

Addiction Severity and Psychopathology in Persons with Substance Use Disorder under Opioid Substitution Therapy

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ABSTRACT

Background: Opioid substitution therapy (OST) is widely used as an effective pharmacological intervention program to address substance use disorders. This study focused on examining the severity of substance use disorder and psychopathology among persons diagnosed with substance use disorder who are under opioid substitution therapy.

Methods: 60 individuals under the OST program participated from the OST Centre in STNM Hospital Gangtok Sikkim. A total sample of 60 was drawn using purposive sampling which was further divided into two groups based on the composite score in the drugs parameter in the Addiction Severity Index (<0.36 and > 0.37) according to the mean score obtained. The Addiction Severity Index by McLellan (1980) and the Symptom 90 questionnaire SCL-90-R by Derogatis (1983) were used to evaluate the addiction severity and psychopathology. Results were statistically analyzed using the Mann-Whitney U Test.

Results: Somatization, Hostility, and Phobic anxiety are parameters of psychopathology, which are significant at 0.05 level, with individuals having higher severity in addiction with greater mean rank. "Obsessive Compulsive", "Depression", "Phobic anxiety", "Paranoid Ideation", "Psychoticism", and "Global Severity Index", which depict psychological distress, are significant at 0.01 level with individuals with higher severity in addiction with greater mean rank than individuals with lower severity.

Keywords

Addiction severity, Opioid substitution therapy (OST), Psychopathology, Substance use disorder (SUD)

INTRODUCTION

Addiction is a maladaptive pattern of substance use leading to clinically significant psychological distress. The nosography defines addiction as the presence of core symptoms such as compulsive substance-seeking behaviour, a continuation of use despite consequences, reduction of other interests and activities, craving, decontrol, and lastly, psychiatric comorbidity (APA, 2000). There is persistent uncertainty in the classification of psychiatric symptoms. As per Morisano et al. (2014), there are five ways to understand addiction concerning psychopathology: 1) Psychopathology, which increases the probability of drug abuse, 2) Drug abuse increases the probability of psychopathology, 3) Overlaying genetic vulnerabilities, 4) Bidirectional consequential association between the two, and 5) Etiological independence.

Numerous research suggests an association between the severity of substance use and higher levels of mental distress. There is a connection between the present level of severity of substance use and lifetime mental disorders with their effect on mental distress; hence, the importance of treatment that integrates both mental health

disorders and substance use is critical for improvement in long-term prognosis (Hjemseter et al., 2019; Morisano et al., 2014; Lai et al., 2015; Regier et al., 1990). This relationship between substance use disorder and psychological distress is vital as the issues related to psychological distress adversely influence the treatment or the recovery process (Kavanagh & Connolly, 2009). Psychological distress is particularly more profound in those with severe substance use disorder. Many studies report that individuals undergoing treatment for substance use disorder (SUD) have co-occurring mental health problems (Chi et al., 2005; Chan et al., 2008).

The archetype of multiple drug use increases psychological distress. It can be understood that elevation in drug use or psychological distress can heighten the other as the two are linked inversely (Fleming et al., 2008). A higher frequency of use was linked with greater psychiatric severity (Chi & Weisner, 2008). Patients seeking treatment for multiple drug use have more significant levels of depression and suicidal tendencies at treatment admission than single substance users. Multiple drug users showed higher psychiatric comorbidities in the Australian sample (Lynskey et al., 2006), and as the drug abuse increased, so did the psychological distress (Booth et al., 2010).

Previous studies confirmed a high prevalence of psychopathology among opioid users (Darke et al., 1992). Affective disorder in substance abuse and depressive disorder having a prevalence rate of 74% are associated with poor social functioning.

It has been substantiated by numerous studies that substance use disorder has an inversely proportional relationship with psychological distress. This study attempts to incorporate patients under treatment for opioid use disorder with the level of severity of addiction and psychological distress. Individuals with higher levels of severity were more likely to re-enter treatment, around 80% of the people entering SUD treatment were with one or more co-occurring psychiatric disorders (Bakken et al. 2007). Co-occurring psychiatric problems are associated with higher levels of severity in substance use, intense level of care requirement, lower level of treatment participation, and worse results (Angst et al., 2002). The purpose of this study was to evaluate the addiction severity in individuals under the OST program and evaluate the nine parameters of psychopathological symptoms, namely “somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism”, according to the severity index of addiction.

METHODS

Sample: A total number of 60 samples diagnosed with substance use disorder undergoing the OST program from the OST Centre in STNM Hospital, Gangtok, Sikkim participated in the present study. The sample was separated into two groups of low severity index (<0.36) and high severity index (>0.37) of addiction according to the mean composite score of Addiction Severity Index in persons under OST. The present study used a descriptive research design, and sampling was done using a purposive sampling technique. The following research objective of the present study is to study the nine parameters of psychopathological symptoms, namely “somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism”, in persons with substance use disorder under the OST Program based on the addiction severity index. The tools used for assessment were The Addiction Severity Index (ASI -6) by McLellan 199 and The Symptom Checklist Questionnaire (SCL-90-R) a self-report symptom inventory with 90 items, developed by Leonard R. Derogatis in 1994 to measure psychological symptoms and psychological distress. The SCL-90-R has internal consistency reliability with Cronbach’s alpha coefficients ranging from 0.78 to 0.96.

Procedure:

Data was collected individually from a clinical setting (hospital), and the test administration took 40 to 45 minutes for the Addiction Severity Index and 10 to 15 minutes for SCL-90 R.. After the data collection, scoring and coding were done with the help of statistical software IBM SPSS version-20 for further analysis. Mann-Whitney U Test was performed to study the significant difference in nine parameters of psychopathology based on the high and low addiction severity index of persons with SUD under the OST program.

RESULTS**Table 1:** Results showing Mann-Whitney U test for parameters of psychopathology of the sample based on severity index of addiction

Parameters of Psychopathology	Groups	Mean Rank	Mann-Whitney U	Z-Score	Assymp Sig
Somatization	Low severity	27.00	345.000	-2.175	.030*
	High severity	34.00			
Obsessive Compulsive	Low severity	24.50	270.000	-3.188	.001**
	High severity	36.50			
Interpersonal Sensitivity	Low severity	27.50	360.000	-1.550	.121
	High severity	33.50			
Depression	Low severity	24.00	255.000	-3.330	<.001**
	High severity	37.00			
Anxiety	Low severity	27.50	360.000	-1.737	0.82
	High severity	33.50			
Hostility	Low severity	26.50	795.000	-2.053	.040*
	High severity	34.50			
Phobic Anxiety	Low severity	26.50	330.000	-2.173	.030*
	High severity	34.50			
Paranoid Ideation	Low severity	24.00	255.000	-3.345	<.001**
	High severity	37.00			
Psychoticism	Low severity	26.50	330.000	-2.560	.010*
	High severity	34.50			
Global Severity Index	Low severity	23.00	225.000	-3.950	<.001**
	High severity	38.00			

$N = 60$; $p < 0.05^*$, $p < 0.01^{**}$

Table 1 shows the differences in psychopathological symptoms in persons with SUD based on the high and low severity index of addiction. Results reveal that high and low addiction severity in persons with SUD did not differ significantly in interpersonal sensitivity and anxiety.

However, the findings of the present study indicate that the four parameters of psychopathological symptoms as Obsessive-Compulsive, Depression, Paranoid Ideation, and Psychoticism, are significant at 0.01 level which indicates that the persons with higher addiction severity experience greater Obsessive Compulsive, Depression, Paranoid Ideation and Psychoticism as compared to persons with low addiction severity.

The Global Severity Index which depicts the psychological distress level also is significant at .01 level indicating that persons with higher addiction severity have more psychological distress as compared to persons with lower addiction severity.

Furthermore, findings reveal that somatization, hostility, and phobic anxiety differ significantly at 0.05 level of significance in persons with high addiction severity and low addiction severity, which confirms that high addiction severity persons experience a greater amount of somatization, hostility and phobic anxiety

Discussion: The present study explored the index of addiction severity and psychopathology in persons with SUD under the OST program. Sixty samples were drawn using purposive sampling and data was collected from an OST Center based in one of the North-East Indian states. The findings of the present study demonstrated high levels of psychological distress and psychopathological symptoms in individuals with high addiction severity under the OST. Substance use disorder and its comorbidity with anxiety and depression can be linked to a complex range of factors from biological to cultural and societal. Previous studies have found a high prevalence of psychopathology among Substance users (Darke et al.,1992). According to Hartz et al. (2014), the prevalence of substance use disorders in severe psychopathological conditions was underestimated in different social and

cultural contexts and the comorbidity of substance use disorders with severe behaviour or psychotic illnesses among multi-ethnic samples was high. Individuals with severe psychotic disorders had increased risks of substance use disorders compared to those with mild mental illness, and the findings of this study align with those of Hartz et al. among the individuals under OST in the state of Sikkim, India.

Rabinowitz et al. (1998) examined the severity and prevalence of substance use disorders and the onset of psychotic illness among multiple samples. In their study, the severity of substance abuse did not appear to be a pivotal correlate of the onset of psychotic illness. The findings of this study contradicted the findings of Rabinowitz et al. and demonstrated high levels of psychological distress and psychopathology in individuals with high addiction severity under OST. Studies also showed that the onset of psychotic symptoms occurred after many years of substance abuse (Strakowski et al., 1995).

Studies showed that the elevation of either mental distress or drug use could lead to the escalation of both constructs because they are linked. Active poly-drug use and mental stress affected the dose response where mental distress increased both in severity and the number of drugs used (Andreas et al., 2015); therefore, multiple drug use and the level of psychopathological distress are strongly co-related. Individuals with severe poly-substance use disorders also have more psychopathological problems compared to patients with less severe substance use disorder patients. Substance use disorders were associated with higher levels of psychopathological distress, like having lifetime affective, anxiety, and personality disorders (Hjemsæter et al., 2020). In their study, Erga et al. (2021) found that stable abstinence had a lower baseline SCL-90-R score. They found that increased levels of psychological distress indicate an increased risk of relapses among patients with SUD. This study's findings align with those of Erga et al. (2021).

Individuals who are dependent on various substances often have problems in various domains of life like employment, interpersonal relationships, physical and psychological health, and psychopathology (Colpaert et al., 2013). The severity of substance use disorder and other psychopathological disorders like anxiety, mood disorders, and personality disorders deteriorate the quality of life of individuals with SUDs (Lazano et al., 2017). Daigre et al. (2021) examined the treatment adherence and abstinence of patients with substance use disorders according to the severity of addiction and psychotic comorbidity through a first study. They found that dual diagnoses with psychotic illnesses were associated with short abstinence periods, and depressive disorders had shorter abstinence. Psychotic symptoms among substance use disorders usually manifest after repeated administration of psychostimulant drugs, showing a closer association between psychosis and substance use disorders due to a process of hyperdopaminergic status at the limbic level (Kapur, 2003; Pani et al., 2010). The findings of this study are consistent with the findings of other studies.

Conclusion: The finding of this study demonstrated high levels of psychological distress and psychopathology in individuals with high addiction severity under OST. The research findings suggest that individuals with dual diagnosis and dual dependence form a separate group of substance users with specific intervention and treatment needs. The higher level of severity of the addiction showed the lower level of quality of life (Colpaert et al., 2013). 'One size fit' programs like OST programs may not fulfil the purpose for all substance use. This paper suggests practical, individualized, specialized approaches to make OST programs more effective.

Declaration: The authors declare that there is no conflict of interest and no financial assistance acquired.

Ethical Considerations: Due permission was obtained from the hospital authority for data collection; staff and others involved were duly informed to conduct the test on the sample. Informed consent was obtained from the sample as they were briefed about the purpose of testing. Data collected were scrutinized with strict adherence and confidentiality protocol was maintained.