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# Emerging Trends and Prevalence of Drug Abuse: A Study Conducted at Swami Vivekananda Drug De-Addiction and Treatment Centre

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## Abstract

**Background:** The epidemic of substance abuse in the present generation has assumed alarming dimensions in the state of Punjab. The success story of Punjab's economy has seemingly come to an end. District Amritsar being close to border is deeply influenced. Maximum cases were registered under the NDPS Act in the year 2012 in Punjab, with the nationally highest drug-related crime rate of 51.6%, against the national average of 2.8%. The present study aims to identify the emerging trends and prevalence of drug abuse among the patients enrolling at Swami Vivekananda drug de-addiction and treatment centre, Amritsar.

**Methods and findings:** In the year 2014 and 2015, consecutive patients on outpatient basis from the month of January 2014 till August 2015 were enrolled. Urine toxicology was done for the drugs abused with rapid immune-chromatographic assay kits available in the centre. A total of 10,568 patients were screened for urine toxicology. Out of 10,568 enrolled patients 9815 patients were found positive for morphine and out of 9815 patients addicted to morphine 5785(54.74%) of patients were abusing heroin in one or other form, which was concluded from the personal interview and general physical examination for scar marks of injectable drug users of heroin. Rest of the substances abused includes other opioids, alcohol, sedatives, cannabis, cocaine, amphetamines and tobacco. The dose of heroin used by the patients varied from person to person but on average most of patients abuse heroin from 500mg up to 2grams on daily basis either in the form of snorting, sniffing or as injectable.

**Conclusion:** High numbers of heroin abusers indicate its high addiction potential. Due to its high cost majority of addicts are not able to procure it and get involved in illegal activities. This publication helps to provide the figure of current alarming rise of heroin abuse among the study population. Immediate steps like demand reduction via proper education of youth and proper treatment of addicts with individual or group counselling are required curtailing the current drug menace in Punjab. Increasing trends of

heroin abuse among population is shattering the youth of Punjab. Such a drastic deviation towards heroin abuse can be attributed to its high addiction potential, easy availability, unemployment and socio-occupational pressure faced by youth of Punjab. Awareness regarding the side effects of drugs and their addictive potential should be focused and campaigns in the rural population regarding the preventive measures and treatment options available for addiction should be encouraged.

**Keywords:** Drug abuse; Drug de-addiction; Heroin

## Introduction

Only a decade ago Punjab, one of the wealthiest states in India at the time, was heralded as one of the country's "crown jewels" [1,2]. Surveys indicate that more than half of all rural households are home to at least one drug addict, a problem most severe along the Pakistan border [3].

It's quite a disrupting fact that we are lending towards increasing development but our core is deteriorating. Youth are the pillars of the country and if the pillars are corroded country will devastate. One survey by the state's department of Social Security Development of Women and Children late last year suggested that as many as 67% of rural households in Punjab had at least one drug addict in the family [4]. Increased cross border smuggling of heroin, easy accessibility and its high addiction potential has encompassed the population despite of its high cost. During the interview patients described that after an average 5 to 7 time regular use of heroin in a beginner leads to addiction and then there is very difficult for them to abstain from the drug.

India's 1.2 billion people find themselves uniquely positioned between the Golden Triangle composed of Myanmar, Laos, and Thailand and the Golden Crescent composed of Afghanistan, Pakistan and Iran. These two regions produce the vast majority of the world's heroin - Afghanistan alone accounts for roughly 75% of the world's supply. The aim of this study is to conclude the prevalence of heroin abuse in Amritsar which is the worst

affected area of Punjab province in India in terms of heroin abuse.

## Methods

This cross sectional study was conducted from January 2014 to August 2015 at Swami Vivekananda drug de-addiction and treatment Centre, Amritsar. A total of 10,568 outdoor patients were registered with their residence proof, which is authorized by government of India and photographs. Patients were then interviewed using a pre-designed and pretested preformat, drug abuse and monitoring system (DAMS) and socio-demographic scale. Further patients underwent urine screening for various drugs like morphine, cannabis, benzodiazepines, amphetamines and dextropropoxyphene.

Urine screening was done by qualitative immunoassay kits available in the department. Kits detect morphine, benzodiazepines at cut-off level of 300 ng/ml while cut-off levels for detecting cannabis, amphetamines and dextropropoxyphene were 50 ng/ml, 1000 ng/ml and 2000 ng/ml, respectively. Drug detection kits used were instant-view lateral flow immunoassay kits from ALFA scientific designs and are US FDA cleared. These kits are highly accurate and positive test results are 98% and specificity is > 99%. Patients found positive for morphine were personally interviewed for further information regarding the form and route of morphine intake.

## Results

A total number of 10,568 patients were screened for urine toxicology. Out of 10,568 enrolled patients 9815 (92.87%) patients were found positive for morphine and out of 9815 morphine addict patients, 5785 (54.74%) patients were abusing heroin in one or the other form. Remaining 7.1% of the patients were abusing rest of the drugs (cannabis, sedatives, amphetamines, alcohol, cocaine, tobacco & inhalants) (Table 1).

**Table 1:** Drug Abuse

Total Patients	Morphine Addicted Patients	Heroin Addicted Patients	Cannabis, sedatives, Amphetamines, Tobacco, Alcohol, cocaine and inhalant
10,568	9815 (92.87%)	5785 (54.74%)	753 (7.1%)

## Discussion

In the current study 54.74% of the patients were found abusing heroin. Such high prevalence of heroin abuse can be attributed to its easy availability, steady supply across the border mainly from Afghanistan and Pakistan and a thriving smuggler-police-politician nexus which is hampering enforcement action. The numbers of people starting to use heroin have been steadily rising since 2007 [5]. Hard-core data on seizures of opium and heroin clearly show that Punjab was the state from where by far the highest seizures were made in the last few years, and the trend is increasing (Narcotics Control Bureau, Annual Report 2012 [6]. Various reports of the United Nations and the US State

Department indicate that India has become a hub for the transshipment of heroin originating from the Afghanistan-Pakistan region [7]. Indeed, there is evidence that many users of traditional, plant-based drugs such as opium may be shifting to synthetic drugs such as heroin (usually smoked or 'chased' in India), buprenorphine (usually injected). It can be concluded from the following data by drug abuse and monitoring system that heroin abuse is on rise. DAMS (Drug abuse and monitoring system) data amongst men, most commonly used substances were alcohol (65%) and tobacco (68%). Opium and its derivatives (heroin, other opioids) emerged as second preferred drug category as 40% men reported its use (14% each for opium and heroin and 12% for other opioids mainly Proxvion, Spasmoproxyvon, fortwin and norphine etc) [8].

According to World Drug Report (2009) there were 25,71,52,582 alcohol users, alcohol dependents were 8,22,88,826 cannabis users were 82,28,883 and Opiate users were 2,057,221 in India [9]. According to the survey, 78% people say that users make their first contact with drugs through friends. Among the states Punjab, Haryana and Chandigarh top in the intake of opioid, opium and heroin, in the country. The rate of intake in these areas is 3.4 per cent. A study conducted by the ministry of social justice and the United Nations International Doping Control Program revealed that the residents of Punjab, Haryana and Chandigarh take drugs three times more than the national average, which is 1 per cent [4]. A few limitations of this study must be acknowledged. Urine morphine kits detect morphine in human urine at cut off level of 300 ng/ml or we can say that there may be some false negative cases of morphine addiction in the study. Specificity and sensitivity of test already discussed.

The cost of heroin is very high, it is sold illegally in India at cost of around 3000-5000 Indian rupees per gram (45-70\$ per gram). This may be one reason for its high business potential and difficult riddance. Addicts of low socio economic status or even daily wagers after getting addicted to heroin are unable to get heroin due to its high cost and then they use illegal means to procure the drug. Education about the drug regarding its high addiction potential, harmful effects and campaigning in low socioeconomic areas is mandatory for its preventive and treatment measures. Measures should be taken by the government to curb the availability issues of the drug.

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