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Validity of the BPRS, the BDI and the BAI in dual diagnosis patients

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Abstract

Aim: The psychometric properties of the Brief Psychiatric Rating Scale, the Beck Anxiety Inventory (BAI), and the Beck Depression Inventory (BDI) were tested in a sample of 134 patients with a substance use disorder and a non-substance related psychiatric disorder in a special inpatient dual diagnosis treatment unit.
Methods: Subjects were assessed at baseline. At discharge on average 6 months post-intake, 78% of patients were re-assessed using the same instruments. All instruments were tested in (1) their ability to discriminate patients with different diagnoses at baseline and follow-up using comparison of area under the curves, and (2) their temporal stability. Moderator regression was used to test whether thought disorder at baseline had any effect on the test–retest rank-order stability of other instruments.
Findings: The BPRS Thought Disorder scale was able to discriminate between patients with and without schizophrenia spectrum diagnoses, and the BDI was able to discriminate between patients with and without mood disorders and schizoaffective disorders at intake to treatment, and each instrument was significantly better than the other at discriminating relevant diagnostic groups. Discriminant correlations between the BDI and the BAI were high and statistically significant. Moderator regression analyses showed no indication that any of the scales were less stable at higher levels of thought disorder.
Conclusions: It is concluded that dual diagnosis patients can be reliably assessed for symptoms using the BDI and some subscales of the BPRS.

Keywords: Psychopathology; Schizophrenia; Dual diagnosis; Diagnostic validity; Inpatient; BPRS; BDI; Depression; Substance abuse

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1. Introduction

Clinical and epidemiologic studies have shown a high co-occurrence of substance use disorders and other psychiatric disorders, with important consequences from health and social perspective, and for treatment. The aetiology of such co-morbidity is unclear, but the accumulation of multiple risk factors related to mental illness, including emotional instability, may increase the risk of substance use disorder (Mueser, Drake, & Wallach, 1998).

Patients with schizophrenia (Krystal et al., 2006), depression (Grant et al., 2004), and some anxiety disorders (Grant et al., 2004) are at an increased risk of substance use disorders. Patients with psychotic illness and substance abuse are more difficult to retain in outpatient treatment than patients with psychotic illness alone (Fuciec, Mohr, & Garin, 2003), and more likely to be non-compliant with pharmacotherapy (Elbogen et al., 2005).

However, the reliable and valid assessment of psychiatric problems in patients with substance abuse may be problematic, mainly because the acute or chronic effects of substance abuse can mimic symptoms of other mental disorders, making difficult to differentiate psychiatric symptoms that are effects of acute or chronic substance use or withdrawal, of those that represent an independent disorder. Therefore, it is necessary that assessment of psychiatric symptoms is conducted with scales that are validated with this population. In this report, we examine the concurrent validity of several instruments used to assess psychopathology in a sample of patients with substance dependence or abuse and serious co-morbid psychiatric symptoms.

For instance, the acute stress associated with seeking treatment may temporarily exacerbate depressive symptoms (Elbogen et al., 2005); use of psycho-stimulants or hallucinogens may induce symptoms that are similar to symptoms of psychosis, and serious dependence on cannabis may produce a state of withdrawal that may appear similar to withdrawal in schizophrenia spectrum disorders (Schuckit, 2006).

The Brief Psychiatric Rating Scale is a brief interviewer-administered instrument designed to assess the symptoms of schizophrenia (Overall & Gorham, 1988). Based on the BPRS, it is possible to estimate a full-scale score. Based on factor analyses, 5 subscales have been derived: Thought Disorder (TD), Withdrawal (W), Anxiety/Depression (AD), Hostility (H) and Activity (A) (Hedlund & Vieweg, 1980). The Thought Disorder factor is related to positive symptoms of schizophrenia (grandiosity, hallucinations, unusual thought content and conceptual disorganisation) the Withdrawal Factor is related to negative symptoms (disorientation, blunted affect, emotional withdrawal and motor retardation), the Anxiety Depression Factor (somatic concerns, anxiety, guilt and depression), the Hostility Factor (hostility, suspicion and uncooperativeness) and the Activity Factor (tension, excitement mannerisms and posturing). On the BPRS full scale, patients with schizophrenia scoring 32 or more are considered ”mildly ill”, patients scoring 44 or more are considered “moderately ill”, patients scoring 52 are considered markedly ill, and patients scoring over 68 are considered “severely ill” (Leucht et al., 2005).

The TD, W, H and A scales should differ from symptoms of depression or anxiety, and therefore should discriminate patients with schizophrenia from patients with non-schizophrenia spectrum disorder. Also, as the full-scale BPRS is believed to be a measure of the overall severity of schizophrenia, it should be able to discriminate patients with schizophrenia from patients without schizophrenia. Other subscales of the BPRS, such as the AD scale, should be higher, rather than lower, in patients with anxiety or depression, relative to patients with schizophrenia. The justification for this assertion was that although some patients with schizophrenia suffer from symptoms of anxiety or depression, patients with anxiety or depression diagnoses should have these symptoms consistently.