ORIGINAL RESEARCH

A study of association of insight with treatment adherence in patients of schizophrenia and bipolar affective disorder

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ABSTRACT
Background: Insight has been reported as one of the most relevant factors associated with medication adherence. It is the key element in schizophrenia and Bipolar Affective Disorder outcomes through its direct effect on disability and adherence. Poor adherence to prescribed regimens can result in serious health consequences. Aim: The purpose of this study is to explore the relationship between insight and medication adherence in patients with schizophrenia and Bipolar Affective Disorder (BAD). Method: A cross-sectional study was conducted for a duration of 6 months on 60 patients (30 patients of bipolar affective disorder and 30 patients of schizophrenia). Patients of schizophrenia and BAD from inpatient and outpatient department fulfilling the inclusion criteria were selected. Socio-demographic data is collected using specially designed proforma. Insight was assessed using Beck cognitive insight scale (BCIS) , treatment adherence by Drug Attitude Inventory scale (DAI). Result: In this study it was observed that, correlation between insight and drug adherence scores in patients of schizophrenia and bipolar affective disorder is positive and strong and statistically significant (P value- 0.001). This study shows that Insight is an important factor which decides the drug adherence. There may be many other factors which influence the drug adherence. However, insight has a direct association with drug adherence in patients of bipolar affective disorder and schizophrenia.
Keywords: Insight, Drug Adherence.

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INTRODUCTION
Insight is defined as a person's capacity to understand the nature, significance and severity of his or her own illness. It is a conscious awareness and understanding of one's own psychological problems and symptoms of maladaptive behavior. The correct attitude towards

morbid change in oneself, relies on the capacity to reflect upon self from the perspective of the other. Treatment adherence is defined by the World Health Organization as "the degree to which the person's behavior corresponds with the agreed recommendations from a health care provider". Insight has been reported as one of the most relevant factors associated with medication adherence. It is an integral component to achieve treatment adherence and promoting their optimal level of social wellbeing.

Although a number of psychotropic medications are available and effective to treat the manifestations of schizophrenia and bipolar affective disorder, many patients do not actually benefit from them due to low adherence with medication regimens. Rates of low adherence have been reported to be as high as two-thirds in patients with schizophrenia.[1] Young et al. also concluded that 40% of patients treated with conventional antipsychotics stop taking their medication within one year[2]. Insight is the key element in Schizophrenia and Bipolar Affective Disorder and it has direct effect on disability and adherence. Prevalence rate of impaired insight in schizophrenia as quoted by various studies varies between 50-85%. In bipolar disorder approximately 60% of the patients have impaired insight. Poor adherence to prescribed regimens can result in serious health consequences. Lack of insight has been linked to the poor treatment adherence, impaired level of functioning, psychopathology severity, relapse and poor outcome[3]. Low adherence rates have been shown to be one of the main causes of relapse and hospitalization.

In recent review in patients with schizophrenia, insight of illness and positive attitude to medication were the only factors consistently associated with better adherence. The consensus of psychiatric opinion about schizophrenia is that it is an illness affecting mental functioning, that at times schizophrenic patients require hospitalization for treatment of exacerbations of their illness, and that neuroleptic medicines diminish psychopathology in most schizophrenic patients. They are unwilling to enter or remain in the hospital during exacerbations of their illness, and discontinue their prescribed psychotropic medications after discharge, with the result being clinical deterioration and need for rehospitalization.

In a small sample of inpatients with schizophrenia or schizoaffective disorder, it was found that a weak therapeutic alliance and low insight were associated with poor adherence in patient with schizophrenia or schizoaffective disorders[5]. Insight is the key element in schizophrenia and BAD outcomes through its direct effect on disability and adherence. It is absolutely necessary to assess it in any patient with psychosis as well as to involve those patients with poorer insight in comprehensive treatment programs to increase insight and improve outcomes.

AIM
To explore the relationship between insight and medical adherence in patients with schizophrenia and Bipolar Affective Disorder.

Objectives
1. To assess the degree of insight in patients with schizophrenia.
2. To assess the degree of insight in patients with BAD.
3. To assess treatment adherence in patients with schizophrenia.
4. To assess treatment adherence in patients with BAD.
5. To document and analyze the findings associated with this study.

MATERIAL AND METHODS:
A cross-sectional study was conducted in the Department of Psychiatry, Bharati Vidyapeeth (Deemed to be university) Medical College and Hospital Sangli. Patients of Schizophrenia and BAD from inpatient and outpatient department fulfilling the inclusion criteria were selected. This study was conducted only after getting approval from the Institutional Ethics

Committee (I.E.C). All participant gave written informed consent, basic information and data which was collected from filled proforma and respective scales were applied. Beck cognitive insight scale (BCIS) was used for assessing insight and Drug attitude inventory (DAI) was applied for assessing drug adherence in all diagnosed cases of schizophrenia and bipolar affective disorder after completing at least 3 months treatment in the selected age group.

Inclusion criteria: 1) Patients on minimum of 3 months treatment for schizophrenia and BAD. 2) Age 18 to 60 years of age. 3) Patients satisfying the ICD- 10 Clinical descriptions and diagnostic guidelines classification of mental and behavioral disorders for schizophrenia and Bipolar Affective Disorder.

Exclusion criteria: 1) Patients with co-morbidities like mental retardation, seizure disorder, neurological deficits, cognitive impairment and organic brain syndrome. 2) Patients who received treatment for schizophrenia and BAD for less than 3 months. 3) Behaviorally uncontrolled patients in which interview is not possible.

OBSERVATION AND RESULTS

1. Socio-demographic profile:

Table 1

Demographic parameters		BAD		Schizophrenia	
		Frequency	Percent	Frequency	Percent
GENDER	Male	21	61.8	20	54.1
	Female	13	38.2	17	45.9
EDUCATION	Uneducated	2	5.9	4	11.2
	Primary	4	11.8	14	37.8
	High-School	17	50	17	45.9
	Graduate	11	32.4	6	16.2
OCCUPATION	Unemployed	10	29.4	23	62.2
	Employed	19	55.9	10	27
	Student / Retired	5	14.7	4	10.8
MARITAL	Married	25	73.5	21	56.8
	Unmarried	9	26.5	16	43.2

2. Clinical profile

Table 2

	BAD					Schizophrenia				
	Mean	Median	Std. Deviation	Minimum	Maximum	Mean	Median	Std. Deviation	Minimum	Maximum
AGE OF ONSET	26.71	24	8.723	15	54	23.97	22	6.698	16	42
ILLNESS DUR	9.85	9	7.394	1	36	11	10	7.52	1	28
EP/EXACER	3.53	4	1.911	1	7	4.16	4	1.788	1	9
HOSPITALIZATION	2.47	2	1.482	1	6	3	3	1.599	1	7
YMRS	1.03	0	1.381	0	4	0.76	0	1.116	0	5
HAM-D	1.94	2	1.757	0	6	1.3	1	1.244	0	6
PANSS	3.71	3	1.382	3	8	7.43	6	6.64	-7	35
BCIS (Composite score)	5.24	5	2.742	0	12	3.43	4	3.346	-12	9

3. Gender based insight:
Table 3

GENDER	BCIS (Insight)		Total
	Low	High	
Male	6	15	21
	28.60%	71.40%	100.00%
Female	4	9	13
	30.80%	69.20%	100.00%
Total	10	24	34
	29.40%	70.60%	100.00%
Pearson Chi-Square	0.019		
P value	0.891		

The correlation between BCIS & gender not statistically significant
P =0.891 > 0.05

4. Residual symptoms and drug adherence:
Table 4

BCIS * PANSS				
		PANSS score		Total
		<= 7	8+	
DAI	<1	40	9	49
	>1	9	2	11
	Total	49	11	60

P value- 0.679
To associate drug adherence in patient with residual symptoms, P value - 0.679 > 0.05, which is not statistically significant.

5. Residual symptoms and insight
Table 5

BCIS * PANSS				
		PANSS score		Total
		<= 7	>= 8	
BCIS	Poor	20	4	24
	Good	29	7	36
	Total	49	11	60

The correlation between BCIS & PANNS scores not statistically significant
P value - 0.533 > 0.05

6. Insight and treatment adherence in patients with schizophrenia
Table 6

		DAI		P Value
		Poor Adherence	Good Adherence	
BCIS score	Low	14 (73.7%)	3 (16.7%)	0.02
	High	5 (26.3%)	15 (83.3%)	
	Total	19	18	

Here we see that P value is 0.02 which is less than 0.05. It means that there is association exits between BCIS & DAI scores

7. Insight and treatment adherence in patients with BAD:
Table 7

		DAI		P Value
		Poor Adherence	Good Adherence	
BCIS score	Low	8 (72.7%)	2 (8.7%)	0.01
	High	3 (27.3%)	21 (9.3%)	
	Total	11	23	

Here we see that p value is much less than 0.05 . it means that there is association exits between BCIS & DAI scores. Which is highly significant in patients of BAD
 P value =0.001 <0.05

DISCUSSION
In our study it was observed that there is a significant correlation exist between Beck Cognitive Insight Scale & Drug Attitude Inventory scores (P value- 0.01). That means lesser the insight scores there will be poorer adherence to the treatment.

Our results are consistent with the study done by Gilleen and Morgan in 2010, where, lack of insight has been linked to the poor treatment adherence, impaired level of functioning, psychopathology severity, relapse and poorer outcome[3]. Also, study done by Xavier Amador et al, in New York, concludes that lack of insight is common in schizophrenia, which has a major impact on the illness course, and causes both partial and complete nonadherence with treatment.

In our study, the correlation between insight scores & gender was found to be not statistically significant, our finding is consistent with the study done by Jesus Cobo university of Columbia, they found significant differences were apparent neither between men and women in the three dimensions of insight, nor in the total awareness, nor in the total attribution subscales[6].

As early as 1934 authors argued that lack of insight arose from a deficit in the neuropsychological aspects, although others maintain that 'impaired insight' should not conceived solely as a defect within the individual response but more as a socio-cultural response[7]. Impaired insight is associated with the disturbed functioning of prefrontal cortex, which sub serves abstract thinking, self-concept formation, cognitive flexibility and self-reflection[1]. Insight into illness was significantly worse among nonadherent patients than among other patients, both at admission and at discharge. Nevertheless, improvement in insight among nonadherent patients from admission to discharge was highly significant. Compared with patients who adhered to their medication regimens, nonadherent patients were hospitalized for significantly longer periods during the year after the index episode [8].

In addition, insight into illness as rated at discharge showed a significant correlation with hospitalization in the next year: patients who had good insight were hospitalized for an average of 19.5±28.3 days, and patients with poor insight were hospitalized for 57.5± 60.8 days. Patients who had been nonadherent at admission and who were discharged with a rating of good insight had a significantly better prognosis than those who had a rating of poor insight[9]. Sociodemographic characteristics did not differ much between patients who had good adherence and those who had poor adherence, which is in line with the results of most other studies. Logistic regression showed that younger age was positively correlated with good adherence. The literature is equivocal about age, with studies finding good adherence more often among younger patients as well as older patients.

A further highly significant finding was that having regular visits to a psychiatrist was correlated with good adherence. Not visiting a psychiatrist might be viewed as just another

aspect of nonadherence. Yet another possible inference from this result is that regular visits to a psychiatrist serve as a protective factor against nonadherence[10].

We also studied the correlation of psychotic symptoms in patients undergoing treatment with their insight and drug adherence, we did not find significant value. Although, Previous studies that investigated the psychopathology of adherent and nonadherent patients in greater detail found that overall scores did not differ very much but that nonadherent patients had higher scores on psychotic symptoms, whereas adherent patients had higher scores on depression and anxiety items[11]. Another study concludes that lack of awareness of symptoms was significantly correlated with higher scores in PANSS (positive and negative symptom syndrome)[12]. Lack of awareness of the illness and its social consequences was only correlated with the positive dimension. Nonadherence is an important contributor to the need for inpatient treatment and is associated with a less favourable course of treatment. The best predictor of further inpatient treatment is insight into illness at discharge.

Strength of our study is that we have used standard and reliable scales. We used BCIS for assessment of insight. We used Drug attitude inventory for assessment of patient's attitude towards treatment.

LIMITATIONS OF OUR STUDY: 1. Small sample size.

REFERENCES

1. David AS. Insight and psychosis. Br J Psychiatry.1990;798–808.
2. Jacob KS. The assessment of insight across cultures. Indian J Psychiatry. 2010 Oct;373-7.
3. Gilleen J, Greenwood K, David AS. Domains of awareness in schizophrenia. Schizophr Bull. 2011 Jan; 61-72.
4. Lien YJ, Chang HA, Kao YC et al. Insight, self-stigma and psychosocial outcomes in Schizophrenia: a structural equation modelling approach. Epidemiol Psychiatr Sci. 2018 Apr;176-185.
5. Buckley PF, Wirshing DA, Bhushan P, Pierre JM, Resnick SA, Wirshing WC. Lack of insight in schizophrenia: impact on treatment adherence. CNS Drugs. 2007;129-41.
6. Jesus Cobo, Lourdes Nieto et al, Insight and gender in schizophrenia and other psychoses, June 2016.
7. M.S. Reddy, Insight and Psychosis. Indian Journal Psychol Med. 2015 Jul-Sep; 257–260.
8. Bartko G, Herczeg I, Zador G: Clinical symptomatology and drug compliance in schizophrenic patients. **Acta Psychiatrica Scandinavica** 78:1988;74–76.
9. Kay SR, Fiszbein A, Opler LA: The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. **Schizophrenia Bulletin** 13,1987;261–276.
10. McEvoy JP, Apperson LJ, Appelbaum PS, et al: Insight in schizophrenia: its relationship to acute psychopathology. **Journal of Nervous and Mental Disease** 177:1989;43–47.
11. Hans Rittmannsberger, M.D., Thomas Pachinger M.D et al. Medication Adherence among Psychotic Patients Before Admission to Inpatient Treatment. A journal of american psychiatric association February 2004;55:174-179.
12. Serge Sevy, Kay Nathanson, Hema Visweswaraiah, Xavier Amador,The relationship between insight and symptoms in schizophrenia,Comprehensive Psychiatry,Volume 45,2004;16-19.