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# Profile of female patients seeking in-patient treatment for prescription opioid abuse from a tertiary care drug dependence treatment centre from India

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***Background & objectives*: There has been a limited focus on prescription drug abuse among women in the country. Choice of psychoactive substance, reasons for initiation and co-occurring disorders have been found to be different among men and women. The current study was aimed at studying the profile of female patients seeking in-patient treatment for prescription drug use over a period of five years at a tertiary care drug dependence treatment centre in India.**

***Methods*: Case records of all female patients admitted with substance use disorder at a national level drug dependence treatment centre in north India across five years (between January 2008 and December 2012) were reviewed retrospectively to study their socio-demographic and clinical profile. The information was gathered using a semi-structured proforma and detailed case records. Abstinence, relapse and retention rates were calculated.**

***Results*: Over the five years, 31 female patients were admitted with prescription drug abuse. Of them, 12 (39%) used prescription opioids and 11 (36%) used prescription opioid along with benzodiazepines. Commonest prescription opioid was pentazocine used by 87 per cent of the women. Twenty two (71%) women were introduced to opioid by medical practitioners and commonest reason for introduction was pain (among 48%). Common co-occurring psychiatric diagnoses were depressive disorder (26%), cluster B traits/disorder (19%) and somatoform disorder (13%). Eight women did not complete treatment and left against medical advice. Thirteen women were advised maintenance treatment, and 70 per cent of them were retained for at least six months.**

***Interpretation & conclusions*: Our findings revealed a link between mental illness, pain and non-medical use of prescription opioids among women. Majority of these women received opioids as a legitimate prescription form physician. Therefore, these legitimate prescribers should be trained for pain management to facilitate proper treatment of pain and to prevent the subsequent misuse of these medicines. Female patients with frequent pain complaints should be assessed for psychopathology while prescribing opioids.**

**Key words** Drug dependence - opioids - pentazocine - prescription - treatment

Studies on use of psychoactive substances have mainly focused on males in India. The only National Household survey conducted in India also extensively studied the pattern of psychoactive substance use among males[1]. However, studies carried out in the north-east part of India and some vulnerable groups like sex workers, have recognized the regular use of psychoactive substance among the Indian women[2].

Prescription drugs have been reported as common initial drugs of abuse among women in India with up to 41 per cent being injecting users[3]. A rapid assessment survey conducted among women drug users in India found that 36 per cent of the current users were using a prescription opioid[4]. Dependence to prescription opioids sets in early and can persist for years without acknowledgement by patient, family and even the treating physician. It has been reported that first exposure to an opioid in up to 85 per cent of females was a legitimate prescription for pain, which subsequently led 60-70 per cent to misuse it to get high[5].

Prevalence of co-occurring mood and anxiety disorders has been reported to be high among women abusing prescription opioids. More specifically, the association between depressive and anxiety disorders and abuse of prescription opioids among women has been supported in earlier studies from west[6,7]. Choice of psychoactive substance, reasons for initiation and co-occurring disorders have all been found to be different among men and women. Also, women are less likely to enter substance abuse treatment than men because of a variety of reasons[8].

Prescription opioid abuse has become a major clinical and public health concern. It has been studied extensively over the past decade in western settings[9-15]. However, there is limited information available form Asian countries including India. Though, it has been argued that women are at an increased risk of prescription drug abuse[16], there is limited literature that has focused on prescription opioid abuse among women[17]. The current study was thus aimed at studying the profile of female patients seeking in-patient treatment for prescription opioid abuse over a period of five years at a tertiary care drug dependence treatment centre in north India.

## Material & Methods

The study was conducted at the National Drug Dependence Treatment Centre (NDDTC), All India Institute of Medical Sciences (AIIMS), New Delhi, India. It is a tertiary care substance use disorder treatment centre in north India. The study involved a retrospective review of the records of all female patients seeking in-patient treatment form the centre over a five year period (2008-2012).

Information was retrieved on socio-demographic variables including age, marital status, educational qualification, occupation, family type and locality. The information related to substance use included type of substance, duration of use, age of onset, motive of use, route of administration and source of procurement. Additionally, details of physical co-morbidities and psychiatric co-morbidities were recorded.

All patients were offered in-patient treatment in form of opioid detoxification. Subsequently, these patients were offered maintenance treatment. The maintenance treatment options included tablet buprenorphine and tablet naltrexone. Tablet buprenorphine is a particle mu-opioid agonist and naltrexone is an opioid antagonist used for long term phase of treatment to avoid relapse among patients with opioid dependence. Follow up records and records from dispensing register were assessed to ascertain abstinence, retention and relapse.

*Data analysis*: The data were analyzed using SPSS ver 21.0 (IBM Inc, Chicago, USA). Descriptive analysis was carried out for the available data. Frequency distribution of study variables was carried out. Abstinence period, relapse rate and retention rate were calculated as operationalized for the study. In between group differences were carried out between in-patient treatment completers and non-completers using chi square test.

The study was approved by the Institutional Ethics Committee. Conditions of anonymity and confidentiality were ensured during analysis and reporting of findings.

## Results & Discussion

A total of 31 women with prescription drug abuse were admitted for in-patient treatment at the centre over the study period of five years. The mean age was 35.16 ± 9.14 yr. More than half of them (n=19; 61.30%) completed less than 13 yr of formal education. Fourteen women (45.17%) came from a rural background. Majority (n=26; 83.88%) were married. Nineteen women (61.30%) were homemakers. Four patients were professionals. Ninety four per cent women visited with family member who was husband in almost all cases.

Most commonly used prescription opioid was injection pentazocine (n=27; 87.07%), followed by capsule dextropropoxyphene (n=4; 12.93%). Other substances used by the women included benzodiazepines (n=13; 41.93%), alcohol (n=3; 9.67%) and tobacco (n=12; 38.12%). In 22 (70.96%) women, the offending medicine was initiated following a legitimate prescription from a medical practitioner. The most common reasons for medical prescription were pain at various sites (n=15; 48.38%), stress/ anxiety (n=5; 16.12%), combined pain and stress (n=4; 12.90%) and insistence by husband (n=2; 6.45%) (Table I).

Eighteen women (58.08%) had co-morbid psychiatric diagnosis which included depression (n=8; 25.80%), cluster B personality disorder/trait (n=4; 19.35%), and somatoform disorder (n=6; 12.90%). Ten women (32.25%) had history of invasive interventions, mainly abdominal.

The mean age at first abuse of prescription opioid was 29.77 ± 9.88 yr. The mean duration of prescription drug abuse was 60.67 ± 51.87 months. Husband was dependent on psychoactive substance in seven (22.58%) cases with opioid being the commonest substance (n=5; 16.12%).

Of the 31 admitted women with prescription opioid dependence only 23 (74.19%) completed detoxification. In-patient treatment completers were significantly more likely to be with lower educational qualification ($P<0.01$); married ($P<0.05$); and used opioids with husband ($P<0.05$) compared to non-completers. Relief from pain was reason of initiation of opioids by significantly greater proportion of women who failed to complete in-patient treatment ($P<0.01$) compared to treatment completers (Table II)..

Thirteen patients were advised maintenance treatment. Ten of them (76.92%) visited out-patient department and got enrolled for maintenance treatment.

**Table I.** Profile of female patients seeking in-patient treatment for prescription drug abuse (N=31)

| | Variable | No. (%) |
|---|---|---|
| Prescription drug abused | Only prescription opioid | 12 (38.73) |
| | Prescription opioid with benzodiazepine | 11 (35.48) |
| | Prescription opioid & alcohol | 3 (9.67) |
| | Prescription opioid & heroin | 3 (9.67) |
| | Prescription Opioid with Benzodiazepines &Alcohol | 2 (6.45) |
| Reason for onset of prescription drug use | Stress/anxiety | 5 (16.12) |
| | Pain | 15 (48.38) |
| | Pain & stress | 4 (12.93) |
| | With husband | 2 (6.45) |
| | Not specified | 5 (16.12) |
| Type of prescription opioid abused | Pentazocine | 27 (87.07) |
| | Dextropropoxyphene | 4 (12.93) |
| Introducer of prescription drug | Physician | 22 (70.98) |
| | Husband | 5 (16.12) |
| | Self | 2 (6.45) |
| | Friends/ co-workers | 2 (6.45) |
| Co-occurring medical condition | Psychiatric disorder | 18 (58.08) |
| | Surgical disorder | 10 (32.25) |
| | Medical disorder | 3 (9.67) |
| Co-occurring psychiatric diagnosis | Depressive disorder | 8 (25.80) |
| | Cluster B personality disorder/ traits | 4 (12.90) |
| | Somatoform disorder | 6 (19.35) |

**Table II.** In between group differences between in-patients treatment completers and non-completers

| Study variable | | In-patient treatment completers (N=23) percentage | In-patient treatment completers (N=8) percentage | *P* value |
|---|---|---|---|---|
| Educational qualification | | | | |
| | Illiterate | 64.3 | 27.3 | <0.01 |
| | Up to 12th | 21.4 | 47.7 | |
| | Graduation | 14.3 | 25 | |
| Marital status | | | | |
| | Never married | 10.7 | 31.8 | <0.05 |
| | Married | 89.3 | 68.2 | |
| Employment status | | | | |
| | Employed | 32.1 | 56.8 | <0.05 |
| | Home maker | 67.9 | 43.2 | |
| Opioid use by husband | | | | |
| | Yes | 53.6 | 38.6 | NS |
| | No | 46.4 | 61.4 | |
| Opioid use with husband | | | | |
| | Yes | 53.6 | 27.2 | <0.05 |
| | No | 46.4 | 72.7 | |
| Reason for initiation of drug use | | | | |
| | To cope with stress/ anxiety | 39.3 | 22.7 | <0.01 |
| | Relief from pain | 28.6 | 65.9 | |
| | On insistence by husband | 32.1 | 11.4 | |
| Co-morbid psychiatric disorder | | | | |
| | Yes | 39.3 | 43.2 | NS |
| | No | 60.7 | 56.8 | |

NS, not significant

Of these 10 women, seven remained in treatment for six or more months with average retention of 510 days. Of the retained patients, six were taking tablet naltrexone.

Over a five year period only 31 women sought in-patient treatment for prescription opioid abuse. This is a small fraction of a total of around 350 annual admissions at the centre. It is likely that gender-specific barriers like concerns for children, apprehension of exploitation, lack of supportive systems might be responsible for poor treatment seeking by women[8].

The socio-demographic profile of women included in the current study was in keeping with the previous published studies from India[3,18]. The mean duration of use of prescription drugs in the current study was lower than the mean duration of nine years reported by a previous Indian study[18]. However, this duration was comparable to the western studies that have suggested a later age of first use, shorter time to regular use and a fast progression from the initiation of substance use to the onset of dependence among women[19,20].

Majority of the women seeking in-patient care were accompanied by their husbands. Around one-fourth of the women left the treatment even before completion of detoxification. Previous studies have reported that homemaking responsibilities, a substance-abusing spouse, a male-oriented treatment system and mental health diagnoses are risk factors for poor treatment retention and completion[21,22].

The choice of psychoactive substance observed in the current study was also comparable to the previous Indian studies except for alcohol[3,18]. Use of prescription opioids by injecting route was observed in around 87.07 per cent of women in the current study. This rate has varied from 24[4] to 41 per cent in previous Indian studies[3,4]. The most common reason for use of prescription drugs was pain followed by stress/anxiety in our study as also reported earlier[23,24].

Almost 60 per cent of women in the current study had a co-occurring psychiatric disorder. The common conditions were depression, cluster B personality trait/ disorder and somatoform disorder. This rate was higher than 23 per cent reported in a previous India study[18]. Previous studies from western settings have also reported association between psychiatric morbidity and prescription opioid misuse in chronic pain patients[25]. It has been postulated that individuals with features of borderline personality disorder may be at risk for use and dependence on prescription opioids[26]. It is interesting to note that self prescribed use of opioids and other analgesics for pain of organic origin has been well studied in literature[27]. However, use of analgesics to overcome functional pain of somatoform origin has not been well documented. The guidelines or recommendations suggest use of analgesics for management of pain of this nature[28].

A high retention rate of 70 per cent over a six month period among those inducted in maintenance treatment was similar to that reported in a previous study[29]. It has been observed that that once initiated in treatment women substance users show better retention and outcome. Another observation of this study was that a high proportion of those retained in treatment for six months were on naltrexone. Concerns have been expressed in literature over retention rates with naltrexone[30].

The current study has certain limitations. It was a retrospective chart review based study from a single centre. The small sample size was a major limitation.

Our findings revealed an association between mental illness, pain/stress and use of prescription opioids among women. There is a need to create awareness on prescription drug abuse among general population as well as medical practitioners. Female patients with frequent pain complaints should be assessed for underlying psychiatric co-morbidity. General practitioners should be sensitized to make referrals to mental health professionals for effective management of underlying psychiatric co-morbidity. Also, it is important to study the determinants of treatment outcome among women with prescription opioid use. The factors that favour better retention in treatment and improve outcome should be explored in these studies. Barriers to treatment and factors associated with dropout also need to be studied and addressed.

***Conflicts of Interest***: None.

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