

The Need to Focus Research on Adolescent Cannabis Use Interventions

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Nearly one half of all 12th-graders in the United States have used cannabis in their lifetime, with more than one third during the past year, and almost one quarter in the past month.¹ Among individuals who have ever used cannabis, the lifetime risk of developing cannabis use disorder (CUD) is 8% to 12%.² With no effective pharmacologic treatment, interventions for adolescents and young adults with CUD rely on psychological modalities. Brief interventions (BIs), defined as “practices that aim to investigate a potential problem and motivate an individual to begin to do something about his substance abuse, either by natural, client-directed means or by seeking additional substance abuse treatment,”³ including techniques such as motivational interviewing (MI), appear well suited for the pediatrician’s office, and is recommended by the American Academy of Pediatrics.⁴

In this issue of *Pediatrics*, Steele et al⁵ synthesized 22 trials of BI in adolescents (12–20 years old) with problematic substance use and estimated effects on alcohol use, cannabis use, and substance-related problems. They found that although MI reduced heavy alcohol use, alcohol use-days, and substance use-related problems, MI did not reduce cannabis use-days. The alcohol findings are consistent with those of numerous studies, reviews, and meta-analyses that have shown benefit to 11- to 18-year-old alcohol users who receive BI.⁶ In contrast, the cannabis findings are within a range of disparate results from previous studies and highlight 2

important issues regarding the state of research on the role of BIs for adolescent substance users: (1) CUD research among adolescents remains in its infancy with heterogeneity and lack of specificity among intervention trials for adolescent cannabis use, and (2) not all BIs are the same.

During the past decade, the United States increased legalization of cannabis on the state level in the context of shifting public sentiment regarding cannabis use. Various organizations called for research agendas in cannabis, cannabinoids, and their use in adolescents.^{7,8} Although descriptive study of adolescent cannabis use is well established, interventions for adolescent cannabis users remains a growing area of research. As a result, few high-quality cannabis-specific intervention studies have been performed, which makes it challenging to draw general conclusions from their results.^{9,10} Steele et al⁵ point out lack of specificity of cannabis use in studies, because cannabis is conflated with “illicit drug use” or similar terms encompassing marijuana with other drugs.^{11–13} Moreover, heterogeneity in setting (primary care, emergency department, school, foster care, homeless, incarcerated), intervention (MI, motivation enhancement therapy, psychoeducation), delivery method (Web, computer, phone, in person, number of sessions) and comparison group (brief advice, information sessions, pamphlets, educational materials, waitlist), all limit the utility of meta-analysis and review to

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generalize the role BI may play in treating cannabis users. Further specific research is needed regarding BI and adolescent cannabis use.

Psychosocial interventions are effective for adult cannabis users in reducing frequency of cannabis use, quantity used per occasion, and severity of dependence.^{14,15} In adolescents, effectiveness of BI for cannabis use varies. For example, researchers of one randomized trial found that a 2-session BI, when compared with a 3-month delay in treatment, significantly reduced the frequency and quantity of cannabis use and the number of cannabis-dependence symptoms.¹⁶ Another review and meta-analysis indicated that BI targeting non-treatment-seeking adolescents results in significant reductions in symptoms of CUD and an increased likelihood of cannabis abstinence but did not reduce cannabis use compared with passive control.¹⁷ Yet another review noted that numerous individual studies, in a variety of settings, such as schools, pediatric emergency departments, and universities, have found that BIs are effective and feasible when applied by trained counselors to an adolescent and young adult population.¹⁸ This further underscores the need for more uniform and targeted adolescent cannabis research and reminds us that not all BIs are the same.

Drug and alcohol treatment outcomes vary according to which practitioners deliver counseling interventions,¹⁹ what is included in the intervention,²⁰ and behavior within sessions.²¹ Fidelity to MI spirit (collaboration, compassion, evocation, acceptance) and the proportion of complex reflections are independently predictive of cessation outcome for adolescent cannabis users.^{22,23} However, fidelity to technique measurement is often absent from BI studies. Similarly, as legalization of recreational and “medical” marijuana

increases and perception of harm decreases,^{24,25} further research must incorporate individual factors because the adolescent cannabis user may face unique challenges in motivation for change compared with users of alcohol and other substances.

BI remains a promising option for pediatricians who treat adolescent substance users but urgently requires further targeted research. Studies to date are too heterogeneous and nonspecific to cannabis use to reliably draw generalizable conclusions. Clarification of correct BI technique, in appropriate settings, for targeted populations, is necessary to determine best practice for adolescent cannabis use harm reduction.

ABBREVIATIONS

BI: brief intervention
CUD: cannabis use disorder
MI: motivational interviewing

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