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# Development and Validation of Substance Use Alienation Scale for Youth

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**ABSTRACT**

The present study aimed to develop and validate a novel measure, the Substance Use Alienation Scale (SUAS), designed to assess alienation in individuals with substance use disorders (SUDs). Alienation is described as feelings of disconnection from oneself and others. Alienation is a critical aspect of substance use disorder because it intensifies the symptoms and creates hindrances in recovery (Alexander, 2008). The study was comprised of four stages: item generation, expert evaluation, testing, and administration to a sample of 217 SUD patients aged 15–29 receiving treatment at a rehabilitation center. The data showed important measurement features ($p < .01$); the Kaiser-Meyer-Olkin (KMO) value was 0.893, and Bartlett's test of sphericity was 2750.6, indicating that the data were suitable for factor analysis. Additionally, principal component analysis with varimax rotation revealed four factors. The factors were social withdrawal, social stigma sensitivity, social and emotional isolation, and social stereotyping. The SUAS is found reliable, as the alpha coefficient value was 0.91, and valid, as the correlation with the Juvenile Social Alienation Scale (Sana et al., 2023) is 0.65**. The SUAS has significant application in clinical practice as it helps practitioners to assess individuals who are at risk of relapses due to alienation, and hence they can improve the quality of life of the individuals with SUDs. Further studies should explore the efficacy of the SUAS in different contexts.



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## 1. Introduction

The 64% of the Pakistani population are young individuals under the age of 30 (World Population Review, 2019). Among the many issues facing this group are substance misuse, poverty, unemployment, and restricted educational opportunities. Drug addiction has become a more pressing problem, especially for young adults. Over 6 million Pakistanis between the ages of 15 and 64 suffer from substance use disorders, according to the United Nations Office on Drugs and Crime (UNODC, 2013). Youth's susceptibility to substance abuse is explained by their developing brains and innate desire for new experiences (Bava & Tapert, 2010). Young people are therefore more likely to partake in risky activities, such as substance abuse. In large cities like Karachi and Lahore, ice use disorder accounted for more than 40% of all drug use disorders, according to a study published in the Journal of Addiction Research and Therapy (Drug Advisory Training Hub, 2023). Several variables, such as its increased accessibility, cost, and the false belief that it is a harmless or recreational substance, are responsible for the rising prevalence of substance use disorders (Ahmad & Khan, 2019). Substance use disorders, including ice use disorder, have grown to be a major public health concern on a global scale (World Health Organization, 2018). The situation in Pakistan is concerning, as more and more young people are using ice (Ministry of Narcotics Control, 2022).

## 2. Literature Review

Research has found numerous important factors that play a role in the emergence and maintenance of substance use disorders. Among these is alienation, which is defined as a condition of detachment from oneself, other people, and society (Seeman, 1959). One important risk factor for substance use disorders is alienation (Isralowitz, Reznik, & Belhassen, 2012). Additionally, alienation can have serious repercussions, raising the likelihood of several psychiatric issues, including anxiety (Verrocchio, Baker, & Bernet, 2016) and depression (McIlveen et al., 2022), as well as thoughts of suicide (Van Orden et al., 2010). Because alienation is complicated and has wide-ranging effects, extensive preventative and intervention techniques are essential. To effectively treat and support individuals with SUDs, clinical experts must confront their root causes, including alienation. Another study found that a person suffering with SUDs for a long time can impair him emotionally and trigger loneliness and alienation from himself and others (Khantzian, 1997). Furthermore, the shame, guilt, and alienation caused by substance abuse can trigger the feelings of disconnection from others and society altogether (Luoma et al., 2008). In accordance with Frankl (2006), people are susceptible to getting involved in inappropriate activities when they feel isolated as a result of poor mechanisms. In Pakistan, among numerous issues, drug abuse is a serious concern, but this problem lacks understanding of the psychological and social aspects that contribute to it. Alienation is a state of disconnection, detachment and isolation. Pakistani culture complicates the situation by viewing it as a sinful act and stigmatizing individuals with SUDs. As a result, people with SUDs limit their socialization and remain isolated. There is a need for culturally appropriate indigenous measurements to assess alienation in Pakistan. Therefore, the present study aims to develop a reliable and valid tool to assess substance use alienation, especially for the Pakistani cultural context(Alfalih & Ragmoun, 2020; Ragmoun & Alfalih, 2025; Wided & Abdulaziz, 2024).

## 3. Methodology

This study is comprised of four phases in order to develop a scale for measuring substance use alienation. Initially, the phenomenological field was explored by using in-depth, semi-structured interviews. Then in the second phase, five experts evaluated the first scale items to ensure content validity. In the third stage, the researcher did pilot testing to evaluate the overall understanding and comprehension of the underdeveloped scale. The final stage included a comprehensive assessment of the scale's psychometric properties, including validity and reliability.

### Phase I: Exploring Phenomenology

After doing in-depth interviews with the participants until saturation point was reached, a total of 86 statements were drawn from the transcribed data of the interviews then the statements were reduced to 47 items after narrowing down similar statements. Participants ranged in age from 15 to 29 ($M = 20.04$, $SD = 1.82$).

### Phase II: Empirical Validation

In Phase II, five experts evaluated the 47 items to determine content validity. The panel looked at how relevant each item was to the main idea using a 5-point scale, and they calculated the Content Validity Index (CVI) to see how much the experts agreed (Polit & Beck, 2006). After evaluating the ratings, 34 questions were identified as the most accurate and reliable indicators of substance use alienation, meeting the criteria for acceptable CVI values (Polit & Beck, 2006).

### Phase III: Tryout Phase

Phase III involved a tryout of the research questionnaires with 10 participants from a private rehabilitation center. The findings indicated that there were no significant understanding issues and that participants thought the scale was simple to use and engaging.

### Phase IV: Main Study

The objective of the final stage was to administer the complete research protocol to the target population. The study administered a complete research protocol to the 217 individuals aged 15 to 29 with substance use disorders who were taking treatment at drug rehabilitation institutions.

### 3.1. Research Questionnaires

The study's target population received a consent form, a demographic sheet, and two principal questionnaires.

#### 3.1.1. Substance Use Alienation Scale (SUAS)

The current study developed this scale to measure substance use alienation in individuals with SUDs. Each of the 37 items has five alternatives, ranging from "Strongly Disagree" to "Strongly Agree." A score of 37 on the scale indicates minimal alienation from substance use. The highest attainable score is 185. The higher scores indicate a high level of substance use alienation.

#### 3.1.2. The Juvenile Social Alienation Scale was developed by Sana et al. in 2023

The Juvenile Social Alienation Scale was developed by Sana et al. in 2023. The 18 items on the Juvenile Social Alienation Scale provide a comprehensive measure that precisely reflects the criminal cognitive patterns of socially alienated juvenile offenders. This scale consists of three subscales, and each subscale has a different number of items. The first subscale is Disgruntlement, and it consists of nine items; the second subscale is Disaffection, and it contains five items; and the last subscale is Estrangement, and it contains four items. All the items have five alternatives, from strongly disagree (1) to strongly agree (5). An elevated score on the scale indicates a higher level of social alienation in criminal cognition.

### 3.2. Sample

We used the G*Power formula to calculate the required sample size for the current study (Faul et al., 2007). The analysis suggested a sample size of 193 is appropriate for this study while using two questionnaires with 52 items total and five demographic variables, a modest effect size of 0.25, and a power of 0.95. A sample of 217 individuals was chosen for the present study to ensure the validity and generalizability of the findings.

### 3.3. Procedure

Purposive sampling was employed to choose a sample including 217 individuals from three distinct rehabilitation clinics. The participants were chosen on the basis of predefined inclusion criteria, being willing, and being available for the participation in the study. The CEOs of the three rehabilitation clinics were approached, and permission was taken to collect data from their centers. Each participant was given a questionnaire, and before they started, they were given quick instructions and had their questions answered. The participants were asked to answer all the questions. After finishing, participants were asked to share their thoughts on the scale and discuss any challenges they had. Lastly, they received appreciation for their participation.

### 3.4. Ethical Considerations

Both research subjects and pertinent higher authorities provided written and verbal informed consent to guarantee ethical compliance. Participants received clear instructions and a comprehensive briefing on the goal, duration, and methods of the study. Their rights as study participants, such as anonymity, confidentiality, and the ability to leave the study at any time, were expressly guaranteed.

## 4. Result

To establish the scale's psychometric properties, factor analysis, internal consistency, item-total correlation, and concurrent validity were conducted.

### 4.1. Item-total correlation

Item-total correlation analysis was performed to assess the coherence of each item with the overall scale. This analysis aimed to identify and potentially eliminate items that were inconsistent with the rest of the scale. The results showed that all items positively correlated with the total scores, with item-total correlations ranging from 0.41 to 0.66. This range suggests that the scale is multidimensional, indicating that the items capture various aspects of the construct being measured.

### 4.2. Factor Analysis

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.893, indicating that factor analysis was suitable for this study. Bartlett’s test of sphericity showed

significant results ($p < 0.05$), confirming that the correlation matrix was significantly different from an identity matrix and that factor analysis could reveal underlying patterns. A scree plot suggested either two or three factors. After conducting analyses with two to five factors, a four-factor solution was retained due to its clear depiction and meaningful distinction among items. The five-factor solution explained little additional variation and resulted in nonsensical item groupings. The retained four-factor solution demonstrated high factor loadings, and each factor was named based on the underlying concept it represented, supporting the reasonableness of the factor solution.

**Figure 1: Scree Plot for factor analysis of Substance Use Alienation Scale**

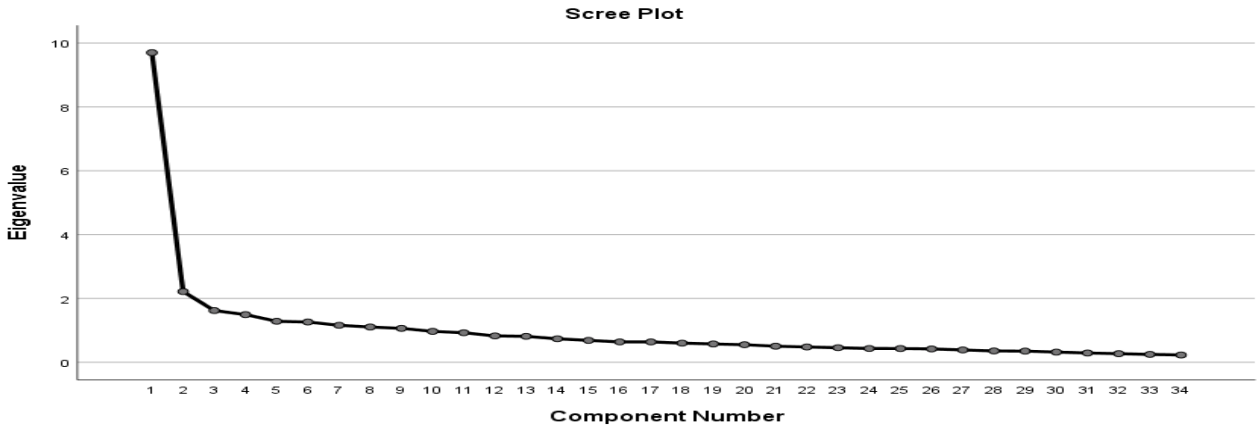


**Table 1: Exploratory Factor Analysis with Varimax Rotation**

| Item No. | F1 | F2 | F3 | F4 |
|---|---|---|---|---|
| 1 | .74 | | | |
| 2 | .71 | | | |
| 3 | .71 | | | |
| 4 | .56 | | | |
| 5 | | .41 | | |
| 6 | | | | |
| 7 | | .50 | | |
| 8 | | .71 | | |
| 9 | | .62 | | |
| 10 | | .60 | | |
| 11 | | .56 | | |
| 12 | | .49 | | |
| 13 | | | | .55 |
| 14 | | | | .68 |
| 15 | | | | .70 |
| 16 | | | | .55 |
| 17 | .49 | | | |
| 18 | .49 | .46 | | |
| 19 | .59 | | | |
| 20 | .60 | | | |
| 21 | .60 | | .42 | |
| 22 | .44 | | | |
| 23 | .47 | | | |
| 24 | | | .50 | |
| 25 | | | | |
| 26 | | | | |
| 27 | | | | |
| 28 | | .62 | | |
| 29 | | .67 | | |
| 30 | | .60 | | |
| 31 | | | .41 | |
| 32 | | | .58 | |
| 33 | | | .69 | |
| 34 | | | .66 | |
| Eigen Value | 9.7 | 2.21 | 1.62 | 1.49 |
| % Variance | 28.52 | 6.51 | 4.76 | 4.38 |
| % of Total Variance | 28.52 | 35.04 | 39.805 | 44.194 |

Table 1 presents the results of an exploratory factor analysis with varimax rotation, which yielded a four-factor solution for the 34-item dataset. Following the analysis, 30 items demonstrated high factor loadings (>0.40) and were retained, while four items with low factor loadings were excluded. The resulting factors comprise varying numbers of items: Factor 1 (11 items), Factor 2 (10 items), Factor 3 (5 items) and Factor 4 has 4 items. Additional information concerning the item attributes is presented below.

**Factor 1: Social Withdrawal**

This subscale consists of 11 items that measure the degree of social withdrawal in individuals with substance use disorder. Examples of items include "I experience distancing from others due to substance addiction," "I experience loneliness," "Substance abusers frequently become alienated from society," and "I find it challenging to ask for help from others." The higher scores on this subscale indicate a high level of social withdrawal, reflecting the individual's enhanced separation from others and society.

**Factor 2: Social Stigma Sensitivity**

This subscale comprises 10 items that reflect sensitivity related to social stigma associated with addiction. This subscale is addressing components related to social stigma sensitivity, such as partial treatment by others, social exclusion, negative perception about being judged, and discomfort in the presence of others. For example, "experiencing alienation in the presence of close family members." "Not getting involved in social gatherings due to fear of being ridiculed due to their addiction." And experiencing alienation in the company of peers." If an individual receives higher scores on this subscale, it indicates a high level of sensitivity to social stigma.

**Factor 3: Social and Emotional Isolation**

This subscale has five questions based on social and emotional isolation. This factor is mainly dealing with how emotional state affects social relationships and vice versa. For example, "Drug addiction has destroyed my opportunities to grow," "I feel I have a disrespectful position in my surroundings," and I am unable to express my feelings and emotions openly. The higher score on this factor shows a high level of isolation in the social and emotional context. Higher scores on this subscale indicate a high level of social and emotional isolation.

**Factor 4: Social Stereotyping**

This subscale has four questions based on social stereotyping. For example, "I feel disconnected from myself." "I am anxious about interacting with people." "I feel like people view me with disdain." Moreover, "I believe others perceive me as dishonest." Higher scores on this subscale indicate greater negative social perception.

### 4.3. Reliability Analysis

Reliability analysis was conducted to calculate Cronbach's alpha for the overall Substance Use Alienation Scale (SUAS) score and its four subscales.

**Table 2: Cronbach's Alpha of Substance Use Alienation Scale**

| Construct | No. of Items | Alpha (α) |
|---|---|---|
| Social Withdrawal | 11 | .87 |
| Social Stigma Sensitivity | 10 | .85 |
| Social and Emotional Isolation | 5 | .67 |
| Social Stereotyping | 4 | .66 |
| SUAS | 30 | .91 |

*Note*: SUAS= Substance Use Alienation Scale

### 4.4. Concurrent Validity

Concurrent validity was established by examining the correlation between the newly developed Substance Use Alienation Scale and the Juvenile Social Alienation Scale (Sana et al., 2025).

**Table 3: Correlation between SUAS and Juvenile Social Alienation Scale (JSAS)**

| Scales | SUAS | JSAS |
|---|---|---|
| SUAS | -- | |
| JSAS | 0.65** | -- |

*Note*: SUAS= Substance Use Alienation Scale, ***p*< .01.

Table 3 demonstrates a positive and significant correlation between the two measures (r = 0.65**, p < 0.01), so validating the concurrent validity of the new instrument.

**Table 4: Percentile Ranks for Four Factors of SUAS**

| Percentile | F1 Social Withdrawal | F2 Social Stigma Sensitivity | F3 Social and Emotional Isolation | F4 Social Stereotyping |
|---|---|---|---|---|
| Mean | 27.55 | 26.89 | 13.29 | 10.41 |
| SD | 9.3 | 8.48 | 4.42 | 3.7 |
| 10 | 15.8 | 17.8 | 7.0 | 5.0 |
| 20 | 18.6 | 20.0 | 9.0 | 7.0 |
| 30 | 22.0 | 22.0 | 11.0 | 8.0 |
| 40 | 24.2 | 24.0 | 12.0 | 9.0 |
| 50 | 28.0 | 26.0 | 13.0 | 10.0 |
| 60 | 31.0 | 28.0 | 15.0 | 12.0 |
| 70 | 32.6 | 30.0 | 16.0 | 13.0 |
| 80 | 35.0 | 32.4 | 17.0 | 14.0 |
| 90 | 40.0 | 39.2 | 19.0 | 15.0 |
| 95 | 44.0 | 44.1 | 21.0 | 16.1 |

Table 4 displays the mean and standard deviations for each element of the Substance Use Alienation Scale (SUAS), accompanied by percentile ranks. These rankings enable the identification of certain patterns of substance use alienation, highlighting which forms are more prevalent. This scale assesses substance use alienation on different levels on the basis of percentile and sets the threshold point at the 50th percentile. The individual who scores higher than the 50th percentile will have substance use alienation. To conclude, the study found substance use alienation a reliable and valid tool to measure feeling alienated related to substance use. This scale is comprised of four subscales, which are further dividing this construct into distinctive but related phenomena. This scale has significant application in various settings of psychology and helps practitioners to assess risk factors related to alienation, which can be a hindrance in the recovery of individuals with substance use.

## 5. Discussion

This study aims to develop an indigenous measure to assess substance use alienation and establish its psychometric properties. This scale is developed specifically for the young population struggling with drug addiction and suffering from substance use alienation. This scale measures alienation using different factors, such as social withdrawal, social stigma sensitivity, social and emotional isolation, and social stereotyping. This study provides a substantial body of knowledge and understanding about substance use alienation in the Pakistani cultural context. When an individual gets involved in substance abuse, he deliberately decreases his social activities and faces social withdrawal. Many studies support the findings; for example, people often experience negative judgment, shame, and decreased socialization (Brook et al., 2002). These behaviors are triggered by substance abuse, and young individuals feel different, and they adopt maladaptive coping mechanisms, and they exacerbate a cycle of alienation (Buehler et al., 1997). Addressing social withdrawal caused by substance use is crucial because it can hinder treatment and limit social support and connectivity. Furthermore, this scale assessed sensitivity to social stigma, reflecting youths' perceptions and emotional responses to being evaluated or stigmatized for their substance use. In a study conducted by Goffman (2009), he highlighted the importance of dealing with stigma because it makes a socially devalued person with fewer social skills. Another study revealed that perceived stigma triggers mental health challenges and stops a person from seeking help and maintaining dependence on substances (Livingston et al., 2012). The impact of perceived stigma can exacerbate feelings of isolation, worthlessness, and the significance of dealing with it, especially in the treatment of substance use.

In substance use alienation, social as well as emotional isolation is a very critical aspect indicating emotional and social detachment. People with substance use disorder often experience social and emotional isolation that stops them from asking for help and expressing their internal feelings (Peplau & Perlman, 1982). Furthermore, this factor is different from social withdrawal in many contexts, especially in that it is highlighting subjective emotional experiences rather than environmental actions. The young individuals who are struggling with substance use are facing challenges in developing or maintaining compassionate relationships; as a result, they are getting more involved in substance use (Kidd, 2004). The fourth factor is social stereotyping, and it refers to partialities and assumptions about young individuals with substance use disorder. Such people are often portrayed as irresponsible, delinquent and morally weak (Room, 2005). Stereotypes are an outcome of powerful media and public discourse, and they do impact their self-perception and influence their treatment (Corrigan, Watson, & Barr, 2006). Moreover, this subscale sheds light on the significant impact of cultural attitudes on the experiences of alienation among youth with substance use.

## 6. Conclusion

The SUAS has significant application in clinical practice as it helps practitioners to assess individuals who are at risk of relapses due to alienation, and hence they can improve the quality of life of the individuals with SUDs.

### 6.1. Limitations

Notwithstanding its merits, this study possesses drawbacks. The sample, albeit varied, may not comprehensively represent all cultural, regional, or socioeconomic demographics. Experiences of alienation may differ markedly across these environments. The cross-sectional methodology further restricts causal inferences about the relationship between alienation and substance use habits. A longitudinal study is essential to investigate how these characteristics develop and affect recovery or relapse trajectories.

### 6.2. Implications

This scale has profound implications for diverse perspectives. This questionnaire is a reliable tool to assess alienation related to substance use disorder for clinical psychologists, therapists, policymakers and researchers. It would help them to assess the various psychological challenges associated with substance use disorders in youth. Not only this, but this study also helps clinicians to customize treatment plans to reduce alienation and its factors and promote connectivity with oneself, emotions, others and society.

### 6.3. Policy Recommendations

Future studies are recommended to study this phenomenon on diverse samples with different backgrounds to get a more nuanced understanding of the manifestation of alienation in different social contexts. Furthermore, the researcher should validate the newly developed scale across different settings and populations to support its efficacy as a reliable and culturally sensitive tool.

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