

Medical Marijuana and the Older Population: A Cross-Sectional Study of Opinion

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Abstract

Background: Medical marijuana (MMJ) has garnered significant attention in recent years as a therapeutic option, which has prompted an investigation of its use among the older population. With those born between 1946 and 1964 (the “Baby Boomer” generation) reaching ages 65 years and older, this demographic is of key importance for researching evolving healthcare interventions, including MMJ. Increasingly affected by chronic conditions for which standard treatments may prove inadequate, investigating the current perceptions of MMJ within this population is crucial.

Methods: This cross-sectional study assessed the attitudes towards medical marijuana in a sample of 139 adults aged 50 years and older at the Lake Erie College of Osteopathic Medicine (LECOM) Institute for Successful Aging, an urban outpatient clinic in Erie, Pennsylvania. Using an exempt protocol approved by the LECOM IRB, data were collected via a voluntary, anonymous survey over a three month period when participants were present for their normally scheduled office visit. Aggregate deidentified data was then compiled and quantitatively assessed using descriptive statistics in Microsoft Excel.

Results: Out of 138 responses, 76.1% of participants had never tried marijuana (either medical or recreational), and among the 23.9% who had, 60.6% had not used it in over a year. Additionally, out of 123 responses, 50.4% of participants expressed disinterest, whereas 24.4% selected anxiety and 30.1% chronic pain when asked which condition(s) they would consider treating if they were to use MMJ. Finally, out of 123 responses, 47.2% participants indicated they may be open to discussing MMJ with their healthcare provider if more information about MMJ were made available to them.

Conclusions: Despite the majority of participants having no prior experience with marijuana, there is an openness among nearly half the participants to discuss MMJ with their provider if more information was accessible to them. Additionally, while there is still hesitancy towards MMJ in the older population, a non-trivial portion of participants selected one or more conditions they would address if they were to consider using MMJ as a therapeutic option. This underscores the importance of providing accessible education about MMJ to both patients and providers. While further research is necessary to address unknown specific concerns or misconceptions, there is a need to include this demographic in open and informed discussions about alternative treatments, including MMJ.

Keywords: Medical marijuana (MMJ), Cannabis, Therapeutics, Older population, Healthcare education

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BACKGROUND

The use of medical marijuana (MMJ) has gained significant attention in recent years, especially as a therapeutic option for numerous health conditions. Furthermore, the general population in the United States is aging rapidly due to the “Baby Boomer” generation (those born from 1946 to 1964), shifting the mindset of healthcare to focus on those reaching 65 years and older (1, 2). Specifically, those aged 65 years or older nationwide was just shy of 58 million in 2022, but expected to skyrocket to over 71 million by 2030 and over 78 million by 2040, making it one of the fastest growing demographics (1). This demographic is particularly affected by chronic pain, insomnia/sleep disturbances, mood disorders, and neurological conditions such as Alzheimer’s and dementia, for which standard drug treatments may be ineffective or introduce unwanted side effects (3, 4).

Interestingly, marijuana (also, cannabis) is one of the most widely used drugs among the older population (5, 6). Past-month marijuana use among Americans 55 years and older significantly increased from 4.2% in 2016 to 5.9% in 2018 (7, 8). Similarly, past-month marijuana use among adults aged 50 and older sampled by the Substance Abuse and Mental Health Services Administration (SAMHSA) National Survey on Drug Use and Health (NSDUH) was 6.5% in 2019, and 3.5% among adults aged 65 and older, indicating a rise in cannabis use among older adults as time progresses (2). To further support this, as of 2022, 9.2% of adults aged 50 and older and 5.2% of adults aged 65 and older reported using marijuana in the past month (9). Additionally, many older adults today have been exposed to, even if they did not use, marijuana simply due to its prevalence in the 1960s and 1970s (5, 10).

Still, perceptions of the use of cannabis both from a medical and legal viewpoint within the older population vary widely. Many within this population that have used cannabis in the past have much less physical concerns, whereas those who haven’t used before have more concerns about its effects on their health (5). Furthermore, the large majority have concerns about the current legal standing of cannabis and have lived through all the legal turmoil surrounding it through previous decades. Although legalization and decriminalization have been implemented and/or

discussed by federal and state representatives, many are still weary of cannabis’ legal standing and afraid of judgement or condemnation from medical or law enforcement authorities (5). Moreover, both patient and physician stigma now associated with marijuana use and the legal complexities surrounding its usage present barriers to its adoption in this demographic (11). Specifically, patient experience and attitude towards cannabis and its medicinal use is often overlooked due to physician bias and lack of knowledge surrounding the drug (5, 12). Lastly, evidence for the safety and efficacy of MMJ on the previously listed symptoms including sleep disorders and neurological conditions in this population is lacking (3, 10, 13). Regardless, cannabis use and impressions in older adults is worth investigating since current suggestions regarding use and dosing rely heavily on patient reports, and is especially timely with the ongoing shift towards adult use to explore the benefits and risks, and opinions within this community (5, 10). Hence, the aim of this cross-sectional study was to assess the current attitudes and opinions towards cannabis (specifically, medical marijuana) within the older population.

METHODS

This work was reviewed and approved by the Lake Erie College of Osteopathic Medicine (LECOM) Institutional Review Board (IRB), approval number 31-029, using an exempt protocol via limited review. According to 45 CFR 46.104(d)(2)(iii), research that only includes interactions involving survey procedures is exempt from the Health and Human Services (HHS) policy for protection of human research subjects, and thus informed consent, if “the information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited review” to ensure “adequate provisions to protect the privacy of [the] subjects and maintain the confidentiality of the data” (14).

To maintain the privacy of the patients and confidentiality of the data, all responses were deidentified and aggregated before being analyzed. All participants were permitted to store their responses in a plain envelope before returning to the check in desk at the clinic to be put in a manila folder with all responses such that one response was

not discernable from the next. Additionally, all deidentified survey data was stored in an Excel file on OneDrive (secured by Microsoft encryption) only accessible to the study coordinator via username and password. Furthermore, each identifying factor (age range, sex, race, education level, and specialty – for providers only) must have had at least 20% of the answer choice to be reported per IRB regulations to maintain anonymity and confidentiality of the data. For example, at least 20% of participants had to select “White” under Race for that to be reported. Otherwise, responses were collectively grouped as something akin to “Other.” All analyses were quantitative in nature using descriptive statistics and performed using Excel (Microsoft 365, Version 2409) on aggregate data.

Participants consisted of LECOM patients and providers from the LECOM Institute for Successful Aging based out of the LECOM Senior Living Center (SLC) in Erie, Pennsylvania. This urban clinic offers mainly primary care, along with a select number of specialists, in geriatric medicine for patients 50 years of age and older from four physicians. Participants were selected by a sample of convenience over a time period of three months, when patients were informed by clinic staff of the voluntary survey consisting of 13 questions when they arrived for their normally scheduled appointment. The survey was designed to gather demographic information including age range, sex (limited to male or female based on sex assigned at birth), race, and education level (and specialty – for providers only) and their opinions and experiences with marijuana.

Questions were adapted based on the 2023 National Survey on Drug Use and Health (NSDUH) by the Substance Abuse and Mental Health Services Administration (SAMHSA) or developed internally with input from LECOM geriatric providers and the Pennsylvania (PA) Bureau of Medical Marijuana based on the PA MMJ program. Specifically, questions adapted from NSDUH included if participants have ever used cannabis (also known as marijuana with more than 0.3% THC), when they last used it if applicable, and if a doctor told them to use cannabis in the past year. Other questions included if participants had a cannabis ID card or if someone who takes care of them has one, which conditions they would use it for if they were going to use cannabis, if their current doctor knows they

use cannabis if applicable, any particular reason their doctor doesn’t know if applicable, and why they haven’t thought about using cannabis as a medicine before. Reasons for potential cannabis use were identified based on the 24 current qualifying medical conditions posed by the PA Department of Health (DOH) for medical marijuana use, focusing on conditions likely to be experienced among the older population (15). Lastly, participants were asked if they would ask their doctor about cannabis if they had more information about it available to them. Logic was applied during aggregation such that if participants responded no to ever using cannabis, last use was denoted as “Does not apply;” likewise, if participants responded yes to their doctor knowing they use cannabis, reason doctor doesn’t know was denoted as “Does not apply.”

RESULTS

Out of 344 unique patients that were seen at the clinic during the three months of recruitment, a total of 139 patients, or approximately 40.4% completed the survey during the time it was made available to them. Furthermore, 73.4% completed all 13 questions, followed by 10.8% completing 12 out of 13 with the most skipped question being why they haven’t thought about using cannabis as a medicine before. The majority of respondents were White, female, and completed education through high school (Table 1.) The age of respondents ranged from 50-55 to over 91 with the majority being evenly split between 61-70 and 71-80 years (34.5%/34.5%, respectively).

	N	%
Age (Years)		
61-70	48	34.5
71-80	48	34.5
81 or Older	29	20.9
Sex		
Male	33	24.3
Female	103	75.7
Education		
High School	61	43.9
College Level	39	28.1
Bachelors or Higher	37	26.6
Other	2	1.4
Race		
White	126	90.6
Other Race	13	9.4

Table 1. Demographics of all patients with percentages $\geq 20\%$ per IRB regulations.

Out of the 139 participants, 138 responded to ever using marijuana, with 33 (23.9%) reporting ever using marijuana, even once, whereas 105 (76.1%) reported never having tried any form of marijuana. Furthermore, out of those participants who reported ever using marijuana, 20 (60.6%) reported that it was over a year ago. However, 12 (36.4%) participants reported using marijuana within the past year, with 8 (24.2%) reporting using it within the past month. One participant did not specify last use.

When asked if they haven't thought about using cannabis as a medicine, 113 participants responded with 64.6% stating they are simply not interested. Furthermore, 28.3% said they either don't know enough about it, or some other aspect of MMJ to consider it as a possible treatment option. Some other reasons for not currently pursuing MMJ as a potential treatment option included current government rules and regulations surrounding the product and privacy concerns, personal negative history with the product, and/or doctor advised against it. When asked if they were to use medical marijuana to treat specific condition(s), 123 participants responded with those disinterested being 50.4%, whereas 30.1% said they would consider using it for pain management, and 24.4% would consider using it to manage their anxiety symptoms.

Perhaps the most interesting results of this research were the responses when participants were asked if they would talk to their doctor if they had more information about medical marijuana. Out of 123 participants who responded, 52.0% said no; however, 26.8% said maybe and another 20.3% said yes. Hence, almost half of this cohort would consider discussing medical marijuana as a potential treatment option with their provider if they had more information about the product and perhaps understood its mechanism in more detail.

DISCUSSION

This research revealed preliminary insights into the attitudes and behaviors towards medical marijuana use in the older population. With initial data showing the majority (76.1%) of participants have never tried marijuana, and with over 60% of the participants who have used marijuana in the past doing so over a year ago, this suggests that for many, marijuana use was not a sustained habit, and this population is potentially being dissuaded to

investigate current findings on MMJ and its therapeutic use.

One of the most notable findings is the majority being disinterested in medical marijuana as a potential treatment option, with over 64% of 113 participants expressing no interest in pursuing it. This could stem from several factors, including lack of knowledge about the therapeutic impact of MMJ, as was indicated by over 16% of participants, as well as concerns related to government rules and regulations, personal privacy and history, and medical advice against its use. These findings underscore the importance of addressing these concerns through patient education and policy considerations to introduce MMJ more broadly as a potential treatment option.

Nonetheless, one of the most intriguing findings was the fact that 16 of those same 113 participants (14.2%) who expressed no interest in considering MMJ as a potential medicine provided at least one condition they would aim to treat if they were to use MMJ. Additionally, when compared with the fact that 49.6% of 123 participants stated they would consider using MMJ to treat one or more conditions reflects the underlying interest in it within this population. Furthermore, although roughly half of 123 respondents would not consider discussing MMJ with their doctor, 47.2% were either potentially or definitively open to discussing MMJ and learning more if more information was available to them. Both of these findings highlight that a significant portion of participants might be open to considering MMJ as a treatment option if provided with appropriate education and information about its benefits and risks.

These results suggest that while there is still significant hesitation and lack of interest in MMJ as a treatment option among the aging population, there is also a considerable portion that may be open to its use if provided with more information. However, although prior research suggests that cannabinoids may offer relief from common complications – such as chronic pain and symptoms associated with dementia, such as dyskinesia, due to their impact on the endocannabinoid system (ECS) – the older population has important differences when compared to younger generations that must be considered if MMJ were to be employed (5, 16-21). Specifically, when assessing the use of MMJ among this generation, the older population is likely to experience a higher likelihood of comorbid

conditions, a slower metabolism, decreased reserve capacity, a higher risk of drug-drug interactions (polypharmacy), and a higher risk of adverse side effects (3, 5, 10, 22-24). As such, common side effects associated with the use of MMJ cannot be taken lightly in the older population, as they could prove more serious. The National Institute on Drug Abuse (NIDA) along with Mayo Clinic have identified that symptoms of cough and increased airway resistance, tachycardia, dizziness, impaired movement, and fatigue are frequent with marijuana use, but these seemingly harmless side effects could prove detrimental to older adults who already have an increased risk of falls and cardiovascular and respiratory issues (25, 26). Furthermore, cognitive disability (i.e., difficulty remembering or concentrating) is already apparent in older adults and marijuana use may increase the chance of this occurring (7, 27-29).

Limitations

The main limitation for this study was the sample of convenience. By collecting data from a small group of patients central to the study origin, it could limit the generalizability of the findings to the broader population of those 50 years and older. Subsequent investigations surrounding this generation should involve several geographical locations, allowing for different providers where these patients are having their experiences and gaining information about medical marijuana.

Likewise, Erie is considered a politically mixed region and is said to mirror Pennsylvania as a whole, with liberal policies in metropolitan areas but conservative representation in surrounding rural areas (30). Hence, the political climate surrounding medical marijuana is fluid (31). This could potentially influence the results compared to if the same study were to be implemented in heavily liberal areas, such as major cities, further emphasizing the need for subsequent investigations in geographic locations throughout Pennsylvania to increase generalizability.

Furthermore, the survey employed in this research is rudimentary since the main goal was to gain a baseline of understanding about cannabis within the older population. Future studies should employ a more robust questionnaire to gather more specific information about cannabis use and attitudes within this population.

Lastly, only two providers at this institution gave feedback on their opinions about medicinal marijuana use and have been left out of the analysis. This severely limits the ability to analyze current views on cannabis from the physician standpoint, which has a large impact on patient treatment plans.

CONCLUSIONS

Overall, this study highlights that while there remains significant resistance to the idea of medical marijuana, along with important differences that must be considered involving risks to the older population, a portion of this population may be open to its use if provided with proper education and more information. The near 50% response when various therapeutic uses and conditions were introduced, as well as when posed with the idea of engaging in conversations with their healthcare providers, suggests an underlying interest in MMJ that could be nurtured through education. Addressing this gap in knowledge and promoting open communication between patients and healthcare providers about potential MMJ use, its risks and benefits, and concerns regarding regulations and privacy, would facilitate informed decision-making regarding MMJ as a therapeutic option within this population.

DECLARATIONS

Ethics Approval and Consent

This study protocol was reviewed and approved by the LECOM IRB, approval number 31-029. All participants were exempt from providing informed consent since adequate precautions were taken to ensure patient privacy and confidentiality of data.

Availability of Data and Materials

The datasets generated and analyzed during the current study are not publicly available due to the sensitive nature of the study and due to privacy statements included in the protocol approved by the LECOM IRB but may be requested from either the corresponding author [MK] or LECOM's Director of Medical Marijuana Research depending on the time the request is received. This study is not registered in any independent institutional registry.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

All persons who significantly contributed to the successful completion of this research have been granted authorship accordingly. MK: study conceptualization and design, methodology, formal analysis and interpretation of data, and writing – original draft. DH: study conceptualization and design, methodology, resources, writing – review and editing. EM: study conceptualization and design, interpretation of data, writing - review and editing, supervision. MF: methodology, acquisition of data, writing – review and editing. MB: study conceptualization and design. ZH: study conceptualization and design, acquisition of data, resources, interpretation of data, writing – review and editing. All authors read and approved the final manuscript.

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