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Older-adult marijuana users and ex-users: Comparisons of sociodemographic characteristics and mental and substance use disorders

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ABSTRACT

Background: The increasing numbers of older-adult marijuana users call for better understanding of their mental and substance use disorders (MSUDs).

Methods: Data came from the 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III; N = 14,715 respondents aged 50+). Multinomial logistic regression analysis was used to compare never users, past-year users, and ex-users on past-year and lifetime MSUDs. Binary logistic regression analysis was used to examine the association of marijuana use patterns in the past year and during the peak use period with lifetime MSUDs.

Results: Of the 50+ age group, 3.9% were past-year marijuana users and 21.7% were ex-users. Past-year users did not differ from ex-users with respect to past-year or lifetime mental disorders, but they had higher risks of past-year other drug use (RRR = 2.73, 95% CI = 1.63-4.55), alcohol use (RRR = 2.30, 95% CI = 1.78-2.98), and tobacco/nicotine use (RRR = 1.87, 95% CI = 1.50-2.34) disorders. Among past-year users, the number of joints smoked during the peak use period (OR = 1.14, 95% CI = 1.04-1.26) and past-year use frequency (OR = 2.20, 95% CI = 1.37-3.52) were significantly associated with greater odds of lifetime marijuana/other drug use disorder. Among ex-users, the number of joints smoked during the peak use period was significantly associated with any mental (OR = 1.05, 95% CI = 1.01-1.09) and marijuana and/or other drug use (OR = 1.13, 95% CI = 1.06-1.21) disorder.

Conclusions: Older-adult past-year marijuana users and ex-users had similarly high risks for past-year and lifetime mental disorders, but past-year users had a higher risk for substance use disorders. Health/mental health providers should be concerned about the increasing number of older-adult long-term marijuana users with MSUDs.

1. Introduction

Cannabis/marijuana is the most widely used illicit drug in all age groups in the United States, and epidemiologic studies show a significant increase in its prevalence over the past decade. Among adults (aged 18+), the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) shows that from 2001–2002 to 2012–2013, the past-year marijuana use rate more than doubled from 4.1% (SE = 0.15) to 9.5% (SE = 0.27) with increases across all demographic subgroups (Hasin et al., 2015). Especially notable were increases among those aged 45–64 from 1.6% (SE = 0.15) to 5.9% (SE = 0.28) and those aged 65+ from 0.0% (SE = 0.02) to 1.3% (SE = 0.22; Hasin et al., 2015). The 2008–2012 National Surveys on Drug Use and Health (NSDUH) showed that 3.9% of the 50+ age group (6.0% of the 50–64 age group and 0.9% of the 65+ age group) reported past-year marijuana use (Choi et al., 2015). From 2003 to 2013, the NSDUH also showed that past-month illicit drug use rose from 3.9% to 7.9% in the 50–54 age group, 2.0% to 5.7% in the 55–59 age group, and 1.1% to 3.9% in the 60–64 age group (Substance Abuse and Mental Health Services Administration, 2014).

Although marijuana is a complex substance with both potential benefits and risks for physical, mental, and cognitive health, more risks than benefits of recreational marijuana use have been reported to date, and evidence of the effects of medical marijuana use among older adults is lacking (Brady and Li, 2014; Hall and Degenhardt, 2014; Lev-Ran et al., 2014; Lutchmansingh et al., 2014; Mechoulam and Parker, 2013; Shi, 2014; Thomas et al., 2014; van den Elsen et al., 2014; Volkow et al., 2014, 2016). Marijuana may be used for self-medicating health and mental health problems

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(Alford et al., 2016; Osborn et al., 2015); however, a study based on two waves of NESARC data found that baseline marijuana use disorder and alcohol use disorder were strongly positively associated with incident major depressive episode, while baseline major depression was associated with comparatively fewer cases of incident marijuana use disorder and alcohol use disorder (Pacek et al., 2013). Another NESARC-based study also found that marijuana use in wave 1 (2001–2002) was significantly associated with substance (alcohol, marijuana, other drug, and tobacco/nicotine) use disorders in wave 2 (2004–2005), although no relationship was found between marijuana use and any mood or anxiety disorder (Blanco et al., 2016).

Marijuana use's increasing prevalence among the 50+ age group is attributed to aging baby boomers given this generation's greater exposure to marijuana and more liberal attitudes toward its use than previous generations (Black and Joseph, 2014). A 2004 AARP survey of U.S. adults aged 45+ found that 72% agreed that adults should be allowed to legally use marijuana for medical purposes if a physician recommended it; 59% believed marijuana has medical benefits; and 23% thought marijuana should be legalized (Kalata, 2004). Boomers were significantly more likely to favor marijuana legalization than previous age cohorts (Nielsen, 2010). Since 23 states and the District of Columbia have now legalized marijuana for at least some purposes, increased availability and easier access to marijuana may also be contributing to increased use rates among all age groups (Monte et al., 2015).

Increases in older adults' marijuana use and permissive attitudes have received mainstream media attention (Huth, 2016; Krueger, 2013; Sedensky, 2010), but compared to adolescents and young adults, systematic research on older adults' marijuana use has been rare. A few NSDUH-based studies of individuals aged 50+ have found that marijuana users had more psychological distress and a higher rate of major depressive episode than those who did not use marijuana or other illicit drugs (DiNitto and Choi, 2011; Choi et al., 2016). Most marijuana users in this age group reported using for recreational purposes (pleasure/relaxation) and perceived no or only slight risks from smoking marijuana frequently (Black and Joseph, 2014; Choi et al., 2016). However, in all these prior studies, nonusers included both ex-users and never users. As the boomers continue to swell the ranks of older adults, comparing continued users and ex-users on sociodemographic, health, substance use, and mental health characteristics may provide valuable information about those who continue to use marijuana.

In light of older adults' rising marijuana use rates, this study, using 2012–2013 NESARC (NESARC-III) data and focusing on individuals aged 50+, extends previous research by (1) examining whether never users (those who have never used marijuana in their lifetime), past-year users (those who used marijuana only during the past year or both in the past year and prior to the past year), and ex-users (those who used marijuana prior to but not in the past year) differ in sociodemographic characteristics and past-year and lifetime mental and substance use disorders (MSUDs); and (2) comparing past-year users and ex-users by initiation age, duration of use, and amount used during peak use periods and identifying the risk factors for lifetime MSUDs in these two groups. Controlling for sociodemographic factors, we hypothesized that: (H1) compared to ex-users, never users will have a lower likelihood and past-year users will have a higher likelihood of past-year and lifetime MSUDs; (H2a) among past-year users, those who initiated use at a younger age, used greater amounts during the peak use period, and used more often in the past-year will be more likely to have lifetime MSUDs; and (H2b) among ex-users, those who initiated use at a younger age, used greater amounts during the peak use period, and quit at an older age will be more likely to have lifetime MSUDs.

2. Material and methods

2.1. Data and sample

Data came from the 2012–2013 NESARC-III, a national probability sample survey of the U.S. civilian noninstitutionalized population aged 18+ years (N = 36,309), sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Using computer-assisted personal interviewing, data were collected on alcohol and other substance use, substance use disorders, and related physical and mental disabilities. The semi-structured diagnostic interview used to collect information was the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-5), which provides rich data for examining the present study's research questions. In NESARC-III's multistage probability sampling, primary sampling units were individual counties or, in some small rural counties, combined contiguous counties; secondary sampling units were groups of Census-defined blocks; tertiary sampling units were households within sampled secondary sampling units, from which eligible adult respondents were randomly selected, with Hispanic, Black, and Asian individuals oversampled (Grant et al., 2015). We excluded 66 respondents (23 of them aged 50+) from the 36,309 respondents aged 18+ due to missing marijuana use data, leaving a sample of 14,715 individuals aged 50+, which composed our study's focal group.

2.2. Measures

2.2.1. Sociodemographic characteristics. were age, gender, race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, non-Hispanic Asian/Pacific Islander [Asian Americans hereafter], and American Indian/Alaska Native [American Indians hereafter]), marital status, education level, employment status, number of diagnosed chronic medical conditions (arthritis, cancer, diabetes, hypertension, heart disease, stroke, liver disease, and lung disease), location of residence (urban versus rural and region of the U.S.), and family (biological parent/s' and any sibling's) drug use problem.

2.2.2. Marijuana and other substance use. The AUDADIS-5 was used to measure the use/nonuse of alcohol, tobacco, marijuana, and other drugs (sedatives/tranquilizers, painkillers, cocaine/crack, stimulants, club drugs, hallucinogens/psychedelics, inhalants/solvents, heroin, and other drugs/medicines, including antidepressants, antipsychotic drugs, steroids, and any other medicines or drugs) in the preceding 12 months, prior to the past year, and during lifetime. Past-year marijuana users and ex-users were asked about their age at first use, age when they used the most (peak use period), and the number of joints usually smoked in a day during the peak use period. Past-year users were also asked about the frequency of their use and the number of joints they usually smoked in a day in the last 12 months. Ex-users were asked about the number of years since their last use (from which we calculated their quit age).

2.2.3. MSUDs. The AUDADIS-5 was used to identify past-year and lifetime DSM-5 diagnoses of MSUDs. In this study, we included the following mental disorders: major depressive disorder (MDD); any anxiety disorder (specific phobia, social phobia, panic disorder, agoraphobia, or generalized anxiety disorder); post-traumatic stress disorder (PTSD); bipolar 1 disorder and/or manic or hypomanic episode; and borderline, schizotypal, or antisocial personality disorder (all personality disorder diagnoses in DSM-5 are lifetime diagnoses); and one or more lifetime suicide attempts. For substance use disorders, in addition to marijuana use disorder,