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Predictors of substance use disorder treatment outcomes among patients with psychotic disorders

Matthew Tyler Boden [a,*], Rudolf Moos [a,b]

[a] Center for Health Care Evaluation, VA Palo Alto Health Care System, United States
[b] Stanford University School of Medicine, United States

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ABSTRACT

Although integrated approaches are recommended and effective for treating patients with co-occurring substance use and psychotic disorders (SUD-PSY), many patients receive standard, nonintegrated substance use disorder (SUD) treatment. Research has yet to investigate how patients with co-occurring substance use and psychotic disorders respond to standard SUD treatment, an issue we address here. In a naturalistic follow-up of 236 male SUD-PSY patients receiving 12-step facilitation or cognitive–behavioral-oriented SUD treatment, we found that patients (1) demonstrated significant improvements in proximal outcomes (e.g., approach coping) from treatment intake to discharge, and in distal outcomes (e.g., psychiatric symptoms, substance use frequency) from treatment intake to 1- and 5-year follow-ups, and (2) tended to have similar outcomes whether they received 12-step facilitation or cognitive–behavioral SUD treatment. Patients who (3) were more involved in treatment, as reflected by more positive perceptions of and more satisfaction, tended to experience better proximal outcomes and engage in more continuing care, and those who (4) experienced better proximal outcomes tended to have better psychiatric and substance use outcomes in the years following treatment. Our results suggest that SUD-PSY patients can benefit from standard SUD treatments, even though it may not directly address their psychiatric disorders.

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1. Introduction

Substance use and related disorders contribute to a more severe and chronic course of psychosis and poor treatment outcomes (Mueser et al., 1992; Soyka et al., 2001). Thus, experts recommend an integrated approach for treating patients with co-occurring substance use and psychotic disorders (henceforth referred to as SUD-PSY), in which treatment targets both the psychiatric and substance use disorder (SUD; Drake et al., 2001; Ziedonis et al., 2005). Although integrated approaches are effective (Drake et al., 1998, 2008), many patients receive only standard SUD treatment (Timko et al., 2005). This is especially true of patients treated in large health care systems, such as the Department of Veterans Affairs.

Some studies have focused on how dually diagnosed patients with substance use and psychiatric disorders, unselected for the presence of any specific psychiatric disorder, respond to standard, nonintegrated SUD treatment, with (Burnam et al., 1995) and without (Boden and Moos, 2009) components added to address the psychiatric symptoms and related problems of participants. However, this issue has not been addressed among SUD-PSY patients. This gap is notable, as SUD-PSY patients might not benefit from standard SUD treatment either with respect to their psychiatric symptoms or substance use problems.

We follow a conceptual framework which posits that aspects of treatment process are associated with proximal outcomes at treatment discharge and indices of continuing care, and that these domains of variables affect longer term treatment outcomes (Moos, 1997). This study expands prior work (Ouimette et al., 1997, 1999; Boden and Moos, 2009) by (1) focusing on whether SUD-PSY patients react differently to 12-step facilitation versus cognitive–behavioral-oriented treatment programs, (2) examining whether program treatment orientation, treatment intensity, and SUD-PSY patients' perceptions of and satisfaction with treatment are associated with their proximal outcomes at discharge; (3) identifying the extent to which SUD-PSY patients participate in continuing care and the predictors of participation in continuing care, and (4) examining SUD-PSY patients' 1- and 5-year treatment outcomes and the program perception, proximal outcome, and continuing care predictors of these outcomes. To our knowledge, no studies have considered these questions among SUD-PSY patients in standard, nonintegrated SUD treatment.

With respect to treatment orientation, we focus on 12-step facilitation and cognitive–behavioral orientations, which have been found to be equally effective for the treatment of patients with SUDs (Ouimette et al., 1997). In terms of treatment process variables, we investigate program treatment orientation, treatment intensity,

* Corresponding author at: Center for Health Care Evaluation, 795 Willow Rd. (152-MPD), Menlo Park, CA 94025, United States. Tel.: +1 714 766 9127.
E-mail address: Matthew.Boden@va.gov (M.T. Boden).

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patients' perceptions of treatment, (including its levels of support, spontaneity, personal problem orientation, and spirituality), and patients' satisfaction with treatment. More positive perceptions of treatment and greater satisfaction with treatment tend to be associated with better outcomes (e.g., Donovan et al., 2002; Fontana et al., 2003; Boden and Moos, 2009).

Proximal outcomes include beliefs and skills SUD treatments target for change (Moos, 1997) and that have been associated with better SUD-related long-term outcomes. The proximal outcomes we consider include perceived benefits of quitting substance use (e.g., Connors et al., 1993), self-efficacy for continued abstinence (e.g., Rychtarik et al., 1992), and more reliance on approach coping and less on avoidance coping (Chung et al., 2001). In general, these findings on treatment processes and proximal outcomes tend to hold for unselected groups of SUD patients with psychiatric disorders (Boden and Moos, 2009); we focus here on whether they hold specifically for SUD-PSY patients.

We investigated two indices of continuing care: participation in outpatient treatment (both substance use and mental disorder-related) and in 12-step self-help groups in the year after discharge from residential treatment. Greater attendance in outpatient treatment and 12-step self-help groups has been associated with positive outcomes following SUD treatment (e.g., Ouimette et al., 1998). However, substance use is associated with elevated rates of noncompliance and disengagement with treatment (i.e., neuroleptic medication) among individuals with schizophrenia (Fenton et al., 1997), and such noncompliance/disengagement tends to be associated with poor outcomes, such as re-hospitalization for exacerbated psychiatric symptoms (e.g., Hunt et al., 2002). As far as we know, no studies have examined the association of 12-step self-help group attendance and long-term outcomes among SUD-PSY patients, although related associations have been examined among dually diagnosed patients unselected for the presence of a psychotic disorder (Magura, 2008).

We measured three outcomes 1-year and 5-years after treatment discharge: (1) psychiatric symptoms, an outcome less likely to be addressed in nonintegrated SUD treatment; (2) employment status, because functional deficits common among individuals with psychosis are partially responsive to treatment (e.g., Cook et al., 2005); and (3) frequency of substance use. Positive perceptions of SUD treatment and better proximal outcomes at discharge have been associated with better distal outcomes among dually diagnosed patients unselected for the presence of a psychotic disorder (Boden and Moos, 2009), but this issue has not been examined specifically among SUD-PSY patients.

Prior research has demonstrated some benefits of standard, nonintegrated SUD treatment for patients with unselected co-occurring mental disorders, although these patients tend to be less involved in SUD programs and to have somewhat poorer proximal outcomes at discharge than patients with only SUDs (Boden and Moos, 2009). Moreover, nonintegrated SUD treatment programs are less well targeted toward the complex needs of SUD-PSY patients (e.g., medication usage for the treatment of psychosis; Flynn and Brown, 2008); this may be especially true of 12-step facilitation programs.

2. Method

2.1. Participants

This study focused on 236 male patients (M_{age} = 41.40, SD_{age} = 7.93) with substance use disorders (SUD), who were also diagnosed with a non-substance-related psychotic disorder (e.g., schizophrenia) and sought treatment at 1 of 15 residential SUD treatment programs affiliated with the Department of Veterans Affairs. Patients' diagnoses were based on the International Classification of Diseases, Ninth Revision (United States National Center for Health Statistics, 1988), and were obtained from the Department of Veterans Affairs clinical records. The majority of the patients reported their race/ethnicity as Caucasian (50.0%) or African-American (44.5%). Patients reported an average of 13.01 years of education (SD = 1.91).

A total of 98.7% of the patients were diagnosed with an alcohol or drug dependence disorder and 62.7% were diagnosed with schizophrenia; the other 37.3% were diagnosed with a psychotic disorder

Table 1
Descriptive statistics for variables, and test statistics for changes in proximal and distal outcomes.

Variables	$M(SD)$ or % (N)	$M(SD)$ or % (N)	$M(SD)$ or % (N)	Test statistics
Treatment orientation (% cognitive–behavioral)	75.4 (178)			
Treatment intensity (0–28)	4.26 (4.30)			
Patient's perceptions of treatment				
-Support (0–10)	7.37 (2.21)			
-Spontaneity (0–9)	5.02 (1.79)			
-Spirituality (0–10)	5.94 (2.75)			
-Personal problem orientation (0–10)	6.48 (2.34)			
-Satisfaction (0–33)	24.84 (6.79)			
Indices of continuing care				
-12-Step self-help groups (0–4)	1.32 (1.53)			
-Outpatient treatment (0–4)	1.47 (1.49)			
Proximal outcomes	Baseline	Discharge		f
-Benefits of quitting (0–24)	17.74 (5.40)	18.39 (5.65)		2.35
-Self-efficacy (0–5)	2.91 (1.27)	3.41 (1.17)		27.39***
-Approach coping (0–36)	20.56 (8.46)	27.67 (6.56)		146.83***
-Avoidant coping (0–33)	17.77 (7.52)	13.38 (6.99)		52.47***
Distal outcomes —	Baseline	1 year	5 year	f or χ^2
-Psychiatric symptoms (0–4)	1.94 (0.86)	1.66 (0.97)	1.63 (0.98)	17.16***, 15.19***
-Employed in prior 12 months (% yes)	12.3 (29)	17.7 (36)	20.5 (34)	62.60, 16.47
-Substance use frequency (0–68)	7.57 (5.04)	3.36 (4.24)	3.38 (4.78)	119.76***, 84.60***

Note. Values for continuous variables include the mean and standard deviation, in parentheses. Values for the single categorical variable, employed in prior 12 months, are percentage and total number, in parentheses. Values for f or χ^2 were obtained from repeated measures analyses of variance or matched pair analyses for comparing dependent proportions using McNemar's test, respectively, investigating change from baseline to discharge for proximal outcomes, and baseline to 1- and 5-year follow-ups for distal outcomes.
*** $p < .001$.