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Demographic and clinical characteristics of current comorbid psychiatric disorders in a randomized clinical trial for adults with stimulant use disorders

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ABSTRACT

This study aimed to determine if current comorbid psychiatric disorders differ in adults with cocaine use disorder, other stimulant (primarily methamphetamine) use disorder, or both, and identify demographic and clinical characteristics in those with increasing numbers of comorbid disorders. Baseline data from a randomized controlled trial beginning in residential settings (N=302) was used. Mood disorders were present in 33.6%, and anxiety disorders in 29.6%, with no differences among stimulant use disorder groups. Panic disorder was more frequently present with other stimulant use disorder. Those with two or more comorbid psychiatric disorders were more often female, White, had more symptoms of depression, greater propensity and risk for suicidal behavior, lower functioning in psychiatric and family domains, lower quality of life, more symptoms with stimulant abstinence and greater likelihood of marijuana dependence. Those with one or more comorbid disorders had more medical disorder burden, lower cognitive and physical functioning, greater pain, and higher rates of other drug dependence. With current comorbid psychiatric disorders, the morbidity of stimulant use disorders increases. Use of validated assessments near treatment entry, and a treatment plan targeting not only substance use and comorbid psychiatric disorders, but functional impairments, medical disorder burden and pain, may be useful.

1. Introduction

The presence of comorbid psychiatric disorders in people with stimulant use disorders has been associated with poorer treatment outcomes, increased likelihood of drug use after treatment, and higher treatment attrition (Glasner-Edwards et al., 2010; Gonzalez-Saiz et al., 2014; Levin et al., 2004). Substantial rates of comorbid psychiatric disorders have been found in clinical, community and epidemiological samples of stimulant users (Conway et al., 2006; Salo et al., 2011). However, the majority of this literature does not consistently differentiate between substance induced and non-substance induced psychiatric disorders, or includes only those with a diagnosis of a stimulant use disorder, and describes lifetime rather than current disorders.

One of the challenges for clinicians and researchers is distinguishing independent psychiatric disorders from substance induced disorders and symptoms of intoxication and withdrawal (Herrero et al., 2008; Nunes and Weiss, 2009; Schuckit, 2006). The effects of intoxication, withdrawal, or chronic exposure to substances can include depressive and anxiety symptoms (Nunes and Weiss, 2009); therefore, comorbid disorders are best diagnosed after at least a brief time abstinent to screen out transient symptoms and correctly identify independent disorders (Nunes and Levin, 2004). Early reports of cocaine dependent patients in hospital based treatment settings documented substantial improvement in mood after cessation of drug use (Satel et al., 1991), especially in the first few days after admission (Weddington et al., 1990).

Studies which have identified stimulant use and psychiatric disorders using validated, diagnostically driven assessments designed to exclude substance induced psychiatric disorders primarily focused on lifetime psychiatric disorders. In amphetamine or methamphetamine dependent samples, rates of lifetime mood disorders were 32.3–64.3%, and anxiety disorders 24.3–50.3% (Conway et al., 2006; Salo et al., 2011). In cocaine dependent samples, rates of lifetime mood disorders were 12.3–62.5%, and anxiety disorders 20.7–45% (Conway et al., 2006; Vergara-

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Moragues et al., 2012). Current non-substance induced mood and anxiety disorders were much lower at 6.2% and 13.7% respectively (Vergara-Moragues et al., 2012). Current comorbid disorders are more relevant for treatment planning during substance use treatment than a history of lifetime disorders. The limited availability of data about *current* comorbid psychiatric disorders in treatment seeking individuals with stimulant use disorder and their correlates, especially in those with specific types of stimulant use disorders, represents an important gap in knowledge. Research often focuses on those with a substance use disorder and one comorbid psychiatric disorder. In clinical practice, however, patients often present with complex sets of comorbid disorders and impairments. The question of how number of current comorbid psychiatric disorders is associated with stimulant use disorder severity, or other demographic and clinical characteristics has not, to our knowledge, been addressed.

Identifying the presence of current comorbid psychiatric disorders in adults with different types of stimulant use disorders and determining whether demographic or clinical features differentiate individuals based on number of comorbid disorders can be useful in both treatment planning and developing hypotheses for further research on effective treatments and specific mechanisms of comorbidity. These complex patients may have distinctive features and patterns of symptoms and disorders which could indicate the need for more targeted treatment approaches. There is growing consensus that comorbid substance use and other psychiatric disorders may need their own distinct treatment plan based on clinical characteristics rather than treating each diagnosis separately, but these have not yet been well studied (Pettinati et al., 2013).

The current study was conducted using baseline data from participants enrolled in Stimulant Reduction Intervention using Dosed Exercise (STRIDE), a multisite randomized controlled trial that compared the efficacy of high intensity exercise and health education, both augmented to substance abuse treatment as usual in adults with stimulant use disorders (stimulant abuse and/or dependence) entering residential treatment settings. Evaluation of study participants in a residential setting provided an advantage for this analysis since participants had at least some days of abstinence prior to assessment, increasing the probability that independent psychiatric disorders would be correctly identified as substance use related symptoms decreased.

Specifically, the following questions were addressed: (1) In a residential treatment sample of patients with stimulant use disorders, what current comorbid psychiatric disorders are present, as determined by formal diagnostic interview, and do these differ by type of stimulant (cocaine only; other stimulants, primarily methamphetamine; or both)? (2) Is the number of diagnosed current psychiatric disorders in patients with stimulant use disorders associated with different demographic and clinical characteristics?

2. Methods

Details of the rationale and design of STRIDE, a National Drug Abuse Treatment Clinical Trials Network study (CTN-0037), have been described elsewhere (Trivedi et al., 2011a). STRIDE was conducted in 9 geographically diverse community treatment facilities across the United States with residential treatment programs and internal or closely affiliated outpatient programs. Institutional Review Boards for the community treatment sites and academic centers associated with each site approved the study. All participants provided written informed consent.

2.1. Participants

Participants in STRIDE (n=302) were treatment seeking individuals aged 18–65, admitted to residential substance abuse treatment with use of a psychostimulant (cocaine, methamphetamine, amphetamine, or other stimulant excluding caffeine and nicotine) in the past 30 days who met Diagnostic and Statistical Manual (DSM-IV) (American Psychiatric Association, 1994) criteria for stimulant abuse or dependence in the past 12 months. Exclusion criteria included failure to receive medical clearance to exercise, presence of a general medical condition that prevented exercise, opiate dependence, psychosis or other psychiatric issues that posed a safety risk, pregnancy, or concomitant therapy with beta blockers or opioid replacement therapy.

Participants were screened for study participation as soon after admission as clinically feasible, following evaluation of clinical suitability and upon approval from the clinical staff at the residential treatment program. For example, some patients experienced symptoms of acute withdrawal, and the clinical staff at the program monitored such patients to determine an appropriate time to approach them regarding potential participation in the study.

2.2. Measures

Demographic information was collected at the screening visit. Drug abuse and dependence diagnoses were assessed independently with the substance abuse modules of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI, Version 2.1) (WHO, 1997). Co-occurring DSM-IV (1994) Axis I diagnoses were assessed with the MINI International Neuropsychiatric Interview (MINI) (Sheehan et al., 1997), which emphasizes identification of psychiatric disorders, using a set of decision guidelines. Research assistants were trained and supervised in the differentiation of substance induced symptoms from those of an independent disorder based on the timing of symptoms relative to the substance use and the evaluation of symptoms that were substantially greater than would be expected based on the type, amount and duration of use. In addition, findings from the MINI were reviewed and confirmed by a clinician at the treatment site. Total number of current psychiatric disorders was summed for each participant (range 0 – 13). The median time from admission to administration of the MINI was 5 days (interquartile range: 3–8 days).

2.2.1. Psychiatric symptoms

Symptoms of depression were assessed with the 16-item Quick Inventory of Depressive Symptomatology-Clinician Rated version ($QIDS\text{-}C_{16}$) (Trivedi et al., 2004). With a score range of 0–27, higher scores indicate more severe depressive symptoms. Suicidality and related symptoms were evaluated with the Concise Health Risk Tracking-Self-Report (CHRT), a 14-item self-report assessment of suicidality and related thoughts and behaviors (Trivedi et al., 2011b). Scores for Propensity (items 1–11, range 0–44) and Risk (items 12–14, range 0–12) are calculated, with higher scores representing more propensity or risk.

2.2.2. Health-related quality of life and function

The Self-Administered Comorbidity Questionnaire (SCQ) (Sangha et al., 2003) assessed the presence of medical conditions, receipt of treatment for the condition, and whether the condition limited functioning. Scores range from 1 to 54, with higher scores indicating greater medical burden. The self-report Short-Form Health Survey (SF-36) (Ware, 2003) assessed quality of life and general health in both mental and physical domains. With a score range of 0–100, higher scores indicate perceived better health and functioning.