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Prevalence and correlates of school drop-out prior to initial treatment of nonaffective psychosis: Further evidence suggesting a need for supported education

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ABSTRACT

Background: Because dropping out of high school (i.e., secondary education) contributes prominently to numerous social, economic, and health conditions, formal public health initiatives promoting population health and social justice, especially in at-risk populations, are increasingly encouraged to address high school drop-out. The relative dearth of research attention on school drop-out prior to first treatment contact in young adults with psychotic disorders indicates a need for investigation of the associations between school drop-out and illness-related variables so that interventions may be tailored appropriately to this unique population.

Methods: This study provides a descriptive characterization of the prevalence and correlates of high school drop-out in a sample of 109 patients hospitalized for the evaluation and treatment of a first episode of nonaffective psychosis.

Results: Findings from this urban, socially disadvantaged, predominantly African American sample indicate that school drop-out is a marker of diverse detrimental social problems in first-episode psychosis, and that further research is required to fully characterize the most appropriate interventions for such individuals.

Conclusions: Future research might seek to intervene through an integrated treatment approach that incorporates supported education, symptom reduction and management, and comorbid substance use treatment in first-episode patients.

1. Introduction

High school drop-out (i.e., discontinuing school during the years of secondary education, which, in many countries, is the final stage of compulsory education) is a problem contributing to numerous adverse social, economic, and health conditions (Freudenberg & Ruglis, 2007). While educational attainment is known to be highly associated with both income level and occupational status, research also indicates that education may be a very important influence on an individual's health (Cutler & Lleras-Muney, 2006; Deaton, 2002; Jemal et al., 2008; Molla et al., 2004; Winkleby et al., 1992). For example, having less formal education is associated with greater levels of risky health behaviors (e.g., substance use, inadequate physical activity) and is predictive of earlier mortality (Jemal et al., 2008; Lantz et al., 1998; Molla et al., 2004). The higher the level of educational attainment, the greater one's access to resources (e.g., money, belongings, housing, food, and medical care), information and skills (e.g., the ability to acquire adequate help and resources), and social support that engenders a sense of control over one's own life (Cutler and Lleras-Muney, 2006; Day & Newburger, 2002; Ross & Mirowsky, 1989; Ross & Wu, 1995). Given that numerous individual-, school-, and community-level factors are associated with high school drop-out, public health professionals are increasingly encouraged to simultaneously target both improvement of health and reduction of school drop-out rates in formal public health initiatives that promote population health and social justice, especially in at-risk populations (Freudenberg & Ruglis, 2007).

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High school represents an important context for adolescent psychological and social development. Thus, dropping out of secondary education can substantially interfere with the achievement of critical psychosocial milestones. Individuals with mental illnesses account for a significant percentage of high school drop-outs (Fine & Zane, 1989; Haynes, 2002). Because psychiatric disability often begins in late adolescence or early adulthood, many affected by serious mental illnesses (e.g., schizophrenia and related psychotic disorders) have difficulty completing high school and entering postsecondary education. This, in turn, can result in inadequate basic knowledge and stunted development of interpersonal skills that are critical for success in a variety of life roles. Much of the psychosocial disability associated with schizophrenia often accumulates before the first treatment contact. Those with schizophrenia who also have dropped out of school have two strikes against them in terms of both social outcomes and physical health outcomes, in addition to mental health outcomes. Surprisingly, little research attention has been given to the issue of school drop-out prior to first treatment in young adults with psychotic disorders. Given the dearth of empirical findings in this area, research is needed on the association between school drop-out and illness-related variables (e.g., age at onset, course, long-term symptomatic and psychosocial functioning) so that psychosocial interventions can be developed to best meet the needs of adolescents and young adults with emerging psychiatric disabilities.

The objective of the present study was to provide a descriptive characterization of the prevalence and correlates of high school drop-out in a sample of patients hospitalized for a first episode of nonaffective psychosis. In particular, this sample included a relatively large group of urban, socially disadvantaged, low-income, predominantly African American patients. The study's aims were to provide a descriptive summary of school drop-out in this sample, and to examine associations between school drop-out and a number of key demographic, social, and clinical variables. In doing so, it is hoped that such descriptions may draw attention to the complex interactions between social disadvantage (as exemplified by school drop-out) and serious mental illnesses, even at the time of initial onset and treatment-seeking. Further, such findings will provide data to support future research on psychosocial interventions addressing high school drop-out in individuals affected by such illnesses.

2. Methods

2.1. Setting and sample

Participants in this study took part in *The ACES Project* (Atlanta Cohort on the Early course of Schizophrenia), a study designed to examine predictors of treatment delay and the duration of untreated psychosis in first-episode patients in an urban, low-income, predominantly African American population. All participants were hospitalized for an initial manifestation of a primary, nonaffective psychotic illness either in an inpatient psychiatric unit of a large, university-affiliated, public-sector hospital or an urban county psychiatric crisis center. Patients who were between the ages of 18 and 40 years and able to speak and read English were eligible to participate. Exclusion criteria included: known mental retardation, a Mini-Mental State Examination (MMSE; Cockrell & Folstein, 1988; Folstein et al., 1975) score of <24, a significant medical condition compromising ability to participate, prior treatment for psychosis for >3 months, previous hospitalization for psychosis >3 months prior to index hospitalization, and inability to provide informed consent.

The 109 first-episode patients had a mean age of 23.1 ± 4.7 years (range: 18–39), and 83 (76.1%) were male. The majority self-identified as Black/African American (98, 89.9%), and the remainder identified as White/Caucasian (7, 6.4%), Asian American (2, 1.8%), and of African/Ethiopian descent (2, 1.8%). Diagnoses based on the *Structured Clinical Interview for DSM-IV Axis I Disorders* (SCID-I; First et al., 1998) were as follows: 62 (56.9%) with schizophrenia (48 with paranoid type, 10 with disorganized type, two with residual type, and two with undifferentiated type); eight (7.3%) with schizoaffective disorder (five with bipolar type and three with depressive type); 22 (20.2%) with schizophreniform disorder; 12 (11.0%) with psychotic disorder not otherwise specified; four (3.7%) with brief psychotic disorder; and one (0.9%) with delusional disorder.

2.2. Procedures and materials

Participants underwent a clinical research assessment during hospitalization, once acute psychosis was stabilized satisfactorily for the informed consent process and research participation. Data were collected from 2004 to 2008. The research was approved by all relevant institutional review boards.

Seven sociodemographic variables of interest in the present study were: gender, age at hospitalization, whether or not the patient had been in any special classes for learning or behavioral problems, who the patient lived with during the month prior to hospitalization, who primarily raised the patient during most of childhood, whether or not the patient has any children, and employment status during the month prior to hospitalization. Participants were classified as having graduated high school or not. Comparative statistics of high school drop-out from the Fulton and DeKalb county school systems of Atlanta, Georgia between the years of 2004 and 2008 were gleaned from census data provided by the U.S. Department of Education (USDE, 2008).

Seven social and clinical characteristics (variables or categories of variables) were examined in relation to school drop-out. Dichotomized variables indicating history of daily nicotine use, weekly alcohol use, and daily cannabis use were created, as described previously (Compton et al., in press; Stewart et al., in press). The use of other drugs was not examined given the low prevalence of other drug use in this sample of relatively young first-episode patients (e.g., only six participants (5.5%) had a history of cocaine abuse or dependence, and none had a history of opioid abuse or dependence, whereas 63 (57.8%) had a history of cannabis abuse or dependence).

Premorbid functioning was rated using the *Premorbid Adjustment Scale* (PAS; Cannon-Spoor et al., 1982), a reliable and valid measure that assesses the degree of attainment of specific developmental goals across life stages prior to onset of prodromal or psychotic symptoms in individuals with schizophrenia (Alvarez et al., 1987; Cannon-Spoor et al., 1982; Krauss et al., 1998). Higher scores indicate poorer premorbid functioning. As in a previous study (Monte et al., 2008), academic and social domain scores for childhood, early adolescence, and