;

managing withdrawal and training skills for achieving abstinence; working on strategies for preventing relapses; and improving emotional management strategies.

2.2. Procedure

Participants were included according to these inclusion criteria: (1) current diagnosis of a SUD in remission for at least three months but being under the first months (3–5) of treatment for SUD; (2) absence of relapses at least 1 month before participation in the study; (3) male gender; (4) aged 18–55; (5) Spanish as their native language. The SZ+ group had the additional inclusion criterion of schizophrenia as the current diagnosis. Exclusion criteria were: (1) meeting DSM-IV-TR criteria for a current substance-induced psychiatric disorder or a psychiatric disorder due to medical condition; (2) unstable or uncontrolled psychotic symptomatology.

Each participant was referred by their treating psychiatrist, who was blind to the aims of the study. Those who provided informed consent were required to complete the clinical and CS assessment in one session only. Assessment of both groups was performed by a trained psychology postgraduate. This study was approved by the University of Barcelona and the treatment centers' ethics committees, meeting the ethical principles of the declaration of Helsinki. Participants were not compensated for their participation in the study and they were part of a larger project on clinical characteristics, neuropsychological functioning, and personality traits in Dual Diagnosis patients.

2.3. Materials and measures

2.3.1. Sociodemographic and clinical data assessment

Current diagnosis of SUD and SZ was obtained by treatment providers of each respective center and confirmed using the Structural Clinical Interview for DMS-IV-R Axis I Disorders (SCID-I; First et al., 2002). Sociodemographic (age, marital status, social class, schooling and economic status) as well as clinical variables (diagnosis, psychiatric and substance use family history, age of onset of the disorder and/or consumption, relapses, abstinence periods, type of drugs used, suicidal attempts, presence of organic pathology and medication) were also collected with the SCID-I.

Psychotic symptomatology was assessed using the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) through the Spanish version (Peralta and Cuesta, 1994). Severity of SUD was assessed using the Spanish version (Gálvez and Fernández, 2010) of the Drug Abuse Screening Test (DAST-20; Skinner, 1992). The DAST-20 provides a total scoring from 0 to 20 (1–5 low; 6-10 intermediate; 11–15 substantial; 16–20 severe), in which a higher score indicates higher severity and a more intensive recommended intervention.

2.3.2. Coping strategies assessment

CS were assessed through the Coping Strategies Inventory (CSI; Tobin et al., 1989) in its Spanish version (Cano-García et al., 2007) since it was proved to be a valid and reliable measure of the CS used in many stressful situations. This version consists in 41 self-reported items in a Likert format designed to assess Engagement and Disengagement coping efforts. In this study, patients were required to describe retrospectively the CS they used to deal with SUD treatment. Each item in the CSI may be valued in a 5-point Likert format, and it has 8 primary subscales that compute in Higher Order Subscales (4 secondary and 2 tertiary).

The primary subscales of the CSI are: Problem Solving, Self- Criticism, Express Emotions, Wishful Thinking, Social Support, Cognitive Restructuring, Problem Avoidance, and Social Withdrawal. Besides, the Spanish adapted version includes one additional item designed to measure the general Self-Perceived Capacity to cope with the problem.

The secondary subscales are: *Problem Focused Engagement* (Problem Solving and Cognitive Restructuring); *Emotion Focused Engagement* (Social Support and Express Emotions); *Problem Focused Disengagement* (Problem Avoidance and Wishful Thinking); and *Emotion Focused Disengagement* (Social Withdrawal and Self-Criticism).

Finally, the tertiary subscales are *Engagement* (Problem and Emotion Focused Engagement) and *Disengagement* (Problem and Emotion Focused Disengagement).

Given that SUD treatment requires an active and responsible participation by the patient, as well as changing situations, making action plans to follow and using social support to facilitate good treatment outcomes, we consider the Engagement CS as adaptive and the Disengagement ones as maladaptive.

2.4. Data analysis

Descriptive statistics and frequencies were calculated to describe the total study sample. Group differences in demographic and clinical variables were explored with independent sample two-tailed t-test for continuous data, and Chi-square (χ^2) test in the case of categorical variables. Intergroup differences in the CSI subscales were examined by multivariate analyses of covariance (MANCOVA), introducing group as an independent variable and age as a covariate, since it could be a confounding factor. All the analyses of variance were Bonferroni corrected and we estimated the partial Eta- square (η^2) to measure the effect size. Data were also compared to the Spanish norms and percentiles (Cano-García et al., 2007) which are only available for the Primary subscales. Cronbach´s alpha coefficient of internal consistency was calculated for these subscales. We carried out correlational