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RESEARCH ARTICLE

Tobacco Screening and Counseling in the U.S.: Smokers With Mental Health and Substance Use Problems

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Introduction: Individuals with mental health and substance use problems have higher rates of smoking and tobacco-related morbidity and mortality than the general population. These increased rates can be explained, in part, by lower cessation rates compared with overall declines in tobacco use in recent years. The purpose of this study was to examine tobacco screening and cessation counseling in healthcare settings to compare rates for adults with mental health and substance use problems with those without such problems.

Methods: A nationally representative sample of adult smokers (N=42,534) from the 2013 to 2016 National Surveys on Drug Use and Health was analyzed using logistic regression to estimate ORs for screening and counseling, adjusting for demographic and socioeconomic characteristics, past-month smoking frequency, and past-year receipt of mental health and substance use treatment. Additionally, predicted probabilities of screening and counseling were calculated across groups to compare regression-adjusted rates of each service. Analyses were conducted in 2017.

Results: Compared with smokers without mental health or substance use problems, smokers with mental health and substance use problems and smokers with only mental health problems had higher odds of screening and counseling (all $p<0.001$); however, smokers with only substance use problems did not (screening $p=0.91$, counseling $p=0.45$).

Conclusions: Like smokers with mental health problems, smokers with only substance use problems are at increased risk of tobacco-related morbidity and mortality. Yet, unlike smokers with mental health problems, their rates of tobacco screening and cessation counseling by general medical providers do not reflect this elevated risk.

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INTRODUCTION

Individuals with mental health and substance use disorders have elevated rates of smoking compared with those without mental health or substance use disorders.[1,2] Current estimates show that fewer than 15% of adults in the general population are smokers,[3] but studies of individuals with mental health and substance use disorders reveal smoking rates of about 37% for bipolar disorder,[4] 40% for depression,[5] 45% for anxiety,[5] 50%–55% for substance use disorders,[5] and 62% for schizophrenia.[6] Although public health efforts to reduce the prevalence of smoking in the U.S. have achieved great success, the general population has achieved 2–3 percentage point larger reductions in smoking prevalence over time compared with reductions achieved by those with mental health and substance use disorders.[7,8] Recent evidence has shown encouraging

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declines in smoking over time among individuals with less severe mental health disorders, such as depression or anxiety.[5] However, similar declines in smoking have not been observed among individuals with substance use disorders.[5] Overall, lower quit rates combined with higher smoking rates has contributed to an increasing concentration of smoking-related morbidity and mortality among individuals with mental health and substance use disorders.[9]

One effective strategy to encourage smoking cessation is to screen for tobacco use and then advise smokers to quit,[10] but it is currently unclear whether smokers with and without mental health or substance use problems in the general population are equally likely to be screened and counseled by healthcare professionals. Evidence from clinical studies of individuals with mental health and substance use disorders is encouraging, showing similar counseling rates among those with more severe disorders and those without a disorder, and slightly higher counseling rates among those with less severe disorders.[11] Having a mental health or substance use problem may lead to greater contact with healthcare professionals and therefore more opportunities for screening and counseling. Yet, misconceptions about smokers with mental health and substance use problems may also lead to undertreatment (e.g., beliefs that smoking cessation is a low priority or interferes with treatment for other mental health and substance use problems).[12] Existing evidence for tobacco screening and counseling among subgroups with mental health or substance use problems focuses on clinical samples that are not representative of broader populations with mental health and substance use problems, including those who are undiagnosed or disconnected from care.[11]

The objective of this study is to assess rates of tobacco screening and cessation counseling across a nationally representative sample of adults with and without mental health and substance use problems. The study focuses on current smokers because of the clinical importance of tobacco screening and cessation counseling for this group.

METHODS

Data were drawn from the 2013 to 2016 National Surveys on Drug Use and Health (NSDUH), which are cross-sectional annual surveys of non-institutionalized individuals in the U.S.[13] The NSDUH samples individuals in all 50 states and the District of Columbia to obtain nationally representative estimates of drug use and mental health problems. The surveys collect data from >60,000 individuals each year using computer-assisted interview methods. Overall weighted response rates are a product of screening (77.9%−83.9%) and interview (68.4%−71.7%) response rates for each year and were 60.2% (2013); 58.3% (2014); 55.2% (2015); and 53.3% (2016). Detailed information regarding NSDUH methods can be found in the Methodological Resource Book for each survey year.[14−16]

Study Sample

The sample included current smokers ages ≥18 years, divided into four groups: individuals with (1) both mental health and substance use problems; (2) only mental health problems; (3) only substance use problems; and (4) no mental health or substance use problems.

Measures

Mental health problems were defined as any mental illness (AMI) in the past year. Past-year AMI was determined by a predictive model developed by the Substance Abuse and Mental Health Services Administration,[17] which is based on survey responses to validated scales measuring psychological distress (Kessler Psychological Distress Scale, 6 items)[18,19] and functional impairment (WHO−Disability Assessment Schedule).[20,21] Substance use problems were defined as past-year drug or alcohol abuse or dependence, which were measured by survey items based on the DSM-IV.[22] Individuals with mental health problems and no substance use problems were included in the group with only mental health problems, and individuals with substance use problems and no mental health problems were included in the group with only substance use problems. Smoking status was defined as past-month cigarette use. Past-month smoking frequency was defined using a survey item that asked respondents to quantify the number of days cigarettes were used in the past month (1−2 days, 3−5 days, 6−19 days, 20−29 days, 30 days).

Tobacco screening and counseling were defined using survey items that asked respondents whether a doctor or other healthcare professional screened them for smoking and advised them to quit in the past year. For tobacco screening, respondents were asked, *During the past 12 months, did any doctor or other health care professional ask, either in person or on a form, if you smoke cigarettes or use any other tobacco products?* For tobacco counseling, respondents were asked, *During the past 12 months, did any doctor or other health care professional advise you to quit smoking cigarettes or quit using any other tobacco products?* Individuals without past-year health care were classified as not receiving screening or counseling. As a sensitivity analysis, screening and counseling were examined among the subsample of individuals who received past-year health care.

Receipt of past-year mental health services was defined as any past-year inpatient or outpatient mental health treatment. Receipt of past-year substance use services was defined as any past-year alcohol or drug treatment.

Statistical Analysis

All analyses were conducted in 2017 using Stata statistical software, version 15, using the *svy* suite of commands to obtain nationally representative estimates of screening and counseling. Tobacco screening and counseling were evaluated using logistic regression adjusted for demographic and socioeconomic characteristics (sex, age, race/ethnicity, education, income, marital status, and insurance); past-month smoking frequency; and past-year receipt of mental health or substance use services. Predicted