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Unveiling the Hidden Connection: Investigating the Relationship between Drug Craving, Emotional Manipulation, and Interoceptive Awareness for Social Acceptance among Substance Use Disorder At KSA

Fahad Ali AL otaiby[1], Fahad Awadh Alghdhbani[2], Naif Falah Alboqami[3], Najeah Mashai M Alanazi[3], Adel Ali Hussain AL Hussain[3], Ayedh Bliheen Alkhtani[4], Thuwaini Hameed Alrashidi[4], Khaled Hamad J Almohammad[4], Saeed Shaie Alqahtani[5], MutebMuways Almutairi[6], Ali Gharib Abdullah Alshalawi[7]

[1]Senior psychologist, Erada Complex and Mental Health in Riyadh, Saudi Arabia.
[2]Senior social specialist, The third health cluster in Riyadh, Saudi Arabia.
[3]Senior Specialist, Erada Complex and Mental Health in Riyadh, Saudi Arabia.
[4]Psychologist, Erada Complex and Mental Health in Riyadh, Saudi Arabia.
[5]Social worker, Erada Complex and Mental Health in Riyadh, Saudi Arabia.
[6]Medical social worker, Erada Complex and Mental Health in Riyadh, Saudi Arabia.
[7]Health Services Administration Specialist, Erada Complex and Mental Health in Riyadh, Saudi Arabia.

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ABSTRACT

Background: Drug addiction is a chronic condition that causes relapses of intoxication, bingeing, withdrawal, and cravings. substance addiction is characterized by a continuous cycle of seeking and consuming the substance,

Aim of the study : This study aim to assess the level of drug craving , emotional manipulation and the relationship interoceptive awareness for social acceptance among substance use disorder.

Methods: Design: Descriptive, cross sectional, correlational, quantitative. Research design was utilized to conduct this research

Setting : This study was conducting at 5 Saudi addictive therapeutic communities settings, at Riyadh, Dammam

ParticipantsA convenience sample of 200 individuals with drug use disorder was drawn from a larger sample of 400 registered patients who visited the clinic.

Instrument: Three tools were utilized ; The Penn Alcohol Craving Scale (PACS) ,The Emotional Manipulation Ability Scale , The Perceived Acceptance Scale

Results:A significant majority of respondents report high levels of craving(76%) for substancesMost respondents exhibit a strong ability to manipulate emotions(65%), either their own or others'A very small percentage of respondents(10%) feel accepted or perceive social support from their environment. The majority of individuals reported significant levels of emotional manipula
ion and low social acceptance from their parents, families, and friends, which supports previous findings.

Conclusion: Based on the results of the Penn Alcohol Craving Scale (PACS), there is a significant relationship between emotional manipulation ability and alcohol craving, with a moderate positive correlation ($r_s = 0.574$, $p < 0.011$). This suggests that individuals with higher emotional manipulation abilities may experience stronger cravings for alcohol. On the other hand, the perceived acceptance scale shows a negative correlation with alcohol craving ($r_s = -0.434$, $p = 0.024$), indicating that individuals who perceive higher levels of acceptance may experience lower cravings for alcohol.

Keywords: environment, lower, addictive, cross sectional, correlational

INTRODUCTION

Substance misuse disorder (SMD) is a global public health concern affecting diverse locations and communities. In 2024, around 292 million persons experimented with drugs, and 64 million had drug use disorders, a 3% rise from the previous estimate (United Nations Office on Drugs and Crime, 2024). According to the United Nations Office on Drugs and Crime (UNODC), roughly 14 million persons worldwide inject drugs, with nearly 8 million

suffering from infectious diseases (UNODC, 2024).Drugaddiction is a chronic condition that causes relapses of intoxication, bingeing, withdrawal, and cravings. substance addiction is characterized by a continuous cycle of seeking and consuming the substance, despite decreased pleasure and negative effects on well-being and quality of life (Ceceli et al., 2022). According to Zhang et al. (2020), drug craving is a strong desire for users to re-experience psychoactive substances. Drug craving is defined as a conscious desire to consume drugs [2]. This leads to excessive attention to drug-related cues and continued use of addictive drugs, regardless of the consequences. Addictive illnesses are often characterized by strong drug craving. Patients with substance use disorder (SUD) often experience intrusive thoughts, leading to increased distress. Distress can negatively impact academic, employment, and social interactions, leading to a lower quality of life [3]. Additionally, it may result in widespread social rejection within the community. Providing a clear perspective on a pressing issue.

Early studies in Saudi Arabia found that substance abusers had an average age of 29 years, with heroin users being younger than those who merely abused alcohol.3,4,6,11,12 A few studies have found low prevalence rates among women.13-15, which may be attributable to special therapeutic regimens used for females. In Kuwait, women receive treatment in normal psychiatric facilities or jails, rather than specialist rehabilitation clinics (13). Researchers face challenges in gathering data from both males and Arab women due to the stigma surrounding substance use and the fear of admission.1

Patients with drug use disorders may struggle to resist the demands of addiction. Their disease can lead to socially undesirable conduct [4]. Emotional manipulation is a common activity used to achieve urgent wants and desires. Covert behavior often disregards interlocutors' needs and sentiments [4]. Emotional manipulation is defined as the capacity to control others' emotions for personal gain [5]. According to Park (2021), addicted manipulators tend to use various defenses to manipulate their surroundings' emotions [3]. Emotional manipulation action can have both positive and harmful outcomes. Patients with substance use disorders may display genuine sadness or tears for their actions, seeking sympathy and forgiveness. Additionally, they may exhibit flattery, gift-giving, and want special privileges or favors. Substance use disorder sufferers might manipulate others by making them feel helpless. They often engage in evasion, lying, theft, dishonesty, bargaining, and guilt-tripping [7]. These socially undesirable behaviors may impede individuals with substance use disorder from fully utilizing their social support system, including family, friends, and loved ones [8].

Patients with substance use disorder often struggle with social acceptance [9]. According to [10], social acceptance occurs when others express a desire to include an individual in their organizations and relationships. Addiction can negatively impact patients' social lives due to manipulative activities [11]. Patients with substance use disorder may cause emotional harm to their families, friends, and others through manipulative behavior. Patients with drug use disorder may experience negative emotions in their social context, driving them to want to leave their current relationships. Research indicates that caregivers of individuals with substance use disorder may see their actions as unduly demanding. They gradually developed feelings of shame and a weaker link with them. Mannelli (2013) found that substance use disorder patients' deceptive behavior affected their social lives, leading to a lack of affection, belonging, and empathy [12].

Interoceptive processing occurs in various biological systems that maintain body homeostasis, including cardiovascular, pulmonary, gastrointestinal, genitourinary, nociceptive, chemosensory, osmotic, thermoregulatory, visceral, immune, and autonomic. Few studies have focused on the integration of bodily systems, leading to siloed research.

Interoception is not a straightforward process; it has multiple components (26). Sensing, interpreting, and integrating information regarding inner body systems involves various elements, including interoceptive attention, detection, discrimination, accuracy, insight, sensibility, and self-report. However, most interoceptive processes happen outside of conscious awareness. Clinically, conscious experiences are measured through subjective reports, with minimal obvious interoceptive indications such as heart rate, breathing rate, pupillary dilation, flushing, perspiration, piloerection, and nociceptive reflexes. Experimental techniques can quantify many body systems and interoceptive processing aspects. However, these measurements only partially overlap and likely represent separate brain processes (27). Invasive methods are often used to access all interoceptive inputs, resulting in physiological changes and objectively detectable aspects (28). Noninvasive techniques have provided valuable insights in neuroscience and psychology assessments (29).

Addiction prevalence has significantly increased in the Arabian Gulf over the past decade. Studies are being conducted to better understand the issue and improve access to services for those affected. In Islamic nations where alcohol and drug use are prohibited, stigmatizing addiction might complicate epidemiological investigations.2 Addiction research in Arab countries began in the early 1980s. Between 1981 and 1982, Kuwait hospitals experienced a 50% increase in admissions for alcohol and drug abuse, with 11% being mental.3 Research suggests that substance misuse is becoming more prevalent.1,4,5. While there is extensive research on alcohol and substance abuse in the Arab region, few studies provide a comprehensive overview of the growing issue.1,5,16 According to an early study7, treating drug abuse in Arab countries is problematic due to its multifaceted nature and the lack of universally effective programs for reducing drug dependence. According to

their review, neither criminalization nor decriminalization appear to reduce addiction. hence this study aims to assess the perception of drug craving at KSA

Aim of the study :
This study aim to assess the level of drug craving , emotional manipulation and the relationship interoceptive awareness for social acceptance among substance use disorder.

Methods:
Design: Descriptive, cross sectional, correlational, quantitative. Research design was utilized to conduct this research
Setting : This study was conducting at 5 Saudi addictive therapeutic communities settings, at Riyadh, Dammam

Participants
A convenience sample of 200 individuals with drug use disorder was drawn from a larger sample of 400 registered patients who visited the clinic. Inclusion criteria for this study include a psychiatrist's diagnosis of substance use disorder with no co-morbidities, as per the DSM IV. Patients with coherent and relevant communication skills were also included. Participants with drug-induced psychosis were excluded.

Instrument:
The Penn Alcohol Craving Scale
The Penn Alcohol Craving Scale (PACS) was created by Flanery (1999) [15]. The PACS is a five-question self-report questionnaire that examines an individual's weekly alcohol craving. The questionnaire assesses frequency, intensity, duration, and respondents' ability to resist from drinking. The PACS has good internal consistency when used in various outpatient populations worldwide [15]. PACS readings above 20 indicate urge for substance use disorder. Witkiewitz and Bowen (2010) updated the PACS score to assess desire for persons with SUDs.The tool was validated and shown to be internally consistent among patients with substance use disorders (Cronbach's alpha =.76) [18].

Emotional manipulation questionnaire (EMQ).
The Emotional Manipulation Ability Scale [13] includes 10 items based on the emotional manipulation element of Austin et al.'s (2007) assessment [16]. It has three subscales: emotional manipulation, perceived inadequate emotional abilities, and emotional concealment. Answers are provided on a scale of 1 to 5, with 1 indicating significant disagreement and 5 indicating strong agreement. High scores indicate skillful emotional manipulation. The scale has great construct validity and an internal consistency of 0.863 for the subscale [9].
The Perceived Acceptance Scale
The Perceived Acceptance Scale was developed to assess relationship-specific elements of perceived acceptance [19]. It was later modified by González, Couñago, and MF (2012) [15]. The 44-item self-report questionnaire assesses acceptance in four types of relationships: friendships (12), families (12), mothers (10), and fathers (10). For example, "My parents objected to a number of things I did" like "I am a very important part of the lives of my friends."
Answers are on a 5-point Likert scale, with 1 representing "strongly disagree" and 5 representing "strongly agree.". This scale has strong convergent and discriminant validity, as well as good internal consistency (Cronbach's alpha values was 0.768).

Ethical consideration
The study received approval from the Research Ethics Committee .The researchers told patients that their responses would be anonymous and confidential, and informed them about the study's goal. Following that, informed written consent was obtained. Participants were informed that they could reject to participate in the study and that their decision would not influence their care. Participants were informed that they could withdraw from the study at any moment, and that their privacy and confidentiality would be respected throughout.
Pilot study. To assess the research tools' impartiality, transparency, viability, and applicability, a pilot study was conducted on 20 patients with drug use disorder who met the inclusion criteria. Official approvals were obtained from the relevant authorities. Cronbach alpha reliability for Tools II (PACS), III (EMQ), and IV (PAS) were significant at "0.68", "0.872", and 0.75, respectively. Five psychiatric and mental health specialists reviewed the instruments for content validity, completeness, item clarity, and cultural relevance to Saudi patients. The necessary changes were made as a result.

Data Collection
The data collection process began with analyzing the medical files of recruited patients with drug use disorder utilizing tool I to gather socio-demographic and clinical information. The convenience method was used to

recruit a representative sample of patients with substance use disorder, excluding those who participated in the pilot trial. The researchers conducted individual interviews with participants to collect data using study tools on the planned follow-up day. Data collection began and lasted 8 months.

Data analysis.

Data were coded and analyzed using IBM SPSS version 20. Data entry was checked and verified multiple times to ensure accuracy. Descriptive statistics were utilized to characterize clinical and demographic characteristics, whereas qualitative data was summarized using numbers and percentages. Quantitative data were described and summarized using minimum and maximum values. The mean (X) was employed to calculate the central tendency in statistical tests of significance. The standard deviation (SD) measures the degree of variability in a set of scores by calculating the average deviation from the mean. The Kolmogorov-Smirnov test was performed to assess normality in the distribution.

RESULTS

Table 1: Frequency distribution of general characteristics of study participants:

Demographic data	**No.**	**%**
Sex		
Male	189	90.9
Female	11	9.1
Age (years)		
18–35	170	78.2
> 35	30	21.8
Educational level		
Illiterate	38	17.3
Basic education	82	37.3
Secondary education or diploma	86	39.1
Higher education	14	6.4
Marital status		
Single	140	62.7
Married	60	37.3
Occupation		
No work	50	25
Student	20	10.0
Employee	22	11.8
Craft worker	40	39.1
Trade work	35	15.5
House wife	6	2.7
Home participants		
Alone	16	7.3
With family	150	66.4
with relatives	8	3.6
With Husband/ wife	50	22.7
Financial status		
Enough	110	55
More than enough	90	45
Source of income		
Work	140	70
Family	55	27.5
Subventions	5	2.5

Table 1 pointed that The vast majority of cases are male (90.9%) vs. Female (9.1%), indicating that malesmay either experience or report higher levels of drug craving or are more likely to be studied in this context. Most cases fall within the 18–35 age range, 18–35 years (78.2%) vs. >35 years (21.8%)highlighting that younger individuals may be more vulnerable to drug cravings, possibly due to developmental, social, or lifestyle factors. A large percentage have only basic (37.3%) or secondary education (39.1%), while only 6.4% attained higher education. Lower educational levels may correlate with a higher susceptibility to drug craving, potentially linked to socioeconomic challenges, limited awareness, or fewer opportunities. Being single is predominant

among the studied cases Single (62.7%) vs. Married (37.3%), which could imply that loneliness or lack of emotional support increases vulnerability to cravings.
Unemployment or instability in work may increase financial or emotional stress because Unemployed (25%) and students (10%) combined account for 35%., contributing to drug cravings. Conversely, manual labor might reflect environments where substance use is more common. Craft workers (39.1%) form the largest employed group, followed by trade workers (15.5%) and employees (11.8%). Work (70%) is the main source, while family support accounts for 27.5%. This indicates some level of independence, but reliance on family (27.5%) or subventions (2.5%) might reflect dependence or instability, potentially influencing drug craving.

Table 2: Distribution of the studied cases according to clinical data

Clinical data	**No.**	**%**	
Age at the beginning of addiction			
< 18	30	13.6	
18–35	160	77.3	
> 35	10	9.1	
Family history of addiction			
No	120	57.3	
Yes	80	42.7	
Duration of addiction (years)			
Less than 1	12	5.5	
1 < 5	140	62.7	
5 < 10	40	23.6	
> 10	8	8.2	
Previous hospitalization			
No	130	65.5	
1 < 3 times	65	30.0	
> 3 times	5	4.5	
Number of substances			
1	65	30.0	
2–4 substances	65	30.0	
> 4 substances	70	40.0	
Main cause of substance addictions			
Peer pressure	50	26.4	
Aggressive behavior in childhood.	15	7.3	
Neglect from parents or guardians.	20	10.0	
Having access to drugs	30	14.5	
Curiosity	30	12.7	
Psychological and family problems	40	18.2	
Free time	15	10.9	
Abused substances*			
Opioids “Tramadol- Heroin- Morphine-Codeine”	10	5.5	
CNS Depressants “alcohol, barbiturates, anti-anxiety tranquilizers”	10	5.5	
CNS Stimulants “cocaine, amphetamines, and methamphetamine”	10	5.5	
Hallucinogens “Cannabis-LSD-MDMA-Ketamine- Pilocybin”	15	7.3	
Inhalants” volatile solvents-Aerosol sprays-Gases-Nitrites”	5	2.7	
Synthetic drugs	10	4.5	
Opioids + Hallucinogens	30	15.5	
Opioids + CNS depressants	45	19.1	
Opioids + CNS Stimulants	15	11.8	
CNS stimulants + Hallucinogens	20	10.0	
Hallucinogens + Inhalants	15	7.3	
CNS depressants + Hallucinogens	5	3.6	
CNS stimulants + Inhalants	10	1.8	

Table 2 pointed that 77.3% of participants began their addiction between ages 18 and 35. This aligns with a critical developmental period where individuals face significant life transitions, such as entering adulthood, higher education, or the workforce. Risk-taking behaviors and social influences are often heightened during this phase, increasing vulnerability to addiction. Furthermore, 62.7% of respondents have been addicted for 1–5

years or less. The relatively short duration for most participants suggests that many are in the earlier stages of addiction. This is a crucial window for intervention and treatment, as early-stage addiction is generally more responsive to rehabilitation efforts. Regarding to Causes of Substance Addiction, Peer pressure (26.4%), curiosity (18.2%), and access to drugs (14.5%) are the leading causes. These findings highlight the role of social and environmental factors in initiating substance use: Peer Pressure: Social dynamics play a significant role in introducing individuals to substance use, particularly among younger populations. Curiosity: Curiosity-driven experimentation suggests a need for better education and awareness programs that inform individuals about the risks of drug use. Access to Drugs: This underscores the importance of regulatory measures and controlling the availability of substances to reduce initiation rates. The most often abused substances are opioids (19.1%) and central nervous system depressants (15.5%) The prevalence of opioids reflects the current opioid problem, which may be caused by overprescribing, accessibility, or its extremely addictive nature. CNS depressants, which are commonly used to treat anxiety or sleep disorders, can be abused due to their sedative effects, emphasizing the importance of careful monitoring and prescription procedures.

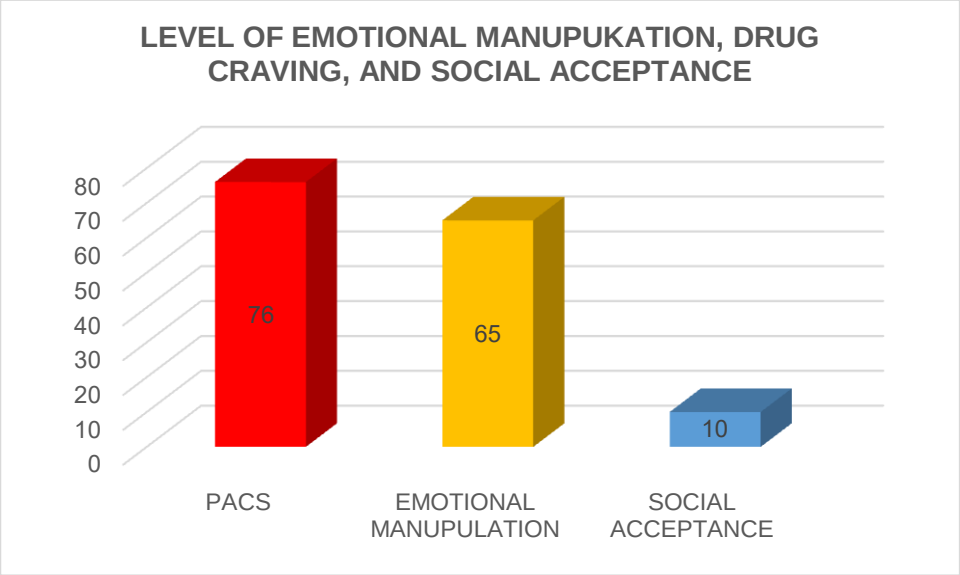

Figure 1: the distribution of the PACS, emotional manupulation, and social acceptance

This figure seems to highlight the psychological and emotional attributes of participants dealing with substance abuse, focusing on PACS (Perceived Addiction Craving Scale), emotional manipulation ability, and perceived acceptance. Here's an interpretation based on substance abuse participants: A significant majority of respondents report high levels of craving(76%) for substances, as measured by the PACS. This indicates that intense cravings are a common feature among participants, reflecting the psychological grip of addiction. Cravings are a major driver of relapse and can undermine recovery efforts if not managed effectively. Most respondents exhibit a strong ability to manipulate emotions(65%), either their own or others'.This could indicate an adaptive or maladaptive coping mechanism developed in the context of addiction. Manipulating emotions may help participants justify substance use or maintain access to drugs. Alternatively, it could reflect a heightened awareness of emotional cues, which might contribute to social or familial conflicts. Furthermore, A very small percentage of respondents(10%) feel accepted or perceive social support from their environment. This highlights a significant sense of social rejection, isolation, or stigma, which are common experiences among individuals with substance use disorders. Low perceived acceptance can exacerbate feelings of shame, hopelessness, and emotional distress, potentially driving further substance use as a coping mechanism.

Table 3 : Correlation between Penn Alcohol Craving Scale (PACS), Emotional manipulation ability and the perceived acceptance scale

	Penn Alcohol Craving Scale (PACS)	
	r_s	**p**
Emotional manipulation ability	0.574*	< 0.011*
The perceived acceptance scale	-0.434*	0.024*

Table 3 pointed that There's a moderate positive correlation between PACS scores and emotional manipulation ability, and the result is statistically significant. This suggests that higher alcohol craving levels are associated with higher emotional manipulation ability. there's a moderate negative correlation between PACS scores and

perceived acceptance. This suggests that higher alcohol craving levels are associated with lower feelings of acceptance, and the finding is statistically significant.

DISCUSSION

Addiction is characterized by cravings, which can lead to relapse after recovery [21]. Research suggests that it is a significant risk factor for both "quitting failure" and behavioral disorders [22]. This study aims to uncover the link between drug cravings, emotional manipulation, and introspective awareness in individuals with substance use disorder.The study found that most people with substance use disorders experience high levels of yearning.The study found that most people with substance use disorders experience high levels of yearning.This finding supports testimony from other studies [23-26]. This finding could be explained by the participants' socio-demographic and clinical features. Most responders were between the ages of 18 and 35. According to Sharma et al. (2018), this age group faces numerous daily challenges. Reasons for substance use include peer pressure, curiosity, balancing duties, and financial independence [27].

Stressors may lead to substance misuse as a coping mechanism to alleviate emotional distress. [28]Similarly, almost 75% of respondents worked in handicrafts. Muller et al. (2019) found that handicraft workers made up less than three-fifths of the sample [29]. According to Ibrahim et al. (2022), fewer than half of the workforce was engaged in handicrafts [26]. This work area allows for easy acceptance and feasibility of chemicals. Egyptians may believe that narcotics enhance physical and sexual abilities [30].

Research suggests that drug addiction is a condition characterized by self-deception, denial, mystification, and dishonesty. Emotional manipulation is a common behavioral characteristic among people with substance use disorder (7, 31). According to Caputo (2019), patients with drug use disorder may use deception to manipulate or control others due to their desire for substances. Faking promises, acting as a victim, inventing explanations for carelessness, making people feel uncomfortable or guilty to meet unrealistic expectations, and threatening self-harm are common behaviors among these individuals [32].

The majority of individuals reported significant levels of emotional manipulation and low social acceptance from their parents, families, and friends, which supports previous findings. Rachel et al. (2019) found that people with substance use disorder experience significant social rejection, which they ascribe to the burden on their families and friends [33].Pearson's correlation coefficient found a strong positive association between drug craving, emotional manipulation, and perceived social approval.This conclusion supports the findings of Ferrari et al. (2008) and Sher & Epler (2004), who found that lying and dishonesty are frequent.

They are much more likely to manipulate those around them. Previous research suggests a link between drug use disorders, psychopathic personality traits, and antisocial and deviant relationship behaviors [35, 36]. However, our investigation did not accurately measure this. This highlights the need of investigating the impact of drug cravings on personality formation.The current study found that need for drugs did not influence perceived social acceptance. The investigators had predicted the opposite tendency, therefore this conclusion was surprising. Researchers suggest that higher levels of craving correlate with higher levels of perceived social acceptance, which may seem counterintuitive.Patients with substance use disorder may struggle to defend themselves due to feelings of shame, guilt, or regret [37], which could explain this finding. They dismiss their situation and escape.Facing the tough realities. According to Freud [38], substance addicts often use denial as a defense technique. Patients with substance use disorders may struggle to understand their problems. This puts them at significant risk of rejection from loved ones and social interactions.

Excessive negative criticism from significant others might lead to a loss of social ties and bonds [39]. Leventhal et al. (2011) found that social acceptance issues enhance the likelihood of substance use [40]. Adults who experience social rejection are more likely to take drugs, while loneliness can lead to a demand for drugs (37).

According to Laws et al. (2017), people often drink excessively to cope with social rejection and stress. Individuals experiencing social rejection may seek greater acceptability and exhilaration through social drinking (41).

CONCLUSION

Based on the results of the Penn Alcohol Craving Scale (PACS), there is a significant relationship between emotional manipulation ability and alcohol craving, with a moderate positive correlation ($r_s = 0.574$, $p < 0.011$). This suggests that individuals with higher emotional manipulation abilities may experience stronger cravings for alcohol. On the other hand, the perceived acceptance scale shows a negative correlation with alcohol craving ($r_s = -0.434$, $p = 0.024$), indicating that individuals who perceive higher levels of acceptance may experience lower cravings for alcohol.

Recommendations

Target Emotional Manipulation in Interventions: Considering the positive correlation between emotional manipulation ability and alcohol craving, interventions aimed at reducing emotional manipulation skills might

help in lowering alcohol cravings. Psychological training and counseling to address emotional regulation could be beneficial for those at risk.

Enhance Social Acceptance: The negative correlation between perceived acceptance and alcohol craving suggests that fostering a sense of belonging and social support could potentially reduce cravings. Encouraging individuals to engage in supportive social networks might be an effective strategy to manage and reduce alcohol cravings.

Further Research: To understand the mechanisms behind these relationships better, future research could focus on exploring how emotional manipulation and perceived acceptance influence alcohol cravings over time and in different populations.

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