Demographic and clinical correlates of substance use disorders in first episode psychosis

Mary F. Brunette [a,b,*], Kim T. Mueser [c], Steven Babbin [d], Piper Meyer-Kalos [e], Robert Rosenheck [f], Christoph U. Correll [g,h,i,j], Corrine Cather [s], Delbert G. Robinson [g,h,i,j], Nina R. Schooler [g,k], David L. Penn [l,m], Jean Addington [n], Sue E. Estroff [o], Jennifer Gottlieb [c], Shirley M. Glynn [p], Patricia Marcy [q], James Robinson [r], John M. Kane [g,h,i,j]

[a] Geisel School of Medicine at Dartmouth, Lebanon, NH, USA
[b] Bureau of Mental Health Services, Department of Health and Human Services, Concord, NH, USA
[c] Center for Psychiatric Rehabilitation, Departments of Occupational Therapy, Psychiatry, and Psychology, Boston University, Boston, MA, USA
[d] University of Massachusetts, Boston, MA, USA
[e] Minnesota Center for Chemical and Mental Health, University of Minnesota, School of Social Work, St. Paul, MN, USA
[f] Yale Medical School, New Haven, CT, USA
[g] Zucker Hillside Hospital, Psychiatry Research, North Shore - Long Island Jewis Glen Oaks, NY, USA
[h] The Feinstein Institute for Medical Research, Manhasset, NY, USA
[i] Hofstra North Shore LIJ School of Medicine, Departments of Psychiatry and Molecular Medicine, Hempstead, NY, USA
[j] Albert Einstein College of Medicine, Department of Psychiatry and Behavioral Sciences, Bronx, NY, USA
[k] SUNY Downstate Medical Center, Department of Psychiatry, Brooklyn, NY, USA
[l] University of North Carolina-Chapel Hill, Department of Psychology, Chapel Hill, NC, USA
[m] Australian Catholic University, School of Psychology, Melbourne, VIC, Australia
[n] Hotchkiss Brain Institute, Department of Psychiatry, University of Calgary, Calgary, Canada
[o] Department of Social Medicine, University of North Carolina, Chapel Hill, NC, USA
[p] Semel Institute of Neuroscience and Human Behavior, University of California, Los Angeles, CA, USA
[q] Vanguard Research Group, NY, USA
[r] Nathan Kline Institute, Orangeburg, NY, USA
[s] Massachusetts General Hospital, Boston, MA, USA

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ABSTRACT

Background: We assessed the prevalence and correlates of lifetime substance use disorders in people with first episode psychosis using the baseline data from the Recovery After an Initial Schizophrenia Episode (RAISE) Early Treatment Program study.

Methods: Research staff assessed 404 first episode patients at 34 community mental health centers across the United States with the Structured Clinical Interview for DSM-IV for diagnoses of psychotic and substance use disorders. Logistic regression was used to evaluate the relationships between participant characteristics and lifetime substance use disorders, followed with generalized linear mixed-effects regression models to identify unique predictors of lifetime substance use disorders.

Results: Approximately one-third of participants reported recent alcohol use (36.6%) and cannabis use (30.7%), and one half (51.7%) met criteria for any lifetime alcohol or drug use disorder. Lifetime substance use disorders were associated with male gender, White race, higher excited (hyperactivity, mood lability, impulsivity, hostility, and uncooperativeness), psychotic and depressive symptoms, less impaired cognition, and greater perceived stigma. Gender, race, and excited symptoms were the most consistent unique predictors of lifetime substance use disorders found in multivariate analyses.

Conclusions: Half of first episode psychosis patients have co-occurring substance use disorders, which are associated with both more severe symptoms and greater perceptions of stigma. Programs aiming to serve these patients must have the skills and clinical strategies to help people with these unique characteristics.

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1. Introduction

Approximately 50% of people with schizophrenia have a lifetime history of substance use disorder (SUD), a rate at least three times higher

* Corresponding author at: Geisel School of Medicine at Dartmouth, Lebanon, NH, USA.
E-mail address: mary.f.brunette@dartmouth.edu (M.F. Brunette).

than that in the general population (Degenhardt and Hall, 2001; Regier et al., 1990; Sara et al., 2014). Alcohol is the most commonly reported substance of abuse in this group, followed by cannabis and stimulants. Male gender, younger age, and lower educational attainment have been associated with higher rates of substance use disorder comorbidity (for a review, see (Brunette et al., 2016)). Findings for race and ethnicity have varied, presumably reflecting variation in access to different substances across communities. Patients with schizophrenia and co-occurring SUD tend to have lower adherence to treatment and a poorer long-term course than those without such disorders, including higher rates of hospitalization, and increased likelihood of violence, victimization, homelessness, infectious disease, and premature mortality (Brunette et al., 2016).

Less is known about SUD among people at the time of their first episode of psychosis (FEP). Reports mostly from the U.S., Canada, Western Europe, and Australia have indicated that 24–74% of this group has a lifetime SUD (e.g., Addington, 1999; Addington and Addington, 2007; Barnett et al., 2007; Kavanagh et al., 2004; Kovasznay et al., 1997; Lambert et al., 2005; Mauri et al., 2006; Rabinowitz et al., 1998; Sara et al., 2013; Van Mastrigt et al., 2004; Wade et al., 2005), with rates of cannabis use slightly higher and alcohol use slightly lower than in multi-episode samples (Koskinen et al., 2010). Being male has been consistently associated with co-occurring substance use and SUD in FEP. Younger age, less education, and unemployment are less consistently associated with co-occurring SUD in FEP (Addington and Addington, 2007; Kavanagh et al., 2004; Larsen et al., 2006; Patel et al., 2016; Sara et al., 2013; Van Mastrigt et al., 2004; Wade et al., 2005). Some studies have reported higher levels of psychotic symptoms (Addington and Addington, 2007; Baeza et al., 2009; Green et al., 2004; Kamali et al., 2009; Mauri et al., 2006; Sevy et al., 2010) and suicidal ideation (Togay et al., 2015; Verdoux et al., 1999, 2001), and lower levels of negative symptoms (Baeza et al., 2009; Green et al., 2004; Larsen et al., 2006) in patients with co-occurring FEP and SUD. These clinical characteristics are generally similar to those in multi-episode patients.

More comprehensive information about the prevalence and correlates of SUD in patients with FEP is needed in order to inform treatment development. This report focuses on the prevalence and the demographic and clinical correlates of SUD from baseline data collected within the National Institute of Mental Health Recovery After an Initial Schizophrenia Episode (RAISE) Early Treatment Program (ETP) study, which is the largest treatment study of people with FEP conducted to date in the U.S. (Kane et al., 2015).

2. Methods

2.1. Overview

In the RAISE-ETP study, 34 community mental health centers were randomly assigned to deliver the NAVIGATE program, a coordinated specialty care intervention for FEP (Heinssen et al., 2014), or usual community care. Eligible participants were assessed in person at baseline and every 6 months, as well as by phone monthly, for two years. This study focuses on the baseline assessments only.

2.2. Participants

Participants (N = 404) were recruited from 34 community mental health centers located in 21 states between 2010 and 2012. Inclusion/exclusion criteria for the study were: 1) between 15 and 40 years of age; 2) DSM-IV diagnoses of schizophrenia, schizoaffective disorder, schizophreniform disorder, brief psychotic disorder, or psychotic disorder not otherwise specified; 3) no history of clinically significant head trauma, or other serious medical conditions; 4) first episode of psychosis, regardless of duration since onset of symptoms; and 5) antipsychotic medication taken ≤6 months over the person's lifetime.

Written informed consent was obtained from adult participants age 18 and older. Youth under age 18 provided written assent and their legal guardians provided written informed consent. The study was approved by the institutional review board of the coordinating center, as well as by the boards of many of the study sites as required. The NIMH Data and Safety Monitoring Board provided study oversight.

2.3. Assessment strategy and measures

Site research staff collected demographic information. Additional trained and blinded research staff used secure, live, two-way video conferencing to perform diagnostic interviews and assessments of symptoms and quality of life, a method that has been shown to have comparable acceptability and reliability to in-person assessment (Zarate et al., 1997).

The Structured Clinical Interview for DSM-IV (SCID) was used to evaluate diagnoses of psychotic and SUD diagnoses (current and lifetime) (First et al., 1996). Four variables representing different domains of lifetime SUD at baseline were created and utilized as dependent variables: alcohol abuse or dependence, cannabis abuse or dependence, other drug abuse or dependence, and summed lifetime number of SUDs (no lifetime SUD, one lifetime SUD, two or more lifetime SUDs).

Data collected during the SCID interview were also used to assess duration of untreated psychosis, which was defined as the period between the onset of the first psychotic symptom and initial treatment with antipsychotic medications (Addington et al., 2015). Symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1987); we calculated PANSS subscales for positive, negative, disorganized, excited, and depressive symptoms with a five factor model (Wallwork et al., 2012). Depression was assessed using the Calgary Depression Scale for Schizophrenia (CDSS) (Addington et al., 1993). The Heinrichs-Carpenter Quality of Life Scale (QLS) (Heinrichs et al., 1984), a semi-structured interview, was used to gather information for 21 items that cover four domains: interpersonal relations, instrumental role functioning, intrapsychic foundations (e.g., sense of purpose, motivation), and common objects and activities. Cognition was evaluated with the Brief Assessment of Cognition in Schizophrenia (BACS) (Keefe et al., 2004), a brief assessment of domains commonly impaired in schizophrenia.

Using a standard phone interview at baseline and monthly (McLellan et al., 1992; Rosenheck et al., 2003; Rosenheck et al., 2006), site research staff also assessed self-reported substance use (Desmarais et al., 2013). Participants reported number of days of use of alcohol, cannabis, other drugs (including all street drugs and medications that were not prescribed for the person) as well as tobacco, which will be described in a separate report. The questions were framed as follows: "*In the past 30 days, on how many days did you <drink alcohol>?*" (McLellan et al., 1992).

Patient perception of stigma was assessed with seven items from the Stigma Scale (King et al., 2007). The original Stigma Scale includes 28 items corresponding to three factors; four items were drawn from the discrimination factor, two from the disclosure factor, and one from the positive aspects factor. We used mean total scores. The coefficient alpha for these items was 0.60. Perceived well-being was assessed with a subset of 18 items from the Perceived Well-being Scale (Ryff, 1989). Attitudes about medication adherence were measured with a subset of 4 items from the Brief Evaluation of Medication Influences and Beliefs (Dolder et al., 2004). The 6-item Autonomy Support Scale, a short version of the Health Care Climate Questionnaire (Williams et al., 1998), reflected perceptions of support for autonomy from treatment providers. An abbreviated version of the Mental Health Recovery Measure (Young and Bullock, 2003) was used to assess participants' perceptions of their recovery from mental illness. Participants rated their overall level of functioning with the Patient Self-rated Global Functioning Scale that corresponds to the global assessment item in the Quality of Life Interview (Lehman, 1988).