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Original Research Article

Understanding the dynamics of opioid substitution therapy retention: a qualitative analysis of injecting drug users in Chandigarh

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ABSTRACT

Background: The World Health Organization (WHO) defines substance abuse as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Opioid substitution therapy (OST), which gradually and safely reduces an IDU's opioid dependence. Several challenges at both structural and individual levels have arisen. Overcoming these hurdles is essential to fulfill the National AIDS Control Organization's (NACO) mission to stop the spread of HIV. The present study aimed to identify the barriers to the OST program in Chandigarh and suggest strategies to overcome these challenges.
Methods: A community-based cross-sectional study was conducted among injecting drug users (IDUs) at the four OST centers in Chandigarh. The study employed a concurrent mixed-method approach.
Results: In this study, 81 respondents were surveyed, with 96.3% being male IDUs. The majority, 56.8%, were aged between 26 and 30 years, followed by 30.9% under 25 years. The most frequently injected drug was chitta (38.3%), followed by buprenorphine (9.9%), tapal (3.7%), and norphine (2.5%). With 66.7% of respondents indicated that time was an important and comfortable consideration to take OST. 65.4% of respondents indicated that the influence of OST influenced their decision to participate in the program. IDUs may leave OST follow-up if the dosage is inadequate to meet their needs. This can be a significant barrier to accessing OST.
Conclusions: This study underscored the necessity of a holistic approach to address the barriers to OST utilization among IDUs in Chandigarh. A comprehensive approach involving education, stigma reduction, increased treatment accessibility, and community involvement is crucial for enhancing the effectiveness of OST programs.

Keywords: HIV/AIDS, IDU, OST, Stigma, Time

INTRODUCTION

The World Health Organization (WHO) defines substance abuse as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Opioids can be consumed via intravenous (i.v.) and non-intravenous routes. According to the United Nations Office on Drugs and Crime (UNODC), there are 11.9 million injectable drug users (IDUs) worldwide.[1] IDUs have 22 times the rate of HIV infection compared to the general population in 49 countries with available data.

India's strategic location between the golden triangle (Myanmar, Thailand, and Laos) in the northeast and the golden crescent (Pakistan, Afghanistan, and Iran) in the northwest makes it a significant player in the regional drug trade. Several strategies have been developed to address the risks associated with i.v. opiate dependence.

One of the most efficient methods is opioid substitution therapy (OST), which gradually and safely reduces an IDU's opioid dependence. The global need for OST was recognized in 1993 and reiterated by UN organizations such as WHO and UNODC in 2013. Pharmaceutical compounds used in OST include methadone, buprenorphine, or a combination of buprenorphine and naloxone. OST is part of a harm reduction strategy and has proven to be an effective tool for HIV prevention among IDUs.

In India, the implementation of OST has undergone three broader phases: contemplation, preparation, and action. Integrating OST with the national health strategy is imperative. As part of the targeted intervention (TI) program, OST was introduced in various states and union territories, including Chandigarh.

Chandigarh is bordered by Punjab to the north, west, and south, and Haryana to the east, with proximity to Himachal Pradesh. The HIV prevalence in Chandigarh is 0.19%, compared to the national average of 0.21%. Interestingly, the HIV prevalence in the surrounding states of Punjab and Haryana is 0.28% and 0.22%, respectively, which is higher than the national average. Chandigarh has a population of 10.54 lakh with a population density of 9,252 persons per square kilometer.[2] The sex ratio is 818 females per thousand males, and 89.8% of the population resides in urban areas. The literacy rate is 81.9%.

Adult HIV prevalence in Chandigarh decreased from 0.5% in 2003 to 0.25% in 2006 and has remained stable since then. Given Chandigarh's unique location, the successful reach of the OST program is crucial. However, several challenges at both structural and individual levels have arisen. Overcoming these hurdles is essential to fulfill the National AIDS Control Organization's (NACO) mission to stop the spread of HIV. The present study aimed to identify the barriers to the OST program in Chandigarh and suggest strategies to overcome these challenges.

METHODS

This study was ethically reviewed and approved by the institutional ethics committee, Panjab University, Chandigarh. Participation was voluntary, confidential, and anonymous. No financial compensation was provided for participants' time or transportation costs. Written informed consent was obtained from all participants prior to data collection.

Study design

A community-based cross-sectional study was conducted among injecting drug users (IDUs) at the four OST centers in Chandigarh, which are managed by the State AIDS Control Society. The study employed a concurrent mixed-method approach, combining quantitative and qualitative data collection techniques to provide a comprehensive understanding of the barriers to OST in the region.

Data collection

Data were collected from the four OST centers in Chandigarh. The study utilized in-depth interviews, focus group discussions (FGDs), and case studies to gather detailed narratives from the participants.

In-depth interviews

These were conducted with both IDUs and key informants, including medical officers and OST staff, to gain insights into their experiences and perceptions regarding the OST program. The interviews focused on understanding the challenges faced by the IDUs and the staff's perspectives on the implementation and effectiveness of the OST program.

Focus group discussions

Two focus group discussions (FGDs) were conducted specifically with IDUs who had been lost to follow-up (LFU). These discussions aimed to explore the reasons behind their discontinuation of the OST program and gather their suggestions for improving retention rates.

Case studies

Individual cases were identified by visiting the OST centers. These case studies provided in-depth, detailed accounts of the personal journeys of IDUs, highlighting the barriers they faced and their experiences with the OST program.

Sampling

To ensure a broad range of information-rich perspectives, a combination of convenience and purposeful sampling was used for recruitment. The study population included 20% of the 516 regular clients (equivalent to 104 IDUs) enrolled in targeted intervention projects implemented by the Chandigarh State AIDS Control Society.

Study population

A total of 81 IDUs (comprising 41 regular clients and 40 LFU cases) were contacted from the four OST centers. This sample included: Regular clients- these are IDUs who consistently participated in the OST program. Lost to follow-up (LFU) cases- these are IDUs who had discontinued the OST program for various reasons.

Data analysis

Data from the in-depth interviews, FGDs, and case studies were transcribed and analyzed using thematic analysis to identify common themes and patterns. The

qualitative data were supplemented with quantitative data from the OST center records to provide a comprehensive overview of the barriers to OST in Chandigarh.

Ethical considerations

Informed consent

Written informed consent was obtained from all participants after explaining the study's purpose, procedures, and potential risks and benefits.

Confidentiality

All data were kept confidential, and participants' anonymity was ensured throughout the study. Unique identifiers were used in place of personal information to protect the identities of the participants.

Voluntary participation

Participation in the study was entirely voluntary, and participants were free to withdraw at any time without any consequences.

By employing a robust mixed-method approach and adhering to strict ethical standards, this study aimed to provide a detailed understanding of the barriers to OST in Chandigarh and suggest strategies to overcome these challenges.

RESULTS

Demographic characteristics of respondents

In this study, 81 respondents were surveyed, with 96.3% being male IDUs. The majority, 56.8%, were aged between 26 and 30 years, followed by 30.9% under 25 years. All participants were above 18 years, in line with the NACOs inclusion criteria for OST initiation. Education levels varied, with 56.8% having matriculated, 32.1% achieving senior secondary education, and only 11.1% holding a bachelor's degree or higher. Employment status was diverse, with 44.4% self-employed, 35.8% working in the service industry, 13.6% unemployed, 2.5% involved in drug dealing, and 3.7% being daily wage workers. Notably, 35.6% of IDUs were married, while 55.6% had never married. The majority (93.8%) lived with their families, and 71.6% had not traveled outside Chandigarh in the last 30 days.

Drug use, dosage and OST participation

A significant portion, 46.9%, were not currently injecting drugs, and 40.7% had not shared needles. However, 12.3% had shared needles with other IDUs. The most frequently injected drug was chitta (38.3%), followed by buprenorphine (9.9%), tapal (3.7%), and norphine (2.5%). Interestingly, 45.7% of OST clients were not injecting any drug. Nearly all IDUs (95.1%) were registered for OST, with only 4.9% not registered.

The most common initial OST dose was 6 mg (27.2%), followed by 4 mg (24.7%) and 8 mg (23.5%). Higher doses of 12 mg and 10 mg were administered to 8.6% and 12.3% of participants, respectively, with only 3.7% starting at 2 mg. Overall, initial doses ranged from 4mg to 8 mg. Currently, 50.6% of participants were not taking OST medication, while others were on doses ranging from 2 mg to 10 mg. Loss to follow-up (LFU) was high, with 50.6% of respondents classified as LFU.

Most participants (23.5%) spent up to Rs. 1000 per day on drugs, with 19.8% spending between Rs. 1001 and 2000. Knowledge of OST was widespread, with 98.8% indicating awareness.

Barriers to accessing OST

With 66.7% of respondents indicated that time was an important and comfortable consideration to take OST. 65.4% of respondents indicated that the influence of OST influenced their decision to participate in the program. Other factors that were frequently cited included lack of self-esteem (46.9%), the mobile nature of the individual (39.5%), fear of disclosure of IDU (injection drug use) status (35.8%), and lack of family support (39.5%). Additionally, fear of side effects (18.5%), fear of police (28.4%), mistrust (22.2%), long waiting times (9.9%), and stigma related to HIV and drug use (27.2%) were also cited as some barriers to access OST. Most respondents (91.4%) cited a positive attitude from healthcare providers as influential in their decision to participate in OST. (Figure 1).

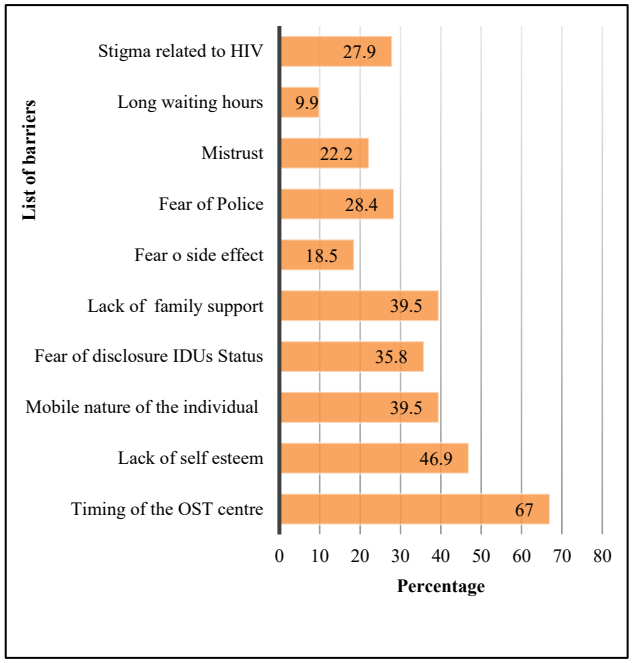

Figure 1: Barriers in accessing OST.

IDUs perspective on OST facilitators and barriers

Facilitating factors in accessing OST

The study identified several facilitating factors for regular participation in opioid substitution therapy (OST), analyzed through focus group discussions and in-depth interviews, and supplemented by theoretical models. The facilitating factors have been categorized at individual, familial, social and economic level (Figure 2).

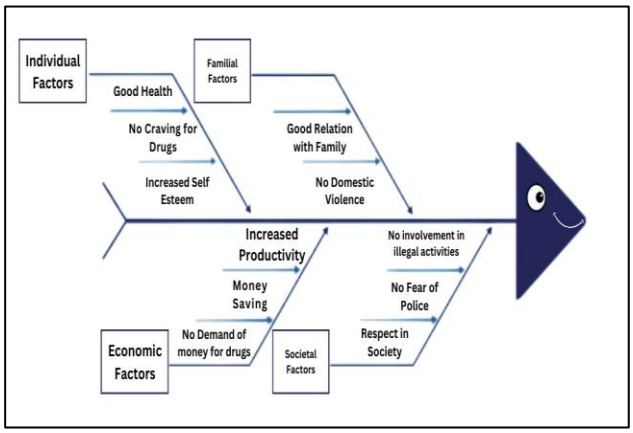

Figure 2: Facilitating factors for regular OST participation.

Individual level

At the individual level, one of the primary facilitating factors is the improvement in health conditions. OST plays a crucial role in preventing overdoses and abscess formation, contributing significantly to the overall health of participants. For instance, one respondent mentioned, "*Mere pair par zakham ho gya tha injection lagate huye…jab se dvai shuru ki hai sehat achi huyi hai…ab koi dar nahi*" (I got abscess on my foot because of injecting…but since I have started medicine my health has improved…now I have no fear). Furthermore, regular doses of OST reduce drug cravings and withdrawal symptoms, making it easier for individuals to manage their addiction. Participants also reported increased self-esteem and a stabilized lifestyle. One participant shared, "*Maine 7 saal se teeka nahi lagya…apne aap ke bare me acha mehsoos karta hu*" (I have not injected since 7 years…. I feel good about myself), highlighting the positive impact of OST on their self-worth and confidence.

Familial level

At the familial level, improved relationships with family members were frequently noted as a facilitating factor. The reduction in domestic violence was a significant benefit, as better health and reduced drug cravings led to more harmonious household environments. One participant recounted, *"Pehle nashe ki tod lagne par ghar me apni aurat ko marta tha*" (Earlier on experiencing withdrawal symptoms, I used to beat my wife), indicating that OST had a direct impact on reducing aggressive behavior at home.

Economic level

Economically, OST facilitated significant financial savings for participants who no longer needed to purchase drugs. "*Main din ka do hazaaer uda deta tha nashe me..jab paise khatam huye tab dvai chaalu kari… ab ghar me paiso ki koi kami nahi padti*" (I used to spend two thousand daily on drugs…when money ran out then I started taking medicine…now there is no shortage of money in house).

This newfound financial stability allowed them to allocate their money towards more important and beneficial aspects of their lives. Additionally, participants reported increased productivity at work, attributing their improved concentration and work efficiency to their reduced dependence on opioids.

Societal level

At the societal level, participants experienced a renewed sense of respect and acceptance. Regaining societal respect after ceasing drug injections was a major motivational factor for many. Moreover, stabilized OST clients reported no longer fearing police encounters during drug procurement, which reduced their stress and anxiety. Lastly, regular OST clients avoided involvement in illegal activities, further contributing to their reintegration into society as responsible citizens.

In conclusion, the study highlighted that the facilitating factors for accessing and continuing OST are multifaceted, spanning individual health improvements, familial relationships, economic benefits, and societal acceptance. These factors collectively contribute to the effectiveness and sustainability of OST programs, reinforcing their importance in the comprehensive treatment of opioid dependence.

Barriers to accessing OST

To study the barriers to OST uptake, data were analyzed using a directed content approach guided by the socio-ecological model (SEM). The SEM describes how health inequity results from the interplay of elements beyond individual characteristics and behaviors, which is particularly important among injecting drug users (IDUs) due to the complex contexts in which they live.

The major barriers leading to clients being lost to follow-up (LFU) in OST retention are illustrated in Figure 3.

Time of OST

The timing of OST programs poses a significant barrier for IDUs. If the timing is not convenient or clashes with

their job or working hours, it may be difficult for them to attend OST regularly. One participant noted, "*Har roj dvai lene ayo to kaam chutt jata hai...ghar ke liye dete nhi hai*" (If you take medicine every day, the work gets affected... they don't provide it to take home).

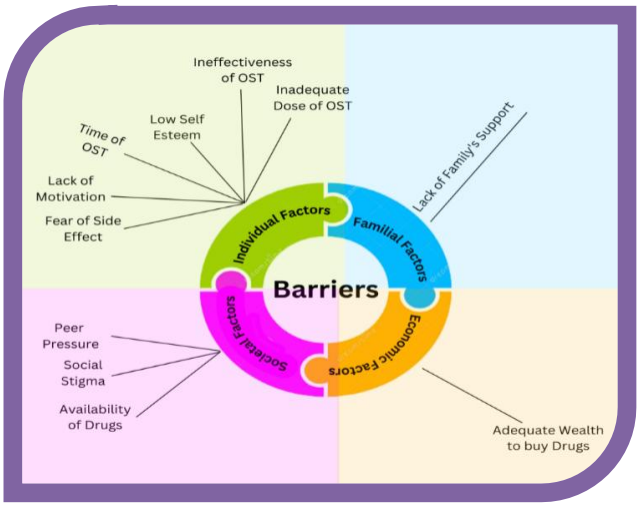

Figure 3: Barriers to access and retain OST.

Inadequate dose of OST

IDUs may leave OST follow-up if the dosage is inadequate to meet their needs. This can be a significant barrier to accessing OST. A participant mentioned, "*Dose bhut kmm hai...sham tak asar khatam ho jata hai...fir mnn krta hai drug le lu*" (The dose is very low... the effect wears off by evening... then there is a temptation to take drugs).

Social stigma

The stigma associated with drug use and addiction is a significant barrier to accessing OST. Many IDUs may fear discrimination, rejection, or social isolation if they disclose their drug use to others.

Availability of drugs

The easy availability of drugs in the region is a major barrier for IDUs to continue OST. If drugs are easily accessible and affordable, it may reduce their motivation to seek treatment. As one participant stated, "*Jab drug mil jata hai dvai koi nhi leta... jab kush bhi na mile fir dvai lete hai*" (When drugs are easily available, nobody takes medication... but when nothing else is available, then they take medication).

Lack of self-esteem

Many IDUs lack self-esteem or confidence in seeking help for their addiction. They feel ashamed or embarrassed about their drug use and fear being stigmatized or judged by others.

Peer pressure

IDUs often face pressure from their peers not to seek help or participate in OST programs. This is especially true in social settings where drug use is normalized, and seeking help is seen as a sign of weakness.

One participant mentioned, "*Jabh sath valon ko milo to bolte hai 'bs etna hi jhel skta tha tu? Itni hi capacity thi teri*?" (When you meet your peers, they say, "Could you only tolerate this much? Was this your only capacity?").

Fear of side effects

IDUs also fear the side effects of OST, such as nausea, dizziness, or drowsiness. This fear may discourage them from seeking help or participating in the program.

Lack of family support

Many IDUs face a lack of support from their families or loved ones, who may not understand or accept their addiction. Without family support, it may be challenging for IDUs to access or stay engaged in the OST program.

Ineffectiveness of OST

Some IDUs may not access OST because they believe it will not be effective in helping them overcome their addiction. This may be due to a lack of knowledge about the program or a previous negative experience with OST.

Low motivation

Negative influences from peers or a lack of supportive social networks can contribute to low motivation to access OST. Individuals struggling with addiction may experience feelings of hopelessness and self-doubt, questioning their ability to recover and sustain positive changes. This lack of belief in oneself can significantly diminish motivation to seek and engage in treatment.

In conclusion, these barriers can significantly impact the ability of IDUs in Chandigarh to retain OST. Addressing these issues will require a multifaceted approach that involves providing education, reducing stigma, increasing the availability and accessibility of treatment, and involving community members in the process.

Healthcare provider perspective

An in-depth interview with a doctor from the targeted intervention (TI) program highlighted several barriers to regular OST utilization:

Duplication of registration

Some IDUs are registered at multiple OST centers, leading to a loss to follow-up (LFU) in one center while continuing to receive medication from another.

Availability of drugs

The easy availability of illicit drugs in the region leads to frequent relapses among IDUs, reducing their motivation to continue with OST.

Quality of OST medication

There is a perception among some IDUs that the quality of OST medication is poor. However, the doctor attributed this belief to a lack of self-motivation and commitment to the treatment program.

Timing of OST programs

The current timing of OST programs, typically from 9 am to 3 pm, is unsuitable for some working professionals, making it difficult for them to attend regularly.

Young age of new IDUs

Younger IDUs often lack motivation and are more likely to engage in drug dealing to support their own drug use, which complicates their engagement in OST programs.

Retention challenges

Maintaining retention in OST programs requires continuous motivation, strong family support, and regular counseling sessions. These factors are essential to ensure long-term adherence to the treatment.

DISCUSSION

This study provides a comprehensive analysis of drug use patterns, OST participation, and the barriers and facilitators affecting OST utilization among IDUs in Chandigarh, the City Beautiful of India. The findings underscore the complexity of opioid dependence and the multifaceted challenges faced by IDUs in accessing and adhering to OST programs.

The demographic profile of the respondents in this study provides critical insights into the population of injecting drug users (IDUs) engaging in opioid substitution therapy (OST) in Chandigarh. The predominance of male respondents (96.3%) and the concentration of participants within the 26-30 age bracket (56.8%) are consistent with global trends in drug use demographics and also aligning with previous research highlighting the demographic profile of IDUs in India.[3-5] The educational attainment among IDUs, with a significant portion having only matriculated (56.8%), underscores the need for targeted educational interventions that could potentially improve health literacy and adherence to OST programs.[6]

The high proportion of participants living with their families suggests that family dynamics could significantly influence drug use behaviors and treatment adherence.[7]

A significant portion of the study participants were not currently injecting drugs, which is a positive indicator of OST effectiveness. However, needle sharing remains a concern, albeit relatively low compared to previous studies.[3,8] The preference for Chitta as the most frequently injected drug indicates regional variations in drug use patterns, which should be considered when designing intervention programs.[9]

The initial and current OST dosages varied widely among participants, reflecting individualized treatment plans based on their specific needs and conditions. The findings that 95.1% of IDUs were registered for OST, yet 50.6% were not currently taking OST medication, highlight significant retention issues within the program. This dropout rate indicates a need for improved follow-up mechanisms and support systems to sustain participation.[10]

The study identified several barriers to accessing OST, categorized using the socio-ecological model (SEM). The barriers identified in this study are consistent with those reported in global literature. Time constraints, inadequate dosage, social stigma, and the easy availability of drugs emerged as prominent barriers.[11] The inconvenient timing of OST programs was a major issue for working professionals, suggesting the need for more flexible scheduling or take-home doses.[12,13] It further emphasizes the need for policy adjustments to cater to the diverse needs of IDUs.[14]

Social stigma and fear of disclosure continue to impede access to OST. Efforts to reduce stigma through public awareness campaigns and community engagement are crucial.[15] The fear of side effects and mistrust in the quality of OST medication also emerged as barriers, which can be addressed through education and counselling.[16]

Conversely, the facilitating factors such as improved health, financial savings, enhanced familial relationships, and societal acceptance are encouraging. Improved health conditions, increased self-esteem, and stabilized lifestyles at the individual level were significant motivators for continuing OST. At the familial level, better relationships with family members and reduced domestic violence were crucial factors. Economically, OST participants experienced financial savings and increased productivity, contributing to their overall well-being. Social acceptance and reduced fear of police encounters also played a role in encouraging sustained OST participation.[8]

The positive attitudes from healthcare providers play a critical role in encouraging IDUs to participate in OST programs, highlighting the importance of provider-patient relationships.[17] These facilitators demonstrate the comprehensive benefits of OST beyond mere cessation of drug use.[14,18]

Healthcare providers identified several barriers from their perspective, including duplication of registration, easy availability of illicit drugs, quality of the OST medication and the retention challenges. Addressing these issues requires coordinated efforts between healthcare providers, policymakers, and community organizations.[11] Continuous motivation, family support, and regular counselling were highlighted as essential for maintaining retention in OST programs.[19]

CONCLUSION

In conclusion, this study underscored the necessity of a holistic approach to address the barriers to OST utilization among IDUs in Chandigarh. A comprehensive approach involving education, stigma reduction, increased treatment accessibility, and community involvement is crucial for enhancing the effectiveness of OST programs. The perspectives of both IDUs and healthcare providers highlight the need for tailored interventions that address the specific needs and challenges faced by this population. Future research should focus on developing and evaluating such interventions to achieve long-term recovery and improve the quality of life for IDUs.

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