



## Early Psychosis and Substance Use Comorbidity

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### Introduction

The Early Psychosis and Substance Use Comorbidity study took place in Manhattan during the early 2000s [1]. The study aimed to differentiate people with primary psychosis versus substance-induced psychosis; to identify the demographic, clinical, and family characteristics of the two diagnostic groups; and to follow these patients for two years. Researchers recruited 400 adults who presented to psychiatric emergency departments in upper Manhattan with early psychosis (less than six months of symptoms) and active use of alcohol and/or other drugs (within the last 30 days). The participants were predominantly from minority backgrounds (African American and Latino), single, unemployed, and poor. Research interviewers collected records and interview data using well-validated instruments at baseline and every six months for two years. Research interviews at baseline and follow-up used the Psychiatric Research Interview for Substance and Mental Disorders (PRISM), a research interview designed to diagnose people with co-occurring psychosis and substance abuse based on DSM-IV criteria [2]. The follow-up study was naturalistic; researchers made no efforts to influence treatment.

### Major Findings

At baseline, 169 (44%) participants were diagnosed with substance-induced psychosis and 217 (56%) with primary psychosis [1]. The most common substance-induced psychosis diagnoses were cannabis-induced psychosis, alcohol-induced psychosis, and cocaine-induced psychosis, although 40% of the participants used at least two substances. The common primary psychosis diagnoses were schizophrenia and psychotic mood disorder and these participants most often used cannabis and/or alcohol. Several background characteristics differentiated the two groups. The substance-induced psychosis group participants were more likely to have parental substance abuse, a diagnosis of substance dependence and visual hallucinations; the primary psychosis group had greater positive and negative symptoms of psychosis.

At the one year follow-up, 25% of the participants with an initial diagnosis of substance-induced psychosis met criteria for primary psychosis, while the primary psychosis group did not change [3]. Participants whose diagnosis changed from substance-induced psychosis to primary psychosis had poorer premorbid functioning, less insight and more family history of mental illness than participants who maintained a diagnosis of substance-induced psychosis. Participants with a substance-induced psychosis were more likely to be in remission from psychosis (absence of positive and negative psychosis symptoms) than those with primary psychosis [4]. The same factors predicted remission of psychosis for both groups: shorter duration of untreated psychosis, fewer positive and negative symptoms at baseline, better premorbid adjustment, and greater awareness of illness.

Longitudinal analyses based on two years of follow-up revealed that both groups improved substantially on psychotic symptoms, substance dependence, homelessness, and psychosocial functioning [5]. Participants in the primary psychosis group were more likely to have been hospitalized, to have used antipsychotic and mood-stabilizing medications, and to have had outpatient psychiatric visits; those with substance-induced psychosis were more likely to have received addiction treatments.

Overall community treatment rates were, however, remarkably low. Although a wide consensus supports integrated dual disorders treatment (combined mental health and addiction treatment by the same team) for people with psychosis and comorbid substance use, few participants in either group received integrated services. Of those with a primary psychosis plus active substance use, only 11-16% received dual disorders treatment during six-month intervals. For those with substance-induced psychosis, only 4-12% received dual disorders treatment during six-month intervals. Single diagnosis treatments (other than medications) were also uncommon. For any outpatient mental health treatment, the six-month rates ranged from 23-39% for those with primary psychosis and from 4-12% for those with substance-induced psychosis. Outpatient substance abuse treatments were even less common. For those with primary psychosis and substance use, only 3-5% received outpatient substance abuse treatment during six-month intervals. For those with substance-induced psychosis, the six-month figures were 10-18%.

### Commentary

Several findings from this study warrant discussion because they may have important implications for the field: the difficulty of diagnosis, the paucity of service access in an area rich with professional resources, and the course of recovery.

Diagnosing psychosis in the context of active substance use is parlous. Many substances can induce psychosis and self-report regarding substance use is often inaccurate. In our study, careful research diagnoses made over several days using records, observations and standardized interviews were not stable over time, even for the basic distinction between primary psychosis and substance-induced psychosis. Leaving aside concerns about the basic validity of these diagnoses, we conclude that substance-induced psychosis in particular should be considered a provisional diagnosis. Many people with a substance-induced psychosis have used drugs persistently over years, precluding the opportunity for careful observations during abstinence. These patients often respond to antipsychotic medications, but often do not need long-term medications. Further, the timing of medication taper and withdrawal is uncertain. Patients with a provisional diagnosis of substance-induced psychosis should be followed carefully, which did not occur in our study.

Manhattan has exorbitant mental health resources. New York State funds mental health care at a high level, well above most states and New York City in particular supports an enormous number of mental health professionals. The study location in upper Manhattan, the home of several psychiatric centers, has perhaps more psychiatrists

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and mental health professionals per capita than any other geographic area in the world. But healthcare inequities are profound. These professionals largely provide outpatient care to people with wealth and private insurance. Evidence-based care for our participants (poor, from minority backgrounds and seriously ill) was almost non-existent - most received essentially no outpatient care. As income and medical care inequities have continued to worsen in the US, poor people have been left to seek care in emergency rooms and hospitals because they have so little access to outpatient care.

Despite the remarkable lack of clinical attention, most of our participants improved in clinical and social functioning over two years. Fewer participants were hospitalized, homeless, and unemployed over time. Symptoms decreased and relationships improved. Possible explanations include baseline bias, fluctuating illnesses and regression to the mean, attrition, natural supports and treatment. When people are identified during a crisis, they are likely to improve. Thus, sampling people with fluctuating illness during an emergency room admission will inevitably lead to improvement on follow-up. Our data were consistent with this pattern: Participants tended to improve at the first follow-up and maintain improvements over two years rather than to improve steadily over time. Natural supports could also have played a role. Although disadvantaged, our participants had families and friends, some returned to employment, and some may have accessed peer supports such as 12 step groups that helped them to recover. Participants with particularly bad outcomes, such as incarceration or early mortality, may have been lost to follow-up. Professional treatment did not predict better outcomes, but that is expected due to selection

bias. Many people who recover discontinue professional treatments, and many who do poorly use professionals extensively.

In conclusion, this study of early psychosis and substance use comorbidity reflects the most worrisome aspects of US psychiatry, healthcare, and society. Psychiatry lacks valid diagnoses, especially in the context of comorbidity. The US healthcare system is plagued by inequities, poor quality, and the wasteful and ineffective use of medical solutions for social problems. And our society continues to disadvantage a poor, largely minority underclass by failing to provide safety net resources in the community.

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