Exploring the Personality Traits of Substance Users

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Received: 09-03-2025 **Revised:** 10-04-2025 **Accepted:** 07-05-2025 **Published:** 26-06-2025

ABSTRACT

This study aimed to explore the relationship between personality traits and substance use across different drug categories, including heroin, cannabis, alcohol, sedatives, and methamphetamine (ice) users. The research was relevant as it provided insight into the personality characteristics that contribute to substance use and how these traits influence treatment outcomes. Existing literature suggests that substance use often correlates with specific personality patterns, such as impulsivity, introversion, and aggression. Using a qualitative research design, the study employed thematic analysis to examine data from individual interviews with one participant from each drug category, yielding a total sample size of five. Data collection involved semi-structured interviews, and the analysis focused on identifying prevalent themes and sub-themes related to personality traits. The findings revealed that different substance users exhibited distinct personality traits, with heroin users showing mood instability and low decision-making, cannabis users displaying defensiveness and low self-esteem, and ice users exhibiting aggressiveness and guilt. Sedative users, on the other hand, tended to be introverted, humble, and familyoriented. These results contribute to the understanding of how personality traits affect substance use patterns and have implications for tailoring therapeutic interventions. Limitations of the study include the small sample size and reliance on self-reported data, which may limit generalizability. Future research should explore larger samples and longitudinal designs to better understand the causal relationships between personality traits and substance use.

Keywords: personality traits, substance use, thematic analysis, drug users, intervention strategies.

INTRODUCTION

Humans are inherently complex, marked by multifaceted constructs such as personality, which fundamentally shapes their behavior and emotional responses. Personality refers to consistent patterns of thought, emotion, and behavior, along with the underlying psychological mechanisms that influence these patterns (Funder, 2013). It encompasses a wide range of attributes that contribute to an individual's uniqueness. This includes how a person solves problems, communicates emotions, and reacts to external events. Personality is shaped through a dynamic interplay of genetic, environmental, and experiential factors. Traits such as extraversion, openness, conscientiousness, agreeableness, and neuroticism—the Big Five personality traits—are formed and influenced over time through experiences within familial, cultural, and social contexts. Though these traits may undergo mean-level changes across the lifespan, substantial stability persists in individual differences (Caspi & Roberts, 2001), making personality a reliable predictor of behavior over time.

Individual differences in personality have been extensively linked to various life outcomes, including job performance (Hurtz & Donovan, 2000), criminal behavior (Samuels et al., 2004), and health-related behaviors (Mõttus et al., 2013). The enduring nature of personality traits makes them instrumental in shaping lifelong behavioral patterns. Research confirms that despite the influence of life events and environmental factors, these elements often reinforce rather than radically alter core personality traits. This stability allows personality to predispose individuals to certain choices and behaviors, for better or worse. Among the more concerning behaviors influenced by personality traits is drug use, which often emerges in individuals with specific trait combinations, such as high neuroticism and low conscientiousness. Understanding these associations is crucial for developing preventive strategies and therapeutic interventions tailored to individual personality profiles.

Drug use and addiction are multifaceted issues influenced by a combination of psychological, genetic, and social factors. Personality traits, especially those within the Five Factor Model, play a pivotal role in predicting susceptibility to drug use. Individuals with high neuroticism are more prone to experiencing negative emotions, while those with low agreeableness and low conscientiousness often demonstrate hostility and poor self-regulation, respectively—traits commonly associated with substance use (Anderson et al., 2007). Adolescents with heightened negative emotionality or reduced constraint are also more likely to develop substance dependence in early adulthood (Elkins et al., 2006). These findings indicate that personality traits not only influence the likelihood of initiating drug use but may also contribute to the development of long-term substance use disorders (SUDs), establishing a strong foundation for understanding addiction through the lens of personality.

Among the Big Five traits, extraversion and openness to experience have shown notable associations with risk-taking and substance use. Extraverted individuals tend to seek stimulation, thrive on social interaction, and display enthusiasm and assertiveness. Their desire for excitement and novelty can lead to greater experimentation with substances (Feiler & Kleinbaum, 2015), and their social nature might increase susceptibility to peer pressure (Allen & Laborde, 2020; Benotsch et al., 2013). Similarly, those high in openness are curious, imaginative

The relationship between personality traits and substance use has been widely studied, with the Big Five personality dimensions offering a structured framework for understanding individual differences. Openness to experience, characterized by traits like curiosity, inventiveness, and a willingness to explore new experiences, has been associated with increased risk-taking behavior. Individuals high in openness

may experiment with psychoactive substances to experience perceptual or cognitive changes, potentially leading to drug use as a means of enhancing creativity or novelty (Kang, 2022; Merenäkk et al., 2003). In contrast, conscientiousness represents attributes such as organization, discipline, and goal orientation. Highly conscientious individuals are typically more self-controlled and deliberate in their actions, which reduces their susceptibility to impulsive behaviors such as substance misuse (Malouff et al., 2007; Roberts et al., 2014). Their ability to evaluate consequences and maintain consistent life goals serves as a protective factor against drug use.

Agreeableness, which encompasses cooperation, empathy, and a strong concern for social harmony, is another dimension linked to lower substance use. Individuals who score high on agreeableness are typically averse to conflict and seek to maintain peaceful relationships, often avoiding risky behaviors that could jeopardize their social bonds (Turiano et al., 2012; Soto & Jackson, 2020). Their prosocial nature may deter them from engaging in substance use, which is frequently associated with social stigma and interpersonal strain. Conversely, those with low agreeableness may demonstrate more competitive, assertive, or even antisocial behavior, increasing their risk of engaging in substance use (Kinyanjui & Sum, 2023; Kroencke et al., 2020). These individuals may prioritize personal goals over social harmony, making them more vulnerable to drug-related behaviors.

Neuroticism, defined by emotional instability, anxiety, and vulnerability, is consistently associated with an elevated risk of substance use. Individuals high in neuroticism often experience negative emotions intensely and may turn to substances as a maladaptive coping strategy to manage stress, fear, or sadness (Roncero et al., 2014; Terracciano et al., 2008). This coping mechanism, however, may create a feedback loop where substance use exacerbates emotional dysregulation, further deepening neurotic tendencies (Yang et al., 2020). Additionally, environmental and psychological stressors such as trauma, anxiety, or preexisting mental health disorders are common underlying causes of substance use. Prolonged stress, in particular, can alter brain chemistry and functioning, promoting substance dependency as a temporary relief mechanism, though it often results in long-term harm and addiction (Kranzler & Liebowitz, 1988; Sinha, 2001).

Mental health disorders, including depression, PTSD, and bipolar disorder, are frequently co-occurring with substance use, with many individuals resorting to drugs or alcohol as a form of self-medication (Khantzian, 1985; Weaver et al., 2003). Trauma, whether due to abuse, neglect, or life-threatening experiences, significantly increases the likelihood of substance misuse as individuals seek escape from psychological pain (Giordano et al., 2016; Brailsford & Myrick, 2010). Cultural, genetic, and social factors further moderate this complex interaction, highlighting that personality traits not only predispose individuals to drug use but may also be altered by prolonged substance abuse. The current study explores these associations within the cultural context of Pakistan, offering insights into how personality traits, stressors, trauma, and mental health collectively shape the patterns of substance use and its long-term consequences.

LITERATURE REVIEW

Drug abuse remains one of the most pressing global challenges, affecting not only individual health but also social, economic, and cultural domains. In Pakistan, despite policy-level interventions and financial investments, addiction control efforts have not yielded satisfactory results. This failure emphasizes the need for more scientific approaches to understanding and addressing drug abuse. Data from treatment centers and scholarly sources highlight alarming relapse rates—over 90% within a year of detoxification. Therefore, initial prevention, focused on protective rather than risk factors, is essential. Prevention is now viewed as a critical part of treatment and rehabilitation, reducing the overall societal burden of addiction.

Personality traits significantly influence the likelihood of developing substance use disorders. Traits such as impulsivity, thrill-seeking, rebelliousness, and nonconformity have been consistently associated with higher risks of drug abuse, while negative emotionality may result from, rather than lead to, substance use. Research shows that even in early childhood, personality differences can predict substance use patterns. Young drug abusers often score high on neuroticism and low on conscientiousness and agreeableness—traits that tend to remain stable across the lifespan. These findings highlight the importance of personality profiling in both prevention and early intervention strategies. Stress is another critical risk factor for substance use, especially when combined with vulnerable personality traits. Environmental and economic stressors exacerbate the likelihood of drug use and relapse. For instance, neurotic individuals may perceive stress more intensely, leading to unhealthy coping mechanisms such as substance use. Multiple studies confirm the correlation between stress, depressive symptoms, and substance abuse, especially among college students. Understanding the interaction between stress and personality traits—particularly neuroticism and low conscientiousness—can help predict substance use and guide targeted interventions.

Theoretical models like Freud's psychoanalytic theory and Khantzian's self-medication hypothesis offer valuable insights into the psychological underpinnings of addiction. Psychoanalytic theory suggests that unresolved unconscious conflicts and defense mechanisms such as denial and repression may manifest through substance use, especially in individuals with high neuroticism. Similarly, the self-medication theory posits that individuals use drugs to alleviate emotional or psychological distress. These frameworks provide a robust theoretical base for understanding the complex motivations behind addictive behaviors, particularly among individuals with distinct personality profiles. Substance abuse is a global issue, with more than 296 million people—around 6% of the population—are involved in drug use. Pakistan, approximately 6.8 million people—around 6% of the population—are involved in drug use. Pakistan's proximity to Afghanistan, a major producer of opiates, complicates its battle against drug trafficking and addiction. Synthetic drugs like methamphetamine have also become increasingly prevalent. This growing crisis poses serious social, economic, and public health challenges that must be addressed with culturally tailored strategies.

Pakistan's collectivist cultural framework influences personality development and behavior. In such tightly knit societies, individual autonomy can be compromised, often resulting in heightened impulsivity and aggression. Research indicates that these traits are more common in collectivist cultures and are associated with higher susceptibility to harmful behaviors, including drug use. The collectivist pressure to conform, coupled with limited emotional autonomy, may drive individuals to experiment with substances as a means of coping. Thus, cultural and personality dimensions must be considered when designing effective prevention and intervention strategies. Considering the multifaceted nature of substance abuse, it becomes imperative to explore the link between personality traits and different types of drug use. The current study aims to identify the specific personality traits associated with the use of alcohol, marijuana, and narcotics within Pakistan's socio-cultural context. It also seeks to understand how environmental stress and cultural dynamics influence these behaviors. By examining personality profiles, the study hopes to contribute to the development of primary prevention strategies, reducing drug abuse risk among vulnerable populations.

METHODOLOGY

Research Design

This study employed a qualitative research design with an inductive approach. Qualitative methodology was selected to allow in-depth exploration of participants' lived experiences, perceptions, and personality characteristics. The inductive approach enabled the identification of emerging themes and categories from

participant narratives, thus preserving the depth and richness of the data (Damyanov, 2023). Participants were engaged as active contributors, and the study design accounted for individual differences, cultural context, and life histories.

Sample

The study sample consisted of five participants selected through purposive sampling. This non-probability sampling technique involves selecting individuals who meet specific characteristics relevant to the study objectives (Obilor, 2023). All participants were self-identified drug users currently attending a rehabilitation center.

Inclusion Criteria

Participants were required to meet the diagnostic criteria for substance use disorder (specific to one drug) as outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Exclusion Criteria

Individuals using multiple substances without a primary drug of use were excluded from the study.

Data Collection Tool

Data were collected using semi-structured interviews guided by an interview protocol comprising openended questions. This format allowed flexibility and encouraged detailed, personal narratives, while also maintaining a structured direction for data collection. The interview guide was developed with reference to previous literature and included questions about family dynamics, personal characteristics, drug use history, and the development of substance dependence over time. The semi-structured approach facilitated a comfortable environment in which participants could freely express their thoughts, emotions, and experiences, thus enriching the dataset with authentic insights.

Procedure

Prior to data collection, informed consent was obtained from all participants. They were briefed about the voluntary nature of the study and assured that their confidentiality would be maintained throughout. Participation could be withdrawn at any stage without any consequences. Data collection was conducted in two phases. In the first phase, demographic information was gathered using a brief questionnaire, including age, education level, marital status, occupation, socioeconomic background, and the initial age of drug use. In the second phase, in-depth interviews were conducted with participants who met the inclusion criteria. The interviews were audio-recorded with participant consent and later transcribed verbatim for analysis. Data from the interviews were analyzed using reflexive thematic analysis, allowing for a nuanced understanding of personality traits and their connection with specific substances. Table 1 presents the demographic profile and drug use history of each participant.

Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional review board. Participants were informed of the study's purpose and their rights. All data were anonymized and securely stored to protect participant confidentiality. The research adhered to ethical guidelines in qualitative research, including respect for autonomy, beneficence, and justice.

RESULTS

Table 1Profile and Drug Use History of Patients (n=5)

Profile	Heroin User	Cannabis User	Alcohol User	Sedative User	Ice User
Age	28	25	32	36	27
Siblings	2	4	3	3	3
Financial Status	Upper Middle class	Middle Class	Middle Class	Middle Class	Middle class
Education	Masters in business management	Till Matric	Till Matric	Till FSC	Till FSC
Reason of Addiction	Curiosity	Peer Pressure	Social isolation Peer pressure	Trauma	-
Duration	Age 21 onwards	Age 16 onwards	Age 18 onwards	Age 31 onwards	Age 18 onwards
Personality Before	Polite, calm Easy going	Attachment issues aggressive	Confident and strong	Polite and silent	Caring and obedient

This chapter explores how personality characteristics influence substance use. Thematic analysis was conducted on interviews with five types of drug users: heroin, sedatives, alcohol, ice, and cannabis. This section presents common themes and sub-themes that emerged, with a focus here on heroin and cannabis users.

Table 1Personality Traits among Heroin Users (n = 1)

No.	Theme	Sub-theme	Relevant Codes
1	Self-Regarding	Moody personality, guilt, strong willpower	Emotional inconsistency, impulsivity, self- infliction, regret, curiosity
2	Socialization	Aggression, introversion, emotional dependency	Isolation, poor social ties, grief, rigidity
3	Occupational Impact	Music orientation	Music as coping, goal-setting, therapeutic value

Theme 1. Heroin users exhibited emotional instability and inconsistent behavior. Mood swings led to difficulty maintaining discipline and routines. Impaired decision-making, self-infliction, and guilt were common. Curiosity and the desire for autonomy contributed to initial drug experimentation.

Theme 2. The participant reported introversion and aggression, distancing from peers but showing emotional dependency on parents. There were strained relationships, a tendency to isolate, and a need for family validation, especially following the loss of his grandmother—a key emotional support figure.

Theme 3. Music emerged as both a coping mechanism and an unfulfilled aspiration. The participant found comfort in music, using it to regulate emotions and manage stress. Music also symbolized lost potential, contributing to feelings of failure and frustration.

Table 2Personality Traits among Cannabis Users (n = 1)

No.	Theme	Sub-theme	Relevant Codes
1	Self- Regarding	Guilt, over thinking, low self-worth	Self-blame, procrastination, obsessive thoughts, emotional fragility
2	Socialization	Friend support, face value concern	Interpersonal conflict, family respect, appearance anxiety
3	Desires	Drug craving, family importance	Ambivalence between substance use and maintaining family harmony

Theme 1 Self-Regarding. Cannabis users often dealt with guilt, low resilience, and emotional sensitivity. Distorted thoughts, fantasy living, and a lack of self-worth were dominant. The participant expressed frequent self-blame and confusion, often linked to unresolved relationship trauma.

Theme 2 Socialization. While valuing family and friends, the participant struggled with interpersonal boundaries. There was an evident concern for social image and discomfort in facing others. Although respectful towards family, he maintained emotional distance from most people.

Theme 3 Desires. A conflict emerged between the desire for drugs and the importance of family life. Despite drug dependence, the participant expressed a longing for meaningful family relationships, signaling internal struggle between addiction and familial responsibilities.

Table 3Prevalent Personality Characteristics of Sedative Users (n = 1)

No.	Theme	Sub-Themes	Relevant Codes
1	Emotional Dysregulation	Emotional numbness, Dissociation	Disconnected, Detached from emotions, Emotional blunting
2	Coping Deficiency	Escapism, Avoidance behavior	Avoidant coping, Withdrawal, Escaping reality
3	Dependency	Psychological reliance	Craving, Need for sedation, Routine drug use
4	Social Detachment	Limited social engagement	Isolation, Reduced communication, Passive interactions
5	Cognitive Impairment	Memory lapses, Lack of focus	Forgetfulness, Slow processing, Mental fog

The analysis of sedative users revealed five predominant themes that outline their psychological and behavioral characteristics. First, Emotional Dysregulation was evident, with users displaying emotional blunting and dissociation, which acted as a defense mechanism to avoid emotional distress. This was closely tied to Coping Deficiency, as participants relied heavily on avoidance strategies such as escapism and withdrawal, demonstrating a lack of effective emotional processing. The theme of Dependency highlighted a psychological reliance on sedatives, with users expressing a need for the substance to cope with daily challenges, indicating patterns of habitual use and potential addiction. Social Detachment was also apparent, as participants often withdrew from social interactions, possibly as a result of the sedative effects or due to a desire to avoid perceived judgment. Finally, Cognitive Impairment emerged as a significant factor, with users experiencing memory lapses and impaired decision-making, suggesting that sedative use affects cognitive functions, leading to sluggish thinking and difficulty in managing day-to-day tasks. Collectively, these themes illustrate a personality characterized by emotional avoidance, social isolation, and cognitive decline, underpinned by a deep psychological reliance on sedative substances.

Table 4Prevalent Personality Characteristics across Sedative Users (n = 1)

No.	Theme	Sub-Theme	Relevant Codes
1	Self-Regarding	Introverted Personality	Separated and isolated, Guilt over drug usage
		Concern for Face value	Guilt over drug usage
		Humble personality	Polite person, Care for others
		Non-aggressive	Care for others
2	Family	Family oriented	Family is role model
		Strong relation with wife	Understanding wife

The prevalent personality traits observed in a sedative user include self-regarding and family oriented characteristics. The Self Regarding theme reflects the participant's introverted personality, with a tendency toward isolation and a significant concern for face-value. This anxiety-driven self-consciousness led the participant to hide their drug usage, resulting in emotional turmoil. Despite the emotional conflict, the participant exhibited a humble and non-aggressive demeanor. The Family theme revealed a strong connection with family, especially with the participant's wife, who was seen as a major support system.

Prevalent Personality Characteristics across Ice Users (n = 1)

Table 5

No.	Theme	Sub-Theme	Relevant Codes
1	Self-Regarding	Aggressiveness	Quick to learn things, Guilt over behavior
		Good Learning	
		Low self-esteem	Lack of self-worth, Overthinking
		Physical Violence	Fights with people, Self-harm

No.	Theme	Sub-Theme	Relevant Codes
2	Socialization	Concern for Face value	Social interconnectedness, Bad influence to others
		Social interconnectedness	Importance of family and friends

For the Ice (Methamphetamine) users, the Self-Regarding theme points to impulsive behaviors, heightened aggressiveness, and a significant lack of self-esteem. These traits were often linked to guilt and remorse after violent outbursts. The Socialization theme reflects feelings of social isolation and internalized pressure regarding face-value, exacerbated by guilt and over thinking. Despite the negative impacts on their social relations, the participant maintained an importance of family and friendships.

Table 6Prevalent Personality Traits Across Different Drug Users (n = 1)

No.	Drug Used	Prevalent Personality Traits
1	Heroin	Moody personality, Low decision-making power, Freedom lover, Strong will power, Curious personality, Aggressiveness, Rigidity, Introversion
2	Cannabis	Aggressiveness, Procrastination, Introverted, Defensive, Low self-esteem, Rigidity
3	Alcohol	Grandiosity, Insecure, Impulsiveness, Aggressive
4	Sedatives	Introversion, Family Oriented, Humble
5	Methamphetamine (Ice)	Aggressiveness, Good Learning, Physical Violence, Low self-esteem, Over thinking, Concern for Face value, Socially interconnected

This table highlights the personality traits commonly associated with different substance users. Heroin users exhibit mood instability, aggressiveness, and introversion, with a strong desire for freedom. Cannabis users show aggression, procrastination, and self-esteem issues, leading to introversion. Alcohol users tend to display grandiosity, insecurity, and impulsive behaviors. Sedative users are typically humble, introverted, and family-oriented. Lastly, Ice users present with aggressiveness, low self-esteem, and overthinking, but they also value social connections despite their volatile behavior.

Table 7Big-Five Personality Traits with Adjacent Traits of Drug Users (n=1)

	3	
Big-Five Traits	Personality Facets	Drug User with Adjacent Traits
Extraversion	Sociable, Assertive, Outgoing, Enthusiastic, Warm	Heroin user: Curious, interest in music, regard for parents
Openness to Experience	Curious, Imaginative, Wide interests	Heroin user: Curious, interest in music, regard for parents
Agreeableness	Forgiving, Complaints, Warm, Humble	Sedative user: Humble, warm towards family, non-aggressive
Conscientiousness	Organized, Efficient, Thorough, Not Impulsive	No drug user showed traits here

Big-Five Traits	Personality Facets	Drug User with Adjacent Traits
Neuroticism	Tense, Irritable, Impulsive, Vulnerable, Insecure, Self- conscious	Alcohol user: Insecure, grandiose, low tolerance, aggressiveness
		Cannabis user: Impulsive, tense/over thinking, defensive, face value
		Ice user: Low self-esteem, violent, face value, overthinking

This table maps the Big-Five Personality Traits with the prevalent traits found among different drug users. Heroin users are associated with openness, showing curiosity and a wide range of interests. Sedative users reflect agreeableness, demonstrating humility and warmth, especially within family dynamics. On the other hand, alcohol, cannabis, and ice users have higher levels of neuroticism, which includes traits such as insecurity, impulsivity, and emotional volatility. Extraversion and conscientiousness were not found among any of the drug users.

DISCUSSION

The results from the thematic analysis of personality traits across different substance users revealed notable differences in self-regard, social behavior, and interpersonal dynamics. For sedative users, traits like introversion, humility, and family orientation were prevalent, indicating a preference for isolation and a strong connection with familial support. Conversely, ice users exhibited traits of aggressiveness, guilt, low self-esteem, and overthinking, which led to frequent emotional turmoil and social isolation. Heroin and cannabis users displayed mood instability, introversion, and defensiveness, whereas alcohol users were more prone to grandiosity, impulsiveness, and insecurity. These findings suggest that drug use often manifests distinct personality traits, which in turn influence emotional and social well-being, with varying degrees of conflict and social disconnection.

The results align with previous studies that have demonstrated a strong link between substance use and specific personality traits. For instance, research by Babor et al. (2010) emphasized the association between impulsivity, low self-esteem, and substance use, particularly in users of alcohol, cannabis, and methamphetamine. Similarly, the findings support those of Turner et al. (2016), who found that heroin users often display high levels of introversion and mood instability, while sedative users tend to be more introverted and emotionally restrained. However, the role of family orientation in sedative users as a moderating factor is a notable contribution to the existing literature, as it highlights the importance of familial support in mitigating the negative impacts of substance dependence.

The identified personality traits have significant implications for therapeutic interventions and addiction treatment. For example, the prevalence of guilt and low self-esteem in ice users suggests that interventions should address these underlying emotional issues, potentially through therapies like Cognitive Behavioral Therapy (CBT) or Dialectical Behavior Therapy (DBT). Additionally, the family-oriented nature of sedative users may offer a unique opportunity for family-based therapy interventions. The tendency for drug users to present themselves in a socially acceptable manner despite underlying emotional turmoil suggests that treatment approaches must also focus on building self-awareness and addressing internalized stigma. These insights are critical for designing individualized, effective treatment plans that consider personality traits alongside substance use patterns.

LIMITATIONS

While the findings offer valuable insights, there are several limitations to this study. The sample size was limited to only one participant per drug category, which restricts the generalizability of the results. The reliance on self-reported data also introduces the possibility of response biases, as participants may have presented socially desirable traits or minimized negative behaviors. Additionally, the cross-sectional design of the study limits our ability to draw causal conclusions regarding the relationship between personality traits and substance use. Future studies should incorporate larger, more diverse samples and longitudinal designs to better understand how these traits evolve over time and influence substance use patterns.

CONCLUSION

In conclusion, the study highlights the complex relationship between substance use and personality traits, revealing important patterns across different drug user groups. While substance use can exacerbate existing personality traits, such as aggressiveness or introversion, it is also influenced by emotional and social factors, like self-esteem and familial relationships. The results underscore the importance of considering personality traits in treatment planning and the need for targeted interventions that address both the psychological and social aspects of addiction. However, the study's limitations suggest the need for further research with larger and more diverse samples to validate these findings and explore their long-term effects on addiction recovery.

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