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Quality of Life of Adults With Substance Use Disorders in Rehabilitation Centers of Twin Cities of Pakistan

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ABSTRACT

The prevalence of substance use disorders is increasing day-by-day globally and specifically in Pakistan. As the prevalence is increasing, the mental health and quality of life of the substance users is also being affected. This study aimed to investigate the quality of life and psychological distress among adults with substance use disorders who were admitted in drug rehabilitation centers for at least one month in twin cities of Pakistan. A quantitative research method was employed, 300 men starting from age 19 years and onwards diagnosed with SUDs were recruited using purposive sampling technique for the study. Urdu indigenously developed QOL questionnaire was used to assess general quality of life, the Urdu translated version of DAST-20 was used to assess substance dependence and Urdu translated version of DASS-21 was administered to assess psychological distress among individuals with SUD. The results indicated significantly strong positive correlation between substance dependence and depression (r=.26**), substance dependence and stress (r=.19**) and substance dependence and overall psychological distress (r=.21**), whereas weak positive correlation between substance dependence and anxiety (r=.12*). The quality of life of the participants is significantly negatively correlated with substance dependence (r=-.21**) and overall psychological distress (-.57**). Poly-substance users scored high on DASS-21 (M=46.9, SD=4.86) and low on QOL questionnaire (M=34.4, SD=5.71) as compared to single substance users. Substance use is associated with high psychological distress and poor quality of life. Poly-substance users have poor quality of life and high psychological distress as compared to single substance users. These findings provide insights to develop targeted interventions and support systems for affected individuals especially poly-substance users.

Keywords: *psychological distress, poly-substance use, substance use disorder, quality of life*

INTRODUCTION

In many parts of the world, substance usage and abuse remain serious problems (Statista Research Department, 2024). The additional unique information that has been uncovered by improved research indicates that substance dependence is having more serious and significant effects than previously believed (Vienna, 2019). According to the 2019 World Drug Report by the United Nations Office on Drugs and Crime (UNODC), an estimated 35 million persons worldwide suffer from drug use disorders (Vienna, 2019). Cannabis remained the most widely used drug in the world in 2022, with an estimated

228 million users (UNODC, 2024). There were 60 million users of opioids, 30 million users of amphetamine-type stimulants, and 20 million users of cocaine and ecstasy, respectively (UNODC, 2024). "poly-substance use" is a common occurrence in most drug markets, and use patterns have grown more complicated as the range of medications available to consumers has expanded (UNODC, 2024). People's life are being impacted by drug usage on all social, economic, and psychological levels (UNODC, 2019). Around the world, many types of drugs are used. Opioids, cocaine, cannabis, and amphetamines are the four primary categories into which international statistics frequently divide illegal drugs (Ritchie, Arriagada & Roser, 2022).

According to Ritchie, Arriagada, and Roser (2022), excessive usage or dependence on illegal drugs can have a detrimental impact on one's general health and mental well-being as well as the wellbeing of those around them. Cannabis has been used for medical purposes from the beginning of recorded history because of its ability to alleviate severe pain and prevent diarrhoea (Sardar, 2016). Its psychoactive components later proved to be remarkably habit-forming, as many people developed addictions to them. As time went on, its use for altering mental states—such as creating a sense of euphoria and excessive rapture—grew concerningly (Sardar, 2016). In persistent clients or chronic users, cannabis antagonistically influences learning and memory that can keep going for a few days, the overdose may bring about feelings of sedation and severe psychosis, in which the individual may get temporarily unconscious (Sardar, 2016). The stimulants include medications such as adderall, methylphenidate (Ritalin), dexamphetamine, illicit substances such as, cocaine, ice and speed, legal substances such as caffeine and nicotine (Alcohol and Drug Foundation, 2024). It is dangerous as it increases blood pressure and heart rate especially when it is used for the first time or in case of overdose (Sardar, 2016). The overdose also results in paranoia in which the individuals may become violent (Sardar, 2016). Opioids are a group of natural, semi-synthetic, and synthetic medicines (NIDA, 2024). People can quickly lose control of their opioid consumption and feel compelled to continue using them to feel normal (NIDA, 2024). Opioids can cause breathing to become dangerously sluggish (NIDA, 2024). As a result, little oxygen reaches the brain and this can lead to severe brain damage or death (NIDA, 2024). Its use has also been linked to mental illnesses such as depression and sexual dysfunction (NIDA, 2024). The poly-substance Use Disorder (PUD) is a medical condition, which happens from long term use or abuse of at least 2 substances (Drugs.com, 2024).

The individual cannot stop despite the fact that it leads to physical or social issues (Drugs.com, 2024). PUD incorporates utilization of a medication like cocaine, or abuse of alcohol, tobacco and a physician recommended medication, for example, narcotics. This problem is additionally called poly-substance abuse (Drugs.com, 2024). Abbasi et al. (2022) from two cities of Pakistan demonstrated that poly-substance abusers who were of older age, unemployed, with a high level of education, with low income and living in a nuclear family had a significantly high risk of shame and guilt. In a related study in Lahore, Pakistan, Iqbal et al. (2022) found that people with poly-substance use disorder reported a higher score on guild, shame, and relapse scale as compared to people monosubstance use disorder. Additionally, people with PUD scored low on self-efficacy than people with SUD (Iqbal et al., 2022).

The quality of life of individuals with substance use disorders decreases as the substance use progresses but the appropriate treatment improves their quality of life (Assari & Jafari, 2010). Armoon et al. (2022) demonstrated that the quality of life of patients with Substance Use Disorder (SUD) is typically lower than that of patients with other mental diseases and lower than that of other patients. The results point to the necessity of mental health care in order to enhance the quality of life of SUD patients. Changes in behavior brought on by cocaine may make risky and suicidal actions more likely (Armoon et al., 2022). Rand, Arnevik & Walderhaug (2020) demonstrated that residential SUD patients reported significantly lower health-related quality of life. This emphasizes the need of establishing or discovering effective

treatment alternatives for those with substance use disorders (Rand, Arnevik & Walderhaug, 2020). Anxiety, depression, pain, discomfort and self-care were the most typically affected dimensions (Rand, Arnevik & Walderhaug, 2020).

Substance Dependence

Substance dependence is related to individual's physical dependence on a substance such as alcohol, nicotine, drugs or medication, to the extent that their body adapts to it and develops a tolerance to it, resulting in withdrawal symptoms when they stop using it. It is a complex condition that affects the person's brain, body, and behavior (Gupta, 2022). The DSM-5 defines substance use disorder (SUD) as a pattern of symptoms brought on by drug use that a person persists in using in spite of its detrimental effects. There is eleven criteria that can result from substance abuse and those who meet this criteria are diagnosed with substance use disorder (SUD) (DSM-5TR, 2022).

Psychological Distress

Psychological distress is a collection of physical and emotional symptoms that most people associate with typical mood swings (APA, 2018). However, psychological distress can sometimes be a sign of the onset of major depressive disorder, anxiety disorder, somatization illness, schizophrenia, or a number of other clinical problems (APA, 2018). It is believed to be what many purpoted self-report measures of anxiety and depression evaluate (APA, 2018).

Quality of Life

Quality of life refers to how satisfied a person is with life (APA, 2023). It includes emotional, material, and physical well-being, involvement in interpersonal relationships, chances for personal (e.g., skill) growth, exercising rights and choosing self-determining lifestyle choices and participation in society (APA, 2023).

Theoretical Background

Codependency Theory

The concept of codependency was proposed by Melody Beattie in 1986 in her book "Codependent No More". Codependency in the context of psychological distress and low quality of life had been described by Stanton Peele in 1998 in his book "The Meaning of Addiction". Addiction has profound roots in social and environmental contexts and is not only a biological or personal issue (Peele, 1998). When codependency occurs, the addict frequently depends on intimate relationships (such as family or partners) to maintain their addictive behavior, and the enablers unintentionally contribute to the addiction cycle by their actions (Peele, 1998). Relationships are sustained, trust is damaged, which causes social isolation and quality of life becomes poor (Peele, 1998). In line with the codependency model, Peele highlights the emotional aspects of addiction. People in codependent relationships frequently feel strong feelings of fear, humiliation and guilt (Peele, 1998). Addiction intensifies these feelings as the addict and those who support them struggle with cycles of conflict and disappointment (Peele, 1998). All the parties involved (especially the addict) experience increased psychological distress and persistent state of emotional instability as a result of these interactions due to addiction (Peele, 1998).

Self- Medication Hypothesis

Self-medication hypothesis was given by Khantzian in 1985. According to this theory, people turn to drugs as a form of self-medication for psychological issues like anxiety, depression or trauma (Khantzian, 1985). But over time, drug usage makes these problems worse, which lowers quality of life (Khantzian, 1985). Although drugs momentarily ease emotional suffering, they eventually deteriorate mental health by increasing psychological distress (Khantzian, 1985). Although substance abuse is perceived as an effort to cope with psychological suffering, but later, it causes severe loss in mental and physical health and decreases quality of life (Khantzian, 1985).

Stress and Coping Theory

According to stress and coping theory (Richard and Lazarus, 1986), addiction can be viewed as a maladaptive stress-reduction technique. However, as the effects of addiction mount, using drugs to deal with stress creates a vicious cycle of psychological suffering (such as anxiety and depression), and a lower quality of life. People with SUD frequently believe that stress is uncontrollable and they use emotion focused coping mechanisms such as substance addiction, which is maladaptive and ultimately lead to more distress (Richard & Lazarus, 1986).

Maslow Hierarchy of Needs

Considering the theory of Maslow's hierarchy of needs (Maslow, 1958), addiction impairs a person's capacity to satisfy fundamental psychological and physiological needs, including self-worth, safety and love. This disturbance lowers the person's quality of life by causing ongoing stress and discontent. Substance use frequently fulfills short-term physiological urges while compromising higher-level needs, such as need for belongingness, relationships and self-actualization. Life dissatisfaction and psychological pain increase when significant goals are not met. Addiction prevents people from moving forward towards greater levels of fulfilment and keeps them stuck in survival mode.

Aim

Current study was aimed to investigate the quality of life and psychological distress among adults with substance use disorders admitted in Drug Rehabilitation Centers in twin cities of Pakistan. There are related studies conducted in other countries. The purpose of the study was to examine if similar patterns and findings exist in the Pakistani context. This will help validate and expand upon findings of other countries, considering cultural and contextual factors specific to Pakistan. It will also provide insights to develop targeted interventions and support systems for affected individuals in Rawalpindi and Islamabad.

Martinotti et al. (2020) demonstrated low quality of life among substance users during the period of lockdown in COVID-19 in Italy. Bizzari et al. (2005) in Italy demonstrated that the patients with opioid dependence and the patients with dual diagnosis reported significantly poor quality of life as compared to the healthy individuals.. Rhee & Rosenheck (2019) demonstrated that the adults with currrent opioid use disorder have much lower health related quality of life and a higher risk of unemployment, while (easily compared to earlier studies (Rhee & Rosenheck, 2019). Bernardes, Filho & Noronha (2018) demonstrated that cocaine and anxiolytic medications resulted in reductions in quality of life.

Green et al (2012) after a longitudinal study demonstrated that when they examine how substance use and psychological distress interrelate, how they are continuously associated with each other over time; how for a cohort of African Americans that when we study the connection between age 16 and age 42 drug

and alcohol use are significantly associated with psychological distress among both males and females. Chang, Stuart & Chen (2021) from a Canadian campus survey have demonstrated that high level of drug use is linked with psychological distress. From a three year longitudinal study, Booth et al (2010) demonstrated that the psychological distress seems to be gradually increased by a variety of distinct substances. Cocaine and methamphetamine users were found in rural regions; these correlations with poor psychological health raise questions about the accessibility of local treatment facilities for people with substance misuse and mental health issues (Booth et al., 2010). Gyawali et al. (2016), demonstrated that in Nepal, high level of psychological suffering is very common in individuals with SUD. However the sample of 180 patients cannot be generalized. Newcomb, Carmona & Galaif (1999) demonstrated that four years later, individuals who misused drugs early on had reduced functioning, anxiety, suicidal thoughts, psychoticism, animosity, and a diminished sense of purpose in life. Four years later, individuals who had psychological distress symptoms (such as dysphoria or suicide thoughts) reported drug use (Carmona & Galaif, 1999).

Sultan, Naureen & Sehar (2024) have demonstrated that among 156 participants, the age group with the highest rates of drug addiction and the most obvious mental health issues was middle adulthood. This particular age group appears to have higher rates of medical comorbidities and suicidal thoughts. Additionally, compared to single people, married people had higher rates of personality, anxiety, depression, and psychotic illnesses (Sultan, Naureen & Sehar, 2024).. Quello, Brady & Sonne (2005) demonstrated that the most prevalent psychiatric comorbidities among substance use disorder patients are mood disorders, such as depression and bipolar disorder. Smith (2022) demonstrated that the prevalence of substance use disorders in adults with major depressive disorder ranges from 10% to 30%. Depression is a mental disorder that frequently co-occurs with substance use (Smith, 2022). Malik et al. (2017) in Faisalabad Pakistan demonstrated that depression and personality disorders were frequently co-morbid with substance use. Individuals with heroin addiction had a much greater prevalence of depression (Malik et al., 2017). Mohamed, Ahmed, Hassaan & Hassan (2020) have demonstrated that the substance use disorders are linked to high levels of anxiety and depression. More precisely, it is linked to severe despair and anxiety (Mohamed, Ahmed, Hassaan & Hassan, 2020). Grant et al. (2004) have demonstrated that in US population, the relationships between substance use disorders and independent mood and anxiety disorders were largely positive and significant, implying that treatment for a comorbid mood or anxiety illness should not be denied to those with substance use disorders (Grant et al., 2004). Baigent (2012) has demonstrated that self- medication with substances of abuse for anxiety is associated with an increased risk of developing anxiety disorders, specifically social anxiety disorder. We have proof that the clinicians should be particularly careful in monitoring for substance use issues early in anxiety and mood disorders (Baigent, 2012).

Lejuez et al (2006) have demonstrated that there is positive association between anxiety sensitivity and heroin use. Vorspan et al. (2015) have demonstrated that the association between substance use disorders and anxiety disorders has now well established. Goodwin, Ferguson & Horwood (2004) after a 21-year longitudinal study demonstrated that young persons with anxiety disorders are more likely to develop substance abuse. Fatseas et al (2010) from a systematic review of 18 studies argued that the prevalence of anxiety disorders assessed using DSM-4 criteria was significant in opiate-dependent individuals. Among anxiety disorders, phobic disorders have been shown to frequently precede the start of opiate addiction (Fatseas et al., 2010). Stewart et al (1997) conducted two studies and demonstrated that Anxiety Sensitivity Index (ASI) scores were found to be strongly linked with the number of indicated reasons for drug use related to anxiety and depression.

Duffing, Greiner & Dougherty (2014) argued that there is a reciprocal relationship between substance misuse and experiencing stressful life situations. Sinha (2001) demonstrated that changes in brain stress

circuits are linked to active substance use, acute and prolonged withdrawal symptoms and tolerance symptoms. The data indicated that as compared to healthy individuals, drug users report noticeably more stressful life experiences (Sinha, 2001). Stress, in addition to drug itself plays an important role in the perpetuation of drug usage and relapse (Sinha, 2001). Cleck & Blendy (2008) demonstrated that drug addiction is one of the neuropsychiatric illnesses that can be made worse by prolonged exposure to certain psychological stressors. Compared to those who are not addicted, addicts' brains are altered and react to stress in completely different ways (Cleck & Blendy, 2008). Stress exacerbates cravings for drugs and leads to relapses (Cleck & Blendy, 2008). Research has shown that stress and drug craving are positively correlated in people (Cleck & Blendy, 2008). Ruisoto & Contador (2019) demonstrated that stress is thought to be a significant contributor to allostatic load, which causes long term, gradual brain alterations that culminate in a drug-prone state marked by craving and a higher chance of relapsing. Hassanbeigi et al. (2013) have demonstrated that opium addicts' development of drug usage or relapse may be significantly influenced by more stressful life situations and more inadequate coping mechanisms.

A study in Australia (Mefodeva et al., 2022) has demonstrated that individuals with extensive poly-substance use may be more susceptible to psychosis and other clinical complications than those who use only one substance. Compared to individuals who use one substance, those who use many substances have a lower quality of life and worse mental health (Mefodeva et al., 2022). Katherine et al. (2015) have demonstrated that poly-substance is linked to negative social and health consequences. Cannabis and medication use was linked to anxiety disorders (Katherine et al., 2015).

METHODOLOGY

Objectives

i. To assess the quality of life and psychological distress among individuals with cannabis, stimulant, opioid and poly-substance dependence admitted in drug rehabilitation centers of twin cities of Pakistan.

ii. To compare the groups of different substance abuse on quality of life and psychological distress.

Hypotheses

i. Substance dependence, quality of life, depression, anxiety, stress and overall psychological distress are significantly correlated with each other.

ii. Individuals with poly-substance use may likely to have low quality of life and high psychological distress as compared to patients with single substance use.

Operational Definitions

Substance Dependence

Substance dependence is related to individual's physical dependence on a substance such as alcohol, nicotine, drugs or medication, to the extent that their body adapts to it and develops a tolerance to it, resulting in withdrawal symptoms when they stop using it. It is a complex condition that affects the person's brain, body, and behavior (Gupta, 2022).

The DSM-5TR defines, "Substance use disorder (SUD) is a pattern of symptoms brought on by drug use that a person persists in using in spite of its detrimental effects" (DSM-5TR, 2022, p. 545). There is

eleven criteria that can result from substance abuse and those who meet at least two of this criteria within period of twelve months are diagnosed with substance use disorder (SUD) (DSM-5TR, 2022, p. 546).

According to the fifth edition of Diagnostic and Statistical Manual of Mental disorders, the terms 'substance dependence' and 'substance abuse', both are included under the umbrella term of substance use disorder (Gupta, 2022). The substance dependence have three levels: mild, moderate and severe (DSM 5TR, 2022, p. 547).

The poly-substance use or dependence refers to (physical, psychological, or both) the use of more than one drug of abuse (APA, 2018). poly-substance use is described as the consumption of one or more illicit substances over a set of period of time or at once (Mahoney, 2024). It can include the use of multiple substances to alter the brain and/or body (Mahoney, 2024).

To assess substance dependence, Urdu translated version of Drug Abuse Screening Test (DAST-20) was used.

Psychological Distress

The psychological distress is unpleasant emotions or feelings a person has when they are overburdened (Bistami & Williams, 2023). Psychological distress can significantly interfere with day-to-day activities (Bistami & Williams, 2023). Anxiety, depression and distraction are just a few of the negative symptoms that can arise from the psychological distress (Bistami & Williams, 2023). Because of the elevated stress levels, a person is more prone to suffer from unfavourable health issues (Bistami & Williams, 2023). Although each person experiences psychological distress differently, the main symptoms include anxiety, depression, ansomnia and changes in appetite (Bistami & Williams, 2023).

Psychological distress is a collection of physical and emotional symptoms that most people associate with typical mood swings (APA, 2018). However, psychological distress can sometimes be a sign of the onset of major depressive disorder, anxiety disorder, somatization illness, schizophrenia, or a number of other clinical problems (APA, 2018). It is believed to be what many purpoted self-report measures of anxiety and depression evaluate (APA, 2018).

The psychological distress was assessed using Urdu translated version of DASS-21, which measures overall psychological distress and also measure depression, anxiety and stress separately as these three are the sub-scales of DASS-21.

Quality of life

Quality of life refers to how satisfied a person is with life (APA, 2023). It includes emotional, material, and physical well-being, involvement in interpersonal relationships, chances for personal (e.g., skill) growth, exercising rights and choosing self-determining lifestyle choices and participation in society (APA, 2023). Quality of life is individual's view of their place in life within the context of their culture and value systems, as well as their objectives, expectations, concerns and standards (WHO, 2024).

The general quality of life was assessed in this study using Urdu indigenously developed Quality of Life Questionnaire.

Research design

The present study utilizes cross sectional research design.

Sample

Data was collected from men with Substance Use Disorders (cannabis, stimulants, opioids and poly-substance use) admitted in drug rehabilitation centers of Rawalpindi and Islamabad for at least one month after detoxification.

Inclusion Criteria

Those patients were considered as sample who had recently completed their detoxification and admitted in rehabilitation centers and those patients were considered who could easily read, write and understand Urdu language. The patients of age greater than 18 were considered and only men were considered as study sample.

Exclusion Criteria

The patients who had any major debilitating physical illness or organic brain syndrome were not included in study. The patients who had not been detoxified were not included in the sample and the individuals with alcohol dependence were also not included. Women and adolescents with substance dependence were also not included in the study sample.

Instruments

Urdu indigenously developed Quality of Life Questionnaire by (Kainaat, Sadaf and Mustafa, 2024) was used in the study to measure the quality of life of adults with SUDs. It is five point likert scale ranging from “strongly disagree” to “strongly agree” and having 15 items.

To measure the substance dependence, the Urdu translated version of Drug Abuse Screening Test DAST-20 developed by Skinner (1982) was used. It was translated and validated by Saeed, Bhat and Shakir (2022) having alpha reliability of (0.8). It contains 20 items on a two point scale having Yes or No.

The Urdu translated scale DASS-21 was used to assess the psychological distress of patients, originally developed by Lovibond and Lovibond (1995) and translated and validated by Aslam and Kamal (2018) having alpha reliability (0.9) of the original English DASS-21 and (0.9) of the Urdu translated DASS-21. It has three subscales measuring anxiety, depression and stress. It is four point likert scale ranging from “never” to “always”.

Ethical Considerations

It was ensured that participants were fully informed about the study’s purpose, procedures, risks, and benefits, and obtaining their voluntary consent to participate. The privacy and confidentiality of participants was protected by safeguarding their personal information and ensuring that data is anonymized and stored securely.

Procedure

The cross sectional research design was adopted in the study with a population comprising men with stimulants, opioids, cannabis and poly substance abuse from drug rehabilitation centers, among twin cities of Pakistan. After the informed consent and other ethical considerations, the sample of 300 patients was collected. Purposive sampling was used and then the data was analyzed using SPSS version 20. To measure substance dependence, Urdu translated version of DAST 20 (Saeed, Bhat and Shakir, 2022) was

used. Urdu translated DASS- 21 (Aslam and Kamal, 2018) was used to assess psychological distress among patients. Urdu indigenously developed Quality of Life Questionnaire (Kainaat, Sadaf & Mustafa) was administered to assess overall quality of life of the patients.

DATA ANALYSIS

The data was analyzed using SPSS version 20. Descriptive data was analyzed by frequency, percentage, mean, standard deviation, ANOVA and post hoc analysis. Correlation analysis was done to find out association between the variables. The demographics were age, educational status, marital status, occupation, family type, locality, socioeconomic status, and type of substance.

RESULTS

Table 1

Mean, Standard Deviation, Range and Cronback Alpha Reliability of substance dependence, psychological distress and quality of life. (N=300)

Variables	N	M	SD	Range	α
S.D	300	11.50	3.51	26.00	.642
PD	300	34.87	12.26	52.00	.867
QOL	300	39.85	7.91	64.00	.672

Note: *N=total of number participants, M=mean, SD=standard deviation, α=cronbach alpha, S.D=substance dependence, PD=psychological distress, QOL=quality of life*

Table 1 shows the mean, standard deviation, alpha reliability and normality results of data. The results indicate that data has been mildly deviated from its mean. Range has also been checked which is 26, 52 and 64 respectively. The alpha reliability of depression anxiety stress scale is .867 which indicates good reliability. The alpha reliability of drug abuse screening test is .642 which indicates acceptable reliability. The alpha reliability of quality of life questionnaire is .672 which also indicates acceptable reliability.

Table 2

Socio-demographic variables of study participants (N=300)

Variables	f	%
Age		

19-40	238	79.3
41-65	62	20.7
65 above	0	0
Education		
Matric	192	64
Intermediate	55	18
Bachelor	45	15
Master	8	2.7
Occupation		
Employed	164	54.7
Unemployed	136	45.3
Marital Status		
Married	120	40
Unmarried	175	58.3
Divorced	5	1.7
Family type		
Joint family	186	62
Nuclear family	114	38
Locality		
Urban	205	68.3
Rural	95	31.7
Socioeconomic Status		
Lower class	43	14.3
Middle class	224	74.7

Upper class	33	11
Type of Substance		
Cannabis	102	34
Stimulants	62	20.7
Opioids	25	8.3
poly-substance	111	37

Note: *f=frequency; %=percentage*

Table 2 shows the frequency and percentage of demographic variables. Out of 300, 238 participants were under age group 19-40 (f=238, %=79.3) and 62 were under the age group 41- 65 (f=62, %= 20.7). The educational status of 192 of the participants was matric (f=192, %=64), 55 were intermediate (f=55, %=18.3), 45 were bachelors (f=45, %= 15) and only 8 of the participants were masters (f=8, %=2.7). 164 of the participants were employed (f=164, %=54.7) whereas 136 were unemployed (f=136, %=45.3). Married participants were 120 (f=120, %=40), unmarried were 175 (f=175, %=58.3) and 5 participants were divorced (f=5, %=1.7). 186 of the participants were living in joint family (f=186, %=62) whereas 114 were living in nuclear family (f=114, %= 38). The number of participants living in urban area were 205 (f=205, %=68.3) whereas 95 were living in rural area (f=95, %=31.7). 43 of the participants were from lower class (f=43, %=14.3), 224 of the participants were from middle class (f=224, %=74.7) and 33 participants were from upper class (f=33, %=11). 102 of the participants consumed cannabis (f=102, %=34), 62 participants consumed stimulants (f=62, %=20.7), 25 participants consumed opioids (f=25, %=8.3) and 111 participants were poly-substance users (f=111, %=37).

Table 3

Pearson correlation between substance dependence, quality of life, depression, anxiety, stress and overall psychological distress among adults (N=300)

	Variables	N	M	SD	1	2	3	4	5	6
1	S.D	300	11.50	3.51	-	-.21**	.21**	.26**	.12*	.19**
2	QOL	300	39.85	7.91		-	-.57**	-.57**	-.53**	-.43**
3	PD	300	34.87	12.26			-	.89**	.89**	.87**
4	Dep	300	11.92	4.33				-	.72**	.67**

5	Anxiety	300	9.95	4.82	-	.64**
6	Stress	300	12.99	4.65		-

Note: *N=number of participants; M=mean; SD=standard deviation; S.D=substance dependence, QOL=quality of life, PD=psychological distress, Dep=depression*

Table 2 shows the Pearson correlation between substance dependence, quality of life, depression, anxiety, stress and overall psychological distress. Results indicate that there is significantly strong positive relationship between substance dependence and depression (r=.26**), substance dependence and stress (r=.19**) and substance dependence and overall psychological distress (r=.21**). There is also significantly positive relationship between substance dependence and anxiety (r=.12*). Results also indicate that there is significantly strong negative relationship between substance dependence and quality of life (r=-.21**), depression and quality of life (r=-.57**), anxiety and quality of life (r=-.53**), stress and quality of life (r=-.43**) and overall psychological distress and quality of life (r=-.57**). The primary hypotheses of the present study are being proved

Table 4

Mean differences on quality of life and psychological distress (N=300)

	Cannabis (N=102)		Stimulants (N=62)		Opioids (N=25)	
V	M	SD	M	SD	M	SD
PD	27.95	10.71	28.50	7.40	25.24	7.83
QOL	43.94	8.15	41.56	6.36	42.76	5.30

Note: M=mean; SD=standard deviation; PD=psychological distress; QOL=quality of life

Table 4 shows the mean difference between four groups of substance users i.e. cannabis, stimulants, opioids and poly-substance use on quality of life and overall psychological distress. The results indicate that poly-substance users have high level of psychological distress (M=46.95, SD=4.86) than individuals with cannabis, stimulants and opioid dependence having mean and standard deviation, (27.95, 10.71), (28.5, 7.40) and (25.24, 7.83) respectively. The results also indicate that the individuals with poly-substance use have low quality of life (M=34.49, SD=5.711) as compared to individuals with cannabis, stimulants and opioid dependence having mean and standard deviation (43.94, 8.15), (41.56, 6.36) and (42.76, 5.30) respectively.

DISCUSSION

The aim of current study was to investigate the quality of life and psychological distress among adults with substance use disorders admitted in Drug Rehabilitation Centers in twin cities of Pakistan. There are related studies conducted in other countries. The purpose of the study was to examine if similar patterns and findings exist in the Pakistani context as there was lack of studies in Pakistan focusing on the mental health and quality of life of adults with SUD in rehabilitation centers under treatment. Studies that are currently available frequently concentrate on sociodemographic characteristics and the prevalence of substance use in Pakistan rather than the psychological distress among individuals with SUDs and their quality of life. This will help validate and expand upon findings of other countries, considering cultural and contextual factors specific to Pakistan. It will also provide insights to develop targeted interventions and support systems for affected individuals in Rawalpindi and Islamabad.

Among the 300 individuals with substance use disorders, 238 participants were under age group 19-40 and 62 were under the age group 41-65. The educational status of 192 of the participants was matric, 55 were intermediate, 45 were bachelors and only 8 of the participants were masters. 164 of the participants were employed whereas 136 were unemployed. Married participants were 120 and unmarried were 175 and 5 of the total participants were divorced. 186 of the participants were living in joint family system whereas 114 were living in nuclear family system. The number of participants living in urban area were 205 whereas 95 were living in rural area. 43 of the participants were from lower class, 224 of the participants were from middle class and 33 participants were from upper class families. 102 of the participants consumed cannabis, 62 participants consumed stimulants, 25 participants consumed opioids and 111 participants were poly-substance users.

The results indicated that there is significant relationship between substance dependence, quality of life, depression, anxiety, stress and overall psychological distress. The results indicated that there is significantly negative relationship between substance dependence and quality of life, depression and quality of life, anxiety and quality of life, stress and quality of life, and overall psychological distress and quality of life. Results also indicated that there is significantly positive relationship between substance dependence and depression, substance dependence and stress, substance dependence and overall psychological distress and there is weak positive relationship between substance dependence and anxiety. The mean difference of individuals with four substance groups (i.e. cannabis, stimulants, opioids and poly-substance use) on quality of life and psychological distress was analyzed. The results indicated that poly-substance users have high level of psychological distress than individuals with only cannabis, stimulants and opioid dependence. The results also indicated that the individuals with poly-substance use have low quality of life as compared to the individuals with only cannabis, stimulants and opioid dependence.

The first general hypothesis of the study was, that substance dependence, quality of life, depression, anxiety, stress and overall psychological distress are significantly correlated with each other which has been proved significantly. Breaking it down into smaller parts, it has been proved that substance dependence and quality of life are significantly and strongly negatively correlated with each other indicating that individuals with SUDs have poor overall quality of life. The existing literature also has similar findings that substance users have low quality of life as compared to healthy individuals. Smith & Larson (2003) demonstrated that individuals with substance abuse have low quality of life than the heart patients whose heart surgery is near. The substance abusers also scored low on mental and physical health than general population (Smith, & Larson, 2003). Zada et al (2022) have demonstrated that individuals with substance use disorder have low quality of life and they need more attention for their well-being. Moreira et al (2013) demonstrated that when compared to the sample of non-drug users, the

psychoactive substance users performed worse on the WHOQOL-BREF questionnaire in nearly every domain and also overall, which supports current results.

The significantly strong positive relationship between substance dependence and depression has also been proved and is aligned with existing studies which indicates that depression is co-morbid with SUDs. Malik et al. (2017) in Faisalabad Pakistan demonstrated that depression was frequently co-morbid with substance use. But that study was conducted in only one city with small sample (n=180), which could not be generalized on larger population of Pakistan (Malik et al., 2017). Smith (2022) demonstrated that depression is a mental disorder that frequently co-occurs with substance use. The association between these two disorders is bidirectional, which means that persons who abuse substances are more prone to experience depression, and vice versa (Smith, 2022). A study from China (Li et al., 2023) has proved that drug addicts experience more severe depression as compared to non-addicts. More emphasis should be paid to drug addicts' mental health, because the eradication of unpleasant feelings or emotions promotes reintegration into society (Li et al., 2023). Quello, Brady & Sonne (2005) demonstrated that the most prevalent psychiatric comorbidities among substance use disorder patients are mood disorders, such as depression and bipolar disorder.

Significant positive relationship between substance dependence and anxiety has been proved in the current study indicating that individuals with substance dependence experience some level of anxiety. Goodwin & Stein (2013) demonstrated that there is proof that certain correlations between substance dependence illnesses and anxiety are specific. Future research should examine the potential for several mechanisms of connection with different substances within a certain anxiety illness (Goodwin & Stein, 2013). Grant et al. (2004) have demonstrated that in US population, the relationships between substance use disorders and independent mood and anxiety disorders were largely positive and significant, implying that treatment for a comorbid mood or anxiety illness should not be denied to those with substance use disorders (Grant et al., 2004). Baigent (2012) has demonstrated that self-medication with substances of abuse for anxiety is associated with an increased risk of developing anxiety disorders, specifically social anxiety disorder.

The relationship between substance dependence and stress has been proved significant and strong. Cleck & Blendy (2008) demonstrated that drug addiction is one of the neuropsychiatric illnesses that can be made worse by prolonged exposure to certain psychological stressors. Compared to those who are not addicted, addicts' brains are altered and react to stress in completely different ways (Cleck & Blendy, 2008). Stress exacerbates cravings for drugs and leads to relapses (Cleck & Blendy, 2008). Research has shown that stress and drug craving are positively correlated in people (Cleck & Blendy, 2008). Duffing, Greiner & Dougherty (2014) argued that there is a reciprocal relationship between substance misuse and experiencing stressful life situations.

The study has proved significantly strong positive relationship between substance dependence and overall psychological distress and the existing literature also supports that. Green et al (2012) after a longitudinal study demonstrated that when they examine how substance use and psychological distress interrelate, how they are continuously associated with each other over time; how for a cohort of African Americans that when we study the connection between age 16 and age 42 drug and alcohol use are significantly associated with psychological distress among both males and females.

In the current study, it has also been proved that individuals with poly-substance use have poor quality of life and high level of psychological distress as compared to individuals with single substance use. Which

indicates that the poly-substance users need extra medical, psychological and social support as compared to individuals with single substance use. A study in Australia (Mefodeva et al., 2022) has demonstrated that individuals with extensive poly-substance use may be more susceptible to psychosis and other clinical complications than those who use only one substance. Compared to individuals who use one substance, those who use many substances have a lower quality of life and worse mental health (Mefodeva et al., 2022). Katherine et al. (2015) have demonstrated that poly-substance is linked to negative social and health consequences.

CONCLUSION

The main purpose of current study was to investigate the quality of life and psychological distress among adults with substance use disorders admitted in Drug Rehabilitation Centers in twin cities of Pakistan. There are related studies conducted in other countries. The purpose of the study was to examine if similar patterns and findings exist in the Pakistani context as there was lack of studies in Pakistan focusing on the mental health and quality of life of adults with SUD in rehabilitation centers under treatment. Studies that are currently available frequently concentrate on sociodemographic characteristics and the prevalence of substance use in Pakistan rather than the psychological distress among individuals with SUDs and their quality of life. This will help validate and expand upon findings of other countries, considering cultural and contextual factors specific to Pakistan. It will also provide insights to develop targeted interventions and support systems for affected individuals in Rawalpindi and Islamabad. The results of the current study indicate that depression, anxiety and stress have comorbidity with substance use disorder and substance users have low quality of life. Also the findings indicate that the poly-substance users have poor quality of life and high psychological distress (poor mental health) as compared to single substance users which is raising concern for the poly-substance users.

LIMITATIONS

Despite the valuable findings of the current study, it has some limitations which future researchers should consider before generalizing the results and to fulfill the research gap.

i. Women with substance use disorder were not included in the study therefore the findings cannot be generalized on population of women with substance use disorder.

ii. The alcoholic patients were not assessed as sample of the current study.

iii. The other underlying factors or variables were not studied which lead to addiction or which lead to psychological distress and poor quality of life among drug addicts.

iv. The findings cannot be generalized on adolescents with substance use disorders.

SUGGESTIONS

The future researchers should consider the population of women for further research and should also explore adolescent population while considering the individuals with alcohol use disorders along with other drugs. The future research should also focus on the underlying factors or variables which can lead to addiction, psychological distress and poor quality of life among these individuals.

IMPLICATIONS

As the results indicate poor quality of life and mental health of substance users, there is need of development of targeted interventions in the rehabilitation process, support systems, and policies to improve their well-being. The current study has provided valuable insights for researchers, policymakers, and healthcare professionals (especially in rehabilitation centers) in Pakistan. The rehabilitation programs should me improved to meet the special requirements of the poly-substance users as they experience more psychological distress and poor quality of life. To lessen stigma and raise awareness, policymakers should create public health campaigns and allocate funds for more serious cases (such as poly-substance users). This study established the framework for future investigations into the long-term effects of SUD treatment in Pakistan.

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