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Reasons for Non-Adherence of Psychiatric Treatments Among Children And Adolescents: Cross Sectional Study

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ABSTRACT

Introduction- Adherence to (or compliance with) a medication regimen is generally defined as the extent to which patients take medications as prescribed by their health care providers.Non-compliance is a significant problem in all patient populations, from children to the elderly.

Keeping these points in view this study has been conducted to find out the reasons for non-adherence among children and adoloscents. Objectives of the Study: To evaluate the factors responsible for non-adherence to psychiatric treatment among children and adolescents with major psychiatric disorders (Schizophrenia, Major Depressive Disorder, Bipolar Disorder and Anxiety Disorders) Materials & Methods- Study area: The study was conducted in three centres namely Manas manochikitsa clinic, Rewa, a private psychiatric clinic, Trison paediatric clinic and Kushabhau Thackrey government district hospital , Rewa over a period of one year i.e. from January to December 2015. Study Population: Patients attending the outpatient clinic with one of the major psychiatric disorders Sample Size Total number of subjects enrolled in study was 120. Results and Conclusion -Results of study revealed maximum degree of influence for non-adherence is because patients considered medication as unnecessary followed by financial obstacle, other common reasons found to be influencing patients were distress from side effects, access to treatment specially distance to clinic

KEYWORDS : Non adherence, major psychiatric illness, children and adolescents

Introduction

Even panacea does not work when the patient intentionally or unintentionally fails to take it. It is a well-accepted fact that "the fate of a drug therapy is with the patient (1); the inevitable consequence is that the patient is the ultimate health care decision maker. These common sense observations get even more complicated by factual evidence that the "ideal of the patient as a passive obedient recipient of medical instructions" (2) is far from the real world.

More than 2000 years ago, for example, the conflicting nature of the man–drug ticket was popular, so that Titus Lucretius Carus (3) used it in an allegory to explain the stratagem of using poetry to disseminate the Epicurean lesson; in the fourth book of the De Rerum Natura, the poet–philosopher referred to the expedient of the physician who sweetens the rim of the glass with honey to induce the sick boy to drink the bitter absinth.

Adherence to (or compliance with) a medication regimen is generally defined as the extent to which patients take medications as prescribed by their health care providers. The word "adherence" is preferred by many health care providers, because "compliance" suggests that the patient is passively following the doctor's orders and that the treatment plan is not based on a therapeutic alliance or contract established between the patient and the physician. Non-compliance is a significant problem in all patient populations, from children (4) to the elderly (5,6) Adherence rates are typically higher among patients with acute conditions, as compared with those with chronic conditions; persistence among patients with chronic conditions it is disappointingly low, dropping most dramatically after the first six months of therapy (7,8,9) Keeping these points in view this study has been conducted to find out the reasons for non-adherence among children and adolescents and also the personality traits of patients who did not adhere to treatment regimen. This knowledge can be helpful so as to consider these things in future for better management of psychiatric illnesses.

Aims and Objectives-

- To evaluate the factors responsible for non-adherence to psychiatric treatment among children and adolescents in major psychiatric disorders(Schizophrenia, Major Depressive Disorder, Bipolar Disorder and Anxiety Disorders)
- Compare the reasons for non-adherence among major psychiatric disorders.

Material and Methods-

The study was conducted over one year from January to December 2015 in three centres namely Manas manochikitsa clinic, Trison paediatric clinic and Kushabhau Thackrey government district hospital, Rewa, Madhya Pradesh.

Study population:

Patients attending the outpatient clinics and diagnosed as one of the major psychiatric disorders (Schizophrenia, Major Depressive Disorder, Bipolar Disorder and Anxiety Disorders).

Study Design:

This was a cross sectional and comparative study

Study Period:

Data was collected over a period of 12 months from 1st January 2015 to 31st December 2015

Sample size:

Total number of subjects enrolled in study was 120

Subjects were further classified into four groups as per their diagnosis that is Schizophrenia, Major Depressive Disorder, Bipolar Disorder and Anxiety Disorders. Each group comprises 30 subjects.

Inclusion Criteria

- Diagnosed case of one of the following psychiatric disorder: Schizophrenia, Major Depressive Disorder, Bipolar Disorder and Anxiety disorders as per DSM IV TR criteria.
- Age less than 18 years.
- Literate up to level that he/she could read and sign informed consent form ,parents could sign the consent for minor patients
- Non adherent to advised treatment. For deciding non- adherence following definition is used: patient who does not follow the treatment schedule and drug regimens prescribed to them by physician.(10)

Exclusion Criteria

- Head injury patients.
- Other Axis -1 disorders.
- Substance dependence
- Subjects or parents who are unable to provide consent

Tools:

Following tools were used to collect the data on identified variables.

Sociodemographic and clinical sheet : A semi-structured proforma was designed to collect demographic information like age, sex, education, occupation, socioeconomic status etc. about the patients along with the clinical diagnosis as diagnosed by Psychiatrist .

Rating for Medications Influences (ROMI) (11)
The reasons for non compliance were evaluated using "reasons of medication influence (ROMI) " Scale. This scale was developed as a part of longitudinal study of antipsychotic non compliance in patients suffering from Schizophrenia.

Statistical Analysis:
Appropriate statistics was applied such as mean, range, S.D., Frequency table, Chi square test. Demographic data, reasons for non-adherence and personality traits were analysed by using Chi Square test (Fischer's Exact test). Reasons for non-adherence were also tabulated in form of frequency table. Confidence interval was considered to be 95%. Above statistics was applied to analyze the data using Statistical package for Social Sciences (SPSS, Ver20.0). The level of significance of 0.05 were adopted in the study.

Results and observation
Present study was a cross-sectional study with total sample size of 120. Sample was divided into four groups depending about their diagnosis as bipolar affective disorder, schizophrenia, major depressive disorder and anxiety disorder as per DSM IV TR. Factors responsible for non-adherence and their personality traits were assessed.

Table no 1 : Socio-demographic profile of total sample

Sex	No. of cases	%
Male	77	64.2
Female	43	35.8
Total	120	100.0
Religion		
Christian	1	.8
Hindu	91	75.8
Muslim	28	23.3
Total	120	100.0
Socioeconomic status		
Upper	6	5.0
Upper middle	25	20.8
Middle	54	45.0
Lower	35	29.2

Table 2 Socio-demographic profile of individual groups

Variable		BAD	Schiz	MDD	Anxiety dis.	Df	P
Sex(n)	Male	17	21	17	22	3	0.39
	Female	13	09	13	08	3	
Religion n(%)	Hindu	24(80)	23 (76.7)	22 (73.3)	91 (75.8)	6	0.86
	Muslim	5(16.7)	7 (23.3)	8 (26.7)	8 (26.7)		
	Christian	1(0.8)	0	0	0		
Socioeconomic status	Upper	1(3.3)	1(3.3)	2(6.7)	2(6.7)	9	0.7
	Upper middle	5(16.7)	7(23.3)	8(26.7)	5(16.7)		
	Middle	14(46.7)	11 (36.7)	16 (53.3)	13 (43.3)		
	Lower	10 (33.3)	11 (36.7)	4 (3.3)	10 (33.3)		

Table 3 Semi-structured Interview ROMI

Category		No. Of cases	%
Living Situation	Supervised	86	71.7
	Unsupervised	34	28.3
Treatment Setting	OPD	120	100
	In- patient	0	0
Overall attitude of patient toward treatment	Positive	75	62.5
	Negative	45	37.5
Family member's/ Care giver's attitude	Positive	96	80.0
	Negative	24	20.0

Table 4 Semi-structured Interview ROMI (individual group)

Variable		BAD	Schiz	MDD	Anxiety dis.	Df	P`
Living situation	Supervised	22(73.3)	22(73.3)	21(70.0)	21(70.0)	3	1.0
	Unsupervised	8(26.7)	8(26.7)	9(30.0)	9(30.0)		
Treatment setting	OPD	30(100)	30(100)	30(100)	30(100)		
Patient attitude	Positive	10(33.3)	9(30.0)	12(40.0)	14(46.7)	6	0.49
	Negative	20(66.7)	21(70.0)	18(60.0)	16(53.3)		
Family attitude	Positive	29(96.7)	24(80.0)	22(73.3)	21(70.0)	3	0.024
	Negative	1(3.3)	6(20.0)	8(26.7)	09(30.0)		

Table 5 Rating of medication influence scale open questions (main reasons for non compliance)

Main reasons of Non Compliance	No. Of case	%
Medications are non necessary as asymptomatic	36	30
Financial problem	31	25.8
Distress with the side effects	23	19.2
Difficulty in coming to the hospital	17	14.2
No benefit from the medications	8	6.7
No illness	5	4.1

Table 6: Rating of medication influence scale open questions (main reasons for non compliance) individual groups

Main reasons of Non Compliance	BAD		Schiz		MDD		Anxiety	
	N	%	N	%	N		N	%
Medications are non necessary as asymptomatic	9	30.0	7	23.3	9	30.0	11	36.7
Financial problem	8	26.7	9	30.0	6	20.0	8	26.7
Distress with the side effects	8	26.7	8	26.7	6	20.0	1	3.3
Difficulty in coming to the hospital	4	13.3	2	6.7	4	13.3	7	23.3
No benefit from the medications	0	0	0	0	5	16.7	3	10.0
No illness	1	3.3	4	13.3	0	0	0	0
Df = 18, p = 0.004								

Table 7: Rating of medication influence scale closed question (main reasons for non compliance) Total sample

Reasons for non compliace		Degree of influence					
		None		Mild		Strong	
		N	%	N	%	N	%
No perceived daily benefit		100	83.3	6	5.0	14	11.7
Negative relation with clinician		111	92.5	6	5.0	3	2.0
Negative relation with therapist		120	100	--	--	--	--

Practitioner opposed to Meds		120	100	--	--	--	--
Family/friends opposed to Meds		81	67.5	22	18.3	17	14.2
Access to treatment problem	A	75	62.5	02	1.7	1	0.8
	B			13	10.8	27	22.5
Embarrassment or stigma over Meds/Illness		67	55.8	34	28.3	19	15.8
Financial Obstacles		70	58.3	12	10.0	38	31.7
Substance Abuse		120	100	--	--	--	--
Denial of Ilness		92	76.7	12	10.0	16	13.3
Medication currently unnecessary		49	40.8	15	12.5	56	46.7
Distress by side effects		81	67.5	11	9.1	28	23.3
Desire for rehospitalisation		120	100	--	--	--	--
A = symptom related problem, B = Logistical Problem							

DISCUSSION

Study was conducted in patients of schizophrenia, bipolar disorder, Major depressive disorder and patients with any of anxiety disorder who were non adherent to psychiatric treatment. For deciding non-adherence following definition is used: patient who does not follow the treatment schedule and drug regimens prescribed to them by physician .

Factors responsible for non adherence

In present study most common reason for non adherence in open ended question was, patients found medication as unnecessary as they were asymptomatic. 30% of patients (n = 36) left medication primarily for this reason followed by financial problem 31 patients 23 patients i.e. 19% patients had distress from side effects leading to non adherence. Non adherence among individual groups, most common reason for non adherence among bipolar disorder patients, patients with major depressive disorder and anxiety disorder was no need of medication as they were asymptomatic however in patients with schizophrenia 30% left medicines because of financial reasons. Side effect being reason for non compliance was next common cause however was rare with patients of anxiety disorder (3.3%), 23.3% patients of anxiety disorder faced problem in coming to the hospital. Four patients of schizophrenia left medication because of lack of insight.

Reason for non adherence among total sample in closed ended questions of ROMI scale corroborate with open ended question. Maximum degree of influence for non adherence is because patients considered medication as unnecessary (46.7%) followed by financial obstacle (31.7% strong influence and 10 % mild influence), other common reasons found to be influencing patients were distress from side effects, access to treatment problem in which more common was logistical problem. No patient had left medication because of negative relation with therapist, substance abuse or with desire of hospitalization.

Indru Prabha Khalko et al (13) studied reasons of non compliance among patients with Bipolar disorder and found most common reason was adverse effects of drugs followed by feeling of well being and financial reason however in present study feeling of well being was most common reason for non adherence followed by side effects and financial difficulty. This difference could be because study by Indru Prabha patiets were on Lithium and neurpleptics with newer mood stabilizers like Vaplporic Acid or Lamotrigine have fewer side effects then compare to Lithium. Hence we found well being as most common cause.

In present study 83.3% patients of total sample had no influence no benefit with medication. Among four groups 17% patients of Schizophrenia and depression had left medication as they didn't perceived benefit from medication. Few patients left medication because of negative relation with physician i.e. 7 % patient had some influence. 26.6% and 20.0% patients with schizophrenia and bipolar disorder respectively had strong influence of friends and family opposition of medication. This could be because of poor psycho education and financial difficulties of family. Difficulty in assessing treatment was another reason for non-compliance effecting around 25% of patients. it effected patients of all four groups and there was no significant difference. This reason could be because of distance to psychiatric clinic. Specially in this area of Madhya Pradesh, number of psychiatric hospitals and clinics are so less compare to population in need warranting patient to travel long distance to reach the caregiver.

Patients with bipolar disorder and schizophrenia had increased influence of stigma/embarrassment then compare to patients anxiety disorders. This study showed significant role of Financial difficulty for not taking treatment, among individual group 40% (n = 12) of both bipolar disorder and schizophrenia had strong influence for non adherence. 76.7% (n = 23) of patient with any of anxiety disorder had no influence of financial obstacle.

Denial of illness was another parameter for study, this study showed denial of illness has significant role in bipolar disorder and schizophrenia then compare to patients with MDD and anxiety disorders. Results are in concordance with nature of illness as patients with anxiety and depression generally have insight of their illness. Maocyr Alxandro et al (14) stuied reasons of non compliance among patients with schizophrenia only and found denial as second largest influence in non compliance next to side effects.

Feeling of well being or belief that medications are currently unnecessary was found to be the most common factor influencing patients for non adherence. There was a significant difference between groups, patients with bipolar disorder and schizophrenia had strong influence for non adherence which is very high then compare to patients with depression and anxiety disorder. Other studies foe evaluation of non compliance factor (13) found it as a important reason. Patients' non adherence because of this reason clearly shows poor psychoeducation as they were not aware about maintenance phase treatment.

Berk L et al (15) studied role of psychoeducation in Bipolar disorder in which they reviewed publications from 1996 to 2008 related to adherence and found that Integral to improving medication adherence is the delivery of psycho-education and emphasised on implementation and timing of psychoeducation.

In present study side-effects of medication was another significant reason for non adherence to medication. There was significant difference among groups that patient on treatment for their anxiety disorders had minimum influence of side effects. Adverse effects influenced maximum for patients with schizophrenia followed by bipolar disorder and major depressive disorder.

Study conducted at Ranchi Institute of Neuro-Psychiatry and Allied Sciences (16) evaluated reasons of drug non compliance among psychiatric patients and found financial difficulty being the most common reason for non compliance followed by distance from the hospital and feeling of well being contrary to present study where feeling of well being was the commonest reason for non adherence. Similar study by

As evident from present study and other publications regarding non adherence most common reasons found were distress from side effects, feeling of well being, cost of treatment, lack of insight mainly in schizophrenia and distance from the psychiatrist. For better outcome of psychiatric illnesses it is important to address these issues with the patient and caregiver to ensure adherence and intern improve the quality of life and reduce burden.

CONCLUSIONS

The success of medication treatment is dependent on a patient's adherence to the medication regimen and non-adherence amongst psychiatric patients is associated with poor clinical outcomes and high resource utilization. In present study we aim to determine various factors responsible for non adherence to psychiatric treatment in major psychiatric disorders .Results of study revealed maximum degree of influence for non adherence is because patients considered medication as unnecessary followed by financial obstacle. Other common reasons found to be influencing patients were distress from side effects, access to treatment specially distance to hospital. Difference among reasons for non adherence was seen among groups as patients with schizophrenia and bipolar disorder are more influenced with Side effects, lack of insight, stigma of illness. Study does not effectively find significance in personality traits among patients. Additional studies are required controlling for the effects of confounding factors like different class of medicines, total number of episodes, psychopathology, with a larger sample to increase the pow-

er of study. Personality assessment could be more relevant if simultaneously compared with adherent patient. In the end it is important to emphasize that non adherence is common and huge problem particularly among psychiatric patients. It is not illness rather not seeking treatment and non-adherence are the reason of increased morbidity of psychiatric illness.

Contribution: RG- Conduct of study, statistical analysis, **GT**- Conceptualization, Writing manuscript.

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