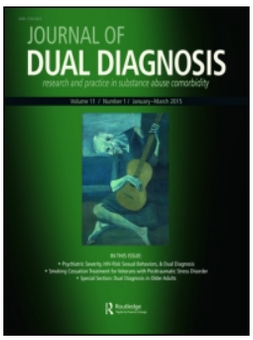

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PSYCHOTHERAPY & PSYCHOSOCIAL ISSUES

Correlates of Current Smoking Among Adults Served by the Public Mental Health System

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ABSTRACT

Objective: As part of a study of health status among 457 adults with diagnostically heterogeneous serious mental illnesses served by the public mental health system in four U.S. states, we assessed predictors of current cigarette smoking. **Methods:** We examined bivariate relationships between smoking status and risks for drug and alcohol use disorders, residential setting, parental status, and employment. Finally, we used multivariable logistic regression to predict current smoking, controlling for significant confounds. **Results:** Of the total sample, 44% of participants reported that they currently smoked and most (62%) were moderately to severely nicotine-dependent. Those at high risk for drug use disorders were more than three times as likely and those at high risk for alcohol use disorders were more than twice as likely to smoke, compared to their counterparts with little or no drug or alcohol use disorder risk. Controlling for all other model variables including drug and alcohol disorder risk, current smokers were less likely to be parents and more likely to reside in supervised settings than nonsmokers. Younger people and those without a college degree were more likely to smoke, controlling for all other model variables. **Conclusions:** Given the high degree of comorbidity of smoking, alcohol disorders, and drug use disorders, the authors highlight the need for integrated interventions that address these issues simultaneously.

KEYWORDS
Smoking; nicotine dependence; substance use; adults with serious mental illnesses

Adults with serious mental disorders served by the public mental health system experience multiple health disparities as well as higher medical morbidity and lifespans 10 to 30 years shorter on average than the general population (Laursen, Nordentoft, & Mortensen, 2014). They also have a higher smoking prevalence, greater level of nicotine dependence, lower smoking cessation rates, and disproportionate health and financial burdens from smoking (Williams, Steinberg, Griffith, & Cooperman, 2013). Considerable evidence suggests that adults with mental illnesses are seldom offered smoking cessation treatment by service providers (Himelhoch & Daumit, 2003; Prochaska et al., 2011; Substance Abuse and Mental Health Services Administration, 2014a) and remain unaware that effective, evidence-based interventions are available (Christiansen et al., 2016). Coupled with this, little is known about the factors associated with current smoking in this population that impede efforts to design smoking cessation interventions that address its special needs and circumstances. The purpose of this study was to examine associations between current smoking and factors identified in prior research in this population, as well as studies of the general population, to build a knowledge base that can be used to inform new treatment approaches.

Estimates of the prevalence of current smoking among people with mental illnesses vary widely from a high of 80% to a low of 28%, depending on study features such as how mental illness is defined, the time frame used, psychiatric treatment status, types of mental illnesses studied, and sampling frame. The definition of mental illness in some smoking prevalence studies is based on screening questions that ask about symptoms and impairments; other studies use diagnosis of one or more psychiatric disorders made by researchers or clinicians at the time of data collection; some studies use respondent self-reports of a mental illness diagnosis; and finally, studies have defined mental illness based on treatment status. Time frames for the occurrence of mental illness vary from the immediate present to past month to past 12 months to lifetime. Sampling frames include nationally representative surveys and treatment-based

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populations such as psychiatric inpatients or outpatients. Some studies assess prevalence only among groups with specific diagnoses or levels of severity of their disorders.

While using so many cross-cutting design characteristics makes comparison difficult, studies using nationally representative populations, and more inclusive definitions of mental illness, tend to find lower current smoking prevalence rates, ranging from 28.3% to 36.1% (Centers for Disease Control and Prevention [CDC], 2013, which used the National Surveys on Drug Use and Health; Glasheen, Hedden, Forman-Hoffman, & Colpe, 2014, which used the National Surveys on Drug Use and Health; Lasser et al., 2000, which used the National Comorbidity Survey; Lawrence, Mitrou, & Zubrick, 2009, which used the National Comorbidity Survey–Replication; Lê Cook et al., 2014, which used the Medical Expenditure Panel Survey; McClave, McKnight-Eily, Davis, & Dube, 2010, which used the National Health Interview Survey). Studies using nonrepresentative outpatient populations receiving treatment for mental disorders typically find higher prevalence rates, ranging from 44.1% to 80% (Chesher et al., 2012; Cook et al., 2015; Dickerson et al., 2013; Vanable, Carey, Carey, & Maisto, 2003). One study of current psychiatric outpatients, limited to people with schizophrenia or bipolar disorder, reported a current smoking prevalence of 59% (Dickerson et al., 2013); another study found a current smoking prevalence of 46.4% for people reporting lifetime bipolar disorder and 59.1% for lifetime schizophrenia (McClave et al., 2010). A study of adults entering treatment for co-occurring substance use and mental health disorders reported a prevalence of 80% (Chesher et al., 2012). Finally, our interviews with people using outpatient programs for people with serious mental illnesses in four states found a prevalence of 44.1% (Cook et al., 2015).

A much smaller body of research has examined predictors of current smoking among groups of individuals with mental illnesses. Our review of the published literature identified only three studies addressing this question. Vanable et al. (2003) examined case record data from 2,774 consecutive admissions to seven hospital-based outpatient psychiatry clinics in Syracuse, New York, with a variety of diagnoses and severity levels. Their multivariable analysis found that current smoking was more likely among people with higher drug abuse risk, higher alcohol abuse risk, higher caffeine consumption, and diagnoses of anxiety, depression, bipolar disorder, schizophrenia, and schizoaffective disorder (compared to adjustment disorder). Dickerson et al. (2013) studied 547 people receiving outpatient treatment at community agencies, inpatient settings, day hospital programs, or office practices in Maryland who had diagnoses of schizophrenia or bipolar disorder. Their multivariable analysis found that current smoking was more likely among people with lower education, a history of substance abuse, longer mental illness duration, a diagnosis of schizophrenia (compared to bipolar disorder), and White race. Finally, using data from the National Survey on Drug Use and Health, which identified mental illnesses in the past 12 months with a disability assessment and psychiatric distress screening instrument, the CDC (2013) found that current smoking prevalence was higher among men, people younger than 45 years, people living in poverty, and people without a college degree.

Given prior findings of significant associations between current smoking and risk of drug and alcohol use disorders, our analysis was designed to explore whether this association was present in a large, multistate population of people attending community outpatient programs for adults with serious mental illnesses. We also wanted to test the effects of additional variables identified as significant predictors of smoking in prior studies of this population, including gender, age, race, education, income level, diagnosis, and health insurance status. Finally, we wanted to examine new variables that have been identified in research on the general population but have not previously been explored in our group of interest. The first of these was parental status. Here, we expected a negative relationship between having children and smoking, given evidence of the social control influences of parenthood that reduce smoking likelihood and make parenthood protective against smoking (Jun & Acevedo-Garcia, 2007; Kendig, Dykstra, van Gaalen, & Melkas, 2007). The second variable of interest was employment status. We hypothesized that people who were working would be less likely to smoke, given evidence of the inverse relationship between smoking and employment (De Vogli & Santinello, 2005) as well as re-employment after job loss (Prochaska et al., 2016). The final variable was residential status. We expected that people living in group homes and other supervised residential settings would be more likely to smoke, given evidence of the link between housing situation and smoking (Baggett, Lebrun−Harris, & Rigotti, 2013) and the documented lack of smoking prohibitions in the majority of behavioral health programs (Belluck, 2013; Weir, 2013). Thus, our study hypotheses were that (a) current smoking would be associated with high risk of drug and alcohol use disorders independent of other previously studied factors and (b) current smoking would be less likely among parents, the employed, and people living in independent residential settings, again controlling for previously studied influences.

Methods

Participants

Participants were 457 adults in four U.S. states (Illinois, Georgia, New Jersey, and Maryland) who were screened for eight common medical conditions using industry-standard testing procedures. Eligibility criteria included having a serious mental illness, as defined by U.S. Federal Public Law 102–321 to include an American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision* diagnosis of a mental illness (e.g., schizophrenia, bipolar disorder, major depression or dysthymia, anxiety disorder), accompanied by moderate to severe functional impairment. Prior to screening, community agency staff confirmed each participant's membership in an agency program open only to those who met the state's statutorily mandated definition of serious mental illness, each of which was consistent with Public Law 102-321. Other inclusion criteria were being aged 18 years or older and ability to provide informed consent.

Screening occurred during health fairs designed and operated by a university research center and a mental health peer-run collaborative (Cook et al., 2015; Swarbrick et al., 2013; Razzano et al., 2015). The first screening was held at a peer-operated mental health program in New Brunswick, New Jersey, and was attended by members of peer-run self-help centers across the state. The second took place in a university gymnasium in Chicago, Illinois, and was attended by people who use services of a psychiatric rehabilitation agency located citywide. The third and fourth were held in an Elk's Club Lodge in Frederick, Maryland, and a church auditorium in Rockville, Maryland, which were attended by people using services at local mental health agencies. The fifth occurred at a large community mental health agency located in Smyrna, Georgia.

Written informed consent was obtained from participants on the day of the screening, using procedures with full review board approval by the University of Illinois at Chicago Institutional Review Board (IRB) and the IRBs of participating agencies, as required. Attendees were screened at a variety of stations within each health fair for cardiovascular health risk factors, including body mass index, blood pressure, cholesterol levels, and glycosylated hemoglobin. In addition, demographic and health attitudes data were collected and are reported elsewhere (Cook et al., 2015; Razzano et al., 2015).

Regarding study respondents' representativeness, we used data from each agency to compare its study participants to the agency's entire population with a serious mental illness. Respondents were highly representative of the agencies from which they were recruited with no significant differences by sex, race, Hispanic/Latino ethnicity, education, age, diagnosis, and health insurance status, except that males were underrepresented in New Jersey (46% study, 59% agency) and people with schizophrenia were overrepresented in Georgia (40% study, 25% agency). Regarding national representativeness, we compared the characteristics of our respondents to a nationally representative household sample of noninstitutionalized adults with serious mental illnesses (Pratt, 2012). Our study population was similar to the national sample (i.e., defined as less than a 10% difference) on gender, education, Hispanic ethnicity, age 60 years or older, Medicare, Medicaid, and lack of health insurance coverage. However, compared to the nationally representative sample, our respondents included lower proportions of Whites, 18-to 39-year-olds, and private health insurance coverage and higher proportions of African Americans, 40- to 59-year-olds, and dual Medicare/Medicaid coverage.

Assessments and measures

Risk for problematic alcohol use was assessed using the Alcohol Use Disorders Identification Test–Consumption (AUDIT-C; Bush, Kivlahan, McDonnell, Fihn, & Bradley, 1998). The AUDIT-C is a 10-item screening questionnaire with three questions on the amount and frequency of drinking, three questions on alcohol dependence, and four on problems caused by alcohol. A score of 8 in men and 7 in women indicates a strong likelihood of hazardous or harmful alcohol consumption at the level of abuse or dependence disorders. Scores of 8 or greater in men and 7 or greater in women were coded as 1 for high risk of alcohol use disorders and 0 otherwise.

Risk of drug use disorders was assessed with the Drug Abuse Screening Test (DAST; Gavin, Ross, & Skinner, 1989), where a score of 6 or more indicates a substantial risk for substance use disorders. Participants with scores of 6 or greater were coded as 1 for high risk of drug use disorders and 0 otherwise.

Nicotine use and dependence were assessed using the Fagerström Test for Nicotine Dependence (FTND), a widely used self-report measure of physical dependence on cigarettes (Heatherton, Kozlowski, Frecker, & Fagerström, 1991). Dependence scores can range from a low of 0 to a high of 10 (Fagerström, Heatherton, & Kozlowski, 1991). Scores of 0 to 3 indicate low or very low nicotine dependence, while scores of 4 to 10 indicate medium to high levels of nicotine dependence.

Regarding individual characteristics, gender was coded 1 for female and 0 for male. Age was calculated in years as of the date that participants were interviewed. College degree was coded as 1 if participants reported

having an associate degree through doctoral degree and 0 otherwise. Current health insurance was coded 1 if participants reported any form of health insurance coverage and 0 otherwise. Employment status was coded 1 if participants reported currently working full or part time and 0 otherwise. Parental status was coded 1 if participants reported having any biological, adopted, or stepchildren and 0 otherwise.

Statistical analysis

Data were analyzed using SPSS software with $p < .05$ serving as the criterion for statistical significance. We used descriptive statistics to report participants' demographic features, clinical characteristics, health insurance status, and smoking behavior. The latter included current smoking status (1 = *smoker*, 0 = *nonsmoker*) and level of nicotine dependence (1 = *medium to high*, 0 = *low to very low*). We conducted bivariate Pearson correlational analyses to identify associations among predictor variables after first checking for the presence of multicollinearity (defined as a correlation > 0.50). Next, we examined Pearson correlations between current smoking status and variables identified in prior research on populations with mental illnesses as well as the general population. Those found to be significant at the bivariate level were included in our final model. The model comprised risk of alcohol use disorders (1 = *at risk*, 0 = *little or no risk*), risk of drug use disorders (1 = *at risk*, 0 = *little or no risk*), age (in years), college degree (1 = *associate degree or above*, 0 = *all other*), employment status (1 = *employed*, 0 = *not employed*), parental status (1 = *parent*, 0 = *no children born to respondent*), nonindependent residential status (1 = *group home/supervised apartment/institution*; 0 = *own or shared home or apartment*), and health insurance status (1 = *private or public insurance*, 0 = *uninsured*).

Findings

Participant characteristics

Participant characteristics are described in Table 1. Among the study participants ($n = 457$), 48.7% were female; the mean age was 46.5 years ($SD = 12.1$); nearly half (48%) were White; 39% were Black/African American; and 23% had a college degree (i.e., associate degree or greater). The majority of participants had health insurance (77%) through Medicaid (29%), Medicare (18%), or both (30%). Most participants reported having a diagnosis of schizophrenia (40.6%) or a mood disorder (46%).

Table 1. Demographic characteristics of adults with serious mental illness screened for smoking risk factors ($N = 457$)[a].

	Study Participants ($N = 457$)	
	N	%
Female	221	48.7
Mean age in years (*SD*)	46.5 (12.1)	
Race		
White	221	48.8
Black/African American	175	38.6
Asian/Pacific Islander	7	1.5
American Indian/Alaskan Native	2	0.4
Multiracial	17	3.8
Other	30	6.6
Ethnicity		
Hispanic/Latino	32	7.1
Not Hispanic/Latino	425	92.9
Residential status		
Living in own or rented home or apartment	323	72.7
Group home/supervised apartment/institution/homeless	121	27.3
Employment status		
Working full or part time	138	31.1
Not employed	306	68.9
Parental status		
Parent of biological child, stepchild, or adopted child	178	40.3
Not a parent	264	59.7
Education		
< High school	89	20.1
High school/GED	138	31.1
Some college	115	25.9
Associate degree, BA, or graduate degree	102	22.9
Health insurance type		
Medicaid	130	29.2
Medicare	82	18.4
Dual (Medicaid and Medicare)	137	30.7
Private	43	9.7
Veteran's	11	2.5
Other	22	5.2
None	62	13.9
DSM-IV diagnosis		
Schizophrenia	179	40.6
Bipolar disorder	100	22.7
Depression	106	24.0
Anxiety disorder	19	4.3
Personality disorder	4	0.9
Other	33	7.5

Note. [a]Variations in N due to missing data.
SD = standard deviation; GED = general equivalency degree; BA = bachelor's degree; DSM-IV = *Diagnostic and Statistical Manual of Mental Disorders, fourth edition*.

Participant smoking behaviors and risk of drug and alcohol use disorders

As shown in Table 2, 44% ($n = 200$) reported that they currently smoke. Of those reporting smoking and who completed the FTND ($n = 184$), 62% scored as moderately to severely nicotine dependent. Based on the AUDIT-C rating scale scores, 17% ($n = 75$) of those screened were at high risk for alcohol use disorders. DAST scores showed that a smaller proportion, 11% ($n = 48$), were at high risk for drug use disorders. To demonstrate the high prevalence of substance use

Table 2. Results of health risk assessments and comparison with identical measures in the general population ($N = 457$).*

Health Risk/Assessment	At Risk in Screened Sample N	At Risk in Screened Sample %	At Risk in the General Population %
Smoking status			
Current smoker	200	44%	19%[1]
Not current smoking	257	56%	
Nicotine dependence/FTND [3]			
0–3: Very low/low dependence	63	32%	43%[1]
4–10: Medium/high dependence	121	62%	57%[1]
Risk of alcohol use disorder/AUDIT-C[4]			
No risk	371	83%	7%[12]
At risk	75	17%	
Risk of drug use disorder/DAST[5]			
No risk	351	79%	3%[2]
Low risk	46	10%	
Intermediate/substantial/severe risk	48	11%	

Note. *Variation in sample size due to missing values.
[1]National Survey on Drug Use and Health 2006 (Substance Abuse and Mental Health Services Administration, 2008).
[2]National Survey on Drug Use and Health 2010 (Substance Abuse and Mental Health Services Administration, 2010).
[3]Fagerström Test for Nicotine Dependence (FTND; Fagerström et al., 1991).
[4]Alcohol Use Disorders Identification Test–Consumption (AUDIT-C; Bush et al., 1998).
[5]Drug Abuse Screening Test (DAST; Gavin et al., 1989).

disorders among study participants, Table 2 compares the study participant rates to the general population.

Bivariate analyses

Bivariate Pearson correlation analyses (not shown) found that, compared to nonsmokers, current smokers were younger and were more likely to lack health insurance coverage, not be working, be childless, and reside in supervised residential settings. Relationships with all other variables examined were nonsignificant, including gender, race, ethnicity, diagnosis of schizophrenia, bipolar disorder or depression, and severity of depressive symptoms.

Multivariable analyses

We included all significant variables in a multivariable logistic regression analysis to further examine associations while controlling for confounding effects (Table 3). Confirming our first study hypothesis, smokers were more likely to be at high risk for both drug use disorders and alcohol use disorders, controlling for all other model variables. People at high risk for drug use disorders were more than three times as likely and people at high risk for alcohol use disorders were over twice as likely to smoke, compared to their counterparts at little or no risk for drug or alcohol use disorders. Regarding our second hypothesis, controlling for all other model variables including drug and alcohol disorder risk, current smokers were more likely to reside in supervised settings than nonsmokers and were less likely to be parents than nonsmokers. However, they were no more likely to be employed than their nonsmoking counterparts. Finally, even controlling for substance abuse risk, parental status, and residential setting, current smokers were younger and were less likely to have a college education than nonsmokers. Neither employment status nor health insurance status were significant in this model.

Table 3. Results of logistic regression analysis predicting likelihood of current smoking.

Predictor Variable	*OR*	*SE*	Significance
High risk of drug use disorder[1]	3.068	.419	.008
High risk of alcohol use disorder[1]	2.330	.307	.006
Residing in agency-owned/supervised housing/institution[2]	1.758	.243	.020
Age, years	.981	.009	.044
Parent of 1 or more children[3]	.612	.229	.036
College degree[4]	.398	.331	.005
Currently has health insurance[5]	.607	.324	.123
Employed full or part time[6]	.835	.238	.449
Constant			

Note. [1]Versus little or no risk.
[2]Versus residing in own or rented home or apartment.
[3]Versus no children ever born to respondent.
[4]Versus some college, high school/GED, or less than high school.
[5]Versus uninsured.
[6]Versus not working.
OR = odds ratio; *SE* = standard error.

Discussion

Results from our analysis confirm those of prior studies, in that 44% of our participants were current smokers, compared to 19% in the U.S. general population, and given that 62% of our respondents had medium to high levels of nicotine dependence, compared to 57% in the general population. The rate of problematic alcohol use was more than twice as high in the study population (17%) as in the general population (7%) and three times as high (11%) for problematic substance use as in the general population (3%). Thus, our results demonstrate the co-occurrence of risks related to smoking, alcohol, and drug use among individuals with mental illnesses. Ours is also the first study of a diagnostically heterogeneous group of people with a serious mental illness who use services in the public mental health system to find significant associations between current smoking and being childless, as well as residing in agency-owned or supervised housing.

Current mental health, smoking cessation, and addiction treatment models fail to address the comorbidity of smoking with alcohol and substance use disorders. In particular, the availability of tobacco recovery services (i.e., smoking cessation treatment) is especially low. Data from the National Mental Health Services Survey

indicate that only one in four U.S. mental health treatment facilities offer smoking cessation services (Substance Abuse and Mental Health Services Administration, 2014a). Moreover, the proportion of mental health residential programs offering smoking cessation treatment was the lowest out of all facility types, at only 14.9%. This helps to explain our study finding that smoking was more likely for those living in supervised or congregate housing than in their own home or apartment. Availability of smoking cessation services is similarly low in addiction treatment programs, where only 39% are offered counseling and 22% are offered medication for tobacco dependence (Substance Abuse and Mental Health Services Administration, 2014b).

The Centers for Disease Control and Prevention (2013) have called for the "full integration of tobacco dependence treatment into mental health care" involving screening for tobacco use and offering evidence-based treatment (i.e., medications and counseling) in clinical settings (p. 3). The agency also has called for better systems coordination between tobacco control and mental health programs at state and national levels. This supports the need to develop and bring to scale interventions that integrate smoking cessation with treatment for substance use disorders in ways that can be realistically embedded in our public mental health system. Such an approach is no easy task. Given the time commitment and costs incurred in service integration, one might ask whether the numbers justify such an effort. In our population of smokers, one-quarter (26.4%, $n = 52$) were at risk for alcohol use disorders and a fifth (19.9%, $n = 30$) were at risk for drug use disorders, with over a third (36.2%; $n = 71$) at risk for one or both types of substance use disorder. While these numbers suggest that the effort is warranted, the reinforcing nature of drug, alcohol, and tobacco use in this population underscores the point that tackling one problem without addressing the others may be ineffective.

Past inattention to treating tobacco dependence in mental health settings may be a matter of organizational perspective and culture change (Ziedonis, Das, & Tonelli, 2015). A paradigm shift is needed that values addressing tobacco use in behavioral health treatment settings through evidence-based practices. It also seems logical that the move toward integrating primary care and behavioral health care would yield greater focus on improving tobacco cessation outcomes. Challenges to providing effective services to address the multiple comorbidities found in this study include lack of research supporting specific best practices (e.g., much research on tobacco cessation excludes people with a psychiatric diagnosis), lack of knowledge among practitioners about how to approach smoking and other tobacco use, and high smoking rates among some groups of service providers themselves.

One way to address this needed culture shift is through the use of peer educators. Both smoking cessation (Ford, Clifford, Gussy, & Gardner, 2013) and treatment for substance use disorders have long traditions of using peer health educators, and this is mirrored in the use of peers in the field of mental health recovery (Swarbrick & Schmidt, 2010). Peer-delivered smoking cessation approaches show great promise (Ford et al., 2013; Williams et al., 2011). Peer enhancement of professionally led smoking cessation programs is also viable (Dickerson et al., 2011). There is a growing workforce of peer support specialists who draw from their own experiences to motivate others to address these issues (Swarbrick, Murphy, Zechner, Spagnolo, & Gill, 2011; Swarbrick, Gill, & Pratt, 2016). The National Academy for State Health Policy has identified a variety of effective ways for peers to support physical and mental health integration and recognizes that support for smoking cessation is a component goal of this integration (Purlington, 2016).

In addition to supporting the need for integrated substance and tobacco use treatment, other findings from this study can inform effective interventions. The robust inverse association between age and smoking suggests the need for approaches that appeal to young adult populations, such as Web-, social media–, and text message–based interventions (Brunette et al., 2013; Ramo, Thrul, Chavez, Delucchi, & Prochaska, 2015; Ybarra, Prescott, & Holtrop, 2014). Of interest, some of these have been designed to integrate smoking and alcohol treatment and thus can serve as platforms for including other substances of abuse (Haug et al., 2014). Further, our finding linking smoking with lower education levels offers further support for simple, widely used information transmission methods such as telephone quit lines (Lichtenstein, Zhu, & Tedeschi, 2010). It also supports tailoring of smoking cessation feedback, given evidence that people with lower levels of education find tailored health messages more interesting and personally relevant (Brug & Assema, 2000). Any intervention focused on people with limited education needs to consider issues of health literacy.

Limitations

Study limitations include the use of a volunteer sample with unknown selection biases, given that the clinical populations we studied were not necessarily representative of all U.S. public mental health service programs for people with serious mental illnesses. Our measures of risk behaviors were exclusively self-report and were not

validated by chart review or biomedical assessments. We also focused on smoking and excluded other forms of tobacco or nicotine use (e.g., e-cigarettes) and did not collect data on medications or counseling for either smoking cessation or substance abuse. Finally, we were not able to control for all possible confounding variables in our analysis, and the significant associations we identified cannot be construed as causal.

Conclusions

Our study findings support the need to develop integrated approaches to promoting smoking cessation and treating drug and alcohol abuse and dependence in diverse mental health service delivery settings. Our results also point to the potential usefulness of offering people with serious mental illnesses smoking cessation treatment approaches tailored to other important features of their lives, such as their parental status, residential setting, age, and education levels. Hopefully, our study's findings can be used to develop a new generation of effective interventions that address the needs of this vulnerable group of individuals and so enhance their potential for recovery.

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Disclosures

None of the UIC authors has any additional income to report.

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