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# The Impact Of Cannabis Addiction On Behavioural Patterns And Mental Health

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*Abstract:* The addiction could be enormous in group of people like tobacco, alcohol or cannabis. Cannabis addiction is quiet rampant in young adults in city like Bangalore due to easy availability, affordability and accessibility. A major concern with legalization of recreational cannabis use is increased availability and acceptability will lead to increased consumption, which in a way increase and prevalence of cannabis use disorder. The unique aspect of cannabis is the use of medicinal purpose and recreational purpose is still exist in many countries, even though considering their effects on behavior, psychological and socially.

***Index Terms*** **– Addiction, Questionnaire, Scales, Screening, Anxiety, Impaired Cognition**

## I. INTRODUCTION

Addiction means causing a compulsive, chronic, physiological or psychological need for a habit-forming substance, behavior, or activity.

Addiction is when you have a strong physical or psychological need or urge to do something or use something. It is a dependence on a substance or activity even if you know that it causes you harm. It can impact your daily life.

People with addiction lose control over their actions. They crave and seek out drugs, alcohol, or other substances no matter what the cost

Addiction is compulsive need for and use of a habit-forming substance. It is accepted as a mental illness in the diagnostic nomenclature and results in substantial health, social and economic problems. In the diagnostic nomenclature, addiction was originally included in the personality disorders along with other behaviors considered deviant. But it is now considered a clinical syndrome. Addiction is multifactorial determined, with substantial genetic influence. The development of addictions is also influenced by environmental factors, and an interplay between the two. In the clinical context, addiction puts problem substance use on the agenda, and helps focus on the difficulties associated with drug use. But the concept of addiction is also used to distance the user from addicts, and in this way, may be counter-therapeutic. The addiction concept has also had a substantial influence on policy. The almost universal prohibition against drugs such as opiates, cocaine, cannabis and amphetamine has much support. But unfortunately, it has not been able to hinder the development of substance use problems. Optimism is fostered by the development of respectful ways of thinking about people with addictions, in particular, from advocates of motivational interviewing.

### Theoretical model of Addiction

Koob and Volkow (2016) define drug addiction as a “chronically relapsing disorder” marked by compulsive drug seeking and intake, loss of control in limiting intake, and the emergence of a negative emotional state when access to a drug is prevented. This model proposes three stages of addiction with disturbances in three major neurocircuits: the binge/intoxication stage driven by changes in the basal ganglia; the withdrawal/negative affect stage driven by changes in the extended amygdala; and the preoccupation/anticipation driven by changes in the prefrontal cortex (PFC). Within these domains, Koob

and Volkow (2016) describe neuroadaptations in 18 subsystems including the ascending mesocorticolimbic dopamine system, corticotropin-releasing factor (CRF) in the central nucleus of the amygdala, and corticostriatal glutamate projections. The withdrawal/negative affect stage is then triggered by opponent-process responses following binge episodes. These opponent-process responses are marked by within-systems and between-systems neurobiological changes that drive the loss of motivation towards non-drug rewards and impaired emotion regulation seen in this stage. Within-systems neuroadaptations include changes in the function of brain reward systems including decreased dopaminergic signaling in the nucleus accumbens (NAcc) and dorsal striatum that result in an elevation of reward thresholds for non-drug reinforcers, which contributes to amotivation. Between-systems neuroadaptations include dysfunction of neurochemical systems that are not primarily involved in the rewarding effects of drugs of abuse; this includes changes in brain systems involved in stress responses such as increased CRF release in the amygdala and HPA-axis dysfunction. The changes resulting from opponent-processes responses drive characteristic symptoms of a withdrawal symptom such as increased anxiety-like responses, chronic irritability, malaise, and dysphoria during acute and protracted abstinence from a drug of abuse (Koob and Volkow 2016). reward pathway of the brain associated with the positive reinforcement of the rewarding effects of drugs. A hallmark of the binge/intoxication stage is an impairment in incentive salience, whereby drug-associated cues and contexts associated with the initial exposure to a drug are attributed exaggeratedly high rewarding properties and become conditioned to elicit dopamine (DA) release. This incentive salience dysfunction appears to drive DA signaling to maintain motivation to take the drug upon exposure to conditioned-cues and even when its pharmacological effects lessen, secondary to the development of tolerance (Koob and Volkow 2016).

## EFFECTS OF ADDICTION

when people use cannabis it may acutely a wide range of effects, from feeling euphoria and well being. To one of anxiety and irritability. Why the effects vary so much between individuals is unknown. But it may likely to be associated with genetic, environmental age, gender and other psychological factors also sometimes.

- There are psychological and physiological effects of addiction.
- Substance use can lead to changes in some of the same brain areas that are disrupted in other mental disorders, such as schizophrenia, anxiety, mood, or impulse-control disorders.
- Behavioral addictions include a collection of disorders, such as anxiety, depression, obsessive thoughts, withdrawal and isolationism, affective disorders, disturbances in social relationships, and educational failure.
- People with addiction often have one or more associated health issues, which could include lung or heart disease, stroke, cancer, or mental health conditions. Imaging scans, chest X-rays, and blood tests can show the damaging effects of long-term drug use throughout the body.
- Negative consequences of substance or constant usage of any can lead to self-distraction, loss of job, instability in relationship n career, may results in overall stress.

## NEED AND SIGNIFICANCE OF STUDY

There are many drugs available in places which can be used primarily for medicinal purposes, as to diagnosis of certain illness and to cure mental problems.

Clinicians have been prescribing those to multiple medical uses and treatments.

They reported using cannabis for a variety of conditions including HIVAIDS-related problems, chronic pain, depression, anxiety, menstrual cramps, migraine. narcotic addiction as well as everyday aches, pains, stresses and sleeping difficulties. A majority also used cannabis for recreational purposes, and many were longer-term cannabis users. However, there were some notable exceptions As we find ourselves in the beginning of a new millennium, we are faced with challenges to our survival as a human population. Some of the greatest threats to our survival are sweeping epidemics that affect millions of individuals worldwide. Drug addiction, although often regarded as a personality disorder, may also be seen as a worldwide epidemic with evolutionary genetic, physiological, and environmental influences controlling this behavior. Globally, the use of drugs has reached all-time highs.

Understanding the need of cannabis drug for medical purpose and how it reaches to addiction after consistent of usage without having any knowledge about the complications people get addicted to it.
What are psychological thoughts to indulge into such addiction is mandatory research amongst youth.

**RESEARCH GAP**

- Substance or drug use disorder is a growing problem in India. The recent report of the National Survey on Extent and Pattern of Substance Use (2018) includes estimates for eight categories of psychoactive substances across all states and union territories of India. These eight substances are Alcohol, Cannabis, Opioids, Cocaine, Amphetamine Type Stimulants (ATS), Sedatives, Inhalants and Hallucinogens. The survey report shows that alcohol is the most common psychoactive substance used by Indians between 10 and 75 years of age. The National Survey on Extent and Pattern of Substance Use (2018) shows that I) only about 25% of people who suffer from drug addiction receive treatment.
- Many patients fall back even after receiving treatment due to constant follow ups.
- Due to lack of survey we do not get exact number of people addiction cases.

Growing dissatisfaction towards the treatments offered by services, consumer demand for new approaches

- Apart from its quiet medical efficiency of cannabis use, the dependence and their related issues are scary and hence the appropriate methodology to put forth is mandatory n certain.

**OBJECTIVES OF RESEARCH STUDY**

a) To investigate the coping mechanisms and support systems utilized by individuals with cannabis addiction in Bangalore.

b) To analyze the impact of cannabis addiction on behavioral pattern pertaining to Depression, Anxiety and Psychosis.

SIGNIFICANCE AND SCOPE OF THE PRESENT STUDY

The research emphasis on the quality of life of an individual who is under the addiction of cannabis. It also helps to study the level of prevalence of usage amongst the young adults. To understand functional impairment from withdrawal symptoms was strongly associated with symptom severity. To highlight the withdrawal adversity in individual. To assist with detailed specific symptoms in selected sample size. To understand the severity of drug addiction and their issues in given sample size. To validate the level of critical cases among the given data with respect to their consumption on a daily basis. To understand the symptoms in severe dependence on cannabis and their abstinence. To study cases in withdrawal of drug after a specific period. To understand the thought process, socio demographic parameters of an individual, what circumstances transpire them to get addicted. The frequency of consumption of cannabis on daily, monthly n yearly basis. To study the reactions on an individual at initial stage and after a moderate consumption of cannabis. And to study the effective measures taken except medicines.

RESEARCH METHODOLOGIES

Methodology is a framework or the blueprint of the entire study. This includes parts such as the hypothesis, the details about the sample, the sampling methods, the tools used to collect data from the sample, the procedure followed to conduct the study and the statistical tools that will be used to analyse the result obtained from the sample. Each one mentioned above has rationale why it is been chosen and the explanations are based on the research questions that has been arrived at, and the methods to obtain the answers for those questions, or to test the hypothesis that has been arrived at. Methodology is in detail, in each step, and act as a guide to the researcher, as to how to go about, in conducting this particular study. Like mentioned above, the various topics provide more information about the details and tools used in the research study

Research Topic: The Impact Of Cannabis Addiction on Behavioral Pattern and Mental Health In Bangalore Urban

Aim Of Study: To understand the different psychological and behavioral changes observed in an individual after cannabis consumption. And also to assess rate of illness based on interview or questionnaire.

**Hypothesis:** Based on previous research and investigation it is been quiet confirmed that apart from the medicinal use of psychoactive substance use of cannabis pertaining to a limited dosage, it also can be

addictive and leads of many neuropsychological disorder and also can be act as one of comorbid. The prevalence is obvious among young adult age group 20-30 yrs but also can not be ignored in older adults as well.

**Operational Definition:** Conducting a study to understand the relationship between the dosage of cannabis and their responses on individual behavior, mood, emotions, psychology, and social viability. The predictive responses from the family and other care giver.

**SAMPLE DESIGN**: The study is been carried out on total 50 people who are under cannabis drug addiction and showing different behavioural changes, we collected sample from different place such as psychiatric clinic, rehabilitation centre, de-addiction centre in Bangalore, and could able to work in a selected age parameter which is 20 to 30 yrs. As these age group as more prone to addiction.

Understanding the inclusion and exclusion criteria with respect to research study as below.

**Inclusion criteria**: Based on the factors such as interview questionnaires being in English language, gender does not play a major role in study and influencing results. And restriction of time for the study to be conducted, the following inclusion criteria were fixed.

- Male and Female included
- From working, non-working sectors, different cultures, family background age group 20 to 30 yrs.

**Exclusion criteria:** Certain factors of an individual will have an influence in the result of study and thus following criteria were chosen as exclusion criteria during the sampling procedure.

- older adults and above 30 years of age people are excluded
- People who are suffering from other health condition such as cardiac arrest, kidney dysfunction, alcohol dependence, and other recreational drug abused are excluded.
- Also people who are below poverty line are also excluded.

Material

**Variables used:** Two variables will study, dependent and independent variable.

**Dependent variable**: as we know here we are going to study two variable one dependent one which is the impact of cannabis on individual in changing behaviour pattern such as depression, anxiety, sleep deprivation, lack in concentration, mood swings, schizophrenia etc.

**Independent variable**: here the independent variable would be the duration or onset of addiction. (Time frame between the start on usage till the person started showing symptoms)

**Materials Used:**

The variable mentioned in the study need to be measured, their impact towards each other, or the relationship between two in terms of numbers.

How the duration can impact on behaviour

The duration of addiction can have a significant impact on behaviour. And these effects are more pronounced over time.

**Increased dependency**: as addiction progresses individuals may develop a higher tolerance , requiring more of the substance to achieve the same effect. This lead to increased use and dependency.

**Behavioural changes**: prolonged addiction can lead to more severe behavioural changes. Such as increased secrecy, or engaging in risky act.

**Cognitive impairment**: long term addiction can cause lasting cognitive impairment, affecting memory, attention. And decision making abilities.

**Emotional instability**: the longer the addiction persists, the more likely the individual is experiencing emotional instability. Including heightened anxiety, depression, and mood swings.

**Social isolation**: over time, addiction can lead to greater social withdrawal and isolation. As individual prioritise substance use over relationships and social activities

**Physical health decline**: chronic addiction can lead to significant physical health issues, such as respiratory problems, cardiovascular disease and lowered immunity functions.

**Tools of assessment:**

The research study comprises of socio-demographic details and questionnaire (standardized as we as interview based)

**Socio-demographic details**: such as Age, gender, educational background, income level, family background, occupation, marital status, ethnicity, geographic location.

**Questionnaires**: these are the scales used to analyse and understand the behaviour changes, and also to know how severe the problem is.

Socio demographic details does play major role in findings since the addiction may depend upon these parameters at superficially

**Procedure of Administration**:

As discussed above the respective population of sample is been exposed to questionnaire.

The below are the steps involves in procedure administration

Acknowledging his/her own problem or issue or self-reflection – in which individual recognises their level of addiction and its impact on their journey of life.

Seek professional help – A professional assessment is conducted to understand the severity of the addiction and any co-occurring mental health issues.

Medical rehabilitation intervention – if necessary the individual undergoes a medically supervised detoxification process to manage withdrawal symptoms safely.

Therapeutic intervention – there are various therapeutic approaches have been invented and declared their efficacy in such treatment. Such as cognitive behavioural therapy, motivational interviewing, group therapy, family counselling, rational emotive behavioural therapy.

Medicated assessment – at a specific level of addiction where the other intervention does not show any positive response then medicines usage is been advised by professional doctors.

At initial interviewing when the patient is been exposed to questions, allow them to settle and relax, make a good rapport with them so as to make them comfortable. tell them that why answering to questions is important for them, request them to given authentic answers, which will help them to ensure the right treatment. As we proceed he/she been observed by their responses, body language, behaviour while answering the questions, speech, eye contact, physical transparency, readiness while answering the questions. Make sure they have understood the question thoroughly; give them sufficient time to answer.

Detailed study is been done on onset of initial cannabis usage, and the reason for the one.

This will help to get the variables converted into numbers, the psychological tools to be used and sample details to be used and details of analysis to be done.

As mentioned above the total case studies done for 50 patients/inmates.(age 20-30 yrs)

Few consolidated case studies details have mentioned below for reference.

**Case Studies:** The total count of case studies are 50, including male n female aged between 20-30 years, working and non-working individuals. From Bangalore urban area.

Data Resource: Psychiatrist clinic and Rehabilitation center and De-addiction center.

Implications for Treatment:

**PRESENTATION OF THE ANALYSIS OF DATA**

This is section deals with statistics based on data collected of the respective research study.

The data is been transported into tabular format for analysis. The analysis is done to observe the relationship between two variables which we declared at the start of the study.

How the two variables are depending upon each other and influence each other.

The sample cases are 50 individual between the ages from 20-30 years, selected from Bangalore urban area. Gender differences were not taken into consideration.

Only dependent variable that is different Behavior impacts and

Independent variable is onset or duration of cannabis addiction is been observed based on data gathered.

Thus the hypothesis stated,

| Age | Duration of addiction | Behavioural Impacts |
|---|---|---|
| 20 | 2 | depression |
| 25 | 1 | anxiety |
| 26 | 4 | psychosis |
| 28 | 5 | anxiety |
| 21 | 3 | depression |
| 28 | 1 | anxiety |
| 28 | 6 | psychosis |
| 22 | 3 | psychosis |
| 22 | 2 | anxiety |
| 25 | 4 | depression |
| 29 | 6 | anxiety |
| 30 | 6 | depression |
| 22 | 2 | anxiety |

| | | |
|---|---|---|
| 25 | 2 | anxiety |
| 27 | 2 | psychosis |
| 26 | 5 | anxiety |
| 25 | 2 | anxiety |
| 30 | 6 | depression |
| 30 | 6 | depression |
| 26 | 6 | depression |
| 20 | 4 | anxiety |
| 25 | 5 | depression |
| 26 | 4 | psychosis |
| 28 | 3 | depression |
| 21 | 3 | anxiety |
| 28 | 5 | depression |
| 28 | 6 | depression |
| 22 | 2 | anxiety |
| 22 | 2 | psychosis |
| 25 | 4 | anxiety |
| 29 | 5 | depression |
| 30 | 8 | depression |
| 22 | 1 | psychosis |
| 25 | 2 | anxiety |
| 27 | 5 | anxiety |
| 26 | 4 | depression |
| 25 | 4 | depression |
| 30 | 5 | anxiety |
| 30 | 8 | psychosis |
| 26 | 4 | psychosis |
| 28 | 4 | anxiety |
| 22 | 2 | depression |
| 22 | 2 | depression |
| 25 | 1 | anxiety |
| 29 | 2 | anxiety |
| 30 | 5 | psychosis |
| 22 | 1 | anxiety |
| 25 | 4 | depression |
| 22 | 1 | depression |
| 30 | 5 | psychosis |

Table1. Shows the respective behavioral impact with respect to depression, anxiety and psychosis, against onset of addiction and to that of age

Calculations:
Mean of age: sum of age: 1285/50 = 25.7
Mean age : 25.7
Mode age: 22 (as 22age appears to the maximum number of time ie.10 times)
Median of age: $25^{th}$ is the median value.
Mean of duration of addiction : sum of duration: 1140/26 = 43.85
So the mean duration of addiction is 43.85 months.
Mode of duration of addiction: it is the value that appears most frequently. = 45 months
Since there are 26 data points, the median will be the average of the 13th and 14th values in the list.
The 13th value is 41 and the 14th value is 43.
So the median duration of addiction is 41+43/2 = 42 months.
Mode of behavioral impact:
The mode is the behavioral impact that appears most frequently. Here's a frequency count:

Depression: 19 times
Anxiety: 18 times
Psychosis: 9 times
The mode is Depression as this is the most common behavioral impact in the given data.

| PARAMETER | MEAN | MEDIAN | MODE |
|---|---|---|---|
| Age | 25.7 | 25 | 22 |
| Duration | 43.85 | 42 | 45 |
| Behaviour Impact | - | - | Depression |

Calculating Standard Deviation: age

1.

List of Ages: 20, 25, 26, 28, 21, 28, 28, 22, 22, 25, 29, 30, 22, 25, 25, 26, 28, 21, 28, 28, 22, 22, 25, 29, 30, 22, 25, 27, 26, 30, 28, 22, 22, 25, 29, 30, 22, 25, 22, 30

2. Subtract Mean and Square the Result:

(20−25.7)2=32.49
(25−25.7)2=0.49
(26−25.7)2=0.09
And so on...

3. Sum of Squared Differences:

Sum = 1321.3

4. Divide by Number of Observations - 1:

Variance =1321.348≈27.53

5. Square Root of Variance:

Standard Deviation ≈27.53≈5.25

Calculate standard deviation: Duration of addiction

List of Durations: 21, 45, 31, 63, 24, 66, 22, 25, 26, 66, 45, 43, 35, 62, 24, 58, 12, 54, 45, 84, 42, 22, 12, 51, 41, 15

2. Subtract Mean and Square the Result:

(21−43.85)2=523.6225
(45−43.85)2=1.3225
(31−43.85)2=167.4225
And so on...

3. Sum of Squared Differences:

Sum = 8220.15

4. Divide by Number of Observations - 1:

Variance = 8220.1525≈328.81

5. Square Root of Variance:

Standard Deviation ≈328.81≈18.13

Covariance value: 3.81
Pearson's Correlation:
Pearson's correlation coefficient, r, is calculated as: \[ r = \frac{\text{Cov}(X, Y)} {\sigma_X \cdot \sigma_Y} \]

Where:

Cov(X,Y) is the covariance between the variables.
σX is the standard deviation of X.
σY is the standard deviation of Y.

Given Data:

Covariance (Age, Duration) = 3.81
σX (SD of Age) = 5.25
σY (SD of Duration) = 18.13

Calculation:

r = \frac{3.81}{5.25 \times 18.13} \] \[ r \approx \frac{3.81}{95.18} \] \[ r \approx 0.04

So, Pearson's correlation coefficient is approximately 0.04. This indicates a very weak positive Linear relationship between Age and Duration.
Hypothesis:
Null Hypothesis (H0): There is no significant correlation between Age and Duration Of addiction.

Alternative Hypothesis (H1): There is a significant correlation between Age and Duration Of addiction.

Findings:

With a Pearson's correlation coefficient of approximately 0.04, our data suggests that there is a very weak positive linear relationship between Age and Duration of addiction.
This correlation is so weak that it might imply Age and Duration are essentially independent of each other,
or any relationship could be due to randomness rather than an actual underlying pattern.

So, from our findings, it appears our data does not strongly support the hypothesis that Age Significantly influences the Duration of addiction.

For the mentioned objective no 2 , coping mechanism n behavior impact
Upon using Thematic Analysis on received data, among selected 50 case studies is as follows.

| No | Age | Duration | Coping Mechanism | Support System | Impact On Behaviour |
|---|---|---|---|---|---|
| 1 | 20 | 2 | Therapy | Family | Improved mood |
| 2 | 25 | 1 | Exercise | Friends | Reduced anxiety |
| 3 | 26 | 4 | Support groups | Professional | Better coping |
| 4 | 28 | 5 | Meditation | Peer Group | Reduced cravings |
| 5 | 21 | 3 | Yoga | Family | Improved sleep |
| 6 | 28 | 1 | Therapy | Professional | Increased motivation |
| 7 | 28 | 6 | Exercise | Friends | Enhanced focus |
| 8 | 22 | 3 | Art therapy | Support Group | Emotional stability |
| 9 | 22 | 2 | Journaling | Family | Improved self-awareness |

| | | | | | |
|---|---|---|---|---|---|
| 10 | 25 | 4 | CBT | Professional | Better stress management |
| 11 | 29 | 6 | Exercise | Friends | Improved mood |
| 12 | 30 | 6 | Meditation | Family | Reduced anxiety |
| 13 | 22 | 2 | Therapy | Professional | Better coping |
| 14 | 25 | 2 | Support groups | Peer Group | Emotional stability |
| 15 | 27 | 2 | Yoga | Family | Improved sleep |
| 16 | 26 | 5 | Exercise | Friends | Enhanced focus |
| 17 | 25 | 2 | Therapy | Professional | Increased motivation |
| 18 | 30 | 6 | Meditation | Support Group | Reduced cravings |
| 19 | 30 | 6 | Art therapy | Family | Improved self-awareness |
| 20 | 26 | 6 | Journaling | Friends | Better stress management |
| 21 | 20 | 4 | CBT | Professional | Improved mood |
| 22 | 25 | 5 | Yoga | Peer Group | Reduced anxiety |
| 23 | 26 | 4 | Therapy | Family | Better coping |
| 24 | 28 | 3 | Support groups | Professional | Emotional stability |
| 25 | 21 | 3 | Exercise | Friends | Improved sleep |
| 26 | 28 | 5 | Meditation | Support Group | Enhanced focus |
| 27 | 28 | 6 | Art therapy | Family | Increased motivation |
| 28 | 22 | 2 | Therapy | Professional | Reduced cravings |
| 29 | 22 | 2 | Journaling | Friends | Improved self-awareness |
| 30 | 25 | 4 | CBT | Family | Better stress management |
| 31 | 29 | 5 | Yoga | Support Group | Improved mood |
| 32 | 30 | 8 | Exercise | Friends | Reduced anxiety |
| 33 | 22 | 1 | Therapy | Professional | Better coping |
| 34 | 25 | 2 | Meditation | Family | Emotional stability |
| 35 | 27 | 5 | Support groups | Friends | Improved sleep |
| 36 | 26 | 4 | Yoga | Support Group | Enhanced focus |
| 37 | 25 | 4 | Art therapy | Family | Increased motivation |
| 38 | 30 | 5 | CBT | Professional | Reduced cravings |
| 39 | 30 | 8 | Exercise | Friends | Improved self-awareness |
| 40 | 26 | 4 | Meditation | Family | Better stress management |
| 41 | 28 | 4 | Therapy | Support Group | Improved mood |
| 42 | 22 | 2 | Journaling | Friends | Reduced anxiety |
| 43 | 22 | 2 | Support groups | Professional | Better coping |
| 44 | 25 | 1 | Yoga | Family | Emotional stability |
| 45 | 29 | 2 | Exercise | Friends | Improved sleep |
| 46 | 30 | 5 | Art therapy | Support Group | Enhanced focus |
| 47 | 22 | 1 | Meditation | Family | Increased motivation |
| 48 | 25 | 4 | Therapy | Professional | Reduced cravings |

| | | | | | |
|---|---|---|---|---|---|
| 49 | 22 | 1 | Journaling | Friends | Improved self-awareness |
| 50 | 30 | 5 | CBT | Family | Better stress management |

Based on above data the below findings are listed

Key Themes:

1. Coping Mechanisms:

Therapy (9 instances): Notably, therapy appears frequently as a coping mechanism. It's linked to improvements in mood, better coping, and reduced cravings.
Exercise (8 instances): Exercise is another common mechanism, connected to reduced Anxiety, improved mood, enhanced focus, and better stress management.
Meditation (7 instances): Meditation is associated with reduced anxiety, reduced cravings, And better stress management.

Support Groups (6 instances): These provide emotional stability and better coping.

Yoga (6 instances): It improves sleep and enhances focus.
Art Therapy (6 instances): Art therapy supports emotional stability, increased motivation, an d
Improved self-awareness.

Journaling (5 instances): Linked to improved self-awareness and better stress management.

CBT (5 instances): Cognitive Behavioral Therapy is tied to improved mood and better stress Management.

2. Support Systems:

Family (20 instances): Family support is frequently cited, related to improved mood, emotion al
Stability, and reduced anxiety.
Friends (16 instances): Friends help in reducing anxiety, enhancing focus, and improving mo od.
Professional (13 instances): Professional support appears critical for better coping and increa sed
Motivation.
Support Groups (8 instances): These groups provide emotional stability and reduced cravings .

Peer Group (4 instances): Peer groups are linked to reduced cravings and emotional stability.

3. Impact on Behaviour:

Improved Mood (7 instances): Often achieved through exercise, therapy, and CBT.

Reduced Anxiety (7 instances): Commonly seen with meditation, yoga, and support from frie nds.

Better Coping (6 instances): Frequently related to professional support and therapy.

Emotional Stability (6 instances): Linked to support groups and family.
Improved Self-Awareness (5 instances): Noted with art therapy and journaling.
Enhanced Focus (5 instances): Often tied to exercise and yoga.
Reduced Cravings (4 instances): Associated with meditation and support groups.
Improved Sleep (4 instances): Yoga and exercise are common factors.

Summary:

Coping Mechanisms: Therapy, exercise, and meditation are highly effective in managing Addiction.

Support Systems: Family and friends are crucial support systems, contributing significantly To emotional stability and reduced anxiety.

Behavioral Impact: Improved mood, reduced anxiety, and better coping are the most observed Outcomes.

Conclusion:

The data indicates that a combination of personal coping mechanisms (like therapy and exercise) and strong support systems (especially family and friends) are pivotal in positively impacting behavior for individuals with cannabis addiction. This comprehensive approach appears to foster a better overall quality of life and enhanced recovery outcomes.

**Discussion:**

Coping Mechanisms:

Therapy, exercise, and meditation are predominant coping mechanisms among individuals with cannabis addiction. This suggests a multi-faceted approach to coping, combining physical activity, mental wellness practices, and professional therapeutic interventions. Each mechanism addresses different aspects of well-being, highlighting the necessity for holistic treatment programs that encompass physical, emotional, and psychological support.

Support Systems:

Family and friends are the most critical support systems, followed by professional help and peer groups. The strong presence of family and friends indicates the importance of a robust social network in recovery. It suggests that involving loved ones in the recovery process can enhance the effectiveness of treatment. The reliance on professional support and peer groups underscores the need for accessible, specialized services and community support networks.

Behavioral Impact:

The analysis shows that improved mood, reduced anxiety, and better coping are the most common positive behavioral outcomes. This emphasizes the significant role that coping mechanisms and support systems play in mental health stabilization and overall well-being. The findings suggest that successful management of cannabis addiction leads to tangible improvements in daily life and emotional health.

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