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The occurrence of cannabis use disorders and other cannabis-related problems among first-year college students

Kimberly M. Caldeira [a], Amelia M. Arria [a,*], Kevin E. O'Grady [b], Kathryn B. Vincent [a], Eric D. Wish [a]

[a] *University of Maryland College Park, Center for Substance Abuse Research (CESAR), 4321 Hartwick Road, Suite 501, College Park, MD 20740, USA*
[b] *University of Maryland College Park, Department of Psychology, 1147 Biology/Psychology Building, College Park, MD 20742, USA*

Abstract

This study reports the prevalence of cannabis use disorders (CUD) and other cannabis-related problems in a large cohort ($n=1253$) of first-year college students, 17 to 20 years old, at one large public university in the mid-Atlantic region of the U.S. Interviewers assessed past-year cannabis use, other drug use, and cannabis-related problems (including DSM-IV criteria for CUD). The prevalence of CUD was $9.4\%_{wt}$ among all first-year students and 24.6% among past-year cannabis users ($n=739$). Of those endorsing any CUD criteria, 33.8% could be classified as diagnostic orphans. Among 474 "at-risk" cannabis users (≥ 5 times in the past year), concentration problems (40.1%), driving while high (18.6%) and missing class (13.9%) were among the most prevalent cannabis-related problems, even among those who endorsed no CUD criteria. Placing oneself at risk for physical injury was also commonly reported (24.3%). A significant proportion of cannabis-using college students meet diagnostic criteria for disorder. Even in the absence of disorder, users appear to be at risk for potentially serious cannabis-related problems. Implications for prevention, service delivery, and future research are discussed.

Keywords: Cannabis; Marijuana; Drug dependency; Drug abuse; College students; Research diagnostic criteria

Abbreviations: CUD, cannabis use disorders.

* Corresponding author. Tel.: +1 301 405 9795; fax: +1 301 403 8342.
E-mail addresses: kcaldeira@cesar.umd.edu (K.M. Caldeira), aarria@cesar.umd.edu (A.M. Arria), ogrady@psyc.umd.edu (K.E. O'Grady), kvincent@cesar.umd.edu (K.B. Vincent), ewish@cesar.umd.edu (E.D. Wish).

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1. Introduction

According to the most recent data from *Monitoring the Future*, in 2006 close to one in three (30.2%) college students had used cannabis in the past year (Johnston, O'Malley, Bachman, & Schulenberg, 2007). These prevalence estimates are similar to findings from the 2001 *Harvard College Alcohol Study* (Mohler-Kuo, Lee, & Wechsler, 2003), which reported that 30% of college students used cannabis in the past year. Moreover, as with other forms of illicit drug use, young adults consistently have a higher prevalence of cannabis use than other age groups (Substance Abuse and Mental Health Services Administration [SAMHSA], 2006), and college students appear to be no different from their non-college-attending peers in this respect (Johnston, O'Malley, Bachman, & Schulenberg, 2006).

Considering the widespread use of cannabis among college students, it is surprising that epidemiologic data on cannabis use disorders in this subpopulation are scarce. Cannabis use disorders (CUD) encompass the two distinct diagnoses of abuse and dependence, defined in the DSM-IV by the same criteria as for other substance use disorders (American Psychiatric Association [APA], 1994). As compared to other age groups, young adults are known to have the highest past-year prevalence of CUD (5.9%), owing in part to their correspondingly high prevalence of cannabis use (SAMHSA, 2006). To our knowledge, however, no studies have measured CUD prevalence among young adults attending college. Anthony, Warner and Kessner (1994) analyzed data from the *National Comorbidity Survey* and observed a substantially higher lifetime prevalence of cannabis dependence among adolescent and young-adult cannabis users as compared to older users. More recent results from another national epidemiologic study indicate that approximately one in three past-year cannabis users in the general population meets criteria for CUD (Compton, Grant, Colliver, Glantz, & Stinson, 2004), however estimates for college-attending young adults were not reported. As yet, it is unknown whether cannabis-using college students experience a risk for CUD that is similar to other young adults.

Aside from the risk for CUD, an extensive body of literature has described other adverse effects of cannabis use, and while most long-term effects appear to be limited to heavy or chronic use, important short-term effects occur during the acute phase of intoxication, regardless of the frequency of use (see reviews by Budney, Moore, & Vandrey, 2004; Joy, Watson, & Benson, 1999; Kalant, 2004). Neurocognitive impairments—such as problems with psychomotor function, attention, memory, and learning—occur during intoxication, some of which persist after a brief period of abstinence. The possible functional consequences of these effects are an important area of concern, as they have the potential to affect the large number of individuals who use cannabis moderately or occasionally. However, most prior evidence of the adverse effects of cannabis use stems from clinical and experimental studies, whereas epidemiologic data about the proportion of cannabis users who experience specific effects has been limited.

Several prior studies of college students have investigated cannabis-related problems and warrant mention here. In one study, the number of cannabis-related problems significantly increased during the transition from high school to college (White, Labouvie, & Papadaratsakis, 2005), but data on discrete cannabis-related problems were not presented. In another study of alcohol-using college students, use of cannabis significantly increased the risk for experiencing any substance-related problems, even controlling for heavy drinking and demographics (Shillington & Clapp, 2001). Other studies of college students have linked cannabis use to specific health risk behaviors, such as smoking tobacco (Hammersley & Leon, 2006; Tullis, Dupont, Frost-Pineda, & Gold, 2003) and unsafe driving practices (Everett, Lowry, Cohen, & Dellinger, 1999). These studies have had limited generalizability, and none were designed to estimate prevalence or assess CUD. Nevertheless, they demonstrate the public health