

ORIGINAL ARTICLE

Estimation of Prevalence of Psychological Distress and Constipation Among Patients Receiving Opioid Substitution Therapy

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Abstract

Background: Patients receiving Opioid Substitution Therapy (OST) often experience co-morbid conditions such as psychological distress, constipation and these complications can significantly impact the quality of life. **Aims:** This study aims to estimate the prevalence of psychological distress and constipation among patients undergoing OST. **Settings and Design:** This cross-sectional study was conducted in the Tertiary care hospital of Jammu over a period of six months. **Methods and Material:** A total of 310 patients receiving OST were recruited through consecutive sampling. Socio-demographic data including age, gender, occupation, income, and level of education were collected using a structured scale. Psychological distress was assessed using the Kessler K6 scale, while constipation was evaluated using the Wexner scale. **Statistical analysis used:** Data were analyzed using descriptive statistics and chi-square tests was used to determine factors associated with psychological distress and constipation. **Results:** All 310 participants were males and the mean age was 34.5 ± 8.6 years. The prevalence of moderate to severe psychological distress was 52%, with a mean K6 score of 18.2 ± 4.5 . Constipation was prevalent in 43% of the participants, with a mean Wexner score of 11.3 ± 2.8 . **Conclusion:** Psychological distress and constipation are frequently prevalent among patients receiving OST.

Key Words

Opioid Substitution Therapy, Psychological distress, Constipation

Introduction

Opioid use disorder (OUD) has become a significant global health crisis, particularly due to the rising prevalence of opioid misuse and dependence, leading to devastating effects on individuals, families, and communities. The World Health Organization (WHO) and various national health agencies have classified opioid dependence as a chronic relapsing condition characterized by the compulsive use of opioids, despite harmful consequences. The Opioid Substitution Therapy (OST) has been widely adopted as a harm-reduction strategy, aiming to reduce opioid-related morbidity and mortality while stabilizing the patient's condition for long-term recovery.

OST involves the administration of medically supervised opioids, such as methadone or buprenorphine allowing better management of withdrawal symptoms and high-risk behaviours associated with opioid use.^[1]

However, while OST has proven to be an effective method for managing OUD, it is not without its complications. Patients receiving OST often experience a range of co-morbid conditions that can impede their recovery and affect their quality of life. Among the most prevalent and distressing complications are psychological distress and constipation. These issues may undermine

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the effectiveness of OST^[2].

In Jammu and Kashmir, there are an estimated 25,000 people who inject drugs (PWID). The comorbid psychiatric illnesses complicate the treatment of such patients, adding to the burden experienced by PWID.^[3]

Constipation, specifically opioid-induced constipation (OIC), is one of the most common side effects experienced by patients undergoing OST. OIC occurs because opioids bind to μ -opioid receptors in the gastrointestinal tract, where they inhibit peristalsis and increase the absorption of water from the stool. These effects slow down the movement of food and waste through the intestines, resulting in infrequent and often painful bowel movements.^[4]

Additionally, younger patients may be more sensitive to the stigma surrounding opioid use, leading to greater feelings of social isolation and anxiety.^[5]

Although few studies in India have explored the quality of life among patients undergoing Opioid Substitution Therapy (OST), limited attention has been given to specific components such as psychological distress and constipation, which are critical aspects of patient well-being. The paucity of literature addressing these issues highlights a significant gap in understanding the comprehensive impact of OST. To bridge this gap, the present study was conducted to estimate the prevalence of psychological distress and constipation among patients receiving OST in a tertiary care hospital in Jammu city of the Union Territory of Jammu and Kashmir, India.

Material and Methods

Study design: Cross-sectional study

Study area: The present study was conducted at Opioid Substitution Therapy (OST) Centre, Psychiatric Diseases Hospital, GMC Jammu.

Study population: All opioid substitution therapy users reporting to the OST center constituted the study population.

Study duration: Data collection was done for a period of six months i.e. January 2024 to June 2024.

Ethical considerations: Ethical clearance was obtained from Institutional Ethical Committee (IEC) of GMC Jammu (No. IEC/GMCJ/2023/1647) dated 08-12-2023.

Inclusion Criteria

1. All service users reporting regularly to the OST center as advised by the doctor were included in the study.
2. All service users who provided written informed consent.

Exclusion Criteria

1. Individuals with a known history of cognitive

impairment.

2. Service users who were not reporting regularly to the OST center.

Sample size and Sampling Method: A total of 340 OST users were enrolled at the center during the study period, out of which 30 users did not report for treatment regularly and were excluded from the study sample so data was collected from 310 participants. Consecutive sampling was used to register the study participants.

Data collection tool: Following were the tools used:

(A) A pre-designed and pre-tested questionnaire was used for collecting socio-demographic details such as age, gender, occupation, income level, and education.

(B) **Kessler K6 scale:** It is a six-item screening scale for psychological distress, developed by Kessler and colleagues. Using a 30-day reference period, respondents rate how often they felt nervous or hopeless or so sad that nothing could cheer them. K6 scale is both an effective screening measure and an indicator of distress severity among populations.

(C) **Wexner scale:** Constipation was measured using the Wexner scale, which quantifies the severity of constipation based on stool frequency, difficulty of evacuation and other related symptoms.

Data Collection Procedure

After obtaining written informed consent and ensuring anonymity of the participants, data was collected about socio-demographic details. Following this, the psychological assessment was conducted using the Kessler K6 scale, where participants responded to six items measuring psychological distress since the beginning of treatment. The Wexner scale was used to evaluate the bowel habits and any symptoms of constipation of the participants during their visit to the OST centre.

Statistical Analysis: The data collected from the respondents was checked for completeness. Thereafter, data was entered into MS Excel spreadsheets. Data analysis was conducted using SPSS version 23. Descriptive statistics including frequencies, means, and standard deviations, were used to summarize the socio-demographic characteristics of the participants and the prevalence of psychological distress and constipation. The association between socio-demographic variables and the presence of psychological distress and constipation was analysed using chi-square tests for categorical variables. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 310 participants were recruited for the study, all of whom were receiving Opioid Substitution Therapy (OST) at the Tertiary care hospital.

Table 1: Socio-Demographic Characteristics of the Participants.

Characteristic	Frequency (n)	Percentage (%)
Gender		
Male	310	100
Age Group (Years)		
18-29	105	33.9
30-39	118	38.1
40-49	70	22.6
50 and above	17	5.5
Education Level		
Illiterate	61	19.6
Primary Education	75	24.1
Secondary Education	80	25.8
Higher Secondary Education	54	17.4
Graduation and Post Graduation	40	12.9
Income Level (INR)		
<20,000	55	17.7
20,000-40,000	86	27.7
40,000-60,000	81	26.1
60,000-80,000	58	18.7
80,000 and above	30	9.6

Table 2: Psychological Distress Levels Based on Kessler K6 Scale.

Psychological Distress Level	Frequency (n)	Percentage (%)	Mean K6 Score (SD)
Low (K6 Score < 13)	148	48.0	9.1 (2.8)
Moderate-to-Severe (K6 Score ≥ 13)	162	52.0	18.2 (4.5)
Total	310	100.0	

The Socio-demographic characteristics of the participants are presented in Table 1.

The results presented in Table 4, indicate a significant association between psychological distress and constipation ($p = 0.01$).

Discussion

The study appears to be one of the first in Union Territory of J&K, India that explored the prevalence of psychological distress and constipation among Opioid Substitution Therapy receiving patients in a tertiary care teaching hospital.

Table 3: Constipation Severity Based on Wexner Scale.

Constipation Severity	Frequency (n)	Percentage (%)	Mean Wexner Score (SD)
Normal (Wexner Score < 8)	178	57.0	4.7 (1.2)
Mild to Severe (Wexner Score ≥ 8)	132	43.0	11.3 (2.8)
Total	310	100.0	

Table 4: Association Between Psychological Distress and Constipation.

Psychological Distress (K6 ≥ 13)	Constipation (Wexner ≥ 8)	Constipation (Wexner < 8)	p-value
Yes	99	75	0.01
No	53	83	

The mean age of the study participants was 34.5 ± 8.6 years and these results were in agreement to those reported by Pant *et al.* from Nepal which shares cultural similarities with India.^[6] All the study participants were males and these results are congruent to those reported by Rathi *et al.*^[7] Proportion of males reported by Lugoboni *et al.* and Pant *et al.* in their respective studies was 56% and 92%.^[8]

The results have revealed a prevalence of moderate to severe psychological distress to be 52% among the study participants. These findings are consistent with those reported by Rathi P *et al.* who found depression and anxiety prevalence to be 52% and 39% respectively. A slightly lower prevalence of 42-44% was found among respondents undergoing Methadone Maintenance Therapy (MMT) using structured clinical interviews for DSM MD-III- R and Beck depression inventory.^{[9][10]}

Pant SB *et al.* underlined that injecting opioid users had higher psychological distress (32.2%) in comparison to those who didn't inject (15.9%). Brienza RS *et al.* reported a prevalence of 38.3% of depression among the study participants.^[11]

However, in contrast, Yin W *et al.* in a study among patients attending community based methadone maintenance treatment in China found a lower prevalence rate of 18.4%.^[12]

Constipation is a frequent side effect of Opioid Substitution Therapy and its prevalence in the present study was found to be 43%. On the other hand, Lugoboni

F *et al.* from Italy (2021) noted a high prevalence of 81% among patients receiving Opioid Substitution Therapy (OST). Other studies have found a prevalence of constipation among OST users varying from 17% to 45% [13-15]. These varied results may be due to lack of standardised methods. The results of the present study have revealed that constipation had statistically significantly been associated with lower physical activity. Lugoboni F (2021) found that older age was associated with a greater impact of Opioid induced constipation (OIC) on quality of life. Authors previously have found a lower attention of health care providers towards constipation which was a significant barrier in the correct management of patients.[16-18] It would be pertinent to add that health care providers should promote interventions aiming to improve bowel functions and laxatives to these patients.

Limitations

Since this study was hospital based and the sample size was small, the results ought to be interpreted with caution. Although the drug used in Opioid Substitution Therapy may be relevant to the occurrence of constipation, but its lack of identification is another limitation. The cross-sectional nature of the study limits establishing causation.

Conclusion

This study highlights the high prevalence of psychological distress and constipation among patients receiving Opioid Substitution Therapy (OST), underscoring the need for integrated care. Addressing these commonly overlooked comorbidities through mental health support and gastrointestinal management can enhance treatment adherence, reduce drop-out rates, and improve the overall well-being of patients undergoing OST. Incorporating regular screening for psychological distress and constipation into routine OST services is essential to promote patient-centered, holistic care.

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Conflict of Interest: Nil

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