

# Psychiatric and Infectious Comorbidity among the Patients Seeking Treatment for Opioid use Disorder

Research Article

Volume 3 Issue 2- 2022

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## Article History

Received: September 13, 2022 Accepted: September 20, 2022 Published: September 22, 2022

## Abstract

**Background:** Opioid Use disorder (OUD) is a serious health issue with significant morbidity and mortality. In opioid users, major studies of psychiatric comorbidity described rates of comorbidity that far exceeded general population estimates. Approximately 21.9 million people are affected by Opioid Use Disorder worldwide. High rates of continued substance use, greater psychosocial impairment, and increased utilization of services are associated with comorbidity. This study aims to determine the psychiatric and infectious comorbidities and the relation of psychiatric and infectious comorbidities with sociodemographic factors in patients undergoing treatment.

**Methods:** This study includes data collected for 209 patients between January 2020 to December 2021 for the Tertiary Psychiatry Health Care and Research Centre. It is a cross-sectional study, 209 consecutive patients as per the International Statistical Classification-10 diagnostic guidelines, patients with the diagnosis of opioid dependence syndrome were included. With a semi-structured questionnaire, all patients were interviewed to collect sociodemographic profile and pattern of opioid use. To find out psychiatric comorbidities among them MINI PLUS English version 5.0.0 scale was administered. For each opioid dependent individual, we extracted sociodemographic data (age, gender, occupation, education, age at onset, form of intake, duration of use) and infectious and psychiatric comorbidities (HIV, Hepatitis, Depression, Anxiety, Bipolar Disorder).

**Results:** A consecutive sample of 209 patients diagnosed with Opioid dependence were recruited. Interview was used to access psychiatric comorbidities 2 weeks after the detoxification. 209 (male, n=207; female, n=2) opioid dependent patients were recruited. The highest prevalence of comorbidities was in age group of 21 to 30 years of age. Participants having a single comorbidity were 66 whereas patients with multiple comorbidities were 105 and some participants didn't have any comorbidity (n=38). Nicotine (n=121) and Alcohol (n=67) use were the commonest comorbidity followed by the Anxiety(n=35) and Depression(n=24).

**Conclusion:** High rates and persistence of co-occurring psychiatric disorders, including Anxiety, Depression, Psychosis, Bipolar disorder, Personality disorder and co-occurring infectious disorders such as Hepatitis, HIV were observed in Opioid Dependence. In order to decrease the severity, duration, and complications of drug dependence, proper treatment of comorbidities will apparently help. Hence there is a need for evaluating all opioid dependents for psychiatric and infectious disorders who come for detoxification.

## Introduction

The term opioids define a class of substances that act on Opioid receptors. Opioid Use disorder is a serious health issue with significant morbidity and mortality affecting approximately 21.9 million people worldwide [1]. In the United States, the prevalence of opioid use disorders has reached epidemic rates and opioid-involved overdoses are now the country's leading cause of injury deaths. Since 1999 the number of fatal overdoses has quadrupled, accounting for 42,000 deaths in 2016 [2,3]. In United States More than 2.1 million people met the

criteria for Opioid Use Disorder, with costs exceeding 78.5 billion annually, opioid misuse bears tremendous economic burden [4].

OUD seldom presents alone, and the comorbidities are possibly linked to diverse risk factors and pathways by which OUD can appear. These risk factors are multifactorial and include genetic predisposition, availability of drugs and environmental factors such as early life stressors (ELS) [5]. The Purpose of this study is to understand the association between the age of onset of opioid use and the presence of physical or psychological comorbidities which will enable the clinician



to identify high risk patients. The ability to identify high risk patients would allow clinicians to monitor them closely, provide them focused treatment options including preventative strategies to reduce the risk of comorbidities.

### Methods

The study followed a cross-sectional design. It was conducted in the Dr. Harjot Singh’s Neuropsychiatry Centre and Hospital for a period of 24 months. Study population included patients admitted for de-addiction, who fulfilled the ICD-10 criteria for Opioid Dependence Syndrome by a qualified psychiatrist. The assessment for psychiatric comorbidities was done according to ICD-10 Diagnostic Criteria for Research, through clinical assessment after two weeks of inpatient treatment. The data was collected from the study participants after 2 weeks of treatment who were experiencing minimal or no opioid withdrawal symptoms at the time of assessment.

Assessment of sociodemographic profile was also done. Patients who were excluded were who refused to consent for study, remained in delirium even after two weeks, and those with organic illnesses. For this study, 209 patients met the eligibility criteria for inclusion. Data was obtained using patient’s medical records and patient interview. Variables like Education, Marital Status, Family Income, Duration of Use, Comorbidity were summarized in percentages (Table 1).

**Table 1:** Sociodemographic profile of study population.

Variable	Number	Percent
<b>Age (In Years)</b>		
11-20	9	4.3
21-30	105	50.23
31-40	66	31.57
41-50	18	8.61
>50	11	5.26
<b>Marital Status</b>		
Married	141	67.14
Unmarried	68	32.3
Widowed	0	0
<b>Occupation</b>		
Unemployed	56	26.79
Self Employed	60	28.7
Private Job	33	15.78
Business	44	21.05
Government Job	16	7.65
<b>Education</b>		
Below Primary	3	1.43
Primary Education	33	15.78
Secondary Education	138	66.02
Graduate	32	15.31
Post Graduate	3	1.43
<b>Family Income Per Month</b>		
<10,000	55	26.3
10,000-20,000	43	20.57
20,000-40,000	68	32.53
>40,000	43	20.57

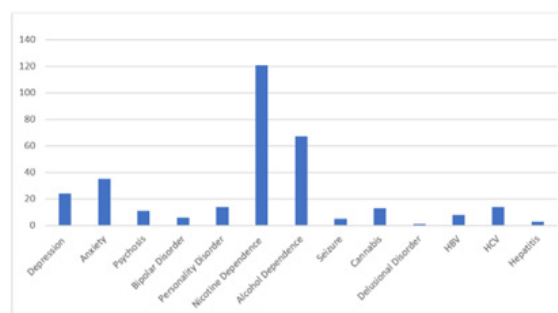
<b>Duration of Use</b>		
<10 Years	183	87.56%
>10years	26	12.44
<b>Age at onset of Comorbidity</b>		
<18 Years	151	72.25
>18 Years	58	27.75
<b>Form of Intake</b>		
Oral	59	28.22
Iv	63	30.14
Nasal	60	28.7
Oral And Iv	1	0.47
Oral, Iv And Nasal	1	0.47
Oral And Nasal	3	1.43
Iv And Nasal	22	10.52

### Results

A total of 209 patients were included. Majority were in the age group of 21-30 years (n=105, 50.23%); were married (n=141,67.14%); self-employed (n=60, 28.70%), had completed secondary education (n=138, 66.02), earning in the range of greater than 20,000-40,000 inr/month (n=68,32.53%) (Table 1). In most of them duration of use was <2 years (n=55, 32.53%), most common route of administration was intravenous (n=63;30.14%). Overall prevalence of comorbidities is depicted in Figure 1. Majority of the study population had dual comorbidities depicted in Table 2.

**Table 2:** Distribution of people according to the number of comorbidities.

Comorbidity	Number of People(N)	Percentage
With 1 comorbidity	66	31.57
With 2 Comorbidities	67	32.05
With 3 Comorbidities	30	14.35
With 4 Comorbidities	7	3.34
With 5 Comorbidities	1	0.47
With No Comorbidity	38	18.18



**Figure 1:** Overall Prevalence of the Comorbidities.



## Discussion

In the present study, 209 patients satisfying the ICD-10 criteria for opioid-dependent syndrome were studied. The present study shows that Opioid Dependence is associated with other substance use disorders such as nicotine (57.89%), alcohol (32.05%) and cannabis (6.22%) which is similar to the findings observed in a study by Carlos et al. [6]. According to previous studies the most common non substance psychiatric comorbidities were anxiety (16.74%), depression (11.48%) and personality disorders (6.69%) [7,8]. The majority of the study subjects were aged between 21 to 30 years. Psychiatric comorbidity was found to be 80.38% among Opioid dependent subjects in our study. Almost similar results were found in other studies which co-related at least one psychiatric comorbidity among opioid users [1,9,10]. Infectious comorbidities were also found in our study (6.13%), in which the most prevalent was HCV (6.69%), followed by HBV (3.82%) and Hepatitis (1.43%).

No definite correlation was found between sociodemographic variables such as age group, marital status, employment status, education status, family income with psychiatric and medical comorbidities. No significant difference was found between different various types of routes of administration and psychiatric comorbidities. Our study has found positive association between age of onset of opioid use and the presence of psychiatric comorbidity. Out of the total percentage of persons with comorbidities, 50.29% belonged to 21-30 age group.

Although we cannot attribute this causation due to the cross sectional study design, this association between psychiatric comorbidity and younger age of onset of opioid use can be explained by the fact that younger age coincides with neurobiological as well as behavioural changes in the brain [11]. These changes although favourable for strengthening cognitive functions, can increase the susceptibility to certain types of psychopathological and addictive disorders emerging later in life.

Another crucial factor that plays role in development of OUD and the comorbidities (other substance use disorders along with depression, bipolar disorder and schizophrenia) is Early Life Stressors (ELS) [12,13]. These adverse childhood experiences can be secondary to poverty, child abuse, domestic violence and other childhood traumas. ELS has been associated with numerous physical as well as cognitive and affective disorders, all of them have been linked to dysfunction in brain reward circuitry [14,15].

Several studies have illustrated possible association between the use of opioids and the presence of comorbidities, secondary to factors such as chronic alcohol use, lifestyle and risk-taking behavior [16-18]. For instance, infectious diseases such as HIV and hepatitis (HBC, HCV) is found to be higher among opioid users compared to general population which is likely due to intravenous drug use and risky behavior [19,20].

In the study population, the age at onset of comorbidity, was divided into two groups, the majority had comorbidity onset at <18 years (n=151; 72.25%). To see the relation between the duration of opioid use with psychiatric comorbidity, the participants were grouped into 2 groups. Majority of the study population having psychiatric and medical comorbidities had used opioids for <10 years duration (n=183, 87.56%).

The co-occurrence presents challenges for optimal patient management as well as for diagnosis. The need to address concomitant psychiatric disorder in patients receiving treatment for OUD must be stressed as these patients show a poor quality of life. Proper treatment can probably help to decrease the severity, duration, and complications of drug dependence. Hence there is a need for screening all opioid dependents for psychiatric disorders who come for treatment.

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