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Research Paper

Is recovery from cannabis use problems different from alcohol and other drugs? Results from a national probability-based sample of the United States adult population

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ABSTRACT

Background: The policy landscape regarding the legal status of cannabis (CAN) in the US and globally is changing rapidly. Research on CAN has lagged behind in many areas, none more so than in understanding how individuals suffering from the broad range of cannabis-related problems resolve those problems, and how their characteristics and problem resolution pathways are similar to or different from alcohol [ALC] or other drugs [OTH]. Greater knowledge could inform national policy debates as well as the nature and scope of any additional needed services as CAN population exposure increases.
Method: National, probability-based, cross-sectional sample of the US non-institutionalized adult population was conducted July–August 2016. Sample consisted of those who responded "yes" to the screening question, "Did you used to have a problem with alcohol or drugs but no longer do?" (63.4% response rate from 39,809 screened adults). Final weighted sample ($N = 2002$) was mostly male (60.0% [1.53%]), aged 25–49 (45.2% [1.63%]), non-Hispanic White (61.4% [1.64%]), employed (47.7% [1.61%]). Analyses compared CAN to ALC and OTH on demographic, clinical, treatment and recovery support services utilization, and quality of life (QOL) indices.
Results: 9.1% of the US adult population reported resolving a significant substance problem, and of these, 10.97% were CAN. Compared to ALC (M = 49.79) or OTH (M = 43.80), CAN were significantly younger (M = 39.41, $p < 0.01$), had the earliest onset of regular use (CAN M = 16.89, ALC M = 19.02, OTH M = 23.29, $p < 0.01$), and resolved their problem significantly earlier (CAN M = 28.87, ALC M = 37.86, OTH M = 33.06, $p < 0.01$). Compared to both ALC and OTH, CAN were significantly less likely to report use of inpatient treatment and used substantially less outpatient treatment, overall ($p < 0.01$), although CAN resolving problems more recently were more likely to have used outpatient treatment ($p < 0.01$). Lifetime attendance at mutual-help meetings (e.g., AA) was similar, but CAN (M = 1.67) had substantially lower recent attendance compared to ALC (M = 7.70) and OTH (M = 7.65). QOL indices were similar across groups.
Conclusion: Approximately 2.4 million Americans have resolved a significant cannabis problem. Compared to ALC and OTH, the pattern of findings for CAN suggest similarities but also some notable differences in characteristics and problem resolution pathways particularly regarding earlier problem offset and less use of formal and informal services. Within a shifting policy landscape, research is needed to understand how increases in population exposure and potency may affect the nature and magnitude of differences observed in this preliminary study.

Introduction

The recent changes in the policy landscape regarding cannabis in the US and other countries (Ammerman, Ryan, & Adelman, 2015; Bestrashniy & Winters, 2015; Budney & Borodovsky, 2017) introduces new challenges for public health, health care policy, and international drug treaties and conventions. Beginning in the 1970s in the US, the declaration of the war on drugs by the Nixon

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administration established a broad and largely punitive rhetoric condemning all forms of psychoactive drug use (other than alcohol and nicotine which were already legally available and commercialized). This categorical policy view pertaining to illicit psychoactive substances lasted many decades until special interest groups and public health and criminal justice reform advocates began to suggest that not all illicit psychoactive substances carry the same risk (Weiss, Howlett, & Baler, 2017).

This has been particularly true in the case of cannabis (marijuana). While cannabis use still causes life-impacting problems in 6 million US adults, corresponding with 30% of those who use it (Hasin et al., 2015, 2016), research has shown its clinical, public health, and public safety profiles are more benign compared to other drugs including alcohol (Lachenmeier & Rehm, 2015; Nutt, King, Saulsbury, & Blakemore, 2007). Together these trends have led to a re-examination of the long-standing uniform prohibition policy pertaining to all psychoactive drugs. Specifically, more nuanced discussions have considered the depth and range of associated health and safety harms resulting from differing policy positions ranging from prohibition to the decriminalization, legalization, and commercialization of different psychoactive substances. This new openness and debate has ultimately promoted policies and legislation relating to decriminalization and medicalization of cannabis use in most states, and legalization for purely recreational use in an increasing number of states (Carliner, Brown, Sarvet, & Hasin, 2017). Interest in the potential therapeutic properties of cannabis in treating pain has heightened also in the midst of the current US opioid overdose crisis. Emerging research, for example, has observed that states with medical cannabis laws have lower levels of opioid overdose deaths (Bachhuber et al, 2014), that appears to imply a causal connection between greater cannabis use and less opioid use. More recent prospective epidemiological data, however, suggest cannabis use leads to increases, and not decreases, in opioid use (Olfson, Wall, Liu, & Blanco, 2017).

Compared to other drugs, such as alcohol or opioids, much less is known about the clinical and public health consequences of cannabis at population levels. Also, while it is known that about 3 in 10 individuals who are using cannabis in the past year also meet criteria for a cannabis use disorder (e.g., continuing to use despite physical and psychological consequences, impaired control over use, tolerance, withdrawal; Hasin et al., 2015), very little is known regarding whether, and how, people who suffer from these disorders or the broader array of cannabis-related problems, resolve those problems. Also generally not known is whether such problem resolution prevalence and processes are similar to or different from those involved in resolving problems related to other substances.

When considering substance-related harms and problem resolution, it is necessary to go beyond purely clinical diagnostic groups (e.g., cannabis use disorder) to examining the broader array of affected individuals because many people who misuse substances actually do not meet diagnostic criteria for an alcohol or other drug (AOD) disorder but can still suffer from significant problems and contribute substantially to the economic and public health burden of disease. For example, more than 66 million Americans report hazardous/harmful alcohol consumption (i.e., consuming 5+ standard drinks within two hours; Surgeon General's Report, 2016) at least once during the past month, increasing risk of accidents, social problems, violence, and alcohol-poisonings. While only a minority of these individuals meet diagnostic threshold for alcohol use disorder, harmful consumption accounts for three-quarters of the yearly economic burden attributable to alcohol (Centers for Disease Control and Prevention [CDC], 2015). Also, in 2015, almost 13 million individuals reported past year misuse of a pain reliever—increasing risk for a variety of consequences including overdose—but only 2.9 million met diagnostic criteria for a prescription medication disorder from the perspective of the diagnostic and statistical manual of mental disorders, 5th edition (DSM-5; Surgeon General's Report, 2016). Given the public health and safety burden conferred by this broad population of individuals engaging in various degrees of problem use, understanding more about them and how they resolve such problems is important, regardless of whether or not they meet criteria for an AOD disorder, per se. Furthermore, shifts in national emphasis in public health and health care policy in recent decades emphasize the need to examine an array of substance-related impairment from individuals' own perspective. There has been a push, for example, to move from "provider-centered" to "patient-centered" care, and more recently to the more holistic, "person-centered" care (National Academies of Sciences, Engineering, and Medicine, 2017). This shift has been particularly true in addiction and mental health, as these problems are typified by heterogeneous and dynamic phenotypic expression that can be resolved through a variety of different bio-psycho-social therapeutic inputs (Papadimitriou, 2017). For the broad array of self-defined alcohol and other drug (AOD) problems, these salutary inputs have been shown to come successfully from the individual sufferers themselves (i.e., unassisted or "natural recovery") as well as from more formal treatment (i.e., "assisted recovery"), including medications Very little is known, however, about the characteristics of this large heterogeneous population of individuals with self-identified AOD problems (i.e., beyond a clinical diagnosis derived from epidemiological studies that use structured diagnostic interviews), and even less is known about how these individuals resolve and overcome this broad array of AOD problems.

With the likely expansion of cannabis legalization across states, subsequent increased population exposure to cannabis, and related increases in the public health burden attributable to cannabis problems (Cerda, Wall, Keyes, Galea, & Hasin, 2012; Hasin et al., 2015), policy makers will need data on how individuals suffering from a broad array of cannabis-related problems resolve those problems, so that they can make evidence-based decisions when levying cannabis taxes and fiscal appropriation for treatment and other recovery support services. It is conceivable, for example, that because cannabis use does not produce life-threatening withdrawal syndromes (Budney & Hughes, 2006), or is unlikely to produce dramatic behavioral impairments with intoxication that can often result in accidents (Andreuccetti et al., 2017), rates of formal medical detoxification and addiction treatment services utilization among primary cannabis users may be lower compared to individuals with other commonly used primary substances, such as alcohol, opioids, and stimulants. A further area of interest is how individuals who have suffered from problems associated with different drug classes (e.g., cannabis, alcohol, other drugs) function after they have resolved their specific drug-related problems. For example, it is conceivable that substances that may not alter and impact individual users' lives so dramatically, such as cannabis, may be associated with less psychological distress, and greater quality of life and happiness once the substance-related problems have abated.

To this end, using a national probability based population sample of the non-institutionalized US population, this study: 1. Provides valid estimates of the proportion of US adults who identify as having successfully resolved a significant cannabis problem; 2. Describes and contrasts the demographic, clinical, and treatment and other recovery support service use histories of those resolving a primary cannabis use problem, with those resolving a primary alcohol or other drug use problem; and, 3. Compares those resolving a primary cannabis use problem with those resolving a primary alcohol or other drug use problem on indices of psychological distress, quality of life, happiness, self-esteem, and recovery capital.