

## Socio-demographic and clinical factors associated with drop out from walk in-clinic in patients with psychoactive substance use

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### Abstract

**Introduction:** Despite availability of adequate treatment, premature termination of treatment or lost to follow-up is great concern in patients with psychoactive substance use. This creates a hindrance in getting the favorable outcomes, indirectly adding up to the increased burden of the disease. This study focuses in assessing the socio-demographic and clinical variables associated with drop-outs in these patients which can guide the clinicians and health care delivery system to make required efforts in preventing these drop-outs.

**Aims and Objectives:** To study the pattern including socio-demographic and clinical profile of drop-out patients with mental and behavioral disorder due to psychoactive substance use.

**Materials and Methods:** Patients attending the Psychiatry Walk-In-Clinic of tertiary care teaching hospital of North India from June 2018 to July 2018 and diagnosed with 'Mental and behavior Disorder due to psychoactive substance use' (F10-19) as per ICD-10 were enrolled in the study. Socio-demographic and clinical variables of these patient were recorded using the Departmental walk-in Performa. Patient who didn't come for follow-up visit till 4 weeks after first contact were considered drop-out. Data was analyzed for factors related to drop-outs.

**Results:** A total of 1553 patients registered in walk-in-clinic during a period of 2 months (June- July 2018), in which 175 patients were diagnosed with Mental and behavior disorder due to psychoactive substance use. Out of 175, 106 were drop-outs (60%). Socio-demographic and Clinical profile of drop-out patients revealed that 57% were of age group 20-40 years, 98% were Male, 75% were married, 70% had income more than 7000 rupees per month, 54% belonged to joint family, 49% were of opioid dependence, followed by alcohol dependence (31%) and 54% had no h/o of previous treatment.

**Conclusion:** It can be concluded from the current study that patients with opioid use, employed and without any medical or surgical comorbidity are more likely to drop-out after the first contact.

**Keywords:** Drop-out, Walk-in clinic, Substance use disorders, Psychoactive substance use.

### Introduction

Substance use is one of the major public health problems. Approximately 31 million persons are suffering from drug use disorders.<sup>1</sup> Meta-analysis of studies indicate overall substance use prevalence of 6.9/1000 in Indian population.<sup>2</sup> In Recent Epidemiological survey of substance use and dependence in the state of Punjab, India reveals the prevalence of lifetime use of licit (alcohol and tobacco) and illicit substances (opioids, cannabinoids, inhalants, stimulants, and sedatives) is 20.2 percent and 2.4 percent respectively.<sup>2</sup> Despite availability of adequate treatment, premature termination of treatment by patients with Mental and Behavior Disorder due to psychoactive substance use remains a great concern. Various studies in past have shown that retention in treatment is associated with better outcomes.<sup>3-5</sup> Investigating factors leading to treatment dropout and identifying possible causal mechanisms can enhance the treatment effect. Recently few Indian studies have been published exploring the various factors associated with treatment drop-out and one of which is in-patient setting. Majumder et al 2016 found out the various predictors associated with treatment retention in admitted patients of substance use disorders (SUDs) like higher socioeconomic status and family history of substance use was associated with lesser drop-out from treatment.<sup>6</sup> In another study by Dayal et al 2017 reported predictors of outcome among admitted female patients with opioid use disorder.<sup>7</sup> In this study, medical comorbidity and age of

onset 25 years or more was associated with more chances of treatment completion. Arya et al 2016 studied factors associated with drop-out in adolescent substance use disorder, and found that lesser duration of substance use, unemployment and cannabis were associated with drop out from outpatient treatment.<sup>8</sup> Study by Basu et al 2017 explored various socio-demographic and clinical factors associated with initial treatment drop-out in a tertiary care centre and found that lower educational status, being employed, lesser duration of substance use and absence of multi-substance use were the predictors of drop out.<sup>9</sup> To this date very limited number of studies have conducted in Indian setting and still less studies focusing on out-patient treatment services as most of the studies have been conducted in in-patient setting and factors like family history of substance use and history of previous substance use treatment have not been studied.

Thus a study was carried out to identify the socio-demographic and clinical factors associated with drop-outs in patients with various types of psychoactive substance use from Walk-in Clinic (WIC) after the first visit.

### Materials and Methods

Study was conducted at department of Psychiatry of a tertiary care teaching hospital of North India. The department of psychiatry runs a daily WIC where all the patients with mental illnesses including Mental and behavior disorder due to psychoactive substance use are

seen by designated Senior Resident and information is written down on specially designed Walk -in Performa for patients of SUDs to record socio-demographic and clinical details. A general prescription pattern consists of 1-2 weeks of follow up after the first contact in WIC with clear advice to come for subsequent follow-ups with the consultant and those who require in-patient treatment, are admitted through Walk-in-Clinic after discussion with consultant in-charge. Case records of patients diagnosed with Mental and behavior disorder due to psychoactive substance use according to ICD-10 criteria<sup>10</sup> registered in OPD from 1<sup>st</sup> June 2018 to 31<sup>st</sup> July 2018 were analyzed. For the purpose of study, drop-outs were defined as patients who didn't come for follow up till 4 weeks after first contact in the WIC. The Walk- in Performa of the drop-out patients were taken out and analyzed for various socio-demographic and clinical profiles of these patients. Socio-demographic profile includes Age, Gender, Marital Status, Education, Occupation, Income, Family type, Locality, Residence and Clinical profile included type of substance, duration of regular use, history of previous treatment, family history of substance use and any psychiatric or medical/surgical comorbidity.

The socio-demographic and clinical variables of drop-out patients were compared with those patients who retained in follow-ups during this period. Data was analyzed using SPSS software.

## Results

A total 1553 patients were registered in walk-in-clinic during a period of 2 months (June- July 2018), in which 175 (8.8%) patients were diagnosed with Mental and behavior disorder due to psychoactive substance use. Out of 175, 106 (60%) were drop-outs (Group-A) and 69(40%) patients continued for followed up (Group-B)(including 18 patients who were admitted). However, the investigators were able to retrieve Walk-in Performa of 100 patients in drop-out group (Group A) and 59 patients in follow-up group (Group B).

Data was analyzed using SPSS ver. 20 and t-test was applied for age group and chi-square test was applied for remaining variables. Significance was kept at p value < 0.05. Majority of the patients (98.7%) were male belonging to age group of 20-40 years. Both the groups didn't differ in terms of marital status, Education, Income, Type of family, Locality and Distance from Centre. However, there were significant difference in terms of Occupation as 58% of Drop-out patients were employed as compared to 49% in Follow-up Group and which is statistically significant (p-value 0.0001). 23% of drop-out were student as compared to 10% in follow-up group, 6% of drop-out were farmer as compared 12% in follow-up group and 13% of drop-out were unemployed as compared to 29% in follow-up group

**Table 1:** Comparison between Drop-outs (Group A) and Follow- up (Group-B) patients on socio-demographic variables

| Variable               | Category                  | Group-A(Dropout)<br>N=100(%) | Group-B(Follow-up)<br>N=59(%) | p-value |
|------------------------|---------------------------|------------------------------|-------------------------------|---------|
| Gender                 | Male                      | 98(98)                       | 53(100)                       | 0.53    |
|                        | Female                    | 2(2)                         | 0                             |         |
| Age group              | <20 years                 | 4(4)                         | 0                             | 0.983   |
|                        | 20-40 years               | 57(57)                       | 39(66)                        |         |
|                        | 40-65 years               | 36(36)                       | 20(34)                        |         |
|                        | >65 years                 | 1(1)                         | 0                             |         |
| Marital Status         | Married                   | 75(75)                       | 44(74)                        | 0.55    |
|                        | Unmarried/single/divorced | 25(25)                       | 15(26)                        |         |
| Education              | Illiterate                | 11(11)                       | 3(05)                         | 0.14    |
|                        | Primary                   | 2(2)                         | 1(02)                         |         |
|                        | Middle                    | 24(24)                       | 12(20)                        |         |
|                        | Matric                    | 21(21)                       | 12(20)                        |         |
|                        | + 2                       | 28(28)                       | 17(29)                        |         |
| Occupation             | Graduate and above        | 23(23)                       | 14(24)                        | 0.0001* |
|                        | Employed                  | 58(58)                       | 29(49)                        |         |
|                        | Student                   | 23(23)                       | 6(10)                         |         |
|                        | Farmer                    | 6(6)                         | 7(12)                         |         |
| Income                 | Unemployed/Retd/Prisoner  | 13(13)                       | 17(29)                        | 0.62    |
|                        | <3500                     | 16(16)                       | 13(22)                        |         |
|                        | 3500-7000                 | 14(14)                       | 7(12)                         |         |
| Family type            | >7000                     | 70(70)                       | 39(66)                        | 0.55    |
|                        | Nuclear                   | 46(46)                       | 28(48)                        |         |
| Locality               | Joint                     | 54(54)                       | 31(52)                        | 0.16    |
|                        | Urban                     | 43(43)                       | 31(53)                        |         |
| Distance from hospital | Rural                     | 57(57)                       | 28(47)                        | 0.59    |
|                        | Within Tricity            | 49(49)                       | 36(61)                        |         |
|                        | 50-100                    | 22(22)                       | 11(19)                        |         |
|                        | >100                      | 29(29)                       | 12(20)                        |         |

**Table 2:** Comparison between drop-outs (Group A) and follow-up (Group-B) patients on clinical variable

| Variable                                     | Category                      | Group-A(Drop-out)<br>N=100(%) | Group-B(Follow-up)<br>N=59(%) | p value |
|--|-------------------------------|-------------------------------|-------------------------------|---------|
| Type of substance<br>(Primary)               | Alcohol                       | 18(18)                        | 17(28)                        | 0.003*  |
|  | Opioid                        | 25(25)                        | 15(25)                        |         |
|  | Tobacco                       | 16(16)                        | 1(2)                          |         |
|  | Cannabis                      | 0                             | 5(8)                          |         |
|  | Single Substance              | 59(59)                        | 38(63)                        |         |
|  | Alcohol + Other<br>Substance  | 13(13)                        | 10(17)                        |         |
|  | Opioid + Other Substance      | 22(22)                        | 7(13)                         |         |
|  | Tobacco+ Other<br>Substance   | 2(2)                          | 3(5)                          |         |
|  | Cannabis + Other<br>Substance | 4(4)                          | 0                             |         |
|  | Multiple Substance            | 41(41)                        | 21(37)                        |         |
| Duration of Regular Use                      | <1 year                       | 14(14)                        | 19(32)                        | 0.09    |
|  | 2- 5 y                        | 39(39)                        | 17(29)                        |         |
|  | 5- 10 y                       | 24(24)                        | 13(22)                        |         |
|  | 11-20 y                       | 15(15)                        | 9(15)                         |         |
|  | >21 y                         | 8(8)                          | 1(2)                          |         |
| Previous Treatment                           | Yes                           | 46(46)                        | 23(39)                        | 0.24    |
|  | No                            | 54(54)                        | 26(61)                        |         |
| Family History                               | Yes                           | 22(22)                        | 8(14)                         | 0.13    |
|  | No                            | 78(78)                        | 51(86)                        |         |
| Co-morbidity<br>(Psychiatric and<br>Medical) | Yes                           | 26(26)                        | 25(42)                        | 0.026*  |
|  | No                            | 74(74)                        | 34(58)                        |         |

Among the clinical variables there were no significant differences in duration of substance use, history of previous treatment and family history of substance use between two groups. However, there was statistically significant difference between two groups on type of substance and psychiatric co-morbidity as shown in table 2.

### Discussion

The results of our study show that 60% of patients of mental and behavior disorder due to psychoactive substance use dropped out from treatment after the first contact at WIC of a tertiary care teaching hospital. Finding of our study is consistent with earlier study carried out by Basu et al, 2017<sup>9</sup> which reported drop rate of 61%. In our study, both the groups were comparable on various socio-demographic and clinical variables except occupation, type of substance use and psychiatric co-morbidity, which were significantly associated with drop out. The drop -out rate was more in students and employed individuals. On the other hand, farmer and unemployed individuals were associated with greater retention rates. This may due to time constraints in employed individuals and students as it's require on an average 2 hours after getting the registration and seeing the doctor in OPD. Secondly, it might also be possible that this subpopulation might have mild to moderate severity of dependence and very minimal socio-occupational dysfunction, hence, did not feel the need to continue the treatment. Earlier studies support the findings of our study

that higher employed status is associated with drop-out.<sup>9,11,12</sup> Although, another study observed that occupation was not associated with drop-out.<sup>13</sup> Also in one study, an inverse finding is seen that patients who dropped out of the treatment program were more frequently unemployed.<sup>14</sup> Among the type of substance; opioid and tobacco was significantly associated with drop-out as compared to Alcohol. This might be due to poor motivational status of patients of opioid dependence and severity of withdrawals in the index study. Sometimes patients of opioid dependence come for the substitution therapy only and which is not available at our centre, hence they don't feel the need to come for subsequent follow up visits. Tobacco use is prevalent in our society and easy availability and acceptability in the society could be the reason for drop out. Earlier studies have also shown that alcohol was associated with greater treatment retention.<sup>9,12,15</sup> However some studies have shown that type of substance use was not a treatment completion predictor.<sup>11,16</sup>

Although we did not find any association between duration of substance use and retention in treatment and past history of treatment and drop out but Basu et al<sup>9</sup> reported that lesser duration of dependence is associated with better retention rate and Şimşek et al<sup>17</sup> reported past history of psychiatric treatment is associated with drop out.

Another finding of index study shows that patients with no co-morbidity (psychiatric or medical) are more likely to drop-out after the first contact. This reflects that patients are

more concerned about medical illness and other psychiatric illness but poorly motivated for drug-de-addiction. Secondly, it also reflects that till the time substance use is severe enough to cause any medical or psychiatry co-morbidity there is no concern for dependence. Conversely, patients with co-morbid medical/surgical illnesses report to other disciplines and from where they referred for regular de-addiction treatment and hence retain in follow up. Our findings are similar to another study which reported that individuals without any co-morbid psychiatric illness were 1.6 times more likely to drop out as compared to those with co-morbid psychiatric illness.<sup>8</sup> However, another study has shown that comorbid psychiatric disorders have been associated with poorer substance abuse treatment engagement.<sup>18</sup>

Though the study has been carried out in real clinical setup but it has certain limitations that socio-demographic and clinical information was gathered from walk-in performa only and severity of dependence and motivation was not assessed and the sample size was small.

### Conclusion

Hence, one can conclude from index study that drop rate in psychoactive substance use is huge (60%). The drop-out rate is more in patients with opioid and tobacco dependence which emphasize the utility to assess the need and delivery of service in this subpopulation and implement the same. This has also been reported that drop-out rate is less in patients with co-morbid medical/surgical illnesses, which reiterate the need to psycho-educate the patients and family regarding medical/ surgical and other complications of substance use at first visit so that they can be retained in treatment.

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