

Pattern of Follow-up among Patients Attending the Department of Psychiatry: A Prospective Study

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ABSTRACT

Introduction: Adherence to drug regimen is a very important factor for improvement. Dropping out may affect the treatment outcome and also an indication of poor clinical performance. Patient who left the treatment in between can lead to a deterioration in clinical condition, resulting in the need for more intensive therapy that significantly incurs higher social and economic loss. Therefore, improving medication compliance potentially reduces morbidity and suffering of patients and their families, and the cost of rehospitalisation.

Aim: To study the pattern of follow-up among patients of various psychiatric disorders and also to study the therapist factors contributing in adherence to treatment and the socio-demographic profile of patients who dropout from study.

Materials and Methods: This was a prospective analytical study conducted in the Department of Psychiatry, GGSMCH Faridkot, Punjab, India. Patients were enrolled in for six month from June 2019 to November 2019 and then followed-up in next six month period from December 2019 to May 2020. A total of 500 psychiatric patients were selected by the convenient non probability sampling technique in the age group between 18-45 years who met the

inclusion criteria. These patients were evaluated for illness related variables using psychiatric proforma and Charleston Psychiatric Outpatient Satisfaction Scale (CPOSS) was applied. factors affecting the pattern of follow-up, relating to the treatment and its side effects, disease progression as well as therapist-related factors using a semi-structured questionnaire were recorded. The data, thus generated, was subjected to appropriate statistical analysis.

Results: In the socio-demographic profile among dropout education status, occupation, and duration of illness, statistically significant difference was found among different disorders ($p < 0.05$). CPOSS scale was applied among three follow-up groups in which highest mean was 53.03 ± 10.05 in regular follow-up group followed by 49.49 ± 9.06 in intermittent and 44.80 ± 10.70 in dropout follow-up group. Total CPOSS mean was 49.19 ± 10.66 . Overall results were statistically significant ($p = 0.0001$). Also in the medication, disease and physician related factors among follow-up groups, statistically significant results were found ($p < 0.05$).

Conclusion: The study showed that various socio-demographic factors, medication, disease and physician related factors affect the follow-up patterns. So, it is very important to diagnose all these factors to improve adherence among various psychiatric patients.

Keywords: Adherence, Disease, Medication, Physician related factors

INTRODUCTION

From falling sick and dying to find a cure and beat a disease, the world of medicine has come much far. Adherence to drug regimen is a very important factor for improvement. Dropping out of the mental health treatment may affect the treatment outcome and indicates poor clinical performance. Patient who left the treatment in between can cause a deterioration in clinical condition, resulting in the need for more intensive therapy that significantly incurs higher social and economic loss [1].

Adherence, suggests sustained active decision making, rather than the more paternalistic term compliance, from complete (to fill up/complete) [2]. Adherence occurs on a spectrum ranging from total adherence, i.e. all doses of medication are taken at the frequency given on the prescription to total non adherence, i.e. none of the prescribed medication is taken, and partial adherence, or partial non adherence, i.e. some, but not all, of the prescribed medication is taken [3]. In general, the major predictors of non adherence include socio-demographic factors, treatment-related factors and disease related factors. However, the least investigated ones are the physician-related factors, though considered important [4].

The aim of the present study was to study the pattern of follow-up among patients of various psychiatric disorders and the therapist factors contributing in adherence treatment and to study the socio-demographic profile of patients who dropout from study.

MATERIALS AND METHODS

The present study was a prospective analytical study, conducted in the Department of Psychiatry, GGSMCH Faridkot, Punjab, India. Patients were enrolled in for six month from June 2019 to November 2019 and then followed-up in next six month period from December 2019 to May 2020. This study was approved by the ethical committee. An informed written consent was taken from the patient and caregiver prior to the study.

Inclusion criteria: Subjects giving written informed consent, aged 18-45 years and meeting International Classification of Diseases (ICD-10) criteria for Bipolar Affective Disorder (BPAD), depression, Obsessive Compulsive Disorder (OCD), schizophrenia were included in the study.

Bipolar disorder (BPD) is characterised with having either manic episodes characterised by elevated mood, overactivity, decreased need of sleep and increased in the quantity and speed of physical or mental activities and depressive episodes. Depressive episodes are characterised by depressed mood, loss of interest, reduced energy along with reduced concentration, self esteem, disturbed sleep and appetite etc. Obsessive compulsive disorder have recurrent obsessional thoughts i.e. ideas, mages or impulses and/or compulsions which are mental acts or behaviours repeated again and again. Schizophrenia is characterised by fundamental distortion in thinking and perception and inappropriate affect [5].

Exclusion criteria: Subjects with intellectual disability, head injury/neurological illness/severe cardiorespiratory or other medical illness were excluded.

Sample size calculation: The study sample was selected by purposive (non probability) sampling technique based on data analysis of patients in previous year and a total of 500 subjects were included.

Formula: $X = Z\alpha/2 \cdot \sqrt{p \cdot (1-p) / e^2}$

Where, $Z\alpha/2$ is 1.96, e was the absolute error (5%), p is the sample proportion (0.50), Using the formula above, the derived sample size was 383. Considering a non response/attrition rate of 10%, the minimum sample size was 425. So, a sample size of 500 was taken for the purpose of this study [6].

Study Procedure

All the information pertaining to socio-demographic profile, illness related variables like the history of illness and Mental Status Examination (MSE) which includes flow of speech, process and content of thought, perception, attention and concentration, memory, judgement and insight was documented in the prevalidated structured psychiatric evaluation proforma [7]. Following this the CPOSS was applied, which is a self reporting questionnaire that measures client satisfaction regarding mental health services. Its 15 items describe diverse service domains of satisfaction, including two anchor items (overall quality of the care provided and would you recommend this clinic to a friend or relative?). Responses are rated on a 5-point Likert scale ranged from 1 (very dissatisfied) to 5 (very satisfied), with higher score indicating more satisfaction [8].

The individual patients were assessed for six months with monthly follow-ups. To ensure adherence, the patients were contacted telephonically or contacted via text message, one day prior to the date of follow-up. If any patient did not come up at desired date of follow-up he was contacted again. If the patient did not come on rescheduled appointment it was considered as a dropout and reason was documented. Patients who were on and off on the treatment were intermittent and who followed the instruction completely were considered as regular in follow-up. After this, the factors affecting the pattern of follow-up, relating to the medication related (nine questions), disease related (five questions) as well as therapist related factors (nine questions) were assessed using a semi-structured self designed questionnaire within the Department of Psychiatry by the author, and later psychometrically analysed by Department of Preventive and Social Medicine.

All questionnaires were put on cronbach coefficient alpha to check internal consistency of each measure of questionnaire. Before the study, 50 patients from each group (regular, intermittent and dropout) was taken and Intra class Correlation Coefficient (ICC) was calculated. Reliability and validity scores were 0.90, 0.88, 0.82 for medication related, disease related and therapist related factors respectively. Then these questionnaires were distributed to every enrolled patient in printed format which was filled by either the patient/informant/or healthcare worker and was collected on spot. These questionnaires were analysed based on various other studies like Lucca JM et al., which also study patient, medication and disease related factors among various group [9]. Socio-demographic variables including education, occupation and total monthly income of the family was assessed using the Kuppuswamy classification. The data, thus generated, were subjected to appropriate statistical analysis.

STATISTICAL ANALYSIS

The data was entered in Microsoft Excel software and analysed using IBM Statistical Package for the Social Sciences (SPSS) version 20.1. Descriptive statistics for categorical variables were represented in form of frequencies, while continuous variables in the form of mean and standard deviation. The association between various parameters were explored using Pearson’s Chi-square test.

p-values of significance were determined and values <0.05 were considered significant at 95% CI. For comparison of mean score variables, one-way ANOVA test, Posthoc Bonferroni test were used. For correlation among any two variables, Pearson’s correlation coefficient was calculated.

RESULTS

Parameters like age, sex, education, occupation, and duration of illness were found to be statistically significant (p<0.05) in various disorders [Table/Fig-1].

Parameter	Categories	Psychiatric disorder (N=500)				Total	p-value
		BPAD (n=125)	Depression (n=125)	OCD (n=125)	Schizophrenia (n=125)		
Age (years)	18-25	23	25	32	47	127	0.001
	26-35	51	36	55	49	191	
	36-45	51	64	38	29	182	
Sex	Male	87	50	67	73	277	0.001
	Female	38	75	58	52	223	
Education	Illiterate	16	16	2	16	50	0.001
	Primary	14	16	4	7	41	
	Middle	52	46	33	61	192	
	High school	25	26	47	26	124	
	Intermediate	2	3	4	0	9	
	Graduate	11	13	28	13	65	
	Professional	5	5	7	2	19	
Occupation	Unemployed	48	83	74	89	294	0.001
	Labourer	23	17	10	18	68	
	Craft related work	1	2	7	2	12	
	Farmers	44	14	20	9	87	
	Shop keeper	6	4	6	2	18	
	Clerks	0	3	6	1	10	
	Technician	2	0	1	2	5	
	Professionals	0	2	1	2	5	
	Govt officials	1	0	0	0	1	
Total monthly income of the family (In rupees)	≤10,001	13	17	6	7	43	0.064
	10,002-29,972	41	50	57	60	208	
	29,973-49,961	42	37	39	40	158	
	49,962-74,755	19	18	19	12	68	
	74,756-99,930	4	2	0	0	6	
	99,931-199,861	5	0	2	5	12	
	≥199,862	1	1	2	1	5	
Duration of illness (years)	<1	16	54	15	19	104	0.001
	1-5	46	49	82	56	233	
	6-15	50	14	23	46	133	
	>15	13	8	5	4	30	
Total		125	125	125	125	500	

[Table/Fig-1]: Socio-demographic profile of the patients. Chi-square test; p<0.05=significant

In [Table/Fig-2] distribution of subjects where 196 (39.20%) were on regular follow-up, 124 (24.8%) on intermittent follow-up and 180 (36%) were dropout during study period.

In [Table/Fig-3] the education, occupation, monthly income of the family and duration of illness, shows a statistically significant difference (p<0.05) in various disorders among dropout group.

Categories	BPAD	Depression	OCD	Schizophrenia	Total
Regular follow-up	32 (25.6%)	38 (30.4%)	67 (53.6%)	59 (47.2%)	196
Intermittent follow-up	53 (42.4%)	40 (32.0%)	9 (7.2%)	22 (17.6%)	124
Dropout	40 (32.0%)	47 (37.6%)	49 (39.2%)	44 (35.2%)	180
Total	125	125	125	125	500

[Table/Fig-2]: Distribution of subjects in follow-up categories among psychiatric Disorders.

Parameter	Categories	Psychiatric disorder (N=180)				Total	p-value
		BPAD (n=40)	Depression (n=47)	OCD (n=49)	Schizophrenia (n=44)		
Age (years)	18-25	9	12	12	18	51	0.148
	26-35	16	13	16	17	62	
	36-45	15	22	21	9	67	
Sex	Male	26	24	27	22	99	0.502
	Female	14	23	22	22	81	
Education	Illiterate	7	10	1	6	24	0.002
	Primary	4	4	4	1	13	
	Middle	16	14	10	23	63	
	High school	10	7	21	9	47	
	Intermediate	0	2	0	0	2	
	Graduate	3	7	12	4	26	
	Professional	0	3	1	1	5	
Occupation of the head of the family	Unemployed	16	28	30	38	112	0.001
	Labourer	10	5	4	4	23	
	Craft related work	0	2	5	0	7	
	Farmers	9	6	6	0	21	
	Shopkeepers	3	2	1	1	7	
	Clerks	0	2	3	0	5	
	Technicians	2	0	0	1	3	
	Professionals	0	2	0	0	2	
Total monthly income of the family	≤10,001	6	6	2	5	19	0.036
	10,002-29,972	14	21	21	23	79	
	29,973-49,961	10	15	20	12	57	
	49,962-74,755	10	4	4	2	20	
	74,756-99,930	0	1	0	0	1	
	≥99,931-199,861	0	0	0	2	2	
Illness duration (years)	<1	2	19	3	8	32	0.001
	1-5	18	21	31	17	87	
	6-15	13	4	14	18	49	
	>15	7	3	1	1	12	

[Table/Fig-3]: Socio-demographic profile of the dropout group of patients. Chi-square test; p<0.05=significant; p>0.05=non significant

As represented [Table/Fig-4]: shows that CPOSS highest mean was 53.03±10.05 (CI at 95%- 51.61-54.44) in regular follow-up group followed by 49.49±9.06 (CI at 95%-47.88-51.10) in intermittent and 44.80±10.70 (CI at 95%-43.23-46.37) in dropout follow-up group. Total CPOSS mean was 49.19±10.66 (CI at 5%- 48.25-50.12). Overall results were statistically significant (p=0.0001).

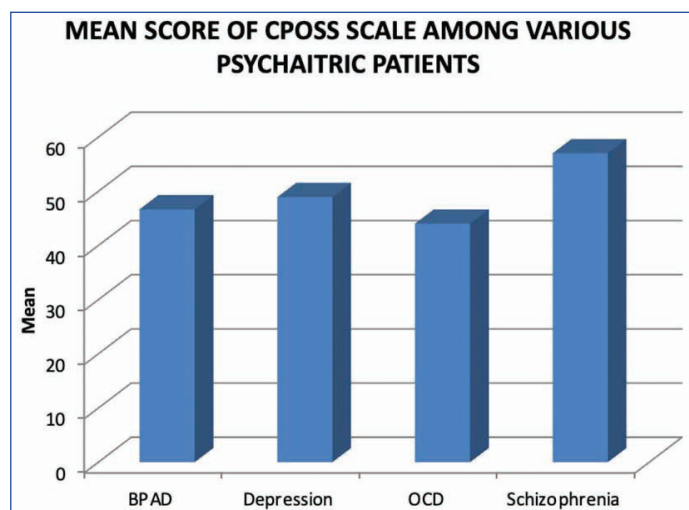
In [Table/Fig-5] CPOSS highest mean was 57.05±7.11 (CI at 95% was 55.79-58.31) among Schizophrenia followed by 48.95±10.56 (CI at 95% was 47.08-50.82), 46.70±10.43 (CI at 95% was 44.85-48.54) and 44.06±9.54 (CI at 95% was 42.37-45.75) among depression, BPAD and in OCD respectively. This result was statistically significant (p=0.0001).

Among the medication related factors among total psychiatric patients affecting follow-up pattern, statistically significant difference

was found in three follow-up groups (p<0.05) except the cost factor (p=0.070) [Table/Fig-6].

Follow-up pattern	N	Mean	Std. Deviation	Minimum	Maximum	p-value	R vs Int	R vs drop-out	Int vs drop-out
							p-value	p-value	p-value
Regular (R)	196	53.03	10.05	28	69	0.0001	0.002	0.001	0.001
Intermittent (Int)	124	49.49	9.06	23	66				
Dropout	180	44.80	10.70	22	69				
Total	500	49.19	10.66	22	69				

[Table/Fig-4]: Mean score of each items of CPOSS among psychiatric patients in follow-up groups. ANOVA test; Post HOC bonferroni test; p<0.05=significant



[Table/Fig-5]: Mean score of CPOSS scale among various psychiatric patients. ANOVA test; Post HOC bonferroni test; p<0.05=significant; p>0.05=non Significant

Medication related factors	Parameters	Follow-up				Total	p-value		
		Regular	Intermittent	Dropout					
1. Did you try self-medication?	No	109	55.6%	26	21.0%	41	22.8%	176	0.001
	Yes	87	44.4%	98	79.0%	139	77.2%		
2. Did you miss the dose ever?	No	116	59.2%	26	21.0%	39	21.7%	181	0.002
	Yes	80	40.8%	98	79.0%	141	78.3%		
3. Had you ever gone to the faith healer?	No	174	88.8%	97	78.2%	113	62.8%	384	0.001
	Yes	22	11.2%	27	21.8%	67	37.2%		
4. Is there any adverse drug reaction?	No	120	61.2%	66	53.2%	83	46.1%	269	0.021
	Yes	76	38.8%	58	46.8%	97	53.9%		
5. Is the medication costly?	No	50	25.5%	19	15.3%	34	18.9%	103	0.070
	Yes	146	74.5%	105	84.7%	146	81.1%		
6. Are there too many pills?	No	124	63.3%	47	37.9%	76	42.2%	247	0.001
	Yes	72	36.7%	77	62.1%	104	57.8%		
7. Is the duration of medication long?	No	6	3.1%	4	3.2%	20	11.1%	30	0.001
	Yes	190	96.9%	120	96.8%	160	88.9%		
8. Are you satisfied with the medication?	No	1	0.5%	3	2.4%	106	58.9%	110	0.001
	Yes	195	99.5%	121	97.6%	74	41.1%		
9. Did you think you are in crutch of medication?	No	83	42.3%	13	10.5%	41	22.8%	137	0.001
	Yes	113	57.7%	111	89.5%	139	77.2%		

[Table/Fig-6]: Medication related factors affecting follow-up pattern among total psychiatric patients. Chi-square test; p<0.05=significant

All disease related factors among total psychiatric patients affecting follow-up pattern, showed a statistically significant difference in three follow-up groups ($p < 0.05$) [Table/Fig-7].

All physician related factors among total psychiatric patients affecting follow-up pattern, showed a statistically significant difference was found in three follow-up groups ($p < 0.05$) [Table/Fig-8].

In the current study, when medication related factors affecting follow-up pattern were assessed, statistically significant results were found in follow-up groups ($p < 0.05$). Teferra S et al., Sanele M et al., also described medication related factors as ADR (11%), cost (6.9%), too many pills (4.6%), non availability (4.0%), long duration (4.0%), complex formulation (1.1%) among bipolar affective disorder were

Disease related factors	Parameters	Follow-up						Total	p-value
		Regular		Intermittent		Dropout			
1. Do you think you have disease?	No	30	15.3%	22	17.7%	52	28.9%	104	0.002
	Yes	166	84.7%	102	82.3%	128	71.1%	396	
2. Do you self-check for the reappearance of symptoms?	No	160	81.6%	36	29.0%	66	36.7%	262	0.001
	Yes	36	18.4%	88	71.0%	114	63.3%	238	
3. Is there any improvement in disease?	No	2	1.0%	7	5.6%	65	36.1%	74	0.001
	Yes	194	99.0%	117	94.4%	115	63.9%	426	
4. Are you hopeless about the disease?	No	178	90.8%	91	73.4%	68	37.8%	337	0.001
	Yes	18	9.2%	33	26.6%	112	62.2%	163	
5. Do you think that symptoms have worsen?	No	189	96.4%	105	84.7%	112	62.2%	406	0.001
	Yes	7	3.6%	19	15.3%	68	37.8%	94	

[Table/Fig-7]: Disease related factors affecting follow-up pattern among total psychiatric patients.

Chi-square test; $p < 0.05$ =significant; $p > 0.05$ =non significant

Physician related factors	Parameter	Follow-up						Total	p-value
		Regular		Intermittent		Dropout			
1. Did the physician understand and ask questions regarding your health issues?	No	0	0	1	0.8%	13	7.2%	14	0.001
	Yes	196	100.0%	123	99.2%	167	92.8%	486	
2. Did the doctor discuss about various treatment options available and their possible side effects?	No	2	1.0%	0	0.0%	18	10.0%	20	0.001
	Yes	194	99.0%	124	100.0%	162	90.0%	480	
3. Did the doctor encourage you to ask any doubts regarding your illness?	No	3	1.5%	2	1.6%	16	8.9%	21	0.002
	Yes	193	98.5%	122	98.4%	164	91.1%	479	
4. Did the doctor have adequate knowledge about your illness?	No	0	0	0	0.0%	7	3.9%	7	0.002
	Yes	196	100.0%	124	100.0%	173	96.1%	493	
5. Did physician answered questions to your satisfaction?	No	1	0.5%	1	0.8%	14	7.8%	16	0.001
	Yes	195	99.5%	123	99.2%	166	92.2%	484	
6. Did the physician spend enough time with you?	No	7	3.6%	8	6.5%	21	11.7%	36	0.009
	Yes	189	96.4%	116	93.5%	159	88.3%	464	
7. Did the physician gives you advice on what to do if symptoms persisted or worsened with treatment?	No	0	0	0	0.0%	14	7.8%	14	0.001
	Yes	196	100.0%	124	100.0%	166	92.2%	486	
8. Did the physician explain you about the follow-up visits?	No	0	0	1	0.8%	17	9.4%	18	0.002
	Yes	196	100.0%	123	99.2%	163	90.6%	482	
9. Was the doctor available on follow-up visits?	No	2	1.0%	2	1.6%	21	11.7%	25	0.001
	Yes	194	99.0%	122	98.4%	159	88.3%	475	

[Table/Fig-8]: Physician related factors affecting follow-up pattern among total psychiatric patients.

Chi-square test; $p < 0.05$ =significant; $p > 0.05$ =non significant

DISCUSSION

In the current study, the difference in monthly income was statistically significant among dropout ($p = 0.036$). A study by Chaudhari B et al., also reported that low household income ($p = 0.02$) was significantly associated with low adherence [11]. In another study conducted by Lucca JM et al., found 67.54% among adherent and 65.11% among non adherent group had family income $< \text{Rs. } 50,000$ [9].

In the present study when mean score of each item of CPOSS was studied, statistically significant difference was found in the follow-up groups ($p = 0.0001$). When mean score of CPOSS among various psychiatric disorders was studied, again the results were statistically significant ($p = 0.001$). Afe TO et al., also found mean of the satisfaction scores (\sum item 1, 2, 3, 4, 5, 6, 7, and 9-14) on the CPOSS ranged from 25 to 60, with a mean of 40.17 ± 7.5 . The modal score was 43.0 (66% of maximum possible score on CPOSS) [12].

poor parameters for adherence [13,14]. Their results were similar to the results of our study. Banerjee S and Varma RP, also describe that out of 239 interviewed patients, most of the patients reported using self medication 72.8% (174), forgetting to take prescribed medicines 56.5% (109), shortage of drug supply, cost of medicines was more, non adherent with the treatment whereas a few reported visiting healing temples 73 (30.5%) [15]. These results are consistent with our study. Santana L et al., reported that among OCD, the reasons for refusing medication or taking medications less frequently or at lower doses than prescribed included: disliking the side-effects of medication (41%), perceived environmental barriers (31%), feeling too busy or believing that treatment was inconvenient, costs of medication, not having enough money to pay for medication, feeling too anxious/fearful of taking medication (26%), having a negative opinion about the efficacy of treatment (23%), having issues regarding stigma/confidentiality (21%), having specific beliefs

regarding severity of illness (13%) believing that his other OCD is not severe enough to justify need for medication (insight) [16].

Considering the disease related factors, statistically significant difference was found in three follow-up groups ($p < 0.05$). Semahegn A et al., in his meta-analysis found that patients having lack of awareness about their illness, not getting subjective relief, hopelessness, felt better lead to discontinuation of treatment and not appreciating subjective relief symptoms contributing medication non adherence [17]. Victoria O et al., also found in their studies that disease related factors self checking for the reappearance of the sign and symptoms (7.5%), feeling better (6.9%), poor insight (6.3%), forgetfulness (5.2%), no improvement (2.3%), worsening of the conditions (1.7%), hopelessness (1.1%) lead to more dropout cases [18].

When physician related factors were assessed, statistically significant difference was found in three follow-up groups in all factors ($p < 0.05$). Lucca JM et al., also concluded the physician related factors in concurrence with our study that is lack of treatment alliance, fail to acknowledge the patient's concern and empathy, compassion and skillful counselling, lack of information provided about the medication, lack of secure atmosphere to discuss about the disease, inability to develop feelings of trust, lack of adequate instruction, non availability of psychiatrist during follow-ups and inability to have bidirectional communication all recognised as poor parameters for adherence [11]. Linden M et al., found that both non adherent and adherent patients had a good relationship with their physicians. Adherent patients trusted their physicians significantly more, and they expected that physicians would be helpful in treatment ($p < 0.05$) [19].

Limitation(s)

To generalise the data, the study needs to be conducted on larger number of patients. Convenience sampling was done to choose the subjects. Our study period was for only one year, all the patients should have been followed-up for atleast three years for proper assessment.

CONCLUSION(S)

Considering the socio-demographic profile among dropout in various psychiatric disorders: parameters including education, occupation, income of the family, marital status and duration of illness were statistically significant. Statistically significant difference was found in follow-up groups among mean score of CPOSS. All the medication related, disease related and physician related factors significantly affect the follow-up patterns in various disorders. To improve the

adherence, follow-up patterns among various psychiatric disorders must be done on large scales for longer duration.

REFERENCES

- [1] Minamisawa A, Narumoto J, Yokota I, Fukui K. Evaluation of factors associated with psychiatric patient dropout at a university outpatient clinic in Japan. *Patient Prefer Adherence*. 2016;10:1903-11.
- [2] Colom F, Vieta E, Tacchi MJ, Moreno SJ, Scott J. Identifying and improving non-adherence in bipolar disorders. *Bipolar Disord*. 2005;7(5):24-31.
- [3] Jawad I, Watson S, Haddad PM, Talbot PS, Williams RH. Medication non-adherence in bipolar disorder: A narrative review. *Ther Adv Psychopharmacol*. 2018;8(12):349-63.
- [4] Singla M, Goyal SK, Sood A, Philips S. Profile and pattern of follow-ups of psychiatry outpatient at Christian medical college, Ludhiana. *J Mental Health Hum Behav*. 2015;20:76-79.
- [5] International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders. A conceptual framework for the revision of the ICD-10 classification of mental and behavioural disorders. *World J Psychiatr*. 2011;10(2):86-92.
- [6] Sharma SK, Mudgal SK, Thakur K, Gaur R. How to calculate sample size for observational and experimental nursing research studies? *Natl J Physiol Pharma Pharmacol*. 2020;10(01):01-08.
- [7] Mayer-Gross W, Slater E, Roth M. *Clinical Psychiater*. 2nd ed. William and Wilkins; 1960.
- [8] Pellegrin K, Stuart G, Maree B, Frueh B, Ballenger J. A brief scale for assessing patients' satisfaction with care in outpatient psychiatric services. *Psychiatr Servi*. 2001;52(6):816-19.
- [9] Lucca JM, Ramesh M, Parthasarathi G, Ram D. Incidence and factors associated with medication nonadherence in patients with mental illness: A cross-sectional study. *J Postgrad Med*. 2015;61(4):251-56.
- [10] Ananthan V. Modified Kuppuswamy scale for socioeconomic status of the Indian family- Update based on New CPI (IW) series from September 2020. *Fam Med Prim Care Rev*. 2021;10(5):2048.
- [11] Chaudhari B, Saldanha D, Kadiani A, Shahani R. Evaluation of treatment adherence in outpatients with schizophrenia. *Ind Psychiatry J*. 2017;26(2):215-22.
- [12] Afe TO, Bello-Mojeed M, Ogunsemi O. Perception of service satisfaction and quality of life of patients living with schizophrenia in Lagos, Nigeria. *J Neurosci Rural Pract*. 2016;7:216-22.
- [13] Teferra S, Hanlon C, Beyero T, Jacobsson L, Shibre T. Perspectives on reasons for non-adherence to medication in persons with schizophrenia in Ethiopia: A qualitative study of patients, caregivers and health workers. *BMC Psychiatry*. 2013;13:168.
- [14] Sanele M, Thandinceba M, Siyabonga N, Farzana NM, Londeka N, Justine P, et al. Medication adherence of psychiatric patients in an outpatient setting. *Afr J Pharm Pharmacol*. 2012;6:608-12.
- [15] Banerjee S, Varma RP. Factors affecting non-adherence among patients diagnosed with unipolar depression in a psychiatric department of a tertiary hospital in Kolkata, India. *Depress Res Treat*. 2013;2013:809542.
- [16] Santana L, Fontenelle JM, Yucel M. Rates and correlates of nonadherence to treatment in obsessive-compulsive disorder. *J Psychiatr Pract*. 2013;19(1):42-53.
- [17] Semahegn A, Torpey K, Manu A. Psychotropic medication non-adherence and its associated factors among patients with major psychiatric disorders: A systematic review and meta-analysis. *Syst Rev*. 2020;9(1):17.
- [18] Victoria O, Yazdani M, Yaghoubi, Namdari M. Noncompliance and its causes resulting in psychiatric readmissions. *Iran J Psychiatry*. 2008;3:37-42.
- [19] Linden M, Godemann F, Gaebel W, Kopke W, Muller P, Muller-Spahn F, et al. A prospective study of factors influencing adherence to a continuous neuroleptic treatment program in schizophrenia patients during 2 years. *Schizophr Bull*. 2001;27(4):585-96.

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