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Perceptions, Attitudes, and Knowledge of Cannabis and its Use: A Qualitative Study among Herbal Heart Study Young Adult Cannabis Consumers in South Florida

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ABSTRACT

Growing cannabis use among young adults in the United States surpasses research and public understanding, raising health concerns despite potential benefits. Limited research focuses on their knowledge, attitudes, risks, and motivations, especially in states with limited legalization. This study explores cannabis knowledge and attitudes among healthy young adult cannabis consumers to understand their risk and benefit perceptions. Data include a subsample of participants in the Herbal Heart Study, a cohort to examine subclinical cardiovascular risk among healthy young adult (18–35 years old) cannabis consumers and non-consumers. A qualitative thematic analysis of the interviews was performed using a deductive approach driven by the theory of the Health Belief Model to generate categories and codes. Dedoose was used to organize transcripts and coding. A total of 22 young adult cannabis consumers (M age = 25.3, SD = 4.4) were interviewed between May 5, 2021- September 23, 2022. Participants were predominantly female (n = 13) and Hispanic (n = 9) or non-Hispanic Black (n = 7). Five themes were identified: perceived health benefits and risks associated with cannabis use, motivation for cannabis use, knowledge of cannabis, and perceived barriers to cannabis use. Participants discussed knowledge, positive/negative attitudes toward cannabis, and perceived risks/benefits based on personal experience and gathered information. Some showed knowledge deficits, and most wanted more health-related cannabis research. Given the current climate of rising cannabis legalization, availability of novel cannabis products, and societal acceptance, further research and evidence-based cannabis literacy for young adults are essential to keep pace with liberalization trends.

1. Introduction

Cannabis is one of the most widely used substances in the United States (US) (Palamar et al., 2014) with young adults being among the highest consumers (Yu et al., 2020). According to the National Institute on Drug Abuse (NIDA), young adults' use of marijuana (cannabis) has surged in recent years. In 2021, 43 % of young adults reported using cannabis within the past year, a substantial rise from 34 % in 2016 and 29 % in 2011. Likewise, 29 % of young adults reported using cannabis in the past month in 2021, compared to 21 % in 2016 and 17 % in 2011. Daily cannabis use among young adults also rose, with 11

% reporting daily use in 2021, which is higher than the 8 % reported in 2016 and 6 % in 2011 (NIDA, 2022).

Changes in cannabis legalization policies have contributed to the normalization of cannabis use, especially among young adults (Hughes et al., 2015). Young adults often perceive cannabis as "natural" and less harmful than other substances; yet it can adversely affect brain function, particularly during the critical developmental stage of young adulthood (Whiteley et al., 2021). Medical cannabis is currently legal in 38 states, four US territories, and the federal District of Columbia (DC); non-medical use is permitted in 23 states, three US territories, and DC (McClure et al., 2023; National Conference of State Legislatures, 2023).

The trend in legalization has advanced faster than prospective research and public understanding of cannabis (Hasin, 2018; Hazle et al., 2022; Orenstein & Glantz, 2020; Vidot, 2014). Despite potential benefits such as the management of pain, side-effects of chemotherapy, and seizure-disorders (Pratt et al., 2019), health professionals are concerned about the increasing cannabis use and its associated health risks, including cognitive impairment and addiction (Carlini & Schauer, 2022; Collins, 2014).

The increasing prevalence of cannabis use, and a more accepting attitude have been reported in recent studies (Anderson et al., 2021; Hammond et al., 2020). However, there is a lack of research exploring the knowledge, attitudes, perceived risks and benefits, motivational factors, and barriers to cannabis use among young adults in states like Florida where cannabis use is only legal for medicinal purposes (Lorenzo, McClean, & Ford, 2023). Cannabis users primarily rely on personal experiences and online sources like websites and social media for information (Kruger et al., 2020; Zeiger et al., 2020). With decreasing legal restrictions, growing acceptance of cannabis use, and lack of public information it is crucial to monitor young adults' attitudes towards cannabis and its effects.

To address this gap, our qualitative study informed by the Health Belief Model aimed to understand the attitudes and knowledge about cannabis use and its effect on health among healthy cannabis users in South Florida. The purpose of this study is to give voice to young adults in South Florida and to describe their cannabis-related knowledge, attitudes, and perceived risks and benefits. The findings from this study can inform future interventions aimed at educating young adults about the scientifically substantiated risks and benefits of cannabis use.

2. Methods

2.1. Study sample

This study was part of the Herbal Heart Study, an ongoing cohort designed to examine the impact of cannabinoids on cardiovascular health over time (Herbal Heart Study, 2021). The current study included 22 young adult cannabis users without chronic disease recruited from South Florida through 1) digital advertising on Instagram and Facebook; 2) medical cannabis dispensaries in Broward and Miami-Dade counties; and 3) events at local public spaces such as farmer's markets, festivals, and on-campus gatherings at high schools and universities. After providing their name, email address, and phone number, participants were notified that they would receive $100 compensation for completing a full visit which included questionnaires, blood and urine sample collection, a non-invasive cardiovascular exam, and an audio-recorded one-on-one qualitative interview with a research assistant.

Potential participants were phone-screened by a trained research assistant to confirm their eligibility. The team contacted 330 individuals: 300 were phone-screened and 50 were enrolled after excluding those who declined participation and were deemed ineligible. To qualify, participants had to be aged 18–35 years, able to speak and read in English, and not currently homeless or planning to leave South Florida for at least a year. Exclusion criteria included prior tobacco use (cigarettes or e-cigarettes), inability to provide urine sample, heavy alcohol use (more than 4 drinks on any day or 14 drinks per week for males and more than 3 drinks on any day or 7 drinks per week for females) within the past 30-days, and chronic health conditions (such). Participants with self-reported cardiovascular diseases, autoimmune disorders, cancer, metabolic conditions or use of other illicit drugs that might confound the link between cannabis use and subclinical cardiovascular risk were excluded from the study. Individuals with severe mental illnesses leading to lack of cognition and incompetence were also excluded. Cannabis use and other substance use status were confirmed by a positive urine toxicology screen test.

2.2. Data collection

The research team conducted semi-structured interviews between May 5, 2021- September 23, 2022. During this period, 50 participants were recruited in the parent study, cannabis users (n = 22) and non-users (n = 28). All participants completed the qualitative interview; however, for the purpose of this study, only the transcripts of cannabis users were analyzed. A general interview guide developed for collecting qualitative data for the parent study was utilized to formulate the research question, guided by the Health Belief Model (Table 1 & Fig. 1). Each interview lasted 10–15 min and took place in a private office at the University of Miami (UM). Study procedures were approved by the UM Institutional Review Board; all participants provided informed consent. Interviews were recorded using a digital recorder and transcribed verbatim. The transcriptions were reviewed by a member of the qualitative research team (AB) and Principal Investigator (DCV).

2.3. Data analysis

The data analysis was performed by a team of five graduate students (AB, YT, NA, MD, WR) using a deductive thematic analysis approach (Braune & Clarke, 2012). To ensure the objectivity of the analysis, the analysis team was separated from the data collection team (BD). A periodic consensus meeting was held to resolve any discrepancies. The analysis was informed by the Health Belief Model (HBM), which served as the basis for deriving a priori codes to categorize data into five themes: perceived health benefits of cannabis, perceived health risks of cannabis, health motivation concerning cannabis use, perceived barriers to cannabis use, and knowledge of cannabis. The HBM, which provides a framework for understanding how beliefs influence their health-related actions (Painter et al., 2008), consists of six health beliefs, including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Mo & Lau, 2020). The preliminary codebook was developed by the analysis team and underwent multiple stages of refinement as the analysis progressed, following the method described by Hennink and Kaiser (Hennink & Kaiser, 2022) to reach an understanding of issues in the data and ensure code meaning was achieved. Saturation was determined based on Guest et al. (2006) and the large number of interview transcripts.

The interview transcripts were organized and coded using Dedoose, a computer assisted qualitative analysis software (CAQDAS). Five transcripts were coded by all five analysis team members to establish consensus definitions for the codes, which were then applied by individual team members to the remaining transcripts. Use of CAQDAS helped to ensure accuracy and consistency in the coding process (Chandra & Shang, 2019).

3. Researcher reflexivity

Our research team was diverse with respect to race/ethnicity, sexual orientation, training level: master's students (YT, NA, MD, WR),

Table 1
Herbal Heart Study qualitative question guide.

| Interview Questions |
| --- |
| What are your thoughts on cannabis? Perceived risks and benefits? |
| Describe your current knowledge of cannabis. |
| Why did you start using cannabis? |
| Why is this route (blunt or joint or vape) of cannabis use your preferred method? |
| Why do you currently use cannabis? |
| What sparks your cannabis use? |
| Are there alternatives to cannabis use in your lifestyle? If so, what are they? |
| Where do you obtain your cannabis from? |
| Would you rather purchase your cannabis from the dispensary or the black market? Why? |
| How do you perceive cannabis to affect one's cardiovascular health |
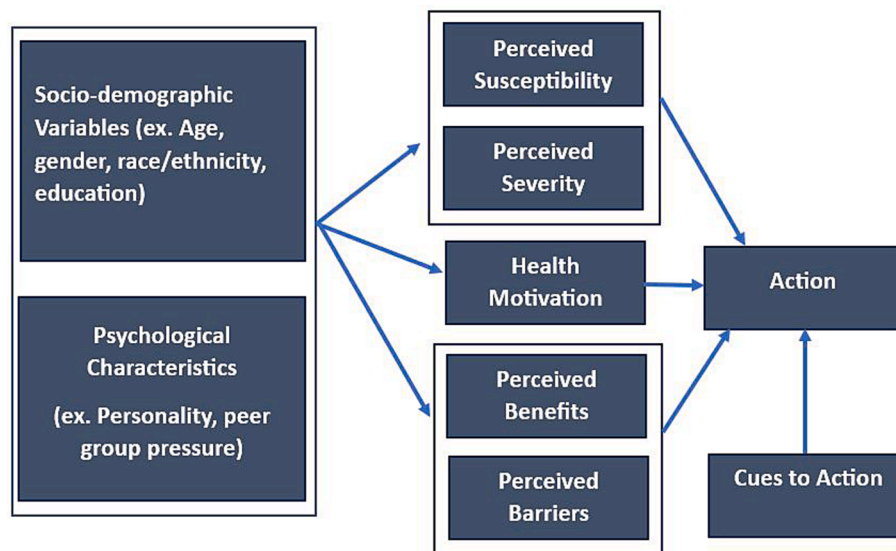
Fig. 1. Conceptual framework of the Health Belief Model.

doctoral students (AB, VM, BD), and faculty (DCV, CM) as well as disciplines. Interviews were conducted by research assistants with no prior relationships with the participants. The first author and project manager (AB), a doctoral candidate and a physician hailing from a country where cannabis is illegal but culturally significant, utilized personal insights and prior experience with cannabis research to investigate individual's perceptions on cannabis use. The coding team (YT, NA, MD, WR) possessed medical backgrounds and received qualitative research training in their master's coursework, albeit lacking prior cannabis research experience. The second author (VM), specializing in Preventive Science and Community Health, had prior exposure to qualitative research on cannabis use. BD, a doctoral student in Epidemiology, had substantial involvement in cannabis research. CM, a physician-scientist specializing in cardiovascular diseases among high-risk populations in substance use settings, contributed expertise to the team. The senior author (DCV), an expert cannabis epidemiologist and principal investigator of the Herbal Heart Study, supervised and guided the research, directed team members in study objectives, data collection, analysis, and result interpretation, and met with the team frequently to discuss issues of positionality and reflect on how researcher identity may shape the interpretation of research findings. The team conscientiously acknowledged individual backgrounds, experiences, and potential biases throughout the research process. Awareness of diverse viewpoints and the impact of personal experiences and biases guided reflections and interpretations, informed by existing scientific evidence.

4. Results

4.1. Participant characteristics

The socio-demographic characteristics of participants (N = 22) in this study are summarized in Table 2. The average age was 25.3 (±4.4) years, with the majority being female (n = 13) and one identifying as non-binary. The participants were primarily Hispanic (n = 9), followed by non-Hispanic Black (n = 5), and non-Hispanic White (n = 5). Most had attained a technical degree/some college (n = 9) and a bachelor's degree or higher (n = 9). Half of the participants (50 %) reported using cannabis for medical purposes, while the other half used it for non-medical reasons.

The interview results are presented in the subsequent sections, categorized by themes. Table 3 provides an overview of these themes along with participant quotes that correspond to numbers in parentheses

Table 2
Subsample of Herbal Heart Study participant characteristics (N = 22).

Characteristics	N (%)	Reason for cannabis use	
		Medical (n = 11, 50 %)	Non-medical (n = 11, 50 %)
	22		
Age (years)			
Mean age (SD)	25.3 (±4.4)	26.3 (±4.6)	24.3 (±4.2)
Range	18–35	20–35	18–31
Sex			
Female	13 (59.1)	4 (36.4)	9 (81.8)
Male	8 (36.4)	6 (54.5)	2 (18.2)
Non-Binary	1 (4.5)	1 (9.1)	0
Race/Ethnicity			
Hispanic	9 (40.1)	5 (45.4)	4 (36.4)
Non-Hispanic Black	7 (31.8)	2 (18.2)	5 (45.4)
Non–Hispanic White	5 (22.6)	3 (27.3)	2 (18.2)
Other	1 (4.5)	1 (9.1)	0
Education			
High school or less	4 (18.2)	1 (9.1)	5 (45.4)
Technical certificate/some college	9 (40.9)	6 (54.5)	3 (27.3)
Bachelor's or higher	9 (40.9)	4 (36.4)	3 (27.3)

throughout the results section.

4.2. Perceived health benefits of cannabis use (Theme 1)

The study participants reported perceived advantages associated with physical and mental health (1.1, 1.2). Most described specific benefits of cannabis, while some offered a more general perspective. Many participants believed in the potential mental health benefits of medical cannabis (1.3), and a few mentioned its use treating eye-related issues like glaucoma and cataract (1.4).

Participants reported multiple mental health benefits from cannabis use, such as stress and anxiety reduction, inducing relaxation (1.5), aiding sleep (1.6), acting as an antidepressant, and assisting in mood stabilization (1.7). Participants also mentioned benefits for mental health symptoms, such as those of ADHD and PTSD (1.8). Some participants viewed cannabis as a natural alternative to modern pharmaceuticals (1.9).

Over half (n = 12) of participants acknowledged pain management properties of cannabis. The majority shared personal anecdotes of how cannabis had assisted them in managing their conditions. One

Table 3
Qualitative themes and illustrative quotes.

Theme	Illustrative Quotes
Theme 1: Perceived health benefits of cannabis use	1.1. I know a lot of people who have found it helpful for particular things in their life, whether that be like stress or anxiety…
	1.2. I believe cannabis to be good. It definitely helps a lot of people in the medical sense.
	1.3. […] there are many positive effects as well, especially like anxiety, depression. And like physically, I'm not gonna lie, I'm sure I'm aware of any of those, but I know that it's really good off for mental health issues.
	1.4. I know it is supposed to help with cataracts.
	1.5. I tend to be very too active, like extremely active and I like to have it at the end of the day because it makes me feel more relaxed and more calm. So, I perceive it as something good.
	1.6. For the gummies they helped me sleep without a problem. I had great sleep with it and it was able to get me off of using Klonopin, which I use for sleep and getting my mind just to clear out so it.
	1.7. It can help with anxiety. The depression, eating problems, whether it's not eating enough or eating too much sleep.
	1.8. Cause I have I'm hyper hyper with ADHD so I was like I'm very hyper so it's just like weed calms me down so it's like I'm chilling when I'm high"- user. "I know it relieves my PTSD. Symptoms that are not as severe. I know it stops my panic attacks.
	1.9. I think the cannabis plant is a wonderful plant with many pharmaceutical properties that are very healthier alternatives than what is given to us for pain management.
	1.10. I started using cannabis because, um, I had back pain for four or five years from a injury. And it was either take opiates, you know, do physical therapy. I did 2–3 years of physical therapy, didn't doing anything, or cannabis. So I said cannabis over opiates.
Theme 2: Perceived health risks of cannabis use	There's always going to be risk involved because depending on the method of consumption you're going to have certain risk factors. I do believe that it does increase heart rate and I've seen it in myself.
	2.3 "That is a trouble that I could see people have also memory loss."
	2.4 And your body as far as feelings or sensations, as far as risk, it can cause distractions.
	2.5 And what I have been taught is that it cannot be psychologically uh physically addictive, only psychologically addictive. Which is like plus for your physical health.
	2.6 I would say in general it doesn't have a big impact on your cardio, cardiovascular health in comparison to something like tobacco cigarettes. I've been smoking cannabis for over 6 years and you know I do exercise. I do go for runs and I don't notice any significant effects on my cardiovascular health.
	2.7 I know smoking is not as good for you really, for

Table 3 (*continued*)

Theme	Illustrative Quotes
	your lungs. Anything that's inhaling combustible smoke is not, you know, good for you. So, I've been trying to use inhalation more, and I just don't live in a place where I can do combustion, I guess or whatever.
Theme 3: Motivation for use	3.1. I started using cannabis because, um, I had back pain for four or five years from a injury. And it was either take opiates, you know, do physical therapy. I did 2–3 years of physical therapy, didn't doing anything, or cannabis. So, I said cannabis over opiates. I use cannabis currently to manage my pain and to manage my anxiety.
	3.2. I've actually have more vivid dreams my creativity has improved. I've become just a more creative individual. I just wanna do creative things right. Like before. I wasn't really creative and there's something about cannabis that just makes me more creative and want to express my creativity, which is something I really appreciate 'cause it's like.
	3.3. Cause weed is great. It makes me feel happy. It makes me feel calm at ease and sometimes it helps with. My ideas formulating ideas.
	3.4. Sativa typically gives you energy, boost, creativity, concentration. And because they're more of a sedating feeling, they're going to give you more feelings of relaxation, of wellness, and usually they're going to make you more sleepy.
	3.5. Uhm, I started smoking in college. Uh, mainly you know it's like my friends are smoking and I've always been curious about it. Yeah, and I think like now I mainly smoke for like creative purposes or like tell me relax and like chill out, yeah.
	3.6. Right now, I think to help me relax. Sometimes when I'm anxious and also to just kind of like help channel my thoughts and kind of like slow things down a bit.
Theme 4: Knowledge of cannabis	4.1. So I have tried joints I have tried everything, joints burn so fast for me so that I don't get to enjoy it. And then the bong. And the bulls. They're wonderful.
	4.2. There's different forms of in taking it, but the main one being inhaling.
	4.3. With hybrids, you pretty much have a combination of those two effects. So, depending on the hybrid, the ratio of sativa indica, you're going to have different combination of effects. You might have a sleeping feeling with the boost of creativity.
	4.4. You know the euphoric effect and depending on the strain that you smoke and have different effects.
	4.5. I know that when you smoke cannabis you know you see your pretty much having the THC bind to those into cannabinoids receptors, and which is giving you the high.
	4.6. I was a THC salesperson I was also in CBD sales today I start my new job at uh flora growth, which is a cannabis company, so I'd have to say that I do have an extensive knowledge of the cannabis plant. And it's wonderful, amazing properties, healing properties.

Table 3 (*continued*)

Theme	Illustrative Quotes
	4.7. I know that it's a flower that it has different cannabinoids that give you psychoactive experiences.
Theme 5: Perceived barriers to cannabis use	5.1. I think it just would lower the stigma around using cannabis, cause I don't necessarily think using it is a bad thing. We even have medicines, like when people like treat their glaucoma with the cannabis. But I don't think the, um, I think the pros is just like lowering that taboo, less consequences of having marijuana on you. Cause I feel like just, like, the, how the system is, it's just weird. Like you have a little bit, not even like an illegal amount, and then there's still like serious consequences.
	5.2. I guess learning specifically what diseases it could or disorders, a good assist in managing. I think that would be really good and have like published studies and papers and stuff that we can look to for that information.
	5.3. I think that like other herbal medicines and stuff like that, the more…if it's legalized, then we will be able to research more into how It's beneficial to us so I do agree with it.
	5.4. I guess, just like medicinal uses like what kind of like conditions they could help with. Like especially where like mental health is concerned, 'cause I do struggle a lot with like you know, mental. Yeah, mental illness so. Like I think I would be open to looking at it as like a like a medical option to help my mental illnesses that I've got so yeah I'd be open to doing more research about that, but yeah.

participant recounted a specific experience of substituting opiates with cannabis for pain relief (1.10).

4.3. Perceived health risks of cannabis use (Theme 2)

Participants expressed concerns about several perceived health risks associated with cannabis use (2.1, 2.2). One participant mentioned worries about memory loss from cannabis smoking (2.3). Several others believed it could lead to procrastination, cognitive impairment, and a lack of awareness (2.4). Participants also noted concerns about decreased productivity, distraction, forgetfulness, and potential addiction (2.5). Many mentioned negative cardiovascular effects, but some found that staying active helped prevent these effects (2.6). Furthermore, some were apprehensive about the impact of smoking cannabis on their lungs, and some opted for non-combustible inhalation methods to reduce risks (2.7).

4.4. Motivation for use (Theme 3)

The participants shared their motivation for using cannabis, whether for medical or non-medical purposes. Specifically, half of the individuals reported using cannabis for medicinal reasons (3.1), while the other half reported using it for non-medicinal reasons. Additionally, several others cited its ability to enhance creativity and aid idea generation (3.2, 3.3) as well as promoting a sense of tranquility (3.4), reducing anxiety, and inducing relaxation (3.5, 3.6).

4.5. Knowledge of cannabis (Theme 4)

Participants exhibited varying levels of knowledge about cannabis, with some having a more comprehensive understanding of consumption methods, including smoking, inhalation, and edibles (4.1, 4.2). Some also demonstrated their knowledge of different strains of cannabis, such

as indica, sativa, and hybrids, and their potential effects on the body (4.3). The euphoric effect of cannabis was identified as strain-dependent with some respondents reporting feeling more energized and creative with Sativa strains, while others felt more relaxed with Indica strains (4.4). Hybrid strains were described as a blend of Sativa and Indica, with the effects determined by the specific ratio.

One participant described the mechanism of action of cannabis and its psychoactive properties, emphasizing THC's role in binding to cannabinoid receptors to induce a "high" (4.5). They also demonstrated knowledge of the different compounds of cannabis, with one individual identifying himself as a THC and CBD salesperson and having extensive knowledge of the plant's healing properties (4.6). Participants also acknowledged that cannabis compounds are plant-derived, with CBD originating from the hemp plant, which is related to cannabis (4.7).

4.6. Perceived barriers to cannabis use (Theme 5)

A limited number of participants expressed encountering impediments to cannabis use. Stigma, a significant barrier, was cited with one participant advocating for reducing the negative perception around cannabis due to its potential medical benefits, like glaucoma treatment, but expressing concerns about legal consequences (5.1). A lack of information and understanding regarding cannabis was also identified as a barrier. Other participants noted the need for more extensive and rigorous research into the medicinal applications of cannabis (5.2, 5.3). This sentiment was shared by another participant who indicated they would be interested in "more research" for medical cannabis use (5.4).

5. Discussion

The findings of this research among young adults in South Florida, offers valuable insights into the perceptions and experiences of cannabis users, shedding light on their motivations, perceived benefits, risks, knowledge, and barriers associated with cannabis use. Participants reported a wide range of health benefits associated with cannabis use, both for physical and mental health. Many participants highlighted the potential of cannabis to manage stress, anxiety, pain, and mood-related conditions.

They also perceived the potential of cannabis as an alternative therapy or part of a holistic medicine for managing health-related conditions which reflects the evolving landscape of medical cannabis use and its potential as an adjunct to traditional treatment (Leinen et al., 2023). Conversely, participants also acknowledged perceived health risks associated with cannabis use. Concerns ranged from cognitive impairments and memory loss to potential addiction and decreased productivity. A recent *meta*-analysis identified a weak association between cannabis use and cognitive abilities in studies involving young individuals, suggesting that these connections may lack clinical significance for the majority (Scott et al., 2018). Research links cannabis use to negative impacts on attention, memory, and learning; yet the direct causal role of cannabis in these effects necessitates further investigation (NIDA, 2023).

Notably, some participants expressed concern about the cardiovascular and pulmonary effects of smoking cannabis. The effects are still unclear; however, some studies have reported that cannabis causes an increase in heart rate, blood pressure, and increased risk of ischemic stroke in healthy young adults (Goyal, Awad & Ghali, 2017). Chronic cannabis smoking links to cough, sputum production, shortness of breath, and wheezing, whereas, ceasing cannabis intake results in reduced respiratory symptoms without an elevated risk of chronic bronchitis (Rebeiro & Ind, 2018). As cannabis use might rise due to relaxed legislation and medicinal cannabinoid use, adopting harm-reduction approaches like non-combustible consumption methods is crucial to mitigate smoking-related risks. A few participants believed that exercise might mitigate these risks; however, there is no scientific evidence to support this. The combination of cannabis and cigarette use

has been shown to exacerbate this effect leading to cardiovascular disease and an increased risk of lung cancer. (Subramaniam et al., 2019; Zhao et al., 2021; Callaghan et al., 2013). Conversely, Ghosh et al.'s study did not find any adverse effects on the cardiovascular system (Ghosh & Naderi, 2019).

Participants demonstrated varying levels of knowledge about cannabis, including its routes of consumption, strain differences, and the psychoactive properties of THC. This variability in knowledge underscores the importance of education and awareness campaigns to inform users about responsible cannabis use, especially in the current landscape of increasing cannabis use (Hammond, Chaney, Hendrickson, & Sharma, 2020).

The participants identified stigma as a significant barrier to cannabis use. This finding reflects the persistent societal stigma associated with cannabis use, even as attitudes and laws surrounding its use continue to evolve (Reid, 2020). Moreover, participants expressed a desire for more extensive and rigorous research into the medical applications of cannabis. This highlights the need for continued research efforts to better understand the therapeutic potential of cannabinoids, which could inform evidence-based cannabis literacy, medical practices, and policies (Purcell, Passley, & Leheste, 2022).

Similar to previous research, participants in this study expressed positive attitudes towards cannabis use, particularly regarding treating medical conditions such as chronic pain management (Gruber et al., 2021). However, it is important to note that the effectiveness of cannabis as a first-line therapy for pain management has not been well-established in scientific research (Maharajan et al., 2020).

Participants in this research also held the belief that cannabis could be beneficial in managing mental health issues, including stress and anxiety symptoms, relaxation, insomnia, depression, mood stabilization, PTSD, and ADHD. A systematic review of studies conducted in 2019 concluded that there was insufficient evidence to support the use of cannabinoids in the treatment of mental health disorders, including depressive disorders and symptoms, anxiety disorders, ADHD, Tic/Tourette syndrome, PTSD, or psychosis (Black et al., 2019).

Respondents in our study expressed concerns about the potential health risks associated with cannabis use, including psychoactive effects impairing decision-making and behavioral skills. They emphasized caution against driving or operating machinery post-cannabis use. Some also reported feeling lazy and distracted after using cannabis, potentially reducing productivity and causing workplace accidents if used during work hours. A previous study by the NIDA revealed a 55 % increase in industrial accidents, 85 % more injuries, and 75 % greater absenteeism among employees who tested positive for cannabis than those who tested negative, and a significant association between cannabis use and an increased risk of motor vehicle crashes (Casajuana Köguel et al., 2018; Howard et al., 2020). However, further research in this area is warranted.

Cannabis is currently listed as a Schedule I drug under the Federal Controlled Substances Act, signifying a high potential for abuse and no accepted medical use (Jean, 2023). Nevertheless, individual states can pass their own laws regarding cannabis cultivation, use, and possession. In Florida, where this study was conducted, medical cannabis is legal but non-medical cannabis use remains prohibited (Lorenzo, McClean, & Ford, 2023). This was a frequent discussion among study participants. Some participants mentioned the non-legalization of cannabis as a barrier for its use, indicating that they might be favorably disposed to using it for both medical and non-medicinal purposes if it was legal.

Previous research has shown that health motivation is one of the most important determinants of healthy behaviors (Zwierczyk et al., 2022; Glanz & Bishop, 2010). It is a multidimensional subsystem which involves the processes of choice, need for competency, and self-determination in one's health. Motivation for health behavior is complex but health behaviors experienced as pleasant are more likely to be repeated (Cox,1982; Michaelsen & Esch, 2021). In our study, participants were split in equal halves in their motivation for its use, between non-medical and medical purposes even though cannabis is only legal for medical uses in Florida. Another motivation for use mentioned was that it helped improve their creativity and idea formulation even though there is no scientific literature to support this. As more states shift towards cannabis legalization, and its use becoming more acceptable, these views will probably become more widely expressed (Lake et al., 2020). In our study, a participant mentioned using cannabis to treat glaucoma and cataract. However, while some research suggests that cannabis might lower intraocular pressure in glaucoma, the existing literature is inconsistent. Therefore, it is insufficient to recommend cannabis as a substitute for established glaucoma therapies (Rafuse & Buys, 2019). Scientific evidence supporting cannabis for cataract treatment is currently lacking, underscoring the necessity for tailored and evidence-based communication of research findings to diverse audiences.

5.1. Limitations

This study has several limitations. First, it was conducted in Florida, where cannabis is legal for medicinal purposes, limiting generalizability of findings to contexts where cannabis is legal for both medicinal and non-medical uses. Second, the study relied on self-report data, which may be biased due to the stigma associated with the topic. Third, the data represents young adults meeting eligibility criteria, excluding those who reported binge alcohol drinking and those who were excluded might have different perspectives given the prevalence of heavy alcohol consumption in this age group. Furthermore, the scope of our study encompassed young adults aged between 18 and 35 years, thereby restricting the generalizability of findings to broader age demographics. Additionally, the semi-structured interview guide used in this qualitative study had limitations in scope, as it was originally designed for the parent study's general purpose and not specifically for this research. However, we analyzed all questions comprehensively to identify codes aligning with our health belief model framework. This approach aimed to prevent the omission of valuable information and potential bias. Despite this, a more detailed interview guide might have yielded richer responses. Nevertheless, the standardized guide ensured consistency in data collection. We also lack information on the dual use of medical and non-medical cannabis. The study revealed diverse opinions on cannabis use, benefits, and risks among participants, mirroring those of the general population and healthcare professionals.

6. Conclusion

Findings from this qualitative study provide insights into the complex perceptions and experiences of young adult cannabis users in South Florida. The findings underscore the need for a balanced and evidenced-based approach to cannabis regulation, education, and public health initiatives, especially in a state such as Florida where cannabis is legal for medical purposes only. A significant number of the participants held positive attitudes towards cannabis use. Future research should continue to explore these themes and consider the evolving landscape of cannabis use and policies. Additionally, efforts to reduce stigma and increase education about responsible cannabis use, guided by rigorous research and evidence-based results are crucial toward maximizing the potential therapeutic benefits of cannabis and minimizing the risks associated with use.

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CRediT authorship contribution statement

Amrit Baral: Conceptualization, Methodology, Software, Data

Curation, Formal analysis, Writing-Original Draft; **Vanessa Morales:** Writing-Review & Editing; **Bria-Necole A. Diggs:** Investigation, Writing-Review & Editing, Data Curation, Funding acquisition; **Yetunde Tagurum:** Formal analysis, Writing-Review & Editing; **Meghal Desai:** Formal analysis, Writing-Reviewing and Editing; **Nawaf Alhazmi:** Formal Analysis, Writing-Reviewing and Editing; **Walter A. Ramsey:** Formal analysis, Writing-Reviewing and Editing; **Claudia Martinez:** Validation, Writing-Review & Editing; **Denise C. Vidot:** Supervision, Resources, Project administration, Funding acquisition, Writing-Review & Editing, Validation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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