Background

In recent years, there have been many anecdotal reports suggesting a significant problem of drug dependence in Punjab. It is also evident that most drug dependent people use opioid group of drugs such as heroin, opium, doda, phukki, pharmaceutical opioids etc. However, there have been no credible and reliable estimates of number of opioid dependent people in Punjab. Such estimates are essential for developing evidence-informed policies and programmes in the state.

Thus, a study was commissioned by the Ministry of Social Justice and Empowerment (MoSJE), Government of India to estimate the numbers of opioid dependent individuals in Punjab. The “Punjab Opioid Dependence Survey (PODS)” was conducted by Society for Promotion of Youth & Masses (SPYM) and a team of researchers from National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi in collaboration with Department of Health and Family Welfare, Government of Punjab.

The study was aimed at (a) estimating the size of opioid dependent individuals in Punjab and (b) exploring the gaps in delivery of services for opioid dependent individuals.

Methodology

For conducting the size estimation of opioid dependent individuals, the methodology adopted was “Respondent Driven Sampling (RDS) with multiplier technique”. This research method has been used earlier for the similar purpose in Punjab as well as in neighbouring countries. This methodology is particularly suitable for reaching out to hidden population groups such as people who use illicit drugs. Additionally, an online survey among organizations and individual professionals involved in delivery of treatment services to opioid dependent individuals was also conducted.

The RDS study was carried out at 10 districts in the state: Bathinda, Ferozepur, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Moga, Patiala, Sangrur, Tarn Taran. Together these
10 districts house about 60% of the population of Punjab and are representative of the entire state on many parameters (population, male:female ratio, urban:rural ratio, location at international or inter-state border, location in the different regions of Punjab).

Two separate training programmes were conducted to train the staff on data-collection and data management. The RDS Study was conducted between February and April 2015, at government de-addiction centres by the trained counsellors under supervision of the psychiatrists / nodal-officers working with the Government of Punjab. Informed consent was obtained from all the respondents and clearance was obtained from the Institute Ethics Committee of AIIMS, New Delhi. The data was collected in the digital format and was subsequently analysed by the researchers at AIIMS using special analytical techniques (RDSAT and SPSS).

Findings

Profile of Opioid Dependent Individuals in Punjab

The data was collected from a total of 3620 opioid dependent individuals across the 10 districts. Based upon the analysis of the data, about 76% opioid dependent individuals in Punjab are in the age group of 18 to 35 years. About 99% are males and 54% are married. A large majority (89%) are literate and have some degree of formal education. Most of them are employed and their major occupations are: Unskilled worker / labourer (27%); Farmer (21%); clerical jobs / businessmen (15%); Transport worker (14%) and skilled worker (13%). About 56% of opioid dependent people in the state belong to rural areas and almost all (99%) report Punjabi as their mother tongue.

Most common opioid drug used by this group is heroin (reported by 53%), followed by opium / doda / phukki (reported by 33%). Rest (14%) report using a variety of pharmaceutical opioids. About one-third take their opioid drugs through injecting route and among them almost 90% (29% overall), inject heroin. Among various reasons reported for starting the use of opioid drugs, the most common reason was ‘peer-influence’ (reported by 75%). On an average a heroin using individual spends about Rs. 1400/day on drugs while this figure is considerably lower for opium users (Rs. 340/day) and pharmaceutical-opioid users (Rs. 265/day). A large majority report suffering from physical, mental or social adverse consequences of their drugs use. While only a minority report having been arrested and having been jailed, almost everyone who had been to jail reports continuing drug use, while inside the jail.

Almost 80% report that they have tried to give-up drug use in the past but just about 35% have received any kind of help or treatment. The medical treatment (which involves using medicines for treatment of withdrawal symptoms) has been received by just about 16% of opioid dependent individuals, ‘ever’. Medicines which are required to be taken on a long term basis (also known as Opioid Substitution Therapy – OST), have been received by less than 10% of...
opioid dependent individuals, 'ever'. Within past one year, just about 8% individuals received in-patient treatment/admission to a de-addiction centre.

Estimated size of opioid dependent population in Punjab

For estimating the size of opioid dependent population, as per the "multiplier technique" the following formula was used:

\[ \text{No. of Opioid Dependent Patients actually admitted to De-addiction centre in the year 2014} \times \text{Reverse of Proportion of the sample reporting that they were admitted to the same centre in the year 2014} \]

Review of records of de-addiction centres in the 10 surveyed districts revealed that a total of 2414 opioid dependent individual were admitted to these 10 centres in the year 2014 (column A). Among the overall sample of surveyed individuals, 1.8% reported that they were admitted to the same de-addiction centre in 2014 (column B). Upon multiplying these figures the estimated number of opioid dependent people is 1,34,111 (in the 10 surveyed districts).

After projecting these figures to the total population of state, the estimated size of opioid dependent population in Punjab is 2,32,856. The range for this estimate is: lower bound = 1,74,642 and upper bound = 3,22,416.

Data from the service providers

Requests for participating in the online survey were sent to all the de-addiction centres as well as individual psychiatrists providing addiction treatment services in Punjab, accompanied with a communication addressed to them from the department of health, Government of Punjab. About 80 organizations and 80 individuals participated in the survey.

Among the 80 organizations (which belonged to all the 22 districts of Punjab), almost all the variety of organizations participated in the survey including Government, private or NGO de-addiction centres, private nursing homes, Government OST centres, NGOs providing needle-syringe services, rehabilitation centres etc. Out of 80 organizations, about 35 reported that they have the facility for providing in-patient treatment; on an average about 333 opioid dependent patients were admitted per centre, in the year 2014.

Among 80 individuals who participated in the survey about two-thirds were medical doctors among whom majority were psychiatrists (representing all the districts of Punjab). This survey revealed that majority of case-load of psychiatrists in Punjab is composed of patients with drug addiction problems. Among addictions too, more than half of the cases belong to the opioid related disorders. Thus, almost one third of clientele of surveyed mental health professionals is comprised of opioid-related problems; rest of the clientele include all the other mental health and drug-use problems. Among all the patients seeking treatment for opioid dependence, majority use heroin (more than 50%).

Among both the types of respondents – organizations and individual professionals – a majority opined that the best treatment of opioid dependence is “long term agonist medicines i.e. OST.”
Discussion and Implications

This is the first ever study of its kind in Punjab which provides an estimation of size of opioid dependent population in the entire state, using a scientifically valid and time-tested methodology. What makes this study unique is its large scope (data from 10 out of 22 districts, covering almost 60% of population) and the collaborative manner in which the entire exercise was conducted.

The important take-home points from the study are:

- **Punjab has a sizable population of opioid dependent people**
  This study estimates that there about 2.3 lakh opioid dependent people in Punjab. For the sake of comparison, the National Survey (conducted nationwide, in 2001, with a different methodology) estimated the entire country's opioid dependent population to be 5 lakhs. Clearly, a fresh, methodologically-robust survey at the national level is urgently required.

  Another noteworthy point is that this study estimates the size of opioid dependent people. In any society, the numbers of users of a drug are far more than the numbers of people who are dependent on drugs. The National survey of 2001 estimated that about 27% of opioid users are dependent. If the same proportion holds true even today, the estimates for opioid users in Punjab could be around 8.6 lakh (though estimating the number of 'users' was not the main focus of the study).

  Male youth in Punjab are disproportionately affected by opioid dependence. Data suggests that among 18-35 years old men in Punjab, about 4 in 100 are opioid dependent and about 15 in 100 could be opioid users.

- **Opioid dependence has spread across the state**
  Findings show that opioid dependence is no longer concentrated only in some, urban areas. In all the surveyed districts, estimates of opioid dependent people run into thousands. In fact, across the state, about 55% of opioid dependent population belongs to rural areas. The typical profile of the opioid dependent population is: male, young, Punjabi-speaking, from a lower-middle class background.

- **Heroin is the most widely used opioid in Punjab among dependent individuals**
  A distinct shift in the pattern of drug use is visible in the state whereby heroin emerges as the most common opioid used by opioid dependent people. The previous studies reported pharmaceutical products as the drug of choice among people who inject drugs. Our study also indicates existence of a large population of people who inject drugs (about 75,000 injecting drug users as opposed to about 25,000, which is the existing estimate). This has serious implications for the HIV/AIDS programme of the state.

- **Opioid dependence poses significant burden**
  A large majority of opioid dependent individuals perceived physical / social / psychological complications. Though only a minority report having been to jail, those who had experienced a jail-term, reported that they continued to use drugs while inside the jail.

  Findings also indicate that there is a huge illegal market of opioid drugs in Punjab. Study provides data on average expenditure on opioid drugs incurred by the opioid dependent persons per day. After multiplying the figures on expenditure with the estimated number of dependent users in the state, we can project that opioid dependent people are spending around 20 crore rupees per day on opioid drugs. This amounts to an annual
expenditure on opioid drugs to be about Rs. 7,575 Crores per year.

- There is a huge gap in the availability of treatment services for opioid dependent individuals – despite significant demand

This study indicates that while as many as 80% of opioid dependent individuals have tried to give-up, only about 35% have received any help. Evidence-based, effective treatment has been received by a miniscule proportion. “Admission to a de-addiction centre” – which appears to be the most focused-upon addiction-treatment strategy in the state is reported by just about 8% individuals in last year. If the treatment strategies remain focused on only a single modality of treatment (i.e. “Admission to a de-addiction centre”), it will take about 10 years to provide a single episode of treatment to the entire opioid dependent population in the state.

- Evidence-based and preferred treatment option is not widely available

Opioid Substitution Therapy (OST, which involves providing an opioid medication like buprenorphine to the patients on a long-term basis) is the most evidence-based treatment modality which has been endorsed by United Nations and World Health Organization as well as the Indian Psychiatric Society. In Punjab, less than 10% of patients have received OST ‘ever’. If there are concerns about availability of this treatment resulting in addiction on these medications, the concern seems to be unfounded; less than 1% of opioid dependent people report using buprenorphine (as a drug of dependence).

**Conclusion and Recommendations**

Data provides clear evidence that the state has a sizable burden of opioid dependence. To deal with this, it would require:

- A healthy mix of Short-term and Long-term strategies
- Inter-sectoral coordination among various stakeholders
- A spirit of ‘helping affected people’ (as opposed to ‘punishing the people who are guilty of using drugs’)

Among short-term strategies it would be crucial to strengthen the treatment services for opioid dependent people. Relying on the singular approach of de-addiction centres is unlikely to be helpful, since opioid dependence is known to be a chronic, relapsing disorder. In this respect, this condition is much similar to diabetes or high blood pressure (which require long-term management) as opposed to malaria or typhoid (which can be managed by short bouts of treatment).

Thus, the state needs a judicious combination of multiple strategies that includes (a) providing both short-term (detoxification) and long-term treatment (such as OST), and (b) providing treatment at both outpatient as well as inpatient settings. Consequently, it would be imperative to shift the focus from ‘de-addiction centres’ (providing in-patient services) and to expand the basket of services by establishing ‘Drug Dependence Treatment

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**Opioid Dependence in Punjab: Highlights**

- A huge population affected by opioid drugs: about 2.3 lakh dependent individuals and probable 8.6 lakh opioid users
- Young males disproportionately affected
- Heroin is the most widely used opioid
- Significant burden on society
- Estimated annual expenditure on opioid drugs by dependent individuals: Rs. 7,500 crores.
- Availability and access to evidence-based treatment services is grossly inadequate.
Clinics that provide long-term outpatient treatment. The treatment available at these centres and clinics must follow certain minimum standards and guidelines.

The most evidence-based and effective treatment for opioid dependence – OST – is scarcely available to the affected patients in Punjab. Primarily, the injecting drug users are receiving OST as a part of the National AIDS Control Programme. The legal and policy roadblocks to OST must be looked into in order to ensure that these medicines are accessible to all the needy patients through their service providers. It would be necessary to enhance the capacity of service providers along with continuous monitoring, to ensure that this treatment (OST) is provided in a judicious, scientific and standard manner with minimum risk of harm to the patients.

In the long term, it would be necessary to ensure coordination between sectors involved in Supply reduction, Demand reduction and Harm reduction. All three approaches have their distinct role to play and over-relying on any one of the three approaches (at the cost of other approaches) is likely to be detrimental to any society.

Acknowledgment
We acknowledge the support provided by the Ministry of Social Justice and Empowerment, Government of India; Department of Health and Family Welfare, Government of Punjab; staff of all the de-addiction centers and NGOs involved in data collection and above all, all the respondents who participated in the study. Thanks are also due to the administration of AIIMS, New Delhi for necessary permissions and clearances.

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