



## Substance Use Alienation and Psychological Capital in Individuals with Methamphetamine Dependence: A Mediating Role of Criminogenic Cognition

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### ABSTRACT

The main objective of the present study was to determine the relationship between substance use alienation (SUA) and psychological capital (PC) with the mediating role of criminogenic cognition among individuals with substance use disorder. This correlational study included a representative sample of 347 participants from various drug rehabilitation centers and hospitals. The study included individuals aged 15 to 29 years, diagnosed with substance use disorder and undergoing treatment. The research protocol included a demographic sheet, the Substance Use Alienation Scale (SUAS), the Criminogenic Cognition Scale (CCS), and the Psychological Capital Questionnaire (PCQ). All the data were screened, and then they were analyzed using SPSS version 26. Mediation analysis was employed using PROCESS Model 4 with 5,000 bootstrapped samples. The results showed that Substance Use Alienation was a significant positive predictor of Criminogenic Cognition ( $\beta = .66^*$ ,  $p < .001$ ), and Criminogenic Cognition was a moderately negative but significant predictor of psychological capital ( $\beta = -.30^*$ ,  $p < .001$ ). The direct effect remained significant ( $\beta = -.39^*$ ,  $p < .001$ ). It is concluded that individuals who experience higher levels of substance use alienation more often tend to have more criminogenic thoughts but less psychological capital. Substance use alienation directly lowers psychological capital, but some of its effects happen indirectly through increased criminogenic cognition.

## **Introduction**

Since the beginning of the great technological revolution a few years ago, many things have changed in the lives of people and in society as a whole. Not all of these changes were positive; in fact, many negatively impacted people's well-being (Hofhuis et al., 2019). Substance use disorder is prevailing in all the regions of the world. This situation may lead to numerous psychological issues, such as shame, guilt, isolation, tension, anxiety, rebellion, depression, and conflicts both with others and within oneself (Keyhan & Kazemzadehbeytali, 2018). People with substance use disorder experience psychological alienation, which can show up in different areas of life like Vinokurov & Kozhina, 2020).

The high perception of psychological alienation stem from the contradictions, competition, and constant change in our current times, leading to various problems and illnesses. The most important one was psychological alienation, which is shown by disability, weakness, loneliness, lack of values, and diminished life's meaning (Keyhan & Kazemzadehbeytali, 2018).

Tomé and colleagues (2016) say that alienation can lead to undesirable behavior like skipping school, bullying, drug use, crime, and death. It can also tell you about psychophysiological problems as well as behaviors, like the number of physical and mental symptoms you have, how happy you are with your life, drinking, getting drunk, not working out as much, and eating unhealthy foods (Rayce, Holstein & Kreiner, 2009). Individuals who perceive alienation are more prone to addiction.

The social alienation theory says that feeling alone is a main reason why people do undesirable things. When someone feels this way, they are cut off from their group, society, or social institutions (Agnew, 1992). This feeling of isolation can stem from your upbringing, friends, or a difficult life. People who are alienated often feel helpless and left out, which can make them feel rejected by society and social rules. Other criminological theories, like the strain theory, the social disorder theory, and the anomie theory, are built on top of this one. It is based on the idea that people who feel very alienated might do undesirable things. It can be anything from a small petty crime to a violent or property crime (Shaw & McKay, 1942).

The concept posits that criminogenic cognitions are the primary cause of crime (Yochelson & Samenow, 1976). There had been a lot of criticism of the theory, but it is still useful in many interdisciplinary studies and practices (Reid, 1998). This suggested research study will be based on the theory of criminal thinking errors.

In fact, criminal thinking has been linked to almost all criminal outcomes that matter, like arrests and participation with justice systems (Walters, 2020). Criminological thinking has also been interconnected to relapse (Mitchell & Tafrate, 2012), and lessening distorted thinking has been associated with fewer violations and less wrongdoing in prisoners (Folk et al., 2016). Moreover, criminogenic thinking is linked to negative views on recovery and reintegrating into society (Bartholomew et al., 2018). If someone consistently and repeatedly has criminal thoughts and they will have a criminal lifestyle, and their lives will revolve around crime, becoming a criminal (Yochelson and Samenow, 1976).

In essence, psychological capital (PsyCap) is a positive mental state that enables individuals to perform effectively, maintain good health, and achieve overall success. Luthans, and colleagues (2007) describe PsyCap as a person's positive state of mind that includes being sure of yourself, having hope, being optimistic, and being strong. This description emphasizes that PsyCap is a resource for growth that can be developed and improved, which makes it different from traits like

personality that don't change. Luthans and Youssef (2004) defined PsyCap as "who you are" and "what you can become." They stress that these psychological resources change and grow over time. From this viewpoint, PsyCap supports positivity and growth in workplace performance, signifying that planned activities and experiences can enhance it.

## **Literature Review**

Alienation changes a person's personality and the way they grow as a person because they lose parts of their integrated sense of life and permanence (Iorfa et al., 2013). It has been found that alienation, or feeling cut off from oneself, others, and society, is a major risk factor for drug use disorders (Hirschfield et al., 2019). Many psychological issues are more likely to happen if someone feels alienated, such as drug use disorders (Hirschfield et al., 2019), depression, anxiety (Hofmann et al., 2010), and suicidal thoughts (Van Orden et al., 2010).

Using drugs can make people withdraw from social relationships, which can make them feel even more alone (Hirschfield et al., 2019). Chronic drug use can make it harder to react emotionally, which can make you feel disconnected from yourself and others (Khantzian, 1997). The shame and guilt that come with drug abuse can make people feel disconnected from others, which can make them feel even more alone (Luoma et al., 2012). Disconnecting from oneself, others, and society can make a person feel like their life has no point, which makes them more likely to turn to crime as a way to address their problems (Frankl, 2006). Chronic alienation can make people feel helpless, which makes them most probably to think inefficiently that lead to crime (Seligman, 1975).

The people who are addicted to drugs do so to alleviate pain, feel more mature, cope with negative emotions, improve their ability to relate to others, and increase their low self-esteem. Additionally, long-term use of crystal methamphetamine can lead to cognitive issues such as attentional and executive function deficits, which may strengthen criminal thinking and hinder recovery (Scott et al., 2017).

Justice-involved groups have much higher proportions of developing psychosis than the general community, and psychotic conditions make it more likely that someone will commit a crime again (Baillargeon et al., 2009). The most important link between recidivism and disorders related to substance is when they are paired with other mental health problems (Zgoba et al., 2020). People who have been treated for drug abuse in education-only programs are more likely to relapse with a substance use problem, overdose, or die. Former prisoners have a much higher chance of dying from a drug accident for up to a year after they get out of jail compared to the common people (Ranapurwala et al., 2018).

Hope, self-efficacy, optimism, and resilience are some of these tools. People see PsyCap as a way to invest in persons to gain a competitive edge (Luthans & Youssef, 2004). Believing in your skills to achieve what you want and overcome past problems is called self-efficacy (Bandura, 1977). Optimism is having a positive attitude about the future and believing that positive things will occur as well as that adverse things are only short-term (Carver & Scheier, 2002). Hope is the idea that things can work out if you work diligently and don't give up and that problems can be solved (Snyder, Irving, & Anderson, 1991). Resilience refers to the ability to overcome adversative experiences, manage problems, and persevere through challenging times (Avey, Luthans, & Jensen, 2009).

Some studies (Avey, Luthans, & Youssef, 2011) link higher self-efficacy to improved job performance, job satisfaction, and well-being. Studies have found that individuals with higher

optimism are stronger and better able to handle adverse experiences (Carver & Scheier, 2002). But it's important to remember that optimism is not the same as being too positive. Having a balanced and sensible view of things is also important for well-being (Seligman, 1990).

### **Rationale**

Substance use remains a major threat to global health, safety, and social stability. But previously most of the research was paying particular attention to the socio-environmental and biological predictors of substance use; changing psychological as well as cognitive variables provides different insights into the onset and persistence of substance use. Particularly in non-Western and developing environments, alienation, criminogenic cognition, and low psychological capital are receiving attention as crucial yet underexplored variables. Alienation is known as feelings of powerlessness, meaninglessness, self-estrangement, and loneliness. It has been discovered through empirical research that individuals who are experiencing alienation are at risk to participate in maladaptive and risky activities, such as drug abuse to escape their reality or coping with psychological pain. People who experience feelings of alienation may develop criminogenic thinking as a means of coping with their feelings of alienation. Such behavior is done to rationalize their disobedience of social standards, which in turn makes substance use easier. On the other hand, those who have a strong psychological capital may be less likely to engage in criminal thinking, which consecutively lowers the risk of engaging in substance use. To provide a mechanical explanation of how alienation leads to substance use and how psychological capital may disrupt this process, it is essential to have a solid understanding of criminogenic cognition as a mediator. This perspective, which integrates cognitive theory with social psychology and positive psychology, offers a more sophisticated and dynamic model of substance use behavior.

### **Objectives**

- To investigate the relationship between substance use alienation, criminogenic cognition, and psychological capital among individuals with SUD.
- To determine whether criminogenic cognition mediates the relationship between substance use alienation and psychological capital in individuals with SUD.

### **Hypotheses**

- There would be a significant relationship between substance use alienation, criminogenic cognition, and psychological capital among individuals with SUD.
- The criminogenic cognition would significantly mediate the relationship between substance use alienation and psychological capital in individuals with SUD.

### **Methodology**

#### **Research design**

The current study used a correlational research design to investigate the correlation between substance use alienation, criminogenic cognition, and psychological capital among individuals with SUDs.

#### **Participant**

The study encompassed 347 participants who satisfied the inclusion criteria and excluded those who met exclusion criteria. The participants were 15 to 29 years of age, diagnosed with substance use disorder by mental health professionals, and taking treatment from drug rehabilitation centers and hospitals. The study included participants who could read and understand Urdu and were

willing to participate. On the other hand, the participants with acute withdrawal and psychotic symptoms were not included in the study.

### **Sample**

The representative sample was approached by using a purposive sampling strategy, and the size was determined by using the G\*Power formula. It suggested a minimum of 139 participants for research to conduct regression analysis. But to increase generalizability, data from 400 participants were collected; 53 participants were excluded from the study due to incomplete information, questionnaires being answered in specific patterns, and withdrawal from participation. Finally, data of 347 were retained for further analysis.

### **Research Instruments**

#### **Demographic Form**

The demographic sheet inquired about personal information such as age, education, marital status, occupation, duration of drug use, and number of relapses for making data homogeneous.

#### **The Substance Use Alienation Scale (SUAS) (Ehsaan & Naz, 2025).**

The SUAS was developed to measure perceived alienation among individuals with substance use disorders. The scale has 30 items and four subscales. The first subscale was social withdrawal, and it has 11 items (item numbers 1 to 4 and 16 to 22); the second subscale is social stigma sensitivity, and it has 10 items (item numbers 5 to 11 and 24 to 26); the third subscale is social and emotional isolation, and it has 5 items (item numbers 23 and 27 to 30); and the final subscale is social stereotyping, and it has 4 items (12 to 15). Each item offers five response options, starting with "strongly disagree" to "strongly agree." The scores range from 30 to 150 and 30 scores indicate low level of substance use alienation, and a score of 150 on the scale signifies a very high level of alienation associated with substance use.

#### **The Criminogenic Cognition Scale (CCS) (Jamil & Fatima, 2018).**

The scale was originally developed by Palmer and Hollin (2004) and translated by Jamil and Fatima in 2018. It was designed to measure belief systems, or cognitive patterns, that are associated with criminal behaviors and considered risk factors for criminal activities or antisocial behaviors. The CCS has 25 questions and five factors. The first factor is feelings of entitlement, and it has 5 items (1, 6, 16, 19, 23); the second factor is failure to accept responsibility, and it also has 5 items (2, 5, 9, 15, 22); the third factor is short-term orientation, and it has 5 items (3, 8, 18, 24, 25); the fourth is insensitivity to crime, and it has 5 items (4, 7, 11, 12, 14); and the fifth is negative authority attitudes, and it has 5 items (10, 13, 17, 20, 21). All questions are further divided into a 4-point Likert scale and higher scores indicate a high level of criminogenic cognition.

#### **The Psychological Capital Questionnaire (PCQ) (Abbasi, Kamal, & Masood, 2020).**

The PCQ was originally developed by Luthans and colleagues (2017) and then translated by Abbasi and colleagues (2020). The scale was developed to measure psychological capital, and it has 24 items and 4 factors. The factor has 6 items, and the first factor is efficacy (item numbers 1 to 6), the second is hope (item numbers 7 to 12), the third factor is resilience (item numbers 13 to 18), and the last factor is optimism (item numbers 19 to 24). All items could be answered on a 6-point rating scale from strongly disagree to strongly agree. The higher the scores indicate the more psychological capital in individuals.

**Procedure**

The research was approved by the Ethical Research Committee of GC University Lahore. Then the authorities of different drug rehabilitation centers and hospitals were approached, and permission for data collection was taken. Then the time was scheduled to collect data from the individuals with substance use disorders without disturbing their treatment and group activities. At the set time, the participants were approached, and they were informed about the objective of the study and their ethical rights during and after the study. They were informed about the privacy of the data and their right to leave participation in the study anytime without punishment. Only those participants who were willing to provide data were given a research protocol, and their consent was obtained. After completion, the data were screened, and then they were entered in SPSS for further analyses.

**Statistical Analyses**

First of all, the data were cleaned by checking missing data, and then computations and coding of the data were done. Pearson Product moment correlation and mediation analyses were performed to investigate the relationship and mediation between variables. Furthermore, simple linear regression analysis was performed to meet assumptions of mediation analysis. The PROCESS and AMOS 26 were used to perform mediation analysis.

**Results**

**Table 1: Correlations between Substance Use Alienation, Criminogenic Cognition, and Psychological Capital among Individuals with Substance Use disorders**

Scales	SUAS	CCS	PCQ
Substance Use Alienation Scale (SUAS)	----	.65**	-.40**
Criminogenic Cognition Scale (CCS)		----	-.43**
Psychological Capital Questionnaire (PCQ)			----

\*\*p<0.01,

Table 1 shows that the relationship between substance use alienation and criminogenic cognition was .65\*\*, which indicates a highly significant positive relationship. In contrast, the relationship between substance use alienation and psychological capital was -.40\*\*, indicating a significant negative and moderate relationship. Similarly, the relationship between criminogenic cognition and psychological capital was -.43\*\*, which also indicates a negative and moderate but significant relationship between variables.

**Table 2: Mediation Analysis between Substance Use Alienation and Psychological Capital through criminogenic cognition among individuals with substance use disorder (N=347)**

Predictors	CCS			PCQ		
	Coeff.	SE	P	Coeff.	SE	P
Constant	24.00	2.64	.001	137.54	5.99	.001
SUA	.66	.02	.001	-.21	0.07	.001
CCS				-.30	0.11	.001
	$R^2 = .428$			$R^2 = .206$		
	$F(1,345) = 257.64, p < .001$			$F(2, 244) = 44.58, p < .001$		

*SUA: Substance Use Alienation, CCS: Criminogenic Cognition Scale, PCQ: Psychological Capital Questionnaire*

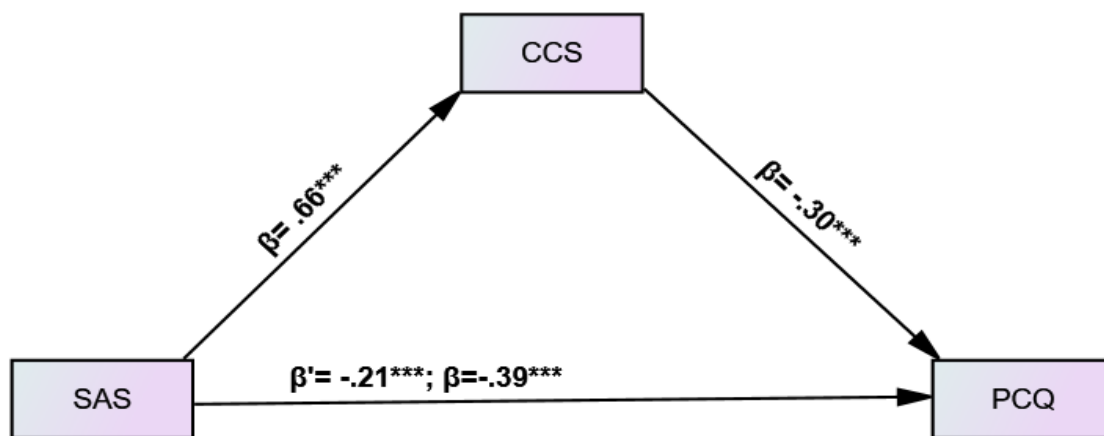
The result of the direct effect showed that substance use alienation is a significant predictor of criminogenic cognition. It explained 43% of changes in criminogenic cognition by substance use alienation. Instead, substance use alienation and criminogenic cognition are significant negative predictors of psychological capital (PCQ). Substance use alienation and criminogenic cognition explained 21% of the changes in psychological capital. Moreover, p-values and F-statistics revealed that models are significant and suggested that predictors are related to the results.

**Table 3: Indirect Effects of Criminogenic Cognition between Substance Use Alienation and Psychological Capital in individuals with Substance Use Disorder (N=347)**

Mediator	Effect	Boots	95%BootCI	
			BootLL	Boot
CCS	-.19	.05	-.297	-.098

Note. Effect = standardized regression coefficient, BootCI = bootstrapped confidence interval, BootLL = bootstrapped lower limit, BootUL = bootstrapped upper limit

The indirect effect results showed that CCS was found to be a significant mediator between SUAS and PCQ, which indicates that an increase in CCS tends to increase PCQ. The results of the mediation analysis indicated that there was full mediation, as illustrated in Figure 1.



**Fig. 1: The Statistical Model of Mediation Analysis**

### Discussion

The first hypothesis of the study was that there would be a significant relationship between substance use alienation, criminogenic cognition, and psychological capital among individuals with substance use disorders. The findings revealed that there is a positive association between substance use alienation and criminogenic cognition. Conversely, PsyCap negatively correlates with substance use alienation and criminogenic cognition. Past literature supported the findings and one study found that the individuals who experience alienation are vulnerable to engaging in risky behaviors due to their distorted thinking pattern. These undesirable behaviors are bullying, drug use, skipping school, crimes, and hurting others (Tomé et al., 2016).

Likewise, criminogenic cognition is directly connected to substance-related behavior such as isolation, social withdrawal, and limiting contacts with close friends and family (Rayce, Holstein & Kreiner, 2009). Similarly, a recent study found that a person perceiving strong alienation is at

risk of getting involved in drug addiction and criminal thinking patterns because a person can be found in conflict between desires and moral standards (Abed & Thanoon, 2021).

On the other hand, the negative relationship was found between substance use alienation and psychological capital. Individuals with substance use disorder often experience alienation due to stigmatization, social disconnection, and hopelessness, which leads to lower psychological capital, including efficacy, resilience, hope, and optimism (Lukoff et al., 2020).

Similarly, according to Sampson and Laub (1997), psychological capital enhances optimism and self-belief that lower alienation is related to substance use. Likewise, when a person is highly alienated due to substance use exclusion or stigma, they experience low internal strengths and lack motivation to overcome these challenges. On the other hand, the people who have high psychological capital can reverse the consequences of substance use alienation and criminogenic cognition. There are a few studies that addressed these variables and found similar results. One study found that psychological capital helped individuals to recognize who they are in actuality and what they can become.

The other hypothesis of the research was that criminogenic cognition would significantly mediate the association between substance use alienation and psychological capital in individuals with SUD. The outcomes of the study supported its hypothesis. Many studies support the findings. According to Luthans and Youssef (2004), PsyCap grows with the passage of time and helps individuals to cope with internal and external negativity.

The other hypothesis predicted that criminogenic cognition would significantly mediate the relationship between alienation related to substance use and PsyCap in individuals with SUD.

The finding of the study supported the hypothesis, and a mediating role of criminogenic cognition was found between substance use alienation and psychological capital. This mediation elaborated the mechanism of relationship between variables and found that alienation related to substance use does not merely reduce the psychological capital; instead, it is affected through criminogenic cognition. Many studies support the findings, like one study that found that alienation related to substance filtered through particular schemas that undermine or support psychological capital (Beck et al., 1993). Similarly, a study found that the individuals who experience alienation or rejection related to substance use perhaps develop criminal thinking patterns, and their abilities to overcome these challenges reduce (Walters, 2012). In accordance with Agnew's (2001) general strain theory, when individuals feel alienation, they start adopting criminogenic cognitive patterns as a psychological defense, and positive defenses start losing strength.

## **Conclusion**

It was concluded that substance use alienation was positively linked to criminogenic cognition but negatively associated with psychological capital. It means when substance use alienation is high, the criminogenic cognition also tends to be high and psychological capital tends to be low, respectively. Furthermore, the study found that substance use alienation was a significant positive predictor of criminogenic cognition, and criminogenic cognition was a moderately negative but significant predictor of psychological capital. A decrease in psychological capital is a direct consequence of substance use alienation; however, some of its effects are also associated with an increase in criminogenic cognition by way of indirect mechanisms.

## **Limitation**

Like other studies, this study also has some limitations; the data could not be taken from female patients with substance use disorder. Many drug rehabilitation centers refused to give permission from female patients due to their privacy issues, or families of the patients strictly refused to allow anyone to take interviews or data. Therefore, the results cannot be generalized to the female population.

## **Policy Recommendations**

Psychological capital should be incorporated in the rehabilitation centers for drug addiction and criminals to overcome substance use alienation and criminogenic cognition. Furthermore, there should be implementation of a community-based screening process for mental health, especially drug addiction, and whenever a person is perceived to be alienated, social support should be provided in a timely manner to treat drug addiction in its early stages.

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