



Published in final edited form as:

J Adolesc Health. 2016 October ; 59(4): 450–456. doi:10.1016/j.jadohealth.2016.07.004.

Marijuana Legalization and Parents' Attitudes, Use, and Parenting in Washington State

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Abstract

Purpose—The recent legalization of non-medical marijuana use in several US states has unknown implications for those who are actively parenting. This study examined parents' reactions to marijuana legalization and changes in attitudes and behaviors over time.

Methods—Data were from a gender-balanced, ethnically diverse sample of 395 parents in Washington State who were participating in the longitudinal Seattle Social Development Project. Participants were interviewed 15 times between 1985 (age 10) and 2014 (age 39). Adult non-medical marijuana use was legalized in Washington in 2012 and retail outlets opened in 2014.

Results—Results showed (a) one third of parents incorrectly believed the legal age of non-medical marijuana use to be 18; (b) significant increase in approval of adult marijuana use and decrease in perceived harm of regular use; (c) wide opposition to teen use and use around one's children; and (d) substantial increases in frequency of use and marijuana use disorder among parents who used.

Conclusions—Despite increased acceptance and frequency of adult use, parents remain widely opposed to teen use but need facts and strategies for talking with their children about marijuana.

Keywords

marijuana; legalization; parenting; adolescents; Washington State

Recent years have seen unprecedented policy change around the legal standing of non-medical marijuana. One of the first major shifts occurred in Washington State when, in December 2012, the possession and use of non-medical marijuana was made legal for adults

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An earlier version of this paper was presented at the annual meeting of the Society for Prevention Research held in Washington, DC in May 2015.

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over age 21. Possible social and behavioral changes associated with this policy shift are important to understand but not easy to predict. Changes among parents are particularly important to document given their role in providing family guidelines and as models for their children's behavior. But how well do Washington parents understand the new law? To what extent have parents' attitudes changed toward approval of marijuana use and its perceived harm? Has parents' use of marijuana changed? And what are parents communicating to their children about marijuana given the change in law? Timely examination of available data addressing these questions is essential to inform the conversation about marijuana nationally as more states consider legal changes similar to those in Washington.

A study by Mason et al. [1] examining parent and adolescent reactions to marijuana legalization provided a first look at some of these questions using one wave of data from 115 low-income families from Tacoma, Washington, surveyed in the summer of 2013. In the present study, we extend and complement Mason et al.'s findings in a longitudinal sample of parents living in Washington State drawn from the Seattle Social Development Project (SSDP). In addition to examining reactions to the changing legal status of non-medical marijuana, this study assessed beliefs around teen use, marijuana-related parenting practices, and changes in attitudes and behaviors over time.

Parents' Understanding of the New Law

Given the newness of a legal marijuana market from production to adult use in Washington State, there is much potential for misunderstanding. Although non-medical use of marijuana by adults is now legal, many restrictions remain. For example, homegrown marijuana, consumption of marijuana in view of the general public, and possession or use by anyone under age 21 remain illegal [2]. Mason et al. [1] found substantial uncertainty about these aspects of the new law (e.g., only 57% selected the correct legal age limit). We will examine how well these legal parameters for personal use are understood by SSDP parents who were interviewed approximately 6 to 18 months after Mason et al.'s sample.

Parents' Approval and Perceived Harm of Adult and Adolescent Use

Marijuana norms likely to be associated with changes in legal status include approval of adult use, beliefs about the potential harmfulness of use, attitudes toward parental use around children, and approval of teen use. Some research indicates that those living in states with legalized use of medical marijuana have norms more supportive of use than those in states without such laws [3–5]. Mason et al. [1] showed that parents *perceived* that legalization had had little impact on their marijuana-related attitudes and behavior, but prospective change was not assessed. SSDP assessed approval of marijuana use and beliefs about harm from childhood to age 39, including a survey wave in 2014 subsequent to legalization. These assessments enable examination of possible longitudinal changes associated with the new law.

Studies show a strong link between social norms and substance use in general [6, 7]. However, there is little research from which to make confident predictions about the

influence of changing norms and marijuana legalization on those who are actively parenting. Notably, parental substance use is strongly associated with use among their children [8–10], so to the extent marijuana legalization increases use among parents then their children would be at increased risk for use. One study [11], based in part on SSDP data, confirmed that parents' marijuana-specific norms and use were associated with child substance use. Direct child exposure is a major mechanism by which risk is exacerbated [12]. Thus it is especially important to consider the role of legalization in how parents approach their own marijuana-using behavior in the presence of their children. Is legalization associated with greater likelihood that parents would expose their children to their own marijuana use (similar to other legal substances such as alcohol)? The present study will examine the approval and perceived harmfulness of exposing children to parental marijuana use, as well as parents' attitudes toward teen use.

Parents' Marijuana Use

Some have argued that marijuana legalization will increase use [13–15], yet there are data to suggest that changes may be small [4, 16–19]. Studies from Australia and the Netherlands suggest little link between the legal status of marijuana and the prevalence of use, though there was some increase in frequency of use among heavy users as well as an association between ease of access to legal marijuana outlets and increased use [15, 18, 19]. Some US studies show a higher prevalence of use in states with legalized medical use [4, 16–20], though it is possible that higher rates of use contributed to medical legalization rather than the reverse [4, 5]. Other studies report no evidence of effects of medical marijuana laws on use, or effects contingent on other factors [21–23]. Most parents in the Mason et al. [1] study reported that neither they nor their children would be more likely to use marijuana as a result of legalization. These studies underscore the difficulty in predicting how the legalization of non-medical marijuana might be associated with changes in use. Using longitudinal data from SSDP, we will examine developmental changes in marijuana use among parents in Washington State through the time of legalization when they were in their late 30s.

Parents' Marijuana-related Communication and Behavior With their Children

A number of studies link parenting practices, including the communication of clear rules and guidelines, to youth substance use [9, 24, 25]. Parents involving their children in their own substance use (e.g., getting a beer or cigarettes for them) is also associated with youth substance use [26, 27]. Most parents (70%) in the Mason et al. [1] study reported having discussions about the marijuana law with their children, many of which focused on marijuana-related household rules. We are aware of no other studies of the impact of changes in marijuana laws on parenting practices. Yet, marijuana-specific parenting practices may change for a number of reasons. For example, some parents may feel less need to communicate clear rules about marijuana use because it is a legal adult drug. Other parents may feel greater urgency to set rules with their children if they suspect that adults in other households where their children visit may use marijuana openly. We will examine marijuana-specific parenting practices following legalization in the present study.

METHODS

Sample

The Seattle Social Development Project is a longitudinal study examining a broad range of developmental factors and substance use and health outcomes. The study population in 1985 included all fifth-grade students in 18 Seattle elementary schools that overrepresented high-crime neighborhoods ($N = 1053$). From this population, 808 students (77%) consented to participate in the longitudinal study and constituted the SSDP sample. Fifteen waves of data have been collected from age 10, in 1985, to age 39, in 2014. Surveys were administered annually through age 16, then every 2 to 4 years thereafter. Retention averaged 90% of the still-living sample across waves. Retention at age 39 was 88%; 37 participants were deceased. The study obtained active consent and was approved by the Human Subjects Review Committee at the University of Washington.

Analyses reported here focused on 395 participants who lived in Washington State at the time of the 2014 survey and were parents who had face-to-face contact with their child (age 19 or younger) at least once a month. These parents were 56% female, 45% European American, 27% African American, 22% Asian American, and 5% Native American. As children, 52% of these participants were eligible for the federal school lunch/breakfast program at some point in the fifth to seventh grades, based on low-income status. Median household income at age 39 was \$67,500; 17% reported annual household income below \$24,000 (the approximate US Census poverty threshold for a 4-person household in 2014). At age 39, most parents were married (60%), fully employed (55%) or full-time homemaker (15%), and had completed at least some college (57%). These participants actively parented 2.74 ($SD = 1.57$) children on average, with an average child age of 9.82 ($SD = 4.89$) years.

Measures and Analyses

Items assessing *parents' understanding of the law* at age 39 asked about the legality of home growing and public use (True/False), and the minimum legal age of use (multiple choice). Items assessing *parents' approval and perceived harm of adult and adolescent use* (e.g., "it is okay for someone your age to use marijuana," "it hurts people if they use marijuana regularly") were administered from age 10 on, using a Likert-type 4-point response format of YES!-yes-no-NO! *Parents' marijuana use* was assessed beginning when they were age 10. Past-year marijuana disorder corresponding to the DSM-IV [28] was assessed from ages 27 to 39 using the Diagnostic Interview Schedule [29]. (The age 35 assessment used a shortened survey that included marijuana use disorder but did not include marijuana attitudes or monthly use.) Items at age 39 assessing *parents' marijuana-related communication and behavior with their children* used various close-ended response formats ranging from more lenient to more strict communication, or assessing the frequency of a child's marijuana-related exposure in the past year. With the exception of disorder criteria, measures were single-item.

Part of the sample was exposed to a multicomponent preventive intervention in the elementary grades, consisting of teacher training, parenting classes, and social competence instruction for children [30]. Analyses shown here were based on the full sample because,

among 43 adult outcomes examined, only one significant difference was found between the control group and the full intervention group (the group most likely to show intervention effects): control group participants were somewhat more likely to have ever tried marijuana. This one difference (representing 2.33% of the 43 comparisons) was less than what would be expected by chance (i.e., less than 5%).

RESULTS

Parents' Understanding of the New Law

Parents indicated substantial uncertainty about the details of Washington State's new marijuana law. When asked if homegrown marijuana for recreational use is now legal, half of parents (50%) incorrectly believed that it is. Over one quarter of parents (27%) agreed with the incorrect statement that the new law allows public use of marijuana as long as it is outdoors. Perhaps of most importance from a parenting perspective, nearly one third of parents (32%) believed the minimum legal age of recreational marijuana use is 18 years, whereas the new law specifies 21.

Parents' Approval and Perceived Harm of Adult and Adolescent Use

As shown in Figure 1, approval of marijuana use in adolescence gradually increased from 1% at age 13 to 25% at age 18. In adulthood, approval continued to increase to 43% at age 27, declined slightly at ages 30 and 33, but then sharply increased to 52% at age 39, coinciding with retail marijuana legalization. This was the first time in the study that marijuana use was approved by a majority.

The decline in perceived harm of regular marijuana use was nearly a mirror image of the increase in approval. During their late child and adolescent years, between 81% and 98% reported that "it hurts people if they use marijuana regularly" but only 76% shared this view by age 27. Perceived harm increased again over the next 2 data waves, but then dropped to only 65% at age 39, the lowest prevalence of perceived harm recorded in the study.

The relatively high level of approval of adult marijuana use did not extend to use around children, or to teens using marijuana. As shown in Figure 2, 89% said it was not okay to be under the influence of marijuana when a parent is actively caring for his or her child. Most parents (61%) were strongly opposed to parenting under the influence of marijuana, answering "NO!" to this question. There was similar widespread opposition to parents using marijuana where their children can see them or know what they are doing, and to teenagers using marijuana; both were opposed by 93% of parents.

Use of marijuana around children was also seen as more harmful than parents using marijuana privately or around other adults even if that use was regular. Approximately four fifths of parents agreed that it was harmful for children to see adults using marijuana in public (79%), or to see their parents using marijuana (81%). Nearly the same wide majority of parents (82%) also agreed that teens risk harming themselves if they use marijuana regularly.

Parents' Marijuana Use

As shown in the upper panel of Figure 3, most parents (79%) reported using marijuana at least once in their lifetime at age 39 (up from 75% at age 33), and over one third (34%) said they had used in the past year at age 39. Analyses of frequency and risks resulting from marijuana use focused on past-year users ($n = 105$). Among past-year users, over half (61%) had an average frequency of use of 12 or more times in the past year. Past-year users also reported substantial rates of having driven a car while under the influence (DUI) of marijuana; 33% reported marijuana DUI at least once in the past year, with 18% indicating 12 or more occurrences of marijuana DUI in the past year. Over one quarter (26%) of past-year users met DSM-IV criteria for marijuana abuse and/or dependence.

To examine changes in marijuana use frequency among past-year users at age 39, we graphed frequency of use in the past month since childhood. As shown in Figure 4, the average rate of marijuana use steadily increased through adolescence up to 6 times per month at age 21 (monthly use was coded 0 to 30 times). Over the succeeding 12 years, to age 33, there was modest variation in use between 4 and 6 times per month. But 6 years later, coinciding with retail marijuana availability at age 39, monthly use among current past-year users nearly doubled to over 10 times per month.

Similarly, after ranging between 13% and 18% from ages 27 to 35, the prevalence of marijuana abuse or dependence disorder increased to 26% at age 39 among current past-year users, although this higher rate was not significantly different from ages 33 or 35. It is noteworthy that this pattern of increasing use and disorder was nearly identical when analyses were restricted to only parents of children age 12 and younger, suggesting that age of children did not explain the change (e.g., the increases were not due to children getting older and a decrease in parenting demands).

Parents' Marijuana-related Communication and Behavior With Their Children

The lower panel of Figure 3 shows parents' attitudes and behavior related to use of marijuana by their children. Whether or not parents had communicated their feelings to their children, most parents (81%) said they would forbid or discourage their children from using marijuana before graduating from high school. However, 15% of parents reported that, although they preferred that their children do not use, they would leave the decision to their children. Another 4% of parents indicated that it is okay for their children to use marijuana.

There is an important historical comparison from this study to add to this finding. An identical item asking for parents' feelings about their children using marijuana before graduating from high school was asked *of the parents of these parents* 23 years earlier in the study when those who are now parents were 16 years of age. At that time, in 1991, only 6% of those parents said they would leave the decision of marijuana use to their children or that it was okay for them to use, compared with 19% of parents who agreed with these statements in 2014. This comparison suggests a tripling of parental acceptance of underage marijuana use in a single generation.

Returning to Figure 3, among parents who felt that their child was old enough for the conversation, most (73%) reported that they had told their child that marijuana use is okay

only for adults, only for medical reasons, or not okay in any case. Still, 22% had not yet talked to their child about marijuana use, and 5% told their child that teen use is okay. Nearly all parents (96%) reported that their child had never used marijuana with their permission. Among parents who were past-year users of marijuana, one third (34%) on at least one occasion had used where their children could see or know what they were doing, and 15% reported that their children had handled or passed marijuana or marijuana paraphernalia to them or others.

DISCUSSION

We sought to address questions regarding marijuana-related attitudes and behaviors among a sample of parents living in Washington State in the wake of unprecedented legalization of non-medical marijuana for adults. Key results showed that many parents were unclear about some basic components of the new law. For example, the common misperception that the minimum legal age of non-medical marijuana use is 18 could result in increased risk for early use among children or for negative legal consequences for parents and children if parents mistakenly allow underage use by their child. We also found that in 2014 approval of adult marijuana use was at its highest and perceived harm of regular use was at its lowest in the 29-year history of the SSDP study. At the same time, most parents drew a clear line between adult use and teen use or use around one's children, which were widely opposed. With respect to parents' marijuana-related behaviors, among past-year users there were surprising increases in frequency of use and marijuana use disorder at an age when substance use is typically stable or decreasing [31, 32]. Notably, even though granting permission to one's child to use marijuana was almost universally opposed, nearly a quarter of parents had not talked to their child about marijuana use and a third of past-year users said that they had used marijuana where their children could see or know what they were doing.

It is unclear whether these findings can be attributed to the change in marijuana's legal status. State policy changes in the lead-up to legalization (effective decriminalization early in 2012), and a delay in establishment of retail outlets and a reliable supply chain until late 2014, complicate interpretation of findings. Moreover, national studies report findings similar to some of those reported here. For example, a report by the Pew Research Center [33] showed a dramatic shift in approval of marijuana legalization in national surveys, from 31% in 2000 to 53% in 2015, and the Monitoring the Future study [34] found similar increases among 27- to 30-year olds in approval of occasional adult use, from 29% in 1999 to 50% in 2014. These shifts mirror approval of adult use in our sample, from 36% in 1999 to 52% in 2014. A report by Caulkins et al. [35] found that consumption of marijuana nationwide increased 30% from 2006 to 2010, largely attributable to regular users, in line with our finding that frequency of use dramatically increased since 2008 among parents who used marijuana. These points suggest a larger cultural shift in marijuana attitudes and behavior that coincided with legalization in some states but did not depend on it.

Some limitations of this study should be considered. The sample was not representative of US parents nor of parents in Washington State. In addition, substance use measures were self-reports and most constructs were single-item measures. However, these limitations were

balanced by substantial strengths. The sample was gender balanced, with ethnic and socioeconomic diversity among parents. Most of these parents were raising more than one child with an average child age between 9 and 10 years. So, many of these parents were experiencing prime child-rearing years with children approaching ages of high risk for substance use initiation [36]. These features of the sample provided an opportunity to understand parental responses to a changing risk landscape among a diverse sample of parents that may reveal trends not evident in more homogenous samples [37, 38]. At the same time, the studies noted above suggest that these parents were not substantially dissimilar to national samples in some key marijuana attitudes and behaviors. Additionally, the long history of conducting confidential interviews with these participants was likely to improve the validity of self-reports [39]. Longitudinal data also allowed analysis of some repeated, prospective measures assessed from childhood to age 39, post-legalization, strengthening the assessment of change [40].

Finally, from a prevention perspective, we believe there is a possible silver lining in these results in that—despite increased acceptance and frequency of adult marijuana use—parents remained widely opposed to teen use. Prevention efforts aimed at helping parents reduce teen risk should be mindful of this distinction and seek to build on opposition to teen use. Interventions for this era of marijuana legalization should consider ways to equip parents with facts and strategies so that they know the law and know how to best talk with their children about marijuana.

Acknowledgments

This research was supported by National Institute on Drug Abuse (NIDA) grant numbers R01DA033956, 1R01DA024411, and 1R01DA09679. Content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agency. NIDA played no role in the study design; in the collection, analysis and interpretation of data; in the writing of the report; nor in the decision to submit the article for publication. The authors have no conflicts of interest to report. We thank our funder, the study participants, and the staff of the Social Development Research Group, especially Diane Christiansen and Tanya Williams for exceptional administrative contributions.

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Implications and Contribution

From a prevention perspective, results revealed a possible silver lining in that—despite increased acceptance and frequency of adult marijuana use—parents remained widely opposed to teen use. Prevention efforts for this era of marijuana legalization should better equip parents in how to best talk with their children about marijuana.

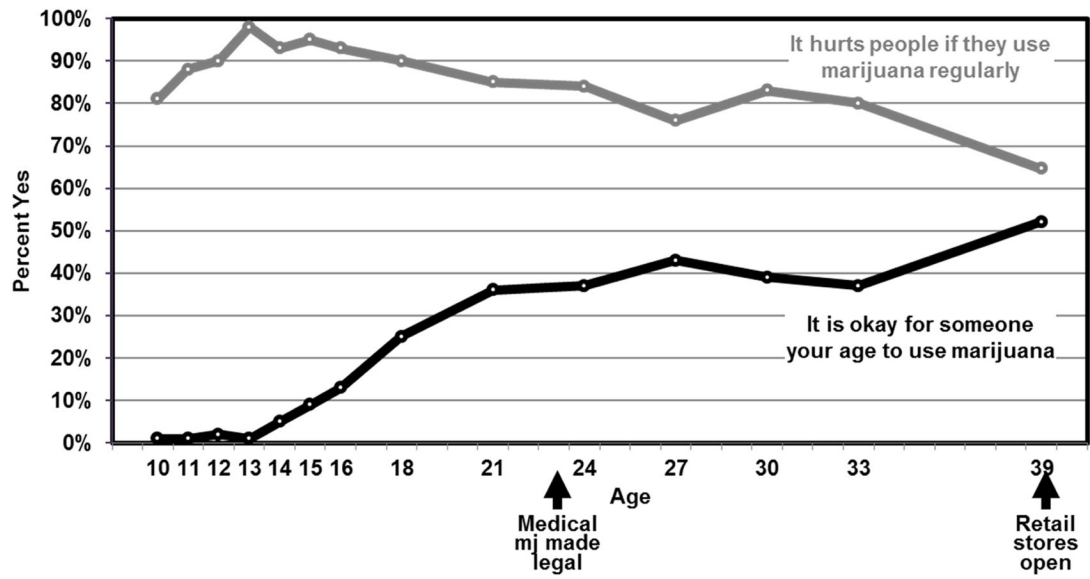


Figure 1. Change in approval of marijuana use and perceived harm of regular use from age 10 to 39. Prevalence of “yes” responses at age 39 was significantly different from age 33 at $p < .05$ for each line. mj = marijuana.

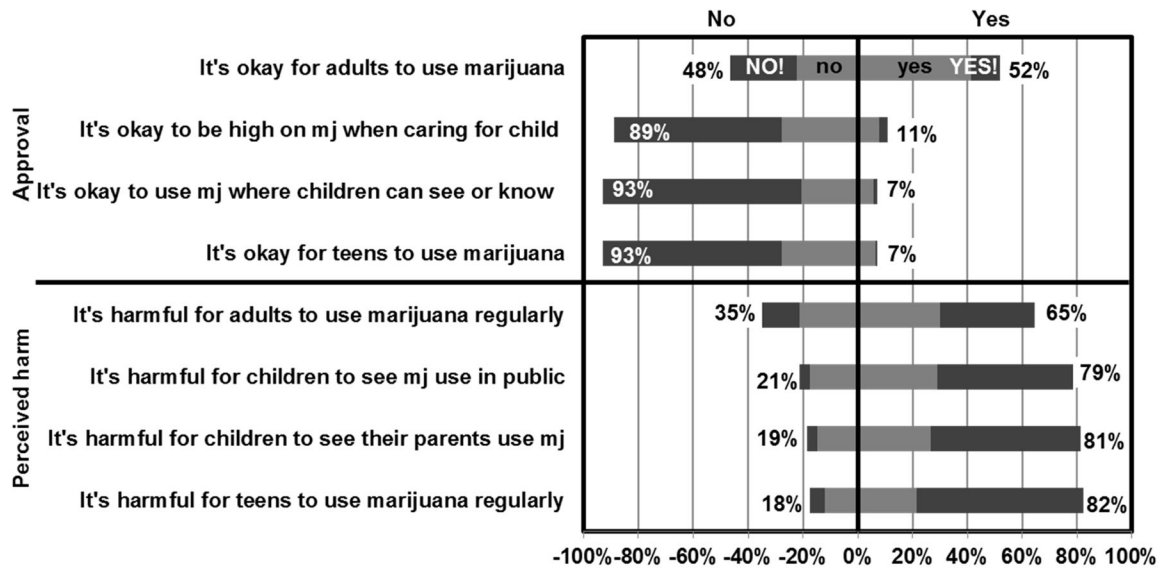


Figure 2. Parents' approval and perceived harm at age 39 of marijuana-related behavior for adults and teens. Lighter shade indicates weaker opinion; darker shade indicates stronger opinion. mj = marijuana.

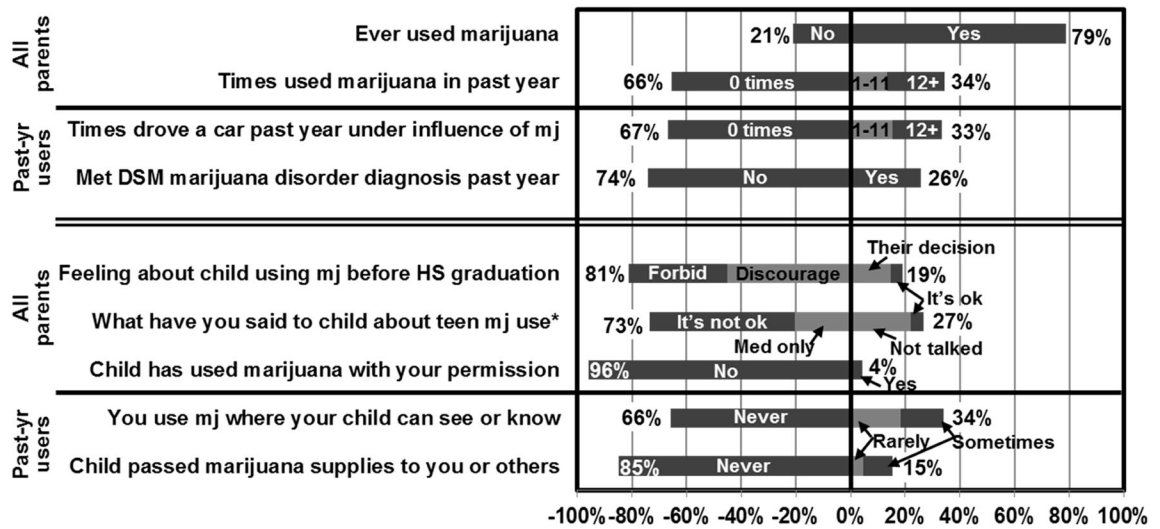


Figure 3. Parents' marijuana use and marijuana-related parenting behavior at age 39. mj = marijuana.
 * If child was old enough for conversation.

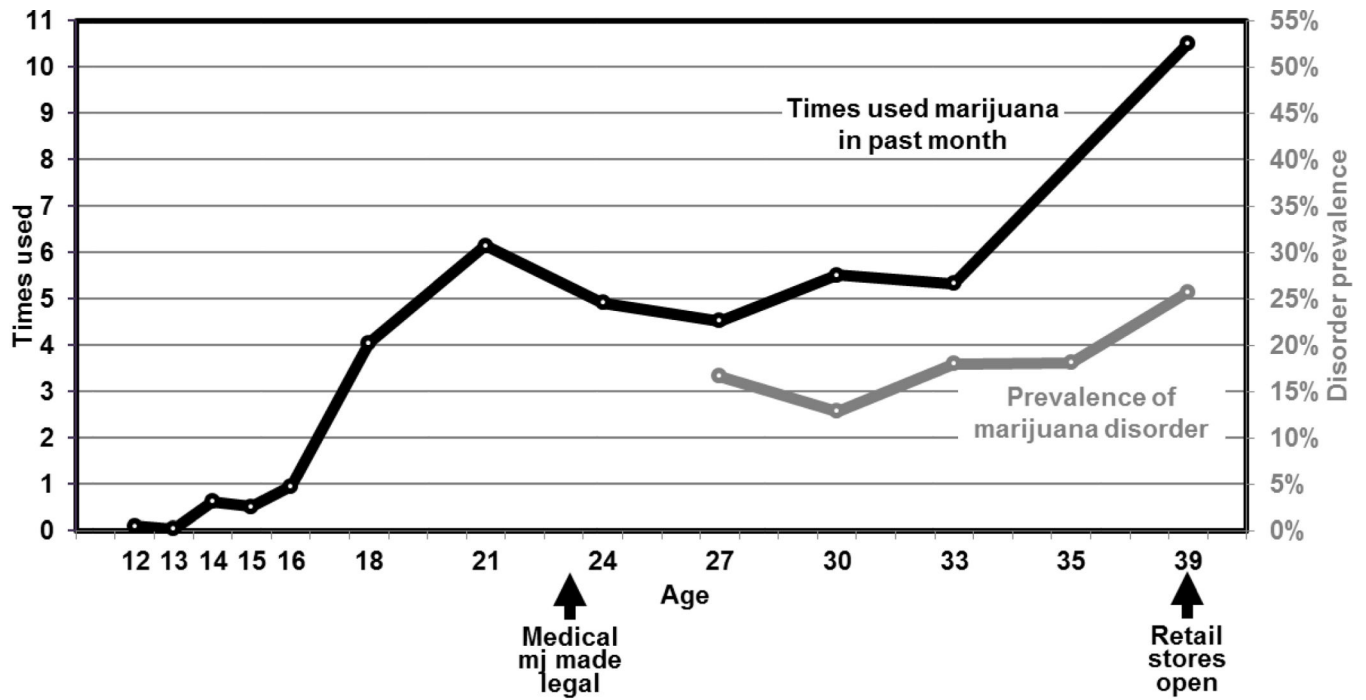


Figure 4. Change in marijuana use (left axis) and DSM-IV disorder prevalence (right axis) among those who used marijuana in the past year at age 39. Increase in use at age 39 was significantly different from age 33 at $p < .05$; increase in disorder prevalence at age 39 was not significantly different from ages 33 or 35.