RELATIONSHIP BETWEEN PERSONALITY RISK FACTORS AND SUBSTANCE USE IN STREET ADDICTS AND ADMITTED PATIENT'S IN DRUG ABUSE TREATMENT UNITS OF PESHAWAR

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ABSRACT

Objective: To explore the association between personality traits and risk factors in drug addicts.

Methods: Researcher made use of descriptive study design. Participants were selected by different hospitals i.e. HMC, LRH and KTH. Ethical approval was obtained from ethical research committee Total (N=50) participants were selected through hospital based convenient sampling technique.

Results: In the present study the association between risk factors and substance use on Addiction severity index and substance use risk profile suggests that there is a significantly positive relationship between risk factors and severity of substance use disorder. Pearson correlation coefficient was used to explore the degree of relationship.

Conclusion: To sum up this study revealed that individuals with potential personality traits such as impulsivity, sensation seeking and hopelessness are more prone to substance use disorder in face of difficult issues in their life

Keywords: Impulsivity, Sensation seeking, Substance use risk profile, severity index

INTRODUCTION

Substance use disorders (SUDs) are often viewed as unitary constructs but their clinical presentations are actually quite varied and this heterogeneity has stimulated efforts to identify meaningful subtypes of substance users. It's estimated that globally around 0.85 percent of the population had a drug use (excluding alcohol) disorder in 2016. At the country-level, this prevalence ranged from 0.4 to 3.3 percent. The highest prevalence was in the United States where around 1-in-30 had a drug use addiction in 2016.[1]

The highest share experience opioid addiction, accounting for around 42 percent globally; cannabis addiction accounts for approximately one-third (Substance Abuse and Mental Health Services Administration.[2]

Mental illness is common among people who struggle with substance abuse and addiction. Around 1 in 4 individuals with Serious Mental Illnesses(SMI) also have a Substance use disorder(SUD). Studies have found that among individuals with non-alcohol substance use disorders, 28% had co-occurring anxiety disorders, 26% had mood disorders, 18% had antisocial personality disorder, and 7% suffered from schizophrenia.[3]

The risk factors and contributors to the onset and persistent of Mental and Substance Use disorders are often complex with interplay between genetic, personality trait, environmental conditions and life events. Although they should in many cases be treated differently, the range of risk factors from preconception through to old age described in our Mental Health entry are likely to also apply in cases of Substance Use disorder.[4]

Early drug use is a high risk factor for onset of substance use disorders in later life. Study conducted by Kreek & colleagues in 2005 which proposed the relative contribution of different factors to drug initiation, regular use and addiction or relapse initiation of drug use is often most closely associated with impulsivity and risk-taking tendencies (which typically have a genetic component), in addition to particular environment factors.[5]

As previous studies have found about 4 personality traits only in puberty however, such personality traits in adulthood population and dependency on substance use have been

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understudied yet.[6] To best of our knowledge, till date there are only two studies have used the SURPS in individuals with substance dependent. This study focused on the adult population and hypothesized that there will be high impulsivity, sensation seeking, hopelessness traits in individuals suffering with drug addiction. Hence, this study aimed to find out relationship between high risk factors and substance use in adult population in our socio culture background which can become pivotal for the mental health professionals to make some interventional plan in future to protect these peoples to develop drug dependency.

OBJECTIVE

To explore the association between personality traits and risk factors in drug addicts.

METHODOLOGY

Participants

The (N=50) participants who came to HMC and LRH were selected by purposive sampling technique. Sample size was determined at the average prevalence of 0.185% with 5% margin of error which suggested n=28, therefore 50 is a good size in this case.

INSTRUMENTS

1. **The Substance Use Risk Profile scale**[6] SURPS is a 23-item

personality measure developed to assess patterns of substance use based on drug specific motivations. Scale is validated and used in other studies as original dataset, for undergraduate and adolescent samples.[7]
Total high score is **92**, low score is **23** and **cutoff** score is **70.** Anxiety sensitivity is negatively correlated with sub reinforcement, whereas 3 other subscales are positively correlated with sub reinforcement. High score on Anxiety sensitivity and Imp is 20 and 20, other hand on Hopelessness has **28 items**, in which **6th** are reversed scoring and only item **17** in this subscale is not a reversed score item**.** Sensation Seeking its **24.** Higher score on each subscale predict the specific dimension of personality leads to specific group of drugs. In this scale the relationship can be developed with Addiction severity index to correlate the specific dimension with specific group. i.e. high score on Hopelessness can lead to cannabis.

2. **Addiction severity index** The ASI is a semi-structured interview invented to identify seven areas of problems: Alcohol, Drug Medical, Employment/Support Status, Legal, Psychiatric and Family/Social. It takes 1 hour, to gathered information by skilled interviewer on recent past 30 days and any of the problem in a lifetime. The ASI draws a map of problems related to substance, instead of addressing on a single area. It has 200 items and 7 subscales. It requires 50 minutes for administration.

Scoring procedure: Two types of scoring objective and subjective.
Sub scoring: 5-point scale from 0= not at all, 1=slightly,2=moderately,
3=considerably,4=extreme. In two time-frames, for 30 days if patient reports not for 30 days it will be mark as 0.
Objective scoring: Interviewer assessed the 7 problem areas on 0-9-point scale. where 0-1 is (no problem), 2 -3(mild problem, treatment not necessary), 4-5(moderate problem, some treatment indicated)6-7(considerable problem, treatment necessary), 8-9(extreme problem, treatment absolutely necessary). Interviewer will combine objective/subjective in a structured fashion to arrive at an interviewer based problem severity in each of 7 areas.

PROCEDURE

A written informed consent was taken from all (N=50) participants of research. Researcher made use of observational descriptive study design. Hence, use Pearson correlation coefficient to explore the degree of relationship. As data is normally distributed, homogeneous of variance, and it fulfills the criteria of parametric test. Participants were selected from different units of drug addiction i.e. (H.M.C, K.T.H, L.R.H,) by Hospital based convenient sampling technique. According to inclusion criteria all patients admitted to DATC units of three of patients, and exclusion criteria Patients suffering with co morbid dementia and mental retardation. Assessment tools (Addiction severity Index and Substance Use Risk Profile) were applied on all participants by clinical psychologist. all the patients were interviewed using a semi structured Performa, it was based on addiction severity index encompassing history and risk factors. The SURP were administered to identify dimension of personality as risk factor for substance use with ASI to made the profile of personality traits which led individuals to use substances.
These are extensive assessment tools for evaluating the personality profile and detailed history from patients suffering with addiction along biopsychosocial and legal issues, therefore assessment with one patient completed in 2 days.
Informed consent is attached as annex A, Addiction Severity Index consists on Biodata and general information regarding participants which is attached as Annex B, Substance Use Risk Profile Scale is attached as Annex C.

Results

The demographics showed that out of (N=50) males, 22 were between ages of 30-40 years whereas 21 were between 40-55 years and only 6 were between 20-30 years of age. (42%-46%), Although 23 were educated with primary level (46%) and 24 were uneducated (48%), whereas only 3 males educated with secondary level (6%). Mostly males were married (64%), whereas 14 were single, & 4 were widows.

Table 1 Demographic characteristics of participants

Age	
20-30	6 (12%)
30-40	23(46%)
40-55	21(42%)
Gender	
Male	50(100%)
Education	
No Education	24(48%)
Primary/Darsi Nizami	26(52%)
Marital Status	
Married	32(64%)
Single	14(28%)
Widow	4(8%)
Groups	
Abuser	25(50%)
Non-abuser	25(50%)

Table 2: Frequency table presents Addiction severity index of seven problem areas in addicted.

Medical status	
Slight	*29* (58%)
Moderate	*14 (28%)*
Severe	*07(14%)*
Employment/Support status	
Extreme issues	*32(64%)*
Considerable	*17(34%)*
Support	*01(2.0)*
Alcohol abuse	
Slight	*17(34%)*
Not at all	*33(66%)*
Drugs status	
Considerable	*12(24%)*
Extreme	*38(76%)*
Legal status	
Considerable	*13(26%)*
Moderate	*12(24%)*
Slight	*08(16%)*
Family/social status	
Slight	*03(6%)*
Moderate	*20(40%)*
Considerable	*27(54%)*
Psychiatric problems	
Considerable	*12(24%)*
Extreme	*38(76%)*

Table 3: The Pearson correlation coefficient presents the relationship between substance use risk profile and addiction severity index by using Correlation Coefficient. It shows that there is significant relationship between Impulsivity, Sensation seeking and anxiety sensitivity with drug addiction. However, there is negative relationship between hopelessness with drug addiction.

	SURP	Hopelessness	Anxiety sensitivity	Impulsiveness	Sensation seeking
SURP	1				
Hopelessness	-.032	1			
Anxiety sensitivity	.694**	-.188**	1		
Impulsiveness	.387**	-.315**	.096**	1	
Sensation seeking	.616**	-.232**	.032**	.138**	1

SURP=substance use risk profile

DISCUSSION

Risk factors increases the tendency in individuals or situations in the family, school or community to engage in problem behavior such as: alcohol, tobacco and other drug use, it also heightens the likelihood of violence, suicidal risk, and teen pregnancy. The more risk factors present, the greater likelihood individuals will develop problems in adolescence. family with a history of alcohol/ drug addiction, it increases the likelihood that individuals will also have alcohol and other drug problems. [7,8,9]

Therefore, this study aims to focused on various personality dimensions and to correlate them with other Alcohol/drug, Medical, employment/support, legal and family psychiatry along social issues which increase the likelihood of substance use disorder. The demographics showed that (N=50) males in which 42%-46% participants were in between 30-55 years' group, although 23 were educated with primary level (46%) and 24 were uneducated (48%), whereas (6%) were secondary
Level educated. Mostly 32 were married (64%), single was 14 whereas, 4 were widows. see (table 1).

Addiction severity index shows 7 individuals with serious medical issues which considerably calls attention for the treatment. 64%had extreme issues with lack of employment and support, whereas only 1 individual had some support and employment (2.0%).
Participants (26-28%) showed considerable and extreme legal issues in their life, 24% moderate legal issues. Problem with Alcohol showed 34%. Although, (76%) had extreme problem with substance use.
On a family psychiatric history (76%) had extreme family psychiatric illnesses, (24%) reported moderate psychiatric disturbances in family. Similarly, the martial and social problems index revealed (54%) considerable issues. On the contrary, only (6%) showed slight conflicts in family. See (table 2).

A model of substance use, based personality traits and risk for SUD were presented in 1975.[7] Another study conducted on underlying personality traits may exhibits changes in functioning of the brain related to motivational systems and vulnerable to have drug induced effects. Which is found in the negative and positive aggravated factors of drug use. [10]
The association between risk factors and substance use on Addiction severity index and SURP suggests that there is a significantly positive relationship between risk factors and severity of substance use order (see table 3). Participants presented high scores on impulsivity r= <.837 at the significant level (p<.000), this presented that individuals with high impulsivity is more prone to substance use disorder in face of difficult issues in their life. The fact that impulsivity is correlated with addiction vulnerability by considering some of evidences: (i) groups prone to risk for development of SUDs, (ii) Pathological risk taking and harmful consequences on brain structure (iii) genetic predisposition for impulsivity is a genetic risk factors for addiction. On one hand, impulsivity may happen as a consequence of long term use of substances effects on the brain harmfully. On the alternative account, uninhibited behavior precedes to SUDs and linked with the sensitivity to addiction. However, there is robust evidence that impulsivity is a pre-existing vulnerability signs for SUDs.[7,8]
Therefore, on sensation seeking dimension r=.616 at the high significance level of (p<.000). This reveals that individuals who are high in seeking sensations and thrilled had more issues with substance use disorder.

These findings are aligning with the previous studies.[9] They postulated that factors are often seen in young people who engage in sensation-seeking and low harm-avoidance behavior and those who demonstrate a lack of impulse control. Impulsivity and sensation seeking represent two distinct pathways to the positive affect vulnerability to alcohol and drug dependency.[11,12]

Similarly, results showed on anxiety sensitivity r=.694 at the significant level of (p<.000). Studies found that AS is an internalizing trait have been linked with superior misapply of depressant and anxiolytic drugs, such as sedatives, opioids, and benzodiazepines, and a particular type of misuse of alcohol related coping mechanisms,[13] lately AS has found to be more related with cannabis misuse.[14]

On the contrary, data on hopelessness dimensions presented r=-.032 at the insignificance level of (p<.825) this shows the negative association with SUD. However, present study reflected the finding which is inconsistent with the previous study findings regarding youth who experience symptoms of depression or suicide are more vulnerable to drug and alcohol misuse, abuse and dependency (see table 3). Therefore, it is probable that current study's findings might be due to the fact that individuals were adult with the possible 30-55 age (42-46%), who have developed various other psychological phenomena such as learned helplessness or desensitized to their problems, or Alexithymia, after heavy prolonged use of drugs they feel numbed towards problems. Similarly, the present study findings are consistent with one of study, which presented that feelings of hopelessness, introversion, and depression-proneness is correlated with sensitivity to misuse of alcohol and opiate, which varies from those individuals who aims to reduce depressive symptoms due to sensitivity to anxiety.[15,16,17]
Researchers found that depression is a high risk factor for alcohol use and opiate.[11,12,13]

Future researcher can find out this relationship more keenly. And the reason why it is so? Relationship between four personality dimensions resulted in positively and negatively enhancing factors which causes to different types of SUDs. The two dimensions' impulsivity and sensation seeking (IMP & SS) which are externalizing traits have been linked with vulnerability to the rewarding properties of drugs, particularly IMP leads to stimulant misuse like SS with alcohol, cannabis, and multiple substance misuse. On the other hand, individuals use more self-medications and less alcoholic and cannabis who score higher on hopelessness and introversion dimensions.[18,19,20]

Conclusion: In conclusion this study presented that individuals with potential personality traits such as impulsivity, sensation seeking and hopelessness are more prone to substance use disorder in face of difficult issues in their life and experience severe difficulty in medical, family or social, legal status, psychiatric illnesses, alcohol use and drugs status.

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