

**Original Research Article** 

# DETERMINANTS OF DROPOUT FROM PSYCHIATRIC OUTPATIENT TREATMENT- A CROSS SECTIONAL STUDY

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#### ABSTRACT

**Background:** Dropout from psychiatric outpatient treatment poses a major challenge to mental health recovery. This study aimed to identify key factors contributing to dropout.

**Aim:** To identify socio-demographic, clinical, and treatment-related factors associated with dropout among psychiatric outpatients.

**Materials and Methods:** Sixty-nine patients who had dropped out of psychiatric outpatient treatment (defined as those who attended at least one diagnostic session and then discontinued treatment on their own for a period of 3 months) were compared with 69 regular attendees for socio-demographic characteristics, clinical variables, and medication patterns. Data were collected through a semi-structured interview and analysed using descriptive and inferential statistics, with significance set at p < 0.05.

**Results:** Dropout was more common among patients aged 51–60 years, particularly those with lower educational attainment and socioeconomic status. Contributing factors included greater distance from the hospital, nuclear family structure, and low monthly income. Clinically, dropouts were more likely to have affective disorders, later onset of illness, longer illness duration, and delayed treatment initiation. A positive family history of psychiatric illness and lack of prior psychiatric treatment were also associated with higher dropout, while previous hospitalization was linked to better adherence. In terms of treatment, dropouts were prescribed fewer psychotropic and total medications but more non-psychotropic drugs. Lack of family supervision and the absence of non-pharmacological therapy further contributed to discontinuation of care. **Conclusion:** Addressing dropout requires multifaceted strategies including psychoeducation, socioeconomic support, and active family and clinician engagement to improve adherence and mental health outcomes.

Keywords: Dropout, Psychiatric Outpatient Treatment, Treatment Adherence.

# **INTRODUCTION**

Dropout from psychiatric outpatient treatment is a major concern in mental health care, marked by premature termination of care without clinical resolution or a mutually agreed treatment conclusion.<sup>[1]</sup> It is typically defined as "having attended at least one session for diagnostic assessment or treatment and discontinuing the process on the patient's own initiative by failing to attend any further planned visits".<sup>[2,3]</sup> This phenomenon is pervasive and poses serious

challenges to both individual recovery and the effectiveness of healthcare systems.

Studies indicate that dropout rates in mental health settings are notably higher than in other medical specialties, ranging from 14% to 64% with the highest rates typically seen during the early phases of treatment.<sup>[4-8]</sup> These discrepancies can be attributed to differences in the operational definitions of "dropout",<sup>[9]</sup> patient sample compositions, clinical settings, and study designs. Comparatively, adherence in non-communicable diseases (NCDs) such as hypertension and diabetes, though variable,

tends to be higher. For instance, a systematic review by Dalal et al.<sup>[10]</sup> (2021) reports antihypertensive adherence rates between 19% and 96%, while Azharuddin et al.<sup>[11]</sup> (2021) found a pooled adherence of 43.4% for anti-diabetic medications. The higher dropout rates in psychiatric settings, compared to other medical specialties, are attributed to several factors, including stigma surrounding mental illness.<sup>[12]</sup> the long-term nature of treatment, and the complexity of psychiatric care.<sup>[13]</sup> A multicountry analysis from the World Mental Health Surveys Initiative reported a 31.7% global dropout rate,<sup>[14]</sup> with higher discontinuation in low- and middleincome countries (LMICs) (45%) compared to highincome countries (30%). Notably, most dropouts occurred after just one or two visits.<sup>[14]</sup>

Factors which lead to dropout from treatment include demographic, clinical, environmental, and treatment-related elements.<sup>[15–17]</sup> Demographically, younger age, male gender, divorce, low education, unemployment, and low income are consistently linked with higher dropout. Other studies found a correlation between dropping out from treatment and distance from treating facility, treatment costs, substance use, and lack of family support.<sup>[18–20]</sup> Some of the environmental factors that are linked to dropping out from treatment are: the type of treatment setting; longer wait times for the initial appointment, and longer gaps between subsequent appointments.<sup>[21,22]</sup>

Clinical variables also play a significant role. Some data support the notion that the diagnosis of schizophrenia increases the likelihood of dropping out.<sup>[23]</sup> Similarly, patients diagnosed with personality disorders have been reported to have low rates of adherence to treatment.<sup>[24]</sup> On other hand, higher levels of adherence to outpatient therapy are seen among those with depressive disorders.<sup>[25]</sup> According to De Panfilis and colleagues' research, individuals who had attempted suicide in the past were more likely to stop therapy prematurely.<sup>[26]</sup> Patients with unclear or dual diagnosis have a higher dropout rate (3 times higher in dual diagnosis group as compared to single diagnosis group).<sup>[16,17]</sup>

Additionally, system-level factors such as the availability of integrated therapy (psychotherapy and pharmacotherapy) influence continuation, with combined approaches yielding lower dropout rates.<sup>[27]</sup>

The consequences of dropout are substantial. Patients may experience worsening symptoms, functional decline, increased caregiver burden, and heightened risk of hospitalization, violence, or suicide. Healthcare systems face increased costs and inefficiencies due to disrupted care pathways particularly in low- and middle-income countries (LMICs) where mental health resources are already scarce.<sup>[14,28]</sup> A study by Nelson et al. (2000) found that patients who adhered to follow-up appointments had a 10% chance of being rehospitalized compared to a 25% chance among those who missed appointments. Furthermore, findings from the Confidential Inquiry into Homicides and Suicides by Mentally Ill People revealed that 28% of mentally ill suicide victims had lost contact with mental health services.<sup>[29]</sup>

Despite its significance, research on psychiatric dropout outpatient remains limited and methodologically inconsistent. While some studies have identified patient-related, treatment-related, and system-related factors contributing to dropout, a clear consensus remains elusive, particularly in LMICs like India.<sup>[13,30-32]</sup> Given the gaps in existing literature, especially in the Indian context, this study aims to identify socio-demographic, clinical, and treatment-related factors associated with dropout in psychiatric outpatient care. The objective is to generate actionable insights that can guide interventions to enhance treatment adherence and improve mental health outcomes.

### **MATERIALS AND METHODS**

This observational, cross-sectional study was conducted over one year in the psychiatric outpatient department of a tertiary care centre-Rohilkhand Medical College and Hospital (RMCH), Bareilly, Uttar Pradesh. Ethical clearance was obtained from the Institutional Ethics Committee (IEC), and written informed consent was obtained from all participants. The study sample comprised two groups: Group 1 (regular attendees) and Group 2 (dropouts). The regular attendee group included participants who were randomly selected from patients who had continued follow-up in the psychiatric outpatient department for a minimum period of 3 months following their initial registration. The dropout group comprised patients who had attended at least one session for diagnostic assessment and thereafter discontinued the treatment process on their own initiative for a continuous period of 3 months.<sup>[33]</sup>

Inclusion criteria required participants to be aged 18 years or older, provide informed consent, and be evaluated by a consultant psychiatrist with a diagnosis confirmed using ICD-10 criteria. Exclusion criteria included patients with only substance use disorders, intellectual disability, autism spectrum disorder, ADHD, significant cognitive impairment due to organic brain syndromes, or severe physical illnesses (e.g., cardiovascular disease, cancer, neurological or respiratory conditions, or major gastrointestinal disorders). Patients without a psychiatric diagnosis or who had never been seen by a psychiatrist after registration were also excluded. A simple random sampling method was employed, with 69 participants selected for each group (N = 138).

All psychiatric diagnoses were made according to ICD-10 criteria and confirmed by a senior consultant psychiatrist. Data collection was carried out through a semi-structured interview schedule, lasting approximately 10–15 minutes per participant. Information was recorded under three domains:

1. Socio-Demographic Form: The sociodemographic form had 12 items (I to XII). It was specifically designed to record information such as the Patient's name, Age, Sex, Education, Marital status, Religion, Occupation, Income, Socioeconomic status, Background, Distance from the hospital, and Type of family.

2. Clinical Profile Form: The clinical profile form had 8 items (I to VIII). It was specifically designed to document information including the patient's age of onset of illness, Duration of illness, Family history of psychiatric illness, Past psychiatric treatment, Primary diagnosis, Time Gap between onset of illness and first psychiatrist consultation, History of hospitalization in a psychiatric setup, and the number of hospitalizations, if any.

**3. Treatment Details Form:** The treatment details form was specifically designed to record information related to:

- Pharmacological Treatment: It had 6 items and this included details about the number of patients on non-psychotropic drugs, the number of psychotropic medications prescribed, the number of non-psychotropic medications prescribed, the total number of medications, cost of treatment borne by the patient/family per month in rupees, and family supervision of medications.
- Non-Pharmacological Management: It had 2 items and this included details on whether non-pharmacological management like relaxation exercises, dietary advice, behavioural therapy was advised or not. If advised, it also documented the patient's adherence— whether they followed the recommendations fully, partially, or not at all.

• Follow-Up Details: This included whether the patient attended OPD with or without a caregiver during the first visit.

Collected data were coded, cleaned, and entered into Microsoft Excel, then analysed using the Statistical Package for the Social Sciences (SPSS) version 23.0. Descriptive statistics (means, standard deviations, and proportions) were used to summarize the data. Chi-square and independent t-tests were employed to assess group differences, depending on data type and distribution. A p-value of <0.05 was considered statistically significant.<sup>[34]</sup>

## RESULTS

Socio-Demographic Comparison Between Dropout and Regular Attendee Groups: Significant differences were observed between the two groups across several socio-demographic variables, including age, educational level, distance from the hospital, socioeconomic status, monthly income, and family structure [Table 1]. Dropout rates were highest among individuals aged 51-60 years. Lower educational attainment was a strong predictor, with 65.2% of illiterate and 91.7% of primaryeducated patients discontinuing treatment. All patients from the lower-middle class and 94.7% from the upper-lower socioeconomic group dropped out. Among patients residing more than 80 km from the hospital, 61.70% dropped out. Additionally, 52.8% of individuals from nuclear families and 68.91% of those earning less than ₹7,322 per month discontinued treatment.

SN	Variables	Regular attendee group	Dropout group	Total	X²/t	p Value
1.	Age Group				8.69	0.034*
	18-30	37	28	65		
	31-40	20	17	37		
	41-50	12	18	30		
	51-60	0	6	6		
2.	Sex				0.0292	0.864
	Female	38	37	75		
	Male	31	32	63		
3.	Religion				0.137	0.711
	Hindu	47	49	96		
	Non-Hindu	22	20	42		
4.	Marital Status				1.46	0.226
	Married	37	44	81		
	Single	32	25	57		
5.	Education				46.7	<.001*
	Illiterate	16	30	46		
	Primary	1	11	12		
	Middle	13	4	17		
	Secondary	4	6	10		
	Intermediate	9	18	27		
	Graduate	22	0	22		
	Post Graduate	4	0	4		
6.	Occupation				1.36	0.506
	Unemployed	28	32	60		
	Unskilled Employment	21	15	36		
	Skilled Employment	20	22	42		
7.	Background				0.06	0.805
	Rural	60	59	119		
	Urban	9	10	19		

8.	Distance From Hospital				3.90	0.048*
	<80km	51	40	91		
	>80km	18	29	47		
9.	Socioeconomic Status				77.3	<.001*
	Upper class	40	11	51		
	Upper middle class	28	7	35		
	Lower middle class	0	33	33		
	Upper Lower class	1	18	19		
	Lower class	0	0	0		
10.	Income				22.8	<.001*
	<7322	23	51	74		
	>7322	46	18	64		
11.	Family				4.16	0.041*
	Extended	10	3	13		
	Nuclear	59	66	125		

Clinical Profile Comparison Between Dropout and Regular Attendee Groups: The clinical characteristics of the two groups also showed significant differences [Table 2]. Affective disorders were more prevalent in the dropout group (42%). These patients had a later mean age of illness onset ( $365 \pm 114$  months), longer illness duration ( $38.8 \pm$ 49.96 months), and a greater delay in initiating psychiatric care ( $49.3 \pm 64.4$  days). A family history of psychiatric illness was reported in 14.5% of dropouts, while none was noted in the regular group. Among those with no prior psychiatric treatment, 62.8% dropped out. History of psychiatric hospitalization was associated with better adherence—only 4.3% of dropouts had been previously hospitalized, compared to 17.4% of regular attendees.

SN	Variables	Regular attendee group	Dropout group	Total	$\chi^2/t$	p Value
1.	Duration of illness (Months)		• • •		-2.93	<.001*
	Mean	11.7	38.8			
	SD	7.62	49.96			
2.	Age of onset of illness (Months)				1.07	<.001*
	Mean	332	365			
	SD	124	114			
3.	Family history				10.8	0.0031*
	Yes	0	10	10		
	No	69	59	128		
4.	Past psychiatric treatment				19.2	<.001*
	Yes	34	10	44		
	No	35	59	94		
5.	Primary Diagnosis				20.3	0.001*
	Psychotic disorders	34	23	57		
	Affective disorders	6	29	35		
	Other disorders	29	17	46		
6.	Time gap between onset of illness and first psychiatric consultation (days)				-3.88	<.001*
	Mean	3.62	49.32			
	SD	1.33	64.39			
7.	Hospitalization				6.06	0.014*
	Yes	12	3	15		
	No	57	66	123		
8.	No. of hospitalization				4.79	0.091
	0	57	66	122		
	1	11	3	15		
	2	1	0	1		

Table 2. Tassatas and	detelle of the door out	group and regular attendee group	
Table 5: Treatment	details of the drob-out	group and regular attendee group	

SN	Variables	Regular attendee group	Dropout group	χ²/t	p value
1.	No. of pt on non-psychotropic drugs			8.99	0.003*
	Yes	34	17		
	No	35	52		
2.	No. of psychotropic medications			45.4	<.001*
	Mean	2.3	1.97		
	SD	0.649	0.857		
3.	No. of non-psychotropic medications			19.4	<.001*
	Mean	0.768	1.435		
	SD	0.957	1.786		
4.	Total no. of medications			23.3	<.001*
	Mean	3.07	2.93		

	SD	1.102	0.88		
5.	Cost of treatment/month			0.01	0.976
	Mean	1573	1570		
	SD	751	740		
6.	Does Family supervise medications			8.54	0.003*
	Yes	55	39		
	No	14	30		
7.	Non pharmacological treatment advised/ adherence				
	Advised	23	3	21.5	<.001*
	Advised, fully adherent	17	0		
	Advised, partially adherent	6	0		
	Advised (non adherent)	0	3		
	Not Advised	46	66		<.001*
8.	Came to the OPD with/without caregiver during first visit			1.01	0.316
	Alone	0	1		
	Came with attendant	69	68		

Treatment-Related Factors of Dropout and Regular Attendee Groups: Treatment-related variables differed significantly between the groups [Table 3]. Dropouts were prescribed fewer psychotropic medications (mean  $1.97 \pm 0.86$ ), more non-psychotropic medications (1.43  $\pm$  1.79), and fewer total medications overall (2.93  $\pm$  0.88). A majority of patients not receiving non-psychotropic medications (59.8%) dropped out. Lack of family supervision was also associated with discontinuation, as 68.2% of such patients did not return for followup. Non-pharmacological therapy (NPT) was not advised in 95.7% of the dropout group, compared to 66.7% in the regular group. Among those who received NPT advice, full (73.9%) or partial (26.1%) adherence were seen exclusively in the regular attendee group; the dropout group exhibited 100% non-adherence.

## DISCUSSION

Treatment adherence in psychiatric patients is a crucial determinant of clinical outcomes, yet dropout rates remain a significant challenge in mental healthcare. This study examined factors influencing patient dropout by comparing those who attended follow-ups with those who discontinued treatment. A structured methodology was used, employing validated tools. The findings provide insights into patient engagement and barriers to continued care in psychiatric settings.

**Socio-Demographic Factors:** Age was significantly associated with discontinuation, with the highest dropout rates observed among patients aged 51–60 years, followed by those aged 41–50 years. In contrast, younger patients (18–30 years) had the lowest dropout rates. These findings are consistent with Grover et al.,<sup>[34]</sup> although Reneses et al.<sup>[6]</sup> reported the opposite trend, observing higher dropout among younger adults.

Gender and marital status were not significantly associated with dropout, aligning with previous studies by Reneses et al.<sup>[6]</sup>, Sajatovic et al.<sup>[16]</sup>, Grover et al.<sup>[34]</sup>, Henzen et al.<sup>[35]</sup> and Srinivasmurthy et al.<sup>[13]</sup> Similarly, religious affiliation showed no significant association. Among dropouts, 71% were Hindu and 29% were from non-Hindu groups. Unemployment and rural residence were prevalent among the dropout group, with 46.37% unemployed and 85.5% residing in rural areas, indicating the role of structural and economic barriers in treatment adherence.

Education level emerged as a strong predictor of adherence. Dropout rates were highest among individuals with primary or no formal education, whereas none of the graduates or postgraduates discontinued treatment. These findings contrast with Reneses et al.<sup>[6]</sup>, who observed lower dropout at both educational extremes, suggesting a non-linear relationship.

Distance from the treatment centre was significantly associated with dropout, with patients living more than 80 km away more likely to discontinue care. This supports findings by Srinivasmurthy et al.<sup>[13]</sup>

Socioeconomic status was a significant predictor of dropout, with the highest dropout rates observed in the lower middle class and upper lower class. The findings suggest that economic constraints may hinder follow-up. However, Grover et al.<sup>[34]</sup> found no significant relationship between socioeconomic status and dropout, contrasting with our results.

Income level also showed a significant association with dropout. Patients earning above ₹7322 had higher follow-up rates, whereas those below this threshold exhibited substantial dropout rates, indicating that financial constraints may hinder adherence due to costs related to transportation, medication, or time off work. In contrast, Benjet et al.<sup>[14]</sup> found that lower-income individuals were less likely to discontinue treatment due to perceived improvement, suggesting that financial insecurity may, in some cases, encourage adherence.

Dropout was more common among individuals from nuclear families, likely due to reduced social and emotional support. This aligns with Reneses et al.<sup>[6]</sup>, who reported higher dropout among those living alone or in smaller family units.

**Clinical Factors:** Patients in the dropout group had a significantly longer duration of illness and higher age at onset. These patients may face greater challenges related to mobility, healthcare access, or motivation, as supported by Grover et al.<sup>[34]</sup> and Reneses et al.<sup>[6]</sup> A positive family history of psychiatric illness was more frequent among dropouts, possibly due to stigma, learned disengagement, or caregiver burden,

as noted by Henzen et al.<sup>[35]</sup> However, Grover et al.<sup>[34]</sup> did not report a significant association, highlighting population-level differences.

Conversely, a history of prior psychiatric treatment was linked to better adherence, likely reflecting greater awareness and familiarity with mental health services. This is consistent with Souto Melo et al.<sup>[36]</sup> and Reneses et al.<sup>[6]</sup>, who reported lower dropout among previously treated individuals.

Diagnosis also played a role. Psychotic disorders were more common among regular attendees, whereas affective disorders were predominant in the dropout group. This pattern suggests that patients with affective disorders might experience fluctuating symptoms, leading to perceived recovery and treatment discontinuation. Similar findings were reported by Grover et al.<sup>[34]</sup> and Centorrino et al.<sup>[17]</sup> Reneses et al.<sup>[6]</sup>, however, reported highest dropout among patients with eating, substance use, and personality disorders highlighting differences in adherence across psychiatric conditions.

The delay between illness onset and first psychiatric consultation was significantly longer among dropouts. Prolonged untreated periods may reduce insight and trust in mental healthcare, consistent with Simioni et al.<sup>[37]</sup>

Hospitalization history was lower among dropouts, indicating that inpatient care may reinforce follow-up adherence. This aligns with findings by Souto Melo et al.<sup>[36]</sup>, although Grover et al.<sup>[34]</sup> reported contrasting results, with a higher number of hospitalizations among dropouts. This discrepancy may stem from differences in healthcare systems, treatment approaches, or patient populations across studies.

Treatment-Related Factors: Our study found that patients on non-psychotropic medications were significantly more likely to adhere to follow-ups than those not on these medications. Additionally, patients receiving more intensive psychiatric treatment, indicated by a higher number of prescribed psychotropic medications, demonstrated better adherence, likely due to increased clinical supervision reinforcing treatment compliance. However, the dropout group had a higher number of non-psychotropic medications, suggesting that additional medical conditions might contribute to non-adherence, potentially due to polypharmacyrelated confusion or prioritization of other health concerns. Furthermore, the total number of medications was significantly higher in the regular attendee group. These findings contrast with Grover et al.<sup>[34]</sup> who found no significant difference between study groups regarding the number and type of medications prescribed. Notably, treatment costs were similar in both groups, aligning with Grover et al.'s findings.<sup>[34]</sup>

Family supervision emerged as a key adherence factor, with significantly better follow-up among those receiving caregiver support. This reflects previous findings by Grover et al.<sup>[34]</sup>, underscoring

the role of family in managing psychiatric care, especially where insight is impaired.

A significant proportion of patients did not receive advice on non-pharmacological treatment (NPT), with a higher percentage in the dropout group. Consistent with our findings, Edlund et al.<sup>[27]</sup> reported that dropout rates were significantly lower among patients receiving dual-modality treatment compared to those receiving single-modality care. Moreover, adherence to NPT recommendations was exclusively observed in the regular attendee group, while non-adherence was only reported among dropouts, emphasizing the importance of both receiving and following NPT advice in improving retention. Similar findings were reported by Cooper et al.<sup>[38]</sup>

Unlike previous findings by Souto Melo et al.<sup>[36]</sup>, our study did not find a significant association between caregiver attendance at the first visit and long-term adherence.

This study has several limitations. Being conducted at a single tertiary care centre, the findings may not be generalizable to broader clinical settings. The modest sample size and diagnostic heterogeneity may limit external validity. Additionally, the inclusion criteria may have unintentionally excluded the most disadvantaged individuals, potentially affecting the applicability of the results to those populations.

# **CONCLUSION**

This study identifies a multifaceted set of factors contributing to treatment dropout in psychiatric care, emphasizing the need for a comprehensive, individualized approach to improve retention. Sociodemographic variables such as lower education levels and low income highlight the importance of targeted educational interventions and improved healthcare accessibility, particularly for those living at a distance from treatment facilities. Economic stability and supportive family structures emerged as critical enablers of sustained engagement, reinforcing the need to account for financial and familial dynamics when designing interventions.

Clinically, patients with prolonged, untreated illnesses, later onset of psychiatric symptoms, and those without prior hospitalization faced greater risk of dropout, suggesting that early diagnosis, prompt initiation of care, and inpatient experiences may foster long-term engagement. Diagnostic patterns also played a role, with affective disorders linked to higher dropout—indicating that symptom fluctuation and perceived improvement may undermine adherence.

Treatment-related factors underscored the value of comprehensive medication management and the essential role of caregiver involvement in ensuring continuity of care. Additionally, the lack of guidance and poor adherence to non-pharmacological treatment (NPT) strategies in the dropout group highlights the need to better integrate psychoeducation, talk therapy, and supportive interventions into standard psychiatric practice. these findings advocate Overall, for а biopsychosocial model that addresses structural barriers, strengthens family and caregiver support, integrates pharmacological and and nonpharmacological treatments to enhance adherence and reduce dropout in psychiatric settings.

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