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A DESCRIPTIVE ANALYSIS OF THE MALADAPTIVE PERSONALITY TRAITS AMONG PERSONS WITH SUBSTANCE USE DISORDERS

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ABSTRACT

Objective: *The present study was undertaken to examine the prevalence of demographics characteristics and maladaptive personality traits among persons with substance use disorders (SUDs).*
Design of Study: *quantitative research design/descriptive study*
Place and Duration of study*: Data was collected from different rehabilitation centers of Karachi from September 2024-May 2025.*
Sample and Method*: A sample of 324, mean age ($\bar{x}$ = 27.65; SD =3.27) was drawn purposively from different Drug rehabilitation centers of Karachi. Demogtraphic form and Personality Inventory for DSM-5 -Adult were administered.*
Result and Conclusion: *Results showed that highest prevalence of substance use is between the age group of 25 to 35 years, most reported gender was male who were under matriculation, belonged to lower socioeconomic status, and were single and first born. The scores on the traits of negative affect, detachment, antagonism and disinhibition are almost normally distributed except psychoticism, where the data is highly positively skewed means the scores of the sample were low on the trait of psychoticism. The study proved that persons with SUDs score on labile personality traits, particularly negative affect and disinhibition which makes imperative that early intervention should be designed to detect labile personality traits to design preventive strategies.*

Keywords: *Personality variables; Substance use; Prevalence; Antagonism & Disinhibition*

INTRODUCTION

Substance use disorder is a brain disease which is caused by multiple factors. From sociological point of view, either economic or social reasons have been identified such as peer pressure and unemployment. Keeping in view the socio- economic conditions of the country as the family system is moving from joint to nuclear and with ever increasing inflation rate, the speed of stressors are rising high resulting in different kinds of psychological disorders. Individuals cope with these issues depending upon their personality. The issue of substance use is also discussed on moral grounds. But psychological analysis of substance user's behavior reveals that those who are affluent and those who do not socialize much they also fall prey to substance use. The issue has been found at trajectory, where in addition to social and economic variables personality variables seem pivotal in triggering the use of substance.

According to Marshall et al. (2021) substance use brings about change in the biological functioning of individual as the chemical components interact with the brain. The biological and genetic factors seem to be operative behind the use of substance.

Demographic factors like education have been examined by Compton et al. (2007), who stated that people who are unable to complete high school are more likely to indulge in substance use. Another such variable is socioeconomic status which has been studied by Phelan et al. (2010), Meier et al. (2012), and Cass et al. (2014). They explained this phenomenon by using fundamental posit theory, according to which the inverse relationship between the variable of substance use and socioeconomic status has been proved, they identified the resources of upper income group as their protective factor, since the early use of substance impair their brain functioning which further impair their ability to study and join high status professions. People ranging from 18 to 25 years were found to be highest followed by 26 to 39 years in substance use disorders as reported National Center for Drug Abuse Statistics (2023).

Comorbidities have been studied by many researchers like Conrad et al. (2000), who identified that many individuals with Substance use disorders (SUDs) also exhibit personality disorders, particularly antisocial and borderline traits. Research indicates that these personality traits can exacerbate substance use and complicate treatment efforts. Identifying these traits can lead to more effective, personalized treatment approaches. Moreover, Korsgaard et al. (2016), found that there is strong association between substance use disorders and personality

disorders regardless of gender using adolescent sample. Furthermore, Lynskey and Hall (2000) discovered that disorders which have difficulty in managing stress are at the risk of substance use. However, Trull's (2018) metanalytic study spanning from 2000 to 2007 covering 70 studies, revealed the co-occurrence ranged from 0 to 53.19%. The records were collected from different settings like inpatient, outpatient, forensic, community and combination of sampling methods.

In addition to personality traits attempts have also been made to identify other factors such as stress, which Sinha (2011) considered a common cause of substance use and numerous psychological theories consider substance use as a coping mechanism. Through the use of ineffective coping individual exhibits various stress related psychiatric disorders like anxiety, mood and PTSD. The same author in 2024 tried to study the adaptive stress response at various levels like baseline, acute and return to homeostasis that occurs at various response times. It was found that this response is disrupted by maladaptive coping of substance use and avoidance and they resort to substance use as coping due to their inability to adapt to stress.

The same issue has been studied from behavioral perspective by Brunelle et al. (2004), and Comeau et al. (1994), both the groups of researchers identified the implication of two different types of reward system, like positive reinforcement for pleasure seeking and negative reinforcement for avoiding negative affect. Baker et al. (2004) pointed out that individuals with personality disorders are more likely to exhibit traits of emotional instability and impulsive behavior particularly when they indulge in substance use as their coping mechanism.

Another supportive study has been reported by Goncalves et al. (2021), who used Clinical Dimensional Personality Inventory 2 (IDCP-2) to identify people with and without substance use and compared the effectiveness of the said instrument in identifying substance users with Personality Inventory for DSM (PID-5). They found that factors such as anxiety, depression and impulsiveness as the most predictive of substance use. They also reported the effectiveness of IDCP-2 and PID-5 in predicting the group variable as 77% and 76% respectively. Similar efforts were made by FuChen et al. (2019), using explanatory item response modeling (EIRM) among Chinese illicit drug users based on DSM-5. Personality traits of anxiety sensitivity, impulsivity, sensation seeking and hopelessness were taken as person covariate. According to results, sensation seeking appeared as the predictor of substance use in their sample. Hasin et al. (2007), reported that people with mood and anxiety disorders are more likely to

experiment with substance use. In another study Folker et al. (2024), explored the relationship between negative affect sensation seeking and executive functioning on 167 adolescents. They discovered the predictive role of sensation seeking between individuals whereas, substance use and negative affect impact each other within individuals. Deep et al. (2024), conducted metanalysis of psychological factors affecting substance use and effective interventions for such young adults. Their analysis reveals idolize antisocial peer model, lack of strong sense of identity, lack of family attachment and parental modelling.

Butt et al. (2022), conducted a qualitative analysis of social, cultural and psychological factors leading to substance use behavior. Among other things the researchers concluded that some personality traits could be seen at early ages among substance users like self-blaming, low self- esteem, coping deficits, low frustration tolerance, moody and worrying were identified as the predictors of substance use among young adults.

In the light of the above literature review it is imperative that these variables should be explored in our society which might result in early screening and identification of potential substance users. Moreover, insights gained from studying personality traits can guide the development of personalized treatment plans that address the specific needs of individuals with SUD. This is particularly important in Pakistan, where access to mental health resources is limited and treatment approaches need to be culturally sensitive. Any strategy resulting in reduction of substance use can be beneficial for society by investing more in prevention rather than cure.

By identifying at-risk populations based on personality traits, preventive measures can be implemented more effectively. Educational programs and community outreach can be designed to target youth exhibiting high-risk personality traits, potentially reducing the incidence of SUD.

In the light of above analysis attempt has been made to assess personality traits of persons with substance use disorders. The following were the objectives:

1) To explore the prevalence of demographic characteristics of persons with substance use disorders.
2) To explore the prevalence of maladaptive personality traits among persons with substance use disorders.

METHOD

The study follows **q**uantitative approach with descriptive research design to find the demographic characteristics and role of maladaptive personality traits among persons with substance use disorders.

Participants

The sample size of 324 was drawn with the help of G* power (version 3.1.9.4) with effect size 10, probability of error .05 and power .95 (Naveed & Rauf, 2024). The sample was approached purposively from the different rehabilitation centers of Karachi.

Inclusion criteria:

Those who were admitted in the drug rehabilitation centers.
Those who have been through the detoxification phase.
Those whose age range from 18 to 60.

Exclusion criteria

Those who were outside Drug rehabilitation centers
Those who have not been through the detoxification phase
Those whose age range below 18 and exceed 60.

Measures

Demographic form

This was designed to gain information about the age, gender, education, marital status, occupation, birth order and socioeconomic status of the participants.

Personality Inventory –DSM 5- Brief-Adult (APA, 2013).

The tool is included in DSM-5 section III assessment measures (APA, 2013). It is 4 points likert type scale. It has five subscales include Negative Affect, Detachment, Antagonism, Disinhibition, Psychoticism. The Cronbach's alphas ranging from 0.72 to 0.96 (median 0.86) (Krueger et al., 2011).

Procedure

Different rehabilitations centres, who deal with the treatment and rehabilitations of substance use disorders in Karachi were approached with the institutional letter stating the purpose of research. After ensuring all the ethical considerations, the concerned authorities allowed us to approach the in patients, those who agreed to participate, the PID-DSM-5 measure was run on them, and they were also assured that they can withdraw from this process whenever they wish. Later the data were entered into SPSS (0.26) and analyzed. Prior to collect data to ensure the application of ethical considerations, the authorities of rehabilitation centers were given detail description of the study. The purpose of research was shared with the participants and informed consent was sought. All of the participants received assurances that their information would be kept confidential will be used only for the purpose of study, and that their cooperation would be greatly valued. Additionally, individuals were told that they have right to withdraw at any moment if they are not willing to disclose their personal information**.**

Statistical Analysis

To assess the prevalence of demographic variables and various personality traits frequencies, mean, SD, skewness and kurtosis of the five subscales of PID-5 were calculated by using SPSS 26.

RESULTS

Table 1
Demographic Characteristics of the sample (N=324)

Variables	*f*	*%*
Age		
18-24	64	19.8
25-35	160	49.3
36-46	80	24.6
47-55	13	3.4
60>	10	3.1
missing	1	0.3
Gender		
Male	290	90
Female	32	9.8
Others	1	0.3
missing	7	2.1
Qualification		
No qualification	13	4
Below matric	98	30.2
Matric	97	29.9
Intermediate	62	19.1
Bachelor	18	5.6
Master	6	1.8
missing	30	9.3
Socioeconomic		
Lower class	192	59
Middle class	66	20.4
Upper class	44	13.6
missing	22	6.7

Marital Status		
Single	139	42.9
Married	109	33.6
Divorced	40	12.3
Widowed	21	6.4
missing	**15**	4.6
Birth Order		
Firstborn	131	40.4
Middle class	82	25.3
Lastborn	57	17.5
Only child	27	8.3
missing	27	8.3
N	324	100%

Note: Note. N=324. The sample was predominantly aged between 25-53= 49.3%. Male respondents were 90%, the qualification level was mostly matric and under matric 30.2 and 29.9%, Mostly the sample comprised of lower- class 59% followed by middle class 20.4%, mostly the respondents were single 42.9% followed by married 33.6%, Majority of the respondents were first born 40.4 followed by middle born 25.3%. The most reporting age bracket was 25-35.

Table 2

Cronbach alpha of Personality inventory DSM-5 Brief

N	Cronbach alpha based on standardized items	No of items
324	.901	25

Note. N=324. Calculated Cronbach's alpha of Personality Inventory DSM -5 Brief is .901, which is excellent.

Table 3

Descriptive statistics of scores of persons with SUDs on five subscales of Personality inventory DSM-5 Brief

Variables	*N*	*M*	*SD*	*Skewness*	*Kurtosis*
Negative Affect	324	7.39	3.62	-.07	-.51
Detachment	324	7.16	4.22	.35	-.12
Antagonism	324	5.79	3.42	.48	-.29
Disinhibition	324	7.72	4.00	-.18	-.80
Psychoticism	324	7.89	6.12	2.81	11.73

Note. N = 324. Mean of all variables range from7.895 to 7.161, except antagonism 5.796

SD range from 3 to 4 except Psychoticism which is 6.12. The Negative Affect and Disinhibition are negatively skewed. Whereas, the variable of Psychoticism is positively skewed and highly leptokurtic.

DISCUSSION

The study examined the prevalence of five personality variables namely negative affect, detachment, antagonism, disinhibition and psychoticism among the persons with SUDs. To explore this phenomenon, rehabilitation centers were approached and relevant data was collected. The analysis of data Table 1, revealed that different demographic factors play important role in the use of substance like participants ranging from 25 to 35 years of age were most likely to use substance. This is the age bracket who have to establish them in any profession and make their social recognition but due to some adversities and low threshold for tolerance, they resort to substance as an ineffective coping strategy. The analysis of qualification also shows that most of them who have minimal education of matric and under matric, almost 30% which again served as a barrier to progress. 59% of participants were from lowest socioeconomic class.

The inverse relation of socioeconomic status and substance use has been reported by numerous researchers like Pehlan et al. (2010), Meier et al. (2012) and Cass et al. (2014). According to them the resources of upper socioeconomic group

delimit their chances of substance use whereas people with meagre resources could neither afford early identification and remedial opportunities, leaving them at lower level of education and financial complications. Most of them were single 42.9%, substance use makes it difficult for them to find partner as well. Sinha (2018) found that marriage serve as a protective factor against substance use, but this is true only in case of couples who have intimate relationship with support and care, whereas, loss of relationship in the form of divorce and poor partner relationship predicts the use of substance. The most reporting age group was found from 25 to 35 years of age bracket, as this age group is supposed to be one which is fraught with the certain responsibilities and expectations of early adulthood, where career and marriage become huge responsibilities. If the individual is predisposed to substance use then minor stressors may trigger the use of substance. The age bracket of 25 to 35 encompasses a significant portion of Millennials and younger members of Generation X. This group experiences various life transitions, including career establishment, family formation, and social pressures, which can influence substance use. 26 to 29 years old were found to be engaged in inhalant use, 30 to 34 years were mostly found in opioid use (https://americanaddictioncenters.org/inhalant-abuse).

Recently Gabaldon and Perez (2024) conducted a longitudinal cohort study and used Big Five dimensions. Participants were tested at the age of 10 and 30 later on. Those children who scored higher on extraversion and lower on conscientiousness and agreeableness were found to be more toward substance use at the age of 30. Literature at different phases of time has been supporting the research objectives.

Lastly, the first born have been found to indulge in substance use most 40.4%. Bishop and Barcley (2022) studied the relation of increased health outcomes like substance use and birth order. They found that family background characteristics as strong predictors of substance use, which also sets the stage for faulty role models. Samek et al. (2015) concluded that later born siblings generally fall prey to substance use due to exposure to older sibling using the same.

Table 2 shows that the Cronbach alpha has been found to be .90 which is excellent. The descriptive properties of the scale table 3 shows that mean for the scale of negative affect, detachment, disinhibition and psychoticism center around 7.89 to 7.16, only the mean of antagonism is 5.79. whereas, SD ranges from 3 to 6 for different scales.

Table 3 shows mean, SD, skewness and kurtosis of different personality traits have similar means except antagonism which is 5.79 and kurtosis of .48 means most of the cases are falling at the left side of the curve, whereas the trait of disinhibition shows that the scores are negatively skewed with most cases falling at the higher scores end, more or less the same is true of negative affect where the scores cluster slightly on the right side. The trait of psychoticism shows highest kurtosis figure 11.731which shows that the scores are highly positively skewed, majority of the cases cluster and peak in the middle of the curve but at the extreme left end which shows minimum prevalence of psychoticism among the sample members. The figures for the trait of detachment are positively skewed with most of the cases falling at the right end which the spread of scores is from the middle to the extreme. Generally, people with poor support system and a sense of alienation accompanied by negative affect and poor temperament are highly likely to resort to substance use to seek pleasure rather than engaging in healthy and adaptive coping strategies, since substance use results in quick mood boosting which becomes a strong motivator for engaging in vicious cycle.

The higher prevalence of such traits has been supported by the work of Goncalves et al. (2021), they used Clinical Dimensional Personality Inventory 2 (IDCP-2) with substance users and non-users. They found the said scale effective in predicting the group variable 77%.

The current study coincides with the existing literature thus, the objectives of the studies meet the expectations of the researchers and indicated the similar patterns of demographics variables and personality traits, which have shown in literature and indicate the vulnerability to develop substance use disorders. The findings are useful for the addiction professionals who are working as prevention specialists in this field. Further, these finding are helpful to the professional who are working for the treatment of SUDs.

Conclusion

The study concludes that negative personality traits are prevalent among Persons with SUDs with scores of negative affect and disinhibition on the higher ends. Such studies could be helpful in planning an early intervention for the prevention of substance use by early identification of maladaptive personality traits. Results of such studies have long lasting implications for future preventive strategies.

Limitations and Recommendations

The study focused on prevalence of demographic variables and maladaptive personality traits only, if other areas were incorporated like family dynamics and detail of some social factors, results could have been enriched. The study relied only on self- reported data, which is subject to bias. A longitudinal study, that addresses the issue of early detection of traits and later development of substance use could provide more promising results. Similar studies have been done in other cities but using different research designs. If a nationwide data is collected, results could be more impactful in terms of policy making recommendations.

These results could be capitalized by designing intervention that could detect such personality traits in addition to family dynamics. If suspected individuals are targeted at right time like if they score high on negative affect, disinhibition and antagonism, emotional regulation training could benefit them, those scoring high on detachment could be taught in skills that could improve their emotional engagement and interpersonal relationships. Cognitive behavior therapy can be used in professional setting but in school environment, techniques such as mindfulness, active listening, communication through verbal and creative activities can have enhancing their emotional connectivity with others. These activities could be carried out in group session, so they may develop an understanding of common issues.

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