Original Article

Predictors of Dropout from Outpatient Mental Health Services; A Study from Rohtak, India

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ABSTRACT

Context: Dropout from mental health services is problematic in both developed and developing nations and often leads to poor outcomes. There is a lack of hospital-based studies assessing the factors responsible for treatment dropout from mental health services in Indian settings. This study aims to contribute in that direction by presenting a study done in a tertiary care hospital in North India. **Methodology:** This was a hospital-based retrospective chart review carried out on randomly selected 139 patients at a tertiary hospital from January 1, 2014, to June 30, 2014. For this chart review, an abstraction form was designed that recorded six sociodemographic variables, nine clinical factors, and two outcome variables (more than one follow-up and active follow-up till 6 months). **Results:** Out of 139 patients, 53 patients dropped out after the first visit and 105 patients dropped out by the end of 6 months. Lower education status (odds ratio [OR] = 8.2, 95% confidence interval [CI]: 2.30–29.50), severe mental illness (OR = 2.6, 95% CI: 1.05–6.49), and early referral to clinical psychologist (CP) (OR = 7.8, 95% CI: 1.87–6.49) were predictors of better rates of follow-up after first visit. Lower education status (OR = 4.9, 95% CI: 1.45–17.08), early referral to CP (OR = 5.8, 95% CI: 2.09–38.35), and previous treatment history (OR = 8.9, 95% CI: 1.97–17.52) were predictors of better rates of follow-up at the end of 6 months. **Conclusion:** The findings that education status, diagnosis, utilizing services of CP, and psychiatric services in past are correlated with dropout rates may be helpful in targeting patients who are more vulnerable to dropping out of care in the given setting.

KEYWORDS: *Disengagement, dropout, mental health services, outpatient, treatment retention*

INTRODUCTION

The problem of lack of availability of evidence-based psychiatric care[1-3] is further compounded by dropout from psychiatric care. Dropout may operationally be defined as the termination of contact with the services when there has not been a clinical resolution or an agreed termination.[4] Dropout from psychiatric care has been found to limit the possibility of monitoring and leads to a poor prognosis.[5] While some of the observed dropout may reflect reduced need for services, disengagement from mental health services can be a significant problem for individuals with mental illnesses that can lead to devastating consequences including exacerbation of psychiatric symptoms, repeated hospitalizations, homelessness, violence against others, and suicide.[6,7]

Many studies from the developed countries inform the correlates of dropping out from psychiatric care.[8-11] World Mental Health Survey carried out by the World Health Organization comparing the dropout between high-income and lower income countries found that the dropout rate was higher in the latter group.[12] While dropout from psychiatric care is common in India, there is a paucity of hospital-based studies from India that have examined the factors contributing to dropout. This study aims to contribute toward reducing this gap.

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Aims and objectives

The study aims to study the rates and predictors of dropout from psychiatric services from a tertiary care center in Rohtak, India.

METHODOLOGY

Patient records from a psychiatric clinic at a tertiary care hospital in North India were reviewed. The study center is a tertiary care center with inpatient and outpatient facilities for psychiatric illnesses. Patients seen at the clinic undergo comprehensive evaluation including a detailed interview. Each patient undergoes a thorough general physical examination and mental status examination. All the details are entered in a semi-structured pro forma. In many cases, patients also receive interventions from clinical psychologist (CP) and psychiatric social worker (PSW). The psychiatric diagnosis is made using International Classification of Diseases-10 criteria.

Treatment charts of every 10th patient seen at the initial visit between January 1, 2014, and June 30, 2014, were selected to obtain a representative sample of clinic patients. The chart review was done on July 1, 2015, to be reasonably sure that the termination of contact for the episode of care had occurred rather than it being a case of a few missed follow-ups.

Each chart was reviewed for the presence of a psychiatric diagnosis. If the chart did not contain this diagnosis and therefore was referred to another clinic, for instance neurology or internal medicine, the next 10th chart was chosen. Similarly, the chart of those patients whose care was terminated by the psychiatrist because of resolution of symptoms before 6 months were also excluded from the analysis and the next 10th chart was chosen. This yielded a final total of 139 charts.

For this chart review, an abstraction form was designed that recorded six sociodemographic variables [Table 1] and nine clinical factors [Table 2] as well as two outcome variables (more than one follow-up and active follow-up till 6 months).

Statistical analysis

Of overall data, 95% was complete, and among 18 variables, only substance use category had missing values of around 15%, all other missing values for remaining variables were <10%. All these values were assumed to be as missing completely at random process, and multiple imputation technique was used to fill in the missing values. Odds ratio using binary logistic regression analysis for the categorical variables of more than one follow-up and active follow-up was calculated.

Table 1: Sociodemographic distribution of participants

Sociodemographic variable	*n* (%)
Age (years)	
>18	5 (3.6)
19-30	43 (30.9)
31-45	61 (43.9)
46-60	24 (17.3)
<60	6 (4.4)
Gender	
Male	86 (61.9)
Domicile	
Within Rohtak district	39 (28.1)
Outside Rohtak district	100 (71.9)
Education	
Literate	101 (72.7)
Occupation	
Employed	117 (84.2)
Marital status	
Married	92 (66.2)

Table 2: Distribution of cases on the basis of clinical variables

Clinical variable	*n* (%)
Onset of illness	
Acute	79 (56.8)
Insidious	60 (43.2)
Course	
Episodic	18 (12.9)
Continuous	121 (87.1)
Diagnosis	
SMI	42 (30.2)
CMI	97 (69.8)
Family history	
Present	19 (13.7)
Past history of psychiatric illness	
Present	65 (46.8)
History of substance abuse	
Present	42 (30.2)
Referrals to PSW on the first visit	15 (10.8)
Referrals to CP on the first visit	27 (19.4)
Insight	
Present	84 (60.4)
Partial	22 (15.9)
Absent	33 (23.7)

CMI: Common mental illness, SMI: Severe mental illness, PSW: Psychiatric social worker, CP: Clinical psychologist

RESULTS

Table 1 shows the distribution of participants on the basis of sociodemographic variables.

It can be seen that 74.8% of the sample belonged to the age group of 18–45 years, 61.9% were males, 72.7% were literate, 84.2% were employed, 66.2% were married, and 71.9% resided outside the district in which the hospital is located.

Table 2 depicts the distribution of participants on the basis of clinical variables.

It shows that majority of the cases studied had presented with an acute onset of illness and a continuous course. About 30% of the cases studied had been suffering from severe mental illness (SMI). More than 3/4th of the cases studied were recorded to have at least partial insight into their illness. Almost half of the participants had a past history of psychiatric illness. Family history of mental illness was positive in 13.7% of the patients, and 30.2% had a history of substance abuse. About 10% and 20% of the cases had received a referral to the PSW and CP at the first visit, respectively.

Tables 3 and 4 illustrate how various sociodemographic and clinical variables are associated with dropping out of psychiatric care. Dropout from psychiatric care was examined at 2 time points, namely, after initial visit and at the end of 6 months from the initial visit.

Out of 139 patients, 53 patients dropped out after the first visit and 105 patients dropped out by the end of 6 months. It can be seen that illiterate patients were about 8 times less likely to drop out after the first visit as compared to literate patients. Similarly, patients with SMI were about 2 times less likely to drop out after initial visit as compared to patients with common mental illness. It was also seen that patients who were offered referral to CP at the first visit were about 8 times less likely to drop out after the first visit.

When the dropout rates at the end of 6 months were examined in the light of sociodemographic and clinical variables, it was found that illiterate patients were 4 times more likely and patients receiving referral to CP were 8 times more likely to remain in psychiatric care at the end of 6 months. It was also revealed that patients who had a past history of treatment for a psychiatric illness were about 5 times more likely to be retained in the service.

DISCUSSION

This study examines the sociodemographic and clinical variables that predict dropping out from psychiatric care. In this study, it was found that about two out of five patients dropped out of care after first visit and about three out of four dropped out by the end of 6 months from the initial visit. Two Indian studies[13,14] have previously reported on the subject of adherence to treatment in mental illnesses. Despite different patient characteristics and methodology, the dropout rate was similar to our study. The NCS study found that one-sixth (16.6%) of respondents who met diagnostic criteria for a serious mental illness had dropped out

Table 3: Odds ratio for more than one follow-up

	B	OR	95% CI		Significant
			Lower	Upper	
Sociodemographic					
Female	−0.095	0.909	0.308	2.683	0.863
Rural background	0.168	1.183	0.447	3.131	0.736
Illiterate	2.103	8.190	2.276	29.469	0.001
Unemployed	1.293	3.643	0.953	13.921	0.059
Single	0.465	1.590	0.558	4.540	0.385
Clinical factors					
Insidious onset	0.239	1.269	0.481	3.351	0.630
Episodic course	−0.245	0.783	0.209	2.928	0.716
SMI	0.961	2.613	1.052	6.492	0.039
No family history	−0.197	0.821	0.233	2.899	0.760
Past treatment	0.571	1.771	0.711	4.410	0.220
Substance use present	0.988	2.687	0.936	7.712	0.066
Insight present	1.026	2.791	0.841	9.261	0.094
CP referral	2.050	7.767	1.876	32.155	0.005
PSW referral	1.013	2.755	0.168	0.653	11.628

SMI: Severe mental illness, OR: Odds ratio, CI: Confidence interval, PSW: Psychiatric social worker, CP: Clinical psychologist

Table 4: Odds ratio for active follow-up

	B	OR	95% CI		Significant
			Lower	Upper	
Sociodemographic					
Female	−1.253	0.286	0.077	1.062	0.061
Rural background	−0.088	0.916	0.296	2.835	0.878
Illiterate	1.605	4.977	1.450	17.088	0.011
Unemployed	1.052	2.863	0.495	16.545	0.240
Single	0.378	0.685	0.558	0.194	2.427
Clinical factors					
Insidious onset	−0.608	0.544	0.154	1.926	0.346
Episodic course	−0.178	0.837	0.196	3.570	0.810
SMI	0.163	1.177	0.272	5.100	0.827
No family history	0.042	1.043	0.261	4.163	0.953
Past treatment	1.772	5.880	1.973	17.522	0.001
Substance use	−0.902	0.406	0.112	1.477	0.171
Insight present	0.768	2.155	0.500	9.292	0.303
CP referral	2.193	8.960	2.093	38.355	0.003
No PSW referral	0.683	1.98	0.408	0.392	9.454

CI: Confidence interval, PSW: Psychiatric social worker, OR: Odds ratio, SMI: Severe mental illness, CP: Clinical psychologist

of treatment.[2] A review of literature that exclusively focused on individuals with schizophrenia or psychotic illnesses reported that one in four patients fail to adhere to treatment programs.[15] While the rates of dropout in our study are not directly comparable with the rates revealed in the studies quoted above because the patient population in our study included patients across all diagnostic categories, we might still surmise that dropout rates are higher in our center as compared to that in the developed countries. This might be explained by two circumstances that exist in developing countries

like India. First, record keeping is poor, and the choices available for treatment are manifold. Hence, dropout from one center may not necessarily mean dropout from care.[16] Second, there is almost complete absence of community psychiatry facilities which can keep a track of patients in their catchment area.

In this study, it was found that illiterate patients and patients who were offered a referral to CP were less likely to drop out after the initial visit and at the end of 6 months after the initial visit. The diagnosis of SMI predicted lesser dropout after the first visit but not at the end of 6 months from the initial visit, whereas those with past history of contact with psychiatric services reported a better follow-up at the end of 6 months.

The correlates and reasons for disengagement from care suggested in previous studies[4,8-10] include younger age, male gender, ethnic minority background, low social functioning, and social isolation, as evidenced by not being married or being out of contact with family, low educational attainment, and unemployment. In terms of clinical characteristics, individuals with a co-occurring serious mental illness and a substance use disorder have very high rates of treatment disengagement.

It appears counterintuitive that literate people should drop out at a rate which is 8 times higher than illiterate patients and many studies suggest the opposite viewpoint. In our setting, two surmises can be drawn from this finding. First, the socioeconomic status of literate patients is likely to be higher, and they might therefore be able to afford treatment at a private health facility. Second, it has been observed while working in the hospital that literate patients often perceive higher stigma related with mental health facility and hence are less likely to continue treatment.

Another interesting finding in this study is that referrals to CP have been associated with lesser dropout rates. Previous studies have reported higher preference of nonpharmacological treatment.[17,18] It might indicate that steps should be taken to strengthen the multidisciplinary approach to the treatment of mental illnesses in Indian settings.

It also emerges that presence of SMI is a predictor of lower dropout rates after the initial visit but not at the end of 6 months. It maybe hypothesized that the treatment was sought for as long as the patients were symptomatic and discontinued once significant improvement occurred. However, this pattern is not clear and warrants additional research. Another important finding to come out of the study is the higher follow-up rate at the end of 6 months in those who have had contact with psychiatric services in the past. This might be due to positive experiences in the past with psychiatric services and as well as from better understanding of psychiatric illness due to greater exposure to psychiatric services.[19]

This study suffers from some limitations. First, the lack of psychiatry registers and community catchment model of services make it difficult to ascertain whether those patients who have dropped out from our service have sought care elsewhere or not. Second, the patient population studied is not homogeneous in terms of diagnosis, and the sample size is small. Third, the study has not evaluated client perspectives and their reasons for dropping out.

CONCLUSION

Drop out from psychiatric care adversely impact the outcomes in mental disorders. In our setting, it was found that some factors such as education status, diagnosis, utilizing services of CP, and psychiatric services in past have been found to correlate with dropout rates. This study needs to be replicated in other settings to examine if these findings are generalizable.

Conflicts of interest

There are no conflicts of interest.

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