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MÉMOIRE

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Experience of cannabis use from adolescence to adulthood: an interpretative phenomenological analysis

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ABSTRACT

Background and aims: Levels of cannabis consumption are high during adolescence, but the proportion of cannabis users among adults is also progressing. This study describes the reasons and motivations for continuing cannabis consumption among adults over 30 years old. **Design:** In part of a mixed methods research study, the qualitative study was performed using an interpretative phenomenological analysis. **Setting:** France. **Participants:** People with a history of cannabis use or actual cannabis users were recruited from the TEMPO cohort. A homogeneous purposive sampling was applied, 12 participants, among 36 who reported using cannabis for medical reasons, were selected and interviewed. **Measurement:** The definition of medical use of cannabis in the qualitative study was based on participants' answers to the quantitative study: to manage stress, anxiety, headaches or migraines, to treat chronic pain, depression, muscle spasms, nausea, for loss of appetite, muscle stiffness, to treat epileptic seizures, for tremors, to prevent vomiting, as automedication. **Findings:** Five super ordinate themes were identified in the analysis: 1- a soothing of a traumatic experience thanks to cannabis; 2- an ambivalent relationship with cannabis and close relatives; 3- cannabis, a known soft drug comparable to alcohol or tobacco, leading to an illogical demonization; 4- a recreational use in the context of experimentation; and 5- a desire for exemplary parenting. **Conclusion:** With this first recent study to describe the reasons and views for adults to continue cannabis consumption over 30 years old, we identified ways explaining this consumption. The internal appeasement provoked by cannabis is due to an impossibility to appeasing the violent exterior. So, it seems important to raise the awareness of caregivers to know how to recognize the suffering of adolescents to prevent psychoactive substance use as a consequence.

Keywords: cannabis, therapeutic, consumption, adults, interpretative phenomenological analysis, qualitative interviews

INTRODUCTION

While France has one of the most repressive illegal drug legislations in Europe, it is also one of the European countries with the highest levels of cannabis consumption, 21.8% of the 15-34 years old declared using cannabis at least once [1]. As in other countries, cannabis is the most experimented and used illicit drug in the French population [1]. In 2017, among 18-64 years old, 44.8% had already experimented cannabis (32.9% in 2010), 11.0% continuing to use it in the preceding year (8.0% in 2010), at a ratio of 1 woman for every 2 men [2]. Problematic use can be deducted from the overall number of patients admitted to treatment for the first time for cannabis-related problems, which increased by 76% between 2006 and 2017 in Europe [1].

If the levels of cannabis consumption are high during adolescence, the proportion of cannabis users among adults is progressing, reflecting both the aging of the generations having experimented this product during its period of high diffusion and the slowdown of cannabis initiation among the youngest [3]. In France, daily use is increasing among the older generations: from 1.4% in 2014 to 2.0% in 2017 among 35-44 years old, and respectively from 0.6% to 1.2% among 45-54 years old [2]. Over the past 30 years, observation of cannabis use in the adult population has revealed a trend: an aging of users with experimenters mostly aged over 30 and "uses during the year" increasingly concern people in their thirties and forties. This trend clearly suggests that some of the first generations of users did not give up their cannabis use as they got older. This increase in uses throughout the French population therefore significantly alters the demographic distribution of cannabis consumers [4].

Otherwise, the high risk of problematic use peaks at 28% of users aged between 26 and 44 years old [2]. However, this level varies depending on age: between 45 and 64 years old, more than one out of five are also at a risk increase of problematic use [2]. Thus, among people seeking help from healthcare centers, the percentage of cannabis users over the age of 40 increased from 5.4% in 2007 to 9.6% in 2017 [5,6].

The reasons for cannabis use among adults are lacking. In particular, during adulthood cannabis could be consumed by people with emotional and/or psychological difficulties, in addition to or instead of psychotropic drugs. Indeed, 52% of people aged 50 and over use cannabis for medical purposes and 18% recreationally, compared to 18% and 50% respectively among 18-29 years old [7]. Other studies showed that the first reason for using medical cannabis is pain (52.5% of people) with a higher percentage among those aged 45 and over (60.9%) compared to those aged 25-44 (45.4%) [8]. The other reasons for using cannabis for medical purposes are anxiety, nervousness and depression for 18.8% of the subjects or insomnia for 18.3% of them [8].

A recent qualitative study conducted in the state of Colorado aimed to identify reasons for medical and recreational cannabis use and perceptions of cannabis among people over 60, the primary reason being the use of cannabis for pain control [9]. Some have used it instead of other treatments such as opioids [10].

Between 2014 and 2017, the French Observatory of Drugs and Addictive Tendencies ("Observatoire Français des Drogues et des Tendances addictives", OFDT) conducted the qualitative study ARAMIS in order to better understand the motivations of the youngest to try and consume psychoactive substances, while retracing their consumption trajectories [11]. During its experimentation, cannabis, unlike cigarettes, given rise to positive impressions, and very often benefits from a normalized image, less addictive and less "dangerous" than cigarettes [11]. Nevertheless, the trajectories of cannabis consumption from adolescence to adulthood remain poorly understood and the perceptions and views of the product among adults have not yet been documented in France. Recreational cannabis has often been perceived more negatively than medical cannabis, with views of cannabis being influenced by the way this substance is consumed [9].

Our aim was to determine the reasons and motivations for continuing cannabis consumption as adults over 30 years old among those specifying medical use.

METHOD

In part of a mixed methods research study, we carried out a qualitative study using an interpretative phenomenological analysis (IPA). This type of analysis was used to offer insights of the individual experience and the participants' views, to understand a phenomenon common to all [12]. We used COREQ-32 criteria to ensure the validity of our study [13].

Sampling

The study was based on data from the TEMPO cohort, a cohort of young adults aged 25 to 47, 40 on average in 2020, followed longitudinally since 1991 with successive data collection in 1999, 2009, 2011, 2015, 2018, and in 2020-2021 during the COVID-19 pandemic [14]. In 2021, the TEMPO cohort included 659 participants. Among them, 58% used cannabis at least once in lifetime. Detailed reasons were available for 91% of them.

A homogeneous purposive sampling was applied among participants who reported using cannabis for medical reasons. The definition of medical use of cannabis in the qualitative study was based on participants' answers to the quantitative study: to manage stress, anxiety, headaches or migraines, to treat chronic pain, depression, muscle spasms, nausea, for loss of appetite, muscle stiffness, to treat epileptic seizures, for tremors and to prevent vomiting, as automedication. Participants' characteristics were sought to be diversified.

Sample

One third of the 36 participant who used cannabis in a medical purpose were interviewed. Between January and May 2022, we carried out 12 comprehensive individual interviews in French, each lasting around two hours with sampling within the TEMPO cohort.

During the interviews, we collected information concerning the social-emotional life, professional life, housing, access to healthcare [15]. The participants had a median age of 41.1 years old. There were 7 women and 3 participants had chronic diseases (Table 1).

Data collection

Comprehensive in-depth individual interviews by video conference were recorded after written consent of the participants, anonymized and transcribed. These interviews were conducted freely following the annotations of an interview guide produced by researchers with clinical and cannabis expertise. It included questions about their consumption, quantity and frequency, the reasons of their consumption, but also questions about how they live their consumption (Supplementary material Table 1).

All the researchers also each kept a log book along all the work to write feelings, preconceptions for bracketing (Supplementary material Table 2). Our preconceptions were: adults consuming cannabis to treat physical illnesses, adults that tried all the treatments available. Specifically, we hypothesize that people who use cannabis over the age of 30 do so mainly for medical reasons.

Data analysis

Three phases of analysis were carried out taking into account IPA method [13]. We first analyzed the interviews one by one, coding the verbatim line by line. We have assigned codes to groups of words, sentences or paragraphs. From there, properties have emerged. Then, we created specific categories in each interview. Once each transcript had been analyzed, a table of superordinate themes was constructed. Triangulation between the researchers was done at each step of the analysis. The researchers discussed these codes and reached consensus. Data sufficiency was sought and obtained with conclusive categories identified from the coded data.

Ethics

The Sorbonne University Ethics Committee approved the qualitative study (n° CER-2021-069). All participants gave their written consent.

FINDINGS

We identified 13 categories from which five super ordinate themes emerged (Table 2): 1- A soothing of a traumatic experience thanks to cannabis, 2- An ambivalent relationship with cannabis and close relatives, 3- Cannabis, a known soft drug comparable to alcohol or tobacco, leading to an illogical demonization, 4- A recreational use in the context of experimentation, and 5- A desire for exemplary parenting.

1- A soothing of a traumatic experience thanks to cannabis:

The persons interviewed felt discomfort and unhappy during their adolescence. They felt bad about themselves and used cannabis to feel better. For example, for participant 9 (P9), “There was a malaise. Adolescence was a difficult period for me, with a lot of emotional difficulties. And that allowed me to.... To bring down the level, and then put me in a certain state of stability”. Many of the participants were unable to cope with violent, traumatic external events in their lives. They smoked joints to try to escape their status of victim, a status they were aware of. This traumatic event could be their parents' divorce like for P1 who said: “One day we suggest it and then you say yes. You are not well. You're in that thing where your parents get divorced, at 13, it's the end of the world.” It could also be more serious events like rape. After that event, P2 experienced a series of relationship breakdowns which she didn’t know how to handle. Speaking about her rape, P2 said: “A big party in the countryside, my parents weren't there, so [...] I got quite drunk, I did the big one [...] two of my father's friends [...] took me home in the car and then afterwards... they took advantage of me. So, rape or not, it's complicated, I know I said no [...] but at the same time I was drunk [...] so clearly with hindsight for me, it's rape.”

Other participants had experienced professional or personal harassment, as well as physical or emotional abuse. It could be criticism about weight by their parents (P12) or an abusive partner as for P2: “I went on with someone even worse who really abused me not physically but [...] morally. I had an abortion.”

P8 mentioned the loss of a child: “That's personal but, I've lost a child (cries) so it's never easy... oh shit... there you go (silence)... And so there are times when it... It just feels good to... To be able to think about something else to be able to... To be more zen... To look at it more relaxed. […] I have a little girl who died at birth. Died in utero just before birth (sobs)... It's an experience I wouldn't wish on anyone (I don’t wish for anyone) (sobs). I think that the death of a child is not... It's not in the order of things, we'll say it's hard.”

They were affected by these events and suffered from them. During their interviews, P2, P4 (who experienced breakups and depressions) and P8 cried.

Thus, cannabis was used by many of the participants to treat depression. For them, life was and is a series of continuous struggles. Cannabis relieved them. Smoked cannabis in joint was used for self-medication and was even considered "better" than the so-called classical treatments. They tried other treatments and didn’t want to use them. They identified the benefit of cannabis use by their personal experience. The antidepressant treatment was considered more addictive.

P8: “But on the other hand, I prefer that to taking antidepressants [...] Clearly. My therapist told me, frankly, in your case... It's not worth going into depression... And it's not worth taking antidepressants either. So, if you have something (cannabis) that makes you feel good at the time, it allows you to come down, breathe and relativize...”

2- An ambivalent relationship with cannabis and close relatives:

When discussing cannabis use, the participants explained they knew the risks and assumed it, but at the same time regretted their consumption and were ashamed of it. Moreover, they could feel judged for their consumption: P1 said that she did not appreciate the way others looked at her: “Because of the people. In fact, I'm the one who's panicking [...] I say to myself, 'Oh, there are people around you. My God, there are people around, they'll see me, they'll understand.”

In a similar way, they devalued themselves but also affirmed their strength and their ability to fight their addiction. An addiction that was difficult to fight according to P6: “In Saint Denis, it's a bit difficult to get through cannabis.”

Furthermore, the interviewees liked and hated cannabis at the same time. They liked the taste and smell but they “didn’t advocate cannabis” (P1, P2, P8). The consumption they had, they didn't want it as said by P2: “I’m not in favour of cannabis. The consumption I had I don't want it”. Nevertheless, they had both negative and positive perceptions of cannabis, as explained by P8: “Because I really like the taste of weed, I love all that. I'm a gourmet”

Cannabis was also a way to socialize. It allowed them to belong to a group. It was the breadcrumb that kept them attached to each other, as expressed by P8: “Cannabis a breadcrumb trail (the golden thread)”

It was both a solution to a malaise but also a constraint. They felt appeased but it was in fact a "false" appeasement.

P6: “Cannabis as a smokescreen”

This ambivalence was found in their relationships with their loved ones: they felt supported and supported others, but could also live complicated relationships. For example, for P6, her wife is her “salvation”. She was the one that helped him stop a consumption that was killing him. However, P1’s daughter had a critical look on her mother: “Well, afterwards, it's silly little thoughts of teenage girls that you... but it's just to sting... in fact… she's trying to hurt (laughs)”.

Loneliness, unspoken words and misunderstanding were recurrent feelings when speaking about their family.

P5: “In... our family there were, as in any family... things left unsaid”

This ambivalence was also found in their relationship with doctors. They could trust their doctor but may be suspicious of him or her, such as P1: "Of course, he's a doctor... You know what I mean? He's not going to tell me to smoke, you're right".

3- Cannabis, a known soft drug comparable to alcohol or tobacco, leading to an illogical demonization:

All the 12 participants spread their knowledge especially about cannabis. They discussed the forms of consumption, dosage and the way to obtain the drugs. They knew the difference between cannabidiol (CBD) and tetrahydrocannabinol (THC).

P8: “I think that if there was for example CBD in vapers or things like that like they do in other countries, the risk is almost zero.”

Some had an activist attitude. They insisted on the awareness they had about the importance of providing education about cannabis.

P8: “I think that legalizing and raising awareness much earlier you know in a... in a collective intelligence way. Not in a judgmental way”.

Cannabis was seen as a "natural" soft drug, unlike other so-called "chemical" drugs. One participant even spoke of an "organic" product.

P11: “I mean is it (cannabis) organic... Mainly (laughs) yeah is it organic or has there been chemical input?”

P12: “Cannabis is also natural”.

P12: “A drug or coke, you are necessarily addicted to it much faster than a natural product (cannabis) in quotation marks.”

Cannabis was also distinguished from tobacco or alcohol. It was even considered sometimes less addictive and they preferred it over the negative effects of alcohol or tobacco. This comparison with drinking alcohol and smoking tobacco was omnipresent. They didn’t understand why tobacco or alcohol was legal when cannabis was not.

P9: “Alcohol can cause delirium tremens, you can have very, very violent things actually when you stop drinking and when you have a regular consumption/use of cannabis, it doesn't do that at all.”

According to them, cannabis was demonized. They did not understand why cannabis was judged. They considered this demonization illogical, a demonization advocated by their parents, who were nonetheless members of the Sixties, a period of high diffusion of drugs.

P6: “Cannabis was something that didn't speak to them very much, even though they were members of the sixties.”

4- A recreational use in the context of experimentation:

Most of the participants were seeking for fun and enjoyment, for a feeling of well-being and pleasure. They enjoyed their experience of consumption. They use cannabis, which for them was a symbol of transgression.

P9: “Initially, it's a... an experience of discovery, of a little transgressive research where we are in something where we experiment, we'll say.”

The interviewees had in common this desire to experiment with different drugs but preferred cannabis.

P5: “I dipped into circles that were a bit ... one thing leading to another with other narcotics that I didn't really get hooked on [...] 'ecstasy, rather amphetamine, I tried a little MDMA. But that was purely festive ... In particular situations ... related to either rave parties or private student parties.”

While discussing their use, the participants distinguished the difference between using cannabis, when they were young vs. when they were older. Most of them said that ‘it was different’ now that they were older. They no longer bought it to use recreationally but used it to manage conditions and symptoms, a physical or a mental illness.

Some of the participants, mainly the men, linked their consumption with violence. They experienced violence with their use of cannabis. They dealt cannabis but insist it was the past. They changed as they became parents leading to our last theme.

5- A desire for exemplary parenting:

Most of the participants had children and wanted to be good parents. They tried to combine their cannabis use with their role as parents. P1 claimed she was a good mother and didn’t smoke around her girls.

P1: “I only smoke in the evening. During the day with my children, it's forbidden [...] I’m telling you, I only smoke when my daughters are in bed because it allows me to get high and not have to say to myself, 'Oh, the little ones, what if one gets up?”

This was not only a maternal instinct but also a paternal one. P3 stopped the use of cannabis to support his wife: “as soon as I knew my partner was pregnant [...] I wanted to have clear ideas of how to accompany her during her pregnancy and [...] to manage my child.”

They were responsible parents and their children became their priority. Parenthood was difficult and they recognized the difficulty of their role.

P9: “Something very strong that happens when you become a mother and [...] Everything is put back in its place, I don't know how to say it, but the accessory becomes accessory again and is no longer in the foreground. On the other hand, the essential is finally recognized as being the essential.”

They refused their children repeat their mistakes. They wanted to be better parents than theirs, to be more open but also to resemble their parents whom they admire. We found again the ambivalence theme.

For P6, “Parenthood replaces a lot of drugs.”

DISCUSSION

To our knowledge, this was the first recent study to describe the reasons and views for adults to continue their cannabis consumption as medical cannabis over 30 years old. Later studies, most of them in the early 2000s, did not studied specifically medical cannabis, but rather the perception of cannabis in general all age groups and in particular among adults [16]. In our study, the interviews were conducted in depth on the feelings and emotions of the participants, allowing to describe their personal story and experiences. All reasons to use “medical” cannabis in adulthood were experienced by most of participants.

The use of cannabis to appease traumatic experiences was previously detailed in the literature. Indeed, a systematic review and meta-analysis showed that sexual and physical abuse during childhood were factors affecting vulnerability to cannabis use in adolescence, but was also associated with substance use in adulthood [17]. The internal appeasement provoked by cannabis is due to an impossibility to appease the violent exterior, this internal appeasement being a form of resignation beyond a certain resilience.

In these situations, cannabis is used as an antidepressant. Nevertheless, this role of cannabis as antidepressant was controversial in the literature [18, 19, 20]. A recent randomized trial showed that cannabis improved insomnia but had no effect on anxiety or depression [21]. Cannabis is said to have an euphoric and anxiolytic effect but low symptom improvement and poor quality of life [22]. Anxious and depressed people and cannabis users - not the same level of activation of brain areas [22] which could explain no effect of cannabis.

Cannabis is also seen as a natural, organic product, a notion found in the ARAMIS qualitative study [12]. However, our interviews did not only reveal a more or less regular consumption of cannabis, but also the concept of addiction, which may or may not be assumed by the interviewees. Addiction is a normal reaction to an abnormal situation. This notion of addiction, far from being recent, was defined as “the repetition of acts likely to provoke pleasure but marked by dependence on a material object or a situation sought and consumed with 'greed' ” [23]. Furthermore, the notion of psychotraumatism is found in “the question of considering the emotional deficiencies that lead the addict to pay with his or her body for the unfulfilled commitments contracted elsewhere” [24]. This definition reflected a traumatic reality underpinned by early deficiencies in the subject's infantile history. The idea of a trunk originating in childhood is found, as an addicted person is defined as a slave to a single solution to escape mental pain [25]. This element was observed in some participants of our study.

There are works, recommendations and labelled diagnostic and therapeutic tools to help in the detection of unhappiness in general medicine practice [26, 27]. It is a way to evoke addictions and the possible suicidal thoughts or self-harm of the patient, in order to take care of teenagers at risk.

The ambivalent relationship with close family and friends could be conceptualized by the Karpman drama triangle [28] which identified three roles: the rescuer, the persecutor and the victim. A parallel with cannabis users can be drawn with users who could be considered as victims. In this context, cannabis would be both a savior, that made them feel better and relieved, and a persecutor because it created an addiction that they fought against. The same drama triangle could be observed in their relationships with their loved ones. Parents, brothers or sisters and even friends could be both rescuers in the role of supporters, and persecutors because they judge their cannabis consumption. They were sometimes even their tormentor and the reason for their ill-being (parents' divorce, criticism of their weight, rejection because of their differences). This dramatic triangle helps to explain the situations of inner conflict in which the participants find themselves.

To get out of this triangle, different approaches have been described. The power of The Empowerment Dynamic (TED), published in 2009 [29], suggested that the victim adopted the role of "creator" and considered the persecutor as a "challenger" and calls upon a "coach" rather than a rescuer. The “coach” would help the person to make informed choices. This person could be their wife, like P6 who said his wife was his "salvation", the one who enabled him to get out of this addiction. Similarly, P9, a psychologist, stopped her consumption at the same time she started her psychotherapy sessions. Her psychotherapist can thus be seen as her “coach”.

They deal with their consumption, the view of their entourage on their consumption, but also their role of parents which is very important for them. Thus, we find, in their discourse, the notion of parenthood oriented around several axes including: the experience of parenthood, and the feeling of parenthood clearly explained by the interviewees. They put a certain amount of pressure on themselves: to be a good parent, which is a contemporary injunction [30, 31].

Limitations and future research:

Our study had some limitations. First is the small number of subjects. Nevertheless, the size of the sample was sufficient enough for deep analysis and was close to classic sample in IPA [14]. Second, we interviewed “medical” cannabis users according to a specific definition. The definition of medical cannabis was made out of the literature [30, 31, 32]. But, as the interviews progressed, answers such as “to forget life's problems"”, “to fit in with a group”, “to do what others do”, “to fill a void” could be interpreted as medical reason and not only for “recreational” cannabis. So, the border line between medical and recreational cannabis is thin and difficult to really define. Nevertheless, the definition used corresponds unambiguously to medical problems. Only one interviewee, among the 36 “medical” users, consumed cannabis as CBD oil to relieve muscle pain related to multiple sclerosis, and not as joints as all other participants. It would be interesting to investigate more participants using CBD alone. Third, our sample is not completely representative of the general population. Indeed, the participants were of a high socio-economic level. This is the case for the entire TEMPO cohort as in majority of cohort. Nevertheless, TEMPO cohort is sufficiently heterogeneous to have all socioeconomic levels. Moreover, there were no statistical associations between socio-economic status and cannabis use [33]. Fourth the interviews were mainly conducted by video conference, which may have hindered the relationship between the participant and the interviewer, but the richness of the interviews does not argue too much in this sense.

Our study also has strengths that offset the previously-cited limitations. First, we used a logbook to deconstruct the researchers’ subjectivity. Second, we checked that our study design conformed to 30 out of the 32 criteria of the COREQ checklist for reporting qualitative research [15]. The two criteria not-validated concerned the feedback to participants on the transcripts and the video conference. The feedback to the participants could not be done for ethical reasons. We felt that it would be difficult to show participants that their traumatic experience could have an influence on their use of cannabis. Because of COVID-19 pandemic, the interviews

were mainly conducted by video conference, which could be thought to have hindered the relationship between the informant and the interviewer. But the interviews were deep enough for analysis. And a recent article showed that online focus groups could be a good opportunity for studying addictive online behaviors [34]. It might be the same for individual online interviews. Third, the duration of the interviews made it possible to extract very rich information allowing to better understand the reasons for the use of medical cannabis by adults. Moreover, the comprehensive interviews helped to limit desirability bias. And fourth, our population had a high level of education that allows them to have a high level of literacy to take a step back from medical cannabis [35].

CONCLUSION

Knowledge on reasons to consume cannabis in adulthood allows to target prevention campaign. Moreover, it seems important to raise the awareness of caregivers to know how to recognize the suffering of adolescents to prevent psychoactive substance use. Nevertheless, interviewing people using cannabis defined as "recreational" will be interesting to compare reasons with those using cannabis for "medical" reasons.

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Table 1: Characteristics of the participants

Participants	Sex	Age	Diploma	Socio-professional category	Marital status	Employment status	Place of residence	Residential area	Financial security	Chronic diseases	Forms of consumption	Type of consumption
1	Female	34	General Certificate of Secondary Education	Jewellery sales advisor	Married	Unemployed	House	Urban	Yes	Crohn's disease and DT2	Joint	Recent regular use
2	Female	40	Bachelor's Degree	Employee in a social support service	Married	Unemployed	Family house	Urban	Yes	No	Joint and CBD	Recent regular use
3	Male	41	Master's Degree	Employee in a digital agency	Married	Active	Flat	Urban	Yes	No	Joint	Former consumption
4	Female	39	Master's Degree	Executive in a pharmaceutical industry	Single	Active	Flat	Urban	Yes	No	Joint	Recent occasional use
5	Male	42	Master's Degree	Information systems consultant	Married	Off work	Flat	Urban	Yes	Accromegaly	Joint	Former consumption
6	Male	44	Bachelor's Degree	Railway worker - runs a maintenance workshop	Married	Active	House	Urban	Yes	No	Joint	Former consumption
7	Female	43	Bachelor's Degree	Nurse	Married	Active	House	Urban	Yes	Multiple sclerosis (ALD)	CBD	Recent regular use
8	Female	43	Bachelor's Degree	Executive in a technical cooperation agency	Married	Active	Flat	Urban	Yes	No	Joint	Recent occasional use
9	Female	44	Master's Degree	Psychologist	Married	Active	Flat	Rural	Yes	No	Joint	Former consumption
10	Male	38	Master's Degree	Computer scientist	Married	Active	House	Urban	Yes	No	Joint	Former consumption
11	Male	44	Bachelor's Degree	IT Consultant	Married	Active	House	Rural	Yes	No	Joint	Recent regular use
12	Female	41	Bachelor's Degree	Bank executive	Married	Active	House	Urban	Yes	No	Joint	Recent occasional use

Table 2: Super ordinate themes and categories

Super Ordinate themes	Categories
A soothing of a traumatic experience thanks to cannabis	Unhappiness in adolescence
	Traumatic events
	Cannabis as an antidepressant
An ambivalent relationship with cannabis and close relatives,	An ambivalent relationship with cannabis
	A "false" appeasement?
	An ambivalent relationship with closest relatives
Cannabis, a known soft drug comparable to alcohol or tobacco, leading to an illogical demonization	Being knowledgeable
	Cannabis, a soft drug
	A demonisation deemed illogical
A recreational use in the context of experimentation	Recreational use
	Experimenting with other drugs
A desire for exemplary parenting	Being good parents
	An essential role, difficult to assume

SUPPLEMENTARY MATERIAL

Table 1: Interview guide

Hello, thank you for participating in the interview. Let me introduce myself, I am .... I am a researcher in the research team that runs the TEMPO study that you know.

First of all, I would like to remind you of the framework of the interview: it will be recorded if you still agree, transcribed and anonymised, i.e. no one but me will know who you are. No one will be able to trace your identity. I am going to ask you some questions which are very general but which are intended to allow us to discuss in confidence, so that you can express what you want. Do you have anything to say before we start recording?

Thank you! Starting the interview

To start the interview, could you introduce yourself in a few words?

(Profession, family, home, ...)

If you have been contacted for this interview, it is because you are participating in the TEMPO study and you have filled in the questionnaire on cannabis use and it seems that you have answered that you use it. Is this correct?

What do you think are the reasons why you currently use cannabis or have used it?

- Since when?

- What form?

- Other substances used?

- How often do you use it?

- Alone or with others?

Some of the participants in the study said that they used cannabis to improve their health. What do you think about this? What health problems do you have? What treatment do you have or have had for these health problems (medical or management or lifestyle modification)?

How do you think cannabis improves your health? What disadvantages do you see in it?

How do you get the cannabis you need? What difficulties, if any, do you have in obtaining it?

How do you feel about your cannabis use? Do you have any inner conflict about your use? Can you elaborate?

What are the opinions of people around you or people who know about your use? Does this have an impact on your inner conflict?

Perception of social risks / perception of public health policies

Initiation? Learning effects, technique

Do you have anything to add?

Thank you

Table 2: Log book:

Theme: Cannabis

Topic: Description of the experience of cannabis use among adults and older people: a qualitative approach

Issue: To gain an in-depth understanding of the motivations for using or stopping cannabis use in adulthood, to identify participants' beliefs, opinions and attitudes towards the product, and to explore participants' relationship with the health care system

Question: Why and how do adults and older people experience self-medication with cannabis rather than the use of medication?

Answers to the 7 questions that will be the focus of my diary:

1- What is my initial question?

What are the links between the socio-familial situation and the trajectories of cannabis use from adolescence to adulthood? How does using cannabis improve health? What is their relationship to cannabis?

2- How did I come to ask myself this question?

This question was suggested to me by my internship supervisors, but I have already asked myself this question in my medical practice.

Cardiology internship at Foch in Paris: meeting with a patient in his forties who had suffered from a heart attack. The next day, he asked for "a medicine to sleep" because he usually took cannabis. Father of a family who seemed anxious but I had no idea he was taking it, it surprised me.

3- If I were questioned myself, what would my answer be?

I've tried everything as far as medication is concerned, i'm in pain and nothing helps. But, guilt for doing something illegal. (In all honesty, I don't think I would have used cannabis even if no medicine worked→ but I haven't experienced such pain? /I am prejudiced about cannabis because of its illegality? The risk of addiction?)

4-Why am I convinced that this question is relevant?

It is a topical issue. Since March 26, 2021, France has started experimenting with cannabis for therapeutic purposes. It is important to understand in depth the reason for cannabis use, especially among the 30-40 years old, a population that is little mentioned in cannabis studies compared to younger people.

Major implication for public health.

5- What answers do I expect from the participants?

Cannabis use for purely medical reasons (physical health): because they are in pain, have a chronic illness, depression, anxiety... and conventional treatments have failed or else: Complicated family life, unfavourable socio-economic conditions, despair... push them to use cannabis.

6- What answers do I not expect from the participants?

I use cannabis only to feel good, because I am bored. (Answer generally given by the youngest) -->a priori to be deconstructed

7- What is finally my research question?

Why use cannabis for self-medication rather than for medication? How do the interviewees perceive cannabis use in relation to their environment/society? What are their cannabis use trajectories? Is this cannabis use purely "therapeutic"?

01/02/2022: 1st interview 14:30

A little apprehensive that it won't last long enough.

I imagine a blonde, smiling, single woman working at the post office who smokes during the afternoons, who consumes to "please" herself.

Afraid that she won't respond to reminders.

I hope it will go well.

I hope I'll be natural enough.

Post interview 16:52

Very nice woman. She doesn’t connect after 15 minutes. I decid to call her. She forgot about the interview and was going to take a nap. She coughs a bit on the phone. She says she's happy to answer questions if that helps. Her child is still sleeping, we have time. Small town not far from Marseille. Has a southern accent. The older one has Covid, 15 years old, she knows how to use zoom (for school). Computer too slow, connects to her phone. I would have liked to have been born in 2022 (zoom application asks for the date of birth). We wouldn't have been able to chat. She's laughing. She seems like a very sunny lady. She says "I have time" (this is mostly for you). Talks out loud while trying to get her computer to work.

Start of the interview on video:

Pretty redhead, with fringes (a bit short), hair tied back. Smiling. She was wearing a dark blue plaid jumper (fashionable, influencers on instagram advertise it as "sweet plaid"). Took it off after a minute. Wearing a military green T-shirt. Hollow cheeks, rather thin, surrounded, very smiling and pleasant. Already confident.

She is not wearing headphones and the sound is on speaker when she talks to me

A dog passes behind her

At first, she is in the living room, then in her room (small blackboard with a red heart)

Afraid of the judgement of others, "the doctors themselves..." (I did well not to introduce myself as a doctor)

Sunny house/ black and red kitchen and living room decor

To explain where her pain is, shows her belly with her phone.

Moves when mother-in-law and partner arrive (blonde mother-in-law, partner has a beard, slightly overweight)

Mutes her microphone, I can hear a little annoyance.

Told them she was in a meeting, a meeting about what? / she hasn't worked for 3 years

Two children, two years old with a dummy

Her 15 years old daughter covid+, wears a black mask, a white short and a black skirt

Woman a bit depressed, bored, consumes because it's a need. Covid has turned her life upside down. Very affected by her parents' divorce. Would like to be a good mother +++ Has trouble dealing with all this... Kind, helpful woman, a bit lost. Considers herself an addict/ would not like her daughter to use

Suggests a meeting with her daughter

Insists that her use is now therapeutic whereas when she was young, recreational+++.

Made me feel a bit sorry. Needs to talk. Hides her sadness behind a smile (when she talks about her parents' divorce).

08/02/2022: 2nd interview 17:05 Cancelled

I feel a bit stressed, less than for the first interview but still a bit apprehensive

He's a man, maybe he'll be less "talkative"?

I wonder what he does for a living/ I imagine he works in a company (when I called him last week, he said he was working)

I hope that the interview will be as rich as the first one and that the person will open up

Interview postponed to 09/02 18:00

At first, he doesn't answer my call. I leave a message. He calls me back and explains that he is stuck at work. He hasn't checked his emails. Interview rescheduled for 6pm the next day. I'm a bit annoyed -> waste of time

09/02 no answer to my calls/messages

14/02/2022: 2nd interview 10am

The lady on the phone sounds very nice. She has a deep voice (of someone who smokes a lot). She insists on anonymity.

She says she is looking for a job so she can do the interview at any time.

I imagine that she is single, without children and that she uses cannabis to please herself, to take her mind off things.

It's February 14th (Valentine's Day), could this day be a bias and change her answers-> more or less "depressed" than another day X.

Post interview 12:05

An emotional challenging interview.

She tells me about things that are very difficult for her, including her relationships, sexual relationships, her rape at 17 (where she makes herself feel guilty and puts the blame partly on herself)

Her rape story touched me, without me letting anything show

She has tears in her eyes, her hair gathered up a bit, her cheeks red.

She talks about her self-image, her self-esteem, her overweight, her difficulty in finding a job

At the end of the interview, I try to discuss again and reassure her because I think it was emotionally hard for her (hypersensitive woman)

14/02/2022: 3rd interview 14:30

I imagine a father who has stopped using for his child

Post interview 14:53

He is a man with medium-length hair, no beard and a moustache, a bit of an artist. He tells me he is 1.93m tall. He speaks quickly and does not look me in the eye when he speaks about his consumption. He is a man of a certain socio-economic level. He is a smoker and seems a bit nervous, maybe that's his nature. Feels very guilty

26/02/2022: 4th interview 16:55

Saturday afternoon. She was not very pleasant the first time on the phone but agreed to participate in the interview. I hope she will. I wonder if she has a heavy or complicated past to carry.

18:30 post interview:

Shy young woman. Studied biology and did a thesis which she stopped. She changed her career to marketing. Currently working at Roche in Boulogne. She is actually in Normandy with her parents. Has difficulty talking about herself. Seems very prone to depression. Cried. Did not dare to put the camera in front of her. Lying in bed during the interview. White wool jumper. A certain casualness that masks a great shyness+++.

07/03/2022: 5th interview 12:55

I'm quite serene. The person on the phone sounded serious and organised. I wonder how the interview will go

14:25 post interview

The person had a peculiar face: a prominent chin. He tells me during the interview that he has acromegaly. He used to be a drug dealer. This surprises me. At the beginning, he doesn't look me in the eye, then he gradually opens up. He talks a lot.

08/03/2022: 6th interview 09:15

I wait for the interview to start. It is Women's Day. The interview has already been postponed. He was a bit annoyed. I hope he won't be in a too bad mood; I feel like I'm starting to get used to this kind of interview.

11:34 post interview

He is a slightly fat man with a shaved head. He wears black rectangular glasses. He is a family man. He had a rather "complicated" youth. He was violent but is now coming to terms with it. He is now a father. He insists on the Maghrebian/Algerian side, and is curious to know more about me. I have the impression that he has understood my origins. His wife is Algerian. I was a bit apprehensive about him being silent. In the end, he spoke quite a bit.

18/03/2022: 7th interview 08:55

She is a woman who seems serious and very willing to participate to the interview. She sent her consent a week before the interview.

10:23 post interview

She is a beautiful young woman. She was without her kitchen which overlooks a small garden. She was wearing a jogging suit. She looks older than her face, it must be her illness. She is sweet and looks like she has suffered from her illness. She seems brave.

04/04/2022: 8th interview 13:05

She works abroad. She replied to my email very quickly and seems very willing. She said she would be 15 to 30 minutes late. It's been a while since I've done any interviews.

15:00 post interview

She cried in the first 5 minutes. She talked about a miscarriage. Her distress touched me. She cried several times. She wore a turban on her head. She looked older than her age. Her cheeks were hollow and streaked with tears. She was smoking an electronic cigarette while talking to me.

25/04/2022: 9th interview 09:49

She is a very nice woman on the phone, very friendly, who seems to be involved in research. By re-reading the characteristics of the quantitative study, I wonder if she does not really consume purely for recreational purposes.

11:20 post interview

She is a very thin woman with greying hair. She is wearing a red turtleneck and a colourful striped jumper. She is very friendly and smiling.

20/05/2022: 10th interview 11.20am post interview

He talked about his wife. His wife was in the background, she goes behind him. I wonder if he may have censored himself at times. He didn't look me in the eye.

23/05/2022: 11th interview 11:35am post interview

He is a thin man with long grey hair tied back. He is in a kind of small office (he works from home), quite dark. There is a picture of a little girl carrying balloons. There is a background noise because of his headphones.

07/06/2022: 12th interview 17:35

I call her. She is still at work and asks me to reschedule the zoom meeting. So we move it to 6.30pm. (She had already offered me an interview and did not honour it)

20:00 post interview

She was a full-figured woman. She didn't put the camera right in front of her but you could see the top of her face. She is nice and pleasant. There is her daughter in a room next door.