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Attitudes toward medical marijuana among substance use clinicians

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ABSTRACT

Background: Research on health professional's attitudes toward medical marijuana have failed to include addictions treatment professionals. The current study attempted to address this gap in the literature.
Methods: Study participants were recruited by e-mail using mailing lists supplied by multiple state licensing/certification boards and through snowball sampling. Participants completed a 22-item survey addressing attitudes toward medical and recreational marijuana. The 13 items relating to medical marijuana were analyzed.
Results: Our sample (N = 966) was largely female (69.1%) with a Masters' or Doctoral degree (80%) and a mean age of 46.5 (SD = 12.8). Participants were mostly split between the mid-west and east coast. Overall, participants held mixed views toward medical marijuana. For example, 71.3% of the sample supported legalization of marijuana for medical purposes and yet 63.6% believed that medical marijuana is often abused.
Conclusions: More research is needed to develop a more nuanced understanding of substance use treatment provider's mixed attitudes toward medical marijuana legalization.

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Marijuana; medical marijuana; substance use clinicians; drug perceptions

Introduction

Under the Controlled Substances Act of 1970, the Food and Drug Administration (FDA) classified cannabis as a schedule I drug with high potential for abuse and no legitimate medical uses. Despite that classification, evidence has been accumulating supporting the use of cannabinoids for a variety of medical ailments. For example, Wiese and Wilson-Poe (2018) conducted a meta-analysis which found support for using cannabinoids as a first line analgesic in lieu of opioids. Research also found that, among Medicaid recipients, the number of prescriptions written for opioids decreased in states where medical marijuana has been recognized (Liang, Bao, Wallace, Grant, & Shi, 2018; Wen & Hockenberry, 2018). In fact, among the limited research on medical marijuana, its use for pain is one of the most supported (Hill, 2015; Jetly, Heber, Fraser, & Boisvert, 2015; Smith, Azariah, Lavender, Stoner, & Bettiol, 2015; Whiting et al., 2015). Given evidence supporting its use for treating epilepsy, the drug Epidiolex (which contains Cannabidiol [CBD], a non-psychoactive derivative of the cannabis plant) was approved by the FDA. Moreover, the FDA recently rescheduled "drugs that contain CBD … and no more than 0.1 percent tetrahydrocannabinol" to Schedule V (FDA, 2018, p. 1).

The potential for therapeutic benefit is likely one reason why 93% of adults in the United States (US) support legalizing medical marijuana (Quinnipiac, 2018). Despite looser policies governing medical marijuana and favorable attitudes among the general public, surveys suggest that, with the exception of neurologists who support legalization of CBD for treating epilepsy (Mathern, Beninsig, & Nehlig, 2015), most other health professionals remain skeptical of medical marijuana's benefits (Charuvastra, Friedmann, & Stein, 2005; Kondrad & Reid, 2013; Lusk & Paul, 2017; Moeller & Woods, 2015; Uritsky, McPherson, & Pradel, 2011).

One group of health professionals whose attitudes toward medical marijuana has been neglected is substance use disorder (SUD) treatment providers. This is surprising given that approval of medical marijuana could have a substantial impact on their clinical practice. Specifically, abstinence from all drugs, except nicotine and caffeine, is generally considered the only acceptable treatment goal for patients with SUD (Andrews, Sorensen, Guydish, Delucchi, & Greenberg, 2005; Davis & Rosenberg, 2013; Rosenberg & Davis, 2014), although some evidence suggests the culture may be changing (Davis & Lauritsen, 2016). For example, one study found that physicians were likely to discontinue long-term opioid treatment for patients who tested positive for cannabis, alcohol and/or other illicit drugs (Wyse et al., 2018) due to concerns that combining marijuana with prescribed opioids would increase risk for adverse consequences. Thus, it seems unlikely that clinicians in opioid-substitution programs would be accepting of any marijuana use, regardless of whether it is for legitimate medical reasons.

Medical marijuana patients may also be at risk of adverse consequences regardless of whether addictions treatment professionals are accepting of non-abstinence goals. On one hand, clinicians who accept non-abstinence as a legitimate goal may find it difficult to discern the difference between medical and recreational use. On the other hand, clinicians who oppose non-abstinence as a treatment goal may hold negative attitudes toward patients who use marijuana for medical purposes, perhaps believing that medical use is simply an attempt to legitimize recreational use. Negative attitudes towards patients who test positive for marijuana may result in poorer quality care (Van Boekel, Brouwers, van Weeghel, & Garretsen, 2013). Moreover, perceived stigma against medical marijuana patients may either lead them to discontinue treatment prematurely

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(Laudet, Stanick, & Sands, 2009) or prevent them from seeking treatment in the first place.

In summary, despite evidence for its efficacy for treating chronic pain, epilepsy, and other medical conditions, medical marijuana is still viewed with skepticism by many health care providers. However, addictions professionals' attitudes toward medical marijuana use among their patients is unknown at this time. Given that negative attitudes toward patients, regardless of the reason, may result in premature treatment termination and poorer quality care, it seems important to understand attitudes toward legalization of medical marijuana among SUD treatment professionals. Consistent with prior research, we hypothesized that addictions' professionals would hold unfavorable attitudes toward medical marijuana legalization.

Method

Participants

Participants were addictions clinicians who were identified through the professional licensing/certification boards of Alaska, Kansas, Nebraska, New Jersey, North Carolina, Rhode Island, West Virginia, and Wisconsin. Clinic directors in the Baltimore area were contacted and asked to distribute the survey to their staff. A link to the survey was sent to participants via e-mail. Upon completing the survey, participants were asked to forward the survey to their colleagues.

Measures

Demographics

A brief demographic questionnaire assessed age, gender, geographic location (using the Census Bureau's nine divisions), etc.

Attitudes toward medical and recreational marijuana use

Thirteen items assessed attitudes toward medical marijuana use among the general population (5 questions) and individuals with SUDs (8 questions). Items were adapted from Moeller and Woods' (2015) survey of marijuana attitudes and Brown's Attitudes Toward Methadone scale (see Brown, Bass, Gauvey, & Kozel, 1972; Brown, Jansen, & Benn, 1975). All items were rated on a 5-point Likert-Type scale. Items were reverse- scored, as appropriate and a summary score was created by calculating the average rating on all 8 items. The scale was found to be internally consistent ($\alpha = .872$). Higher scores reflected more positive attitudes.

Personal history and knowledge

Clinicians were asked if they had ever used marijuana (medically or non-medically) and if they knew anyone who had used medical marijuana. They were also asked if they had known any clients who used marijuana to help with their SUD treatment.

Data analysis

Pearson Correlations examined associations between participant age and attitudes toward medical marijuana. Independent samples *t*-tests examined differences in attitudes between participants who had, or had not, reported prior marijuana use, as well as between participants who did, or did not, know a medical marijuana patient. One-way, between-subjects analyses of variance (ANOVA) were used to examine differences in attitudes toward medical marijuana based on participants' education level and geographic region. Finally, a one-way Chi-Square test examined medical marijuana approval rates between our participants and that of the general population. Statistical analysis was conducted using SPSS v21 (SPSS,Inc., Chicago, IL) with a p value less than .05 representing statistical significance.

Results

Participants

State licensing boards provided over 13,000 e-mail addresses. However, we do not know the total number of e-mails sent because Baltimore-area clinicians were contacted through their clinic directors and some participants may have heeded our request to forward the survey to their colleagues. The survey was started by 1207 individuals. Analyses were limited to the 966 participants (94.06%) who completed all scale items. Data collection took place between February and May 2018.

Participants were predominantly female (69.1%) who held either Associates' (4.0%), Bachelors' (15.8%), Masters' (73.8%), or Doctoral (5.8%) degrees. Geographic regions reported were condensed to East Coast (New England, Mid-Atlantic, South Atlantic), Midwest (the four Central divisions), and Mountain/Pacific. Nearly half of the participants were from the East Coast (n = 471; 50.2%) with the remainder from the Mid-West (n = 443; 45.6%) or Mountain/Pacific (n = 39; 4.2%) regions. Most participants had used marijuana (73.5%) and most knew a medical marijuana patient (73.1%). Moreover, 61.0% of participants reported knowing patients with SUD who had used marijuana to aid in their recovery from other drugs.

Attitudes toward medical marijuana

Most respondents agreed that marijuana should be legalized for medical uses and that its use was safe. Most respondents also believed that medical marijuana is abused and that there has not been enough research on it (see Figure 1).

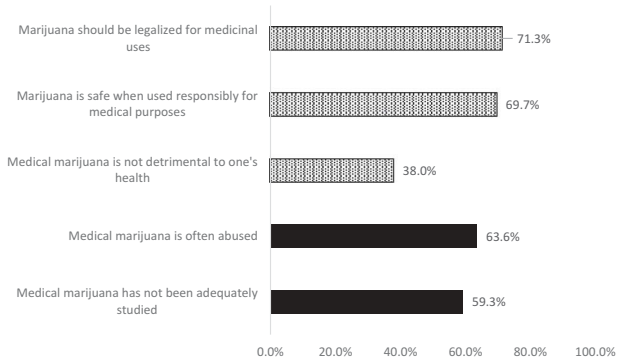

Figure 1. Percentage of sample that endorsed attitudes toward medical marijuana.
Note: **items that achieved consensus (i.e., greater than 50% endorsement); certain items were reworded such that if more than 50% disagreed with an affirmative statement, it was reworded into a negative statement (e.g., greater than 50% disagreed with the statement "Marijuana has been adequately studied") to better reflect the valence (either positive or negative) of the attitude; Shaded bars reflect positive attitudes; Solid bars reflect negative attitudes.

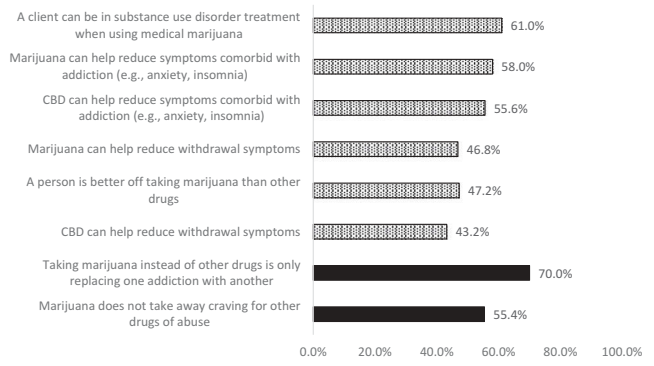

Figure 2. Percentage of sample that endorsed attitudes toward medical marijuana as an aid to substance use disorder treatment.

Note: **items that achieved consensus (i.e., greater than 50% endorsement); certain items were reworded such that if more than 50% disagreed with an affirmative statement, it was reworded into a negative statement (e.g., greater than 50% disagreed with the statement "Marijuana has been adequately studied") to better reflect the valence (either positive or negative) of the attitude; Shaded bars reflect positive attitudes; Solid bars reflect negative attitudes

Attitudes toward medical marijuana use as an aid to recovery

Most participants disagreed with the statement that marijuana takes away cravings but also agreed that marijuana (including CBD) can be therapeutic for conditions comorbid with addiction (e.g., anxiety). Most respondents also believed that marijuana use is trading one addiction for another. Despite this latter belief, most endorsed the idea that it would be acceptable for a SUD treatment patient to use medical marijuana while in treatment (See Figure 2).

Factors that affect attitudes toward medical marijuana

Our results found that increasing age was associated with less favorable attitudes toward medical marijuana (Pearson $r = -.12$, $p < .001$). Independent samples t-test found that participants who reported having used marijuana ($M = 3.18$, $SD = 0.71$), as compared to those who had not ($M = 2.77$, $SD = 0.74$), held more favorable attitudes, $t(938) = 7.57$, $p < .001$; Cohen's $d = 0.56$ (95% Confidence Interval [CI] = 0.41, 0.71). Moreover, participants who reported knowing someone who had used marijuana medically held more favorable attitudes ($M = 3.15$, $SD = 0.75$) than participants who did not know a medical marijuana patient ($M = 2.84$, $SD = 0.68$), $t(949) = 5.81$, $p < .001$; Cohen's $d = 0.42$ (95% CI = 0.28, 0.57).

Results supported a significant main effect of US region on attitudes, $F(2,935) = 4.88$, $p = .008$; $\eta^2_p = .01$. Tukey's Post Hoc tests revealed that East Coast participants held more favorable attitudes toward medical marijuana (M = 3.14, SD = 0.72) than Midwest participants (M = 3.01, SD = 0.75), $p = .02$, but not than Mountain/Pacific participants (M = 2.90, SD = 0.733), $p = .004$. Attitudes did not differ based on education level, $F(3,935) = 1.70$, $p > .05$. Finally, as predicted, fewer substance use treatment professionals (71.3%) than members of the general public (93%; Quinnipiac University Poll, 2018) supported legalization of medical marijuana, $\chi^2(2) = 697.13$, $p < .001$, $\varphi = 0.85$ [95% CI: 0.66, 0.78].

Discussion

We hypothesized that, like most other health professionals, SUD treatment providers would hold negative attitudes toward medical marijuana legalization. Our results partially supported this hypothesis in that SUD clinicians appeared to hold mixed attitudes toward medical marijuana. While most participants agreed that medical marijuana should be legalized and that its "responsible" use was "safe", they also believed that it is often abused and has not been studied adequately. Consistent with prior research (Charuvastra et al., 2005; Kondrad & Reid, 2013; Lusk & Paul, 2017; Mathern et al., 2015; Moeller & Woods, 2015; Uritsky et al., 2011), we found that fewer addictions treatment professionals (approximately 70%) than members of the public supported legalization of marijuana for medical purposes.

Participants also held mixed attitudes toward medical marijuana use among patients with SUD. Specifically, most participants did not believe that marijuana would help reduce cravings for other drugs and did believe that taking marijuana was replacing one addiction for another. Despite these negative views, participants also indicated that both marijuana and CBD could be helpful in reducing symptoms associated with addiction (e.g., anxiety; insomnia). Most surprising was the fact that almost 2/3rd of the sample indicated that a client could be in SUD treatment while using medical marijuana given prior research which found that SUD patients who were medical marijuana users had more severe addictions (Ashrafioun, Bohnert, Jannausch, & Ilgen, 2015). Perhaps endorsement of this item reflects treatment professionals' belief that patients who are using medical marijuana need treatment due to their more severe addiction. This hypothesis should be tested in future research.

Our findings suggest that attitudes toward medical marijuana vary quite considerably depending on how the questions were asked. These inconsistent findings may reflect the predominant culture in substance use treatment programs which promotes complete abstinence from all substances (except tobacco and caffeine) as the only acceptable treatment goal (Andrews et al., 2005; Davis & Lauritsen, 2016; Davis & Rosenberg, 2013; Rosenberg & Davis, 2014). Specifically, SUD professionals may feel comfortable expressing support for legalization of medical marijuana for the general public and that "responsible" use by the general population is safe. However, it is unknown whether they would have agreed with the latter item had it not included the qualifier "responsible". In addition, acknowledging that marijuana can help reduce symptoms associated with addiction may reflect knowledge of the typical effects of the drug rather than support for the idea that marijuana can be used to help patients discontinue other drugs of abuse. Consistent with this interpretation, 70% of participants believed that taking marijuana instead of other drugs was replacing one addiction for another. It is interesting to note, however, that 47% of participants agreed with, and 18% expressed a neutral position toward, the statement that a person is better off taking marijuana than other drugs. Thus, it seems that a considerable number of SUD treatment professionals may be open to a new treatment goal which permits responsible use of a less problematic drug in place of more serious ones. This finding is

consistent with research by Davis and Lauritsen (2016) who found more acceptance of non-abstinence as both an intermediate and final treatment goal for patients with moderate alcohol use and marijuana use disorders.

In addition to inconsistent attitudes, our data showed that younger participants held more favorable attitudes than older participants which is also consistent with prior research (Davis & Lauritsen, 2016). Younger clinicians were trained during a time when marijuana was found to be effective for treating certain conditions, attitudes toward the drug were becoming more favorable, and laws governing recreational use were beginning to relax. These cultural shifts may have contributed to the perception that marijuana use is safe. Older clinicians, however, may have strongly established beliefs about harms of marijuana that are more resistant to change.

In addition to differences in age, we also found differences in attitudes based on geographic region. Specifically, we found that respondents from the East Coast held more favorable views of medical marijuana than Midwest or Mountain/Pacific area respondents. These findings may reflect the fact that we asked participants to indicate the region as opposed to the state they were from. Thus, we were unable to differentiate attitudes among clinicians in states where marijuana is already legal and states where it is not. Future research permitting a more fine-grained analysis of marijuana attitudes by state would be useful.

The study is not without limitations. While our sample was disproportionately female, results revealed no gender differences in attitudes toward medical marijuana. The study also lacked geographic diversity. It is plausible that attitudes would be more favorable among providers from states where marijuana has already been legalized. In addition, more questions asked about benefits than harms of medical marijuana which could have primed participants to respond more favorably than if the questions were evenly split. Overall, attitudes were mixed suggesting that this was not a likely explanation for our findings. Finally, it is possible that respondents rated items in socially desirable ways. This seems unlikely, however, given that data were collected anonymously.

These findings have implications for providers of SUD treatment services. First, it will be important for clinics to establish clear policies regarding medical marijuana use and articulate these rules to patients at the time of intake. Thus, clients will know the risks, if any, they are taking by using medical marijuana during SUD treatment. Second, clinicians and administrators may need to establish a set of criteria for how to distinguish between legitimate (i.e., prescribed) and recreational use. In addition, providers may need to be educated about the benefits of medical marijuana and its legitimate uses. Any remaining bias that clinicians may have toward medical marijuana might be reduced by helping clinicians feel confident in their ability to recognize legitimate use and understand the potential benefits of medical marijuana for their patients. This may reduce the likelihood of premature treatment termination both by clinicians and by patients.

Overall, our results suggest that addictions treatment providers have mixed opinions about medical marijuana legalization. These mixed attitudes may actually reflect a healthy skepticism. That is, if the current trends continue, addictions treatment professionals may be poised to both accept medical marijuana legalization and to handle any associated negative consequences. There is also some indication that providers, at least younger professionals or those from the East Coast, may be experiencing a cultural shift regarding treatment goals. Specifically, the fact that most participants agreed that a patient using marijuana medically could be in SUD treatment and most either agreed or were neutral toward the idea that a patient is better off using marijuana than other drugs suggests that some providers may be open to the idea of controlled use of safer substances, such as marijuana, as opposed to complete abstinence. This interpretation is speculative, however. As such, more research, using a mixed method approach, is needed to help gain a more nuanced understanding of treatment professionals' attitudes toward medical marijuana by their patients.

Disclosure of potential conflicts of interest

The authors declare no conflicts of interest

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