

# Variability in Insight Before and After Treatment in Patients with Schizophrenia

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## ABSTRACT

**Introduction:** An important component in the management of schizophrenia is insight. Schizophrenia patients that lack insight have poor clinical outcomes. Chronic patients of chronic schizophrenia lacking insight more often require hospitalisation than those recognising their illness. Poor insight is a good indicator of poor compliance and can predict the prognosis of any psychiatric patient including schizophrenia.

**Aim:** This study was aimed at contrasting the gain in insight after treatment among various sub-groups of patients with schizophrenia.

**Materials and Methods:** A cross-sectional study was conducted at the Acharya Vinobha Bhave Rural Hospital, Wradha, Maharashtra. The sample size was collected for a period of 1 year, during which all the patients admitted to the psychiatry ward were screened, of which 100 eligible patients with schizophrenia were identified using prespecified inclusion and exclusion criteria. Patients of both sexes aged

above 18 years and attendants that provided consent were included in the study. The Schedule for Assessment of Insight Scale (SAI) was used to determine the patient's level of insight. The proportion of patients with distinct socio-demographic characteristics, clinical profile, psychiatric diagnosis and SAI scores were calculated. A paired t-test was used for elaborating the results. The p-value <0.05 was considered significant.

**Results:** The changes in insight scores from the time of admission (4.15) to the time of discharge (9.28) were statistically significant and similar in both males and females and also results are statistically significant according to marital status. Significant improvement was seen in patients irrespective of their employment status or their educational status.

**Conclusion:** This study showed that the insight changes as the patient improves during the hospital stay. This study highlights that poor insight is commonly seen in psychotic patients and the treatment considerably improves their insight.

**Keywords:** Improvement, Management, Psychosis

## INTRODUCTION

Insight may be defined as the patient's ability to recognise himself as having a mental illness [1]. This emphasises the importance of insight in patients with schizophrenia and their attitude towards taking and continuing the medications. A study by David AS, showed that evidence of poor insight is one of the manifestations of executive dysfunction abnormalities and not failure to accept the illness. According to David's definition, insight comprises three separate but related aspects- the ability to accept unfamiliar psychological events to be pathological, accepting that he/she is suffering from a mental illness, and shows both subjective and objective compliance [2].

Jaspers K observed in patients, the phenomenological and psychoanalytical aspects of insight i.e., the patient being aware of the self, accepting his/her mental illness and the treatment. Further elaborated that patient's awareness and ability to understand the changes due the illness varied from one to another [3]. Freud A defined insight as the knowledge of illness but this inadequately covers the aim of psychoanalytical treatment which requires the patient to have a deeper realisation of the self [4]. A comprehensive study has shown that 50%-80% of patients of schizophrenia have a grade 0 insight [5]. Insight may be considered as a component of schizophrenia without the scope of improvement or it originates from neurological deficit similar to anosognosia.

Schizophrenia patients that lack insight have poor clinical outcomes. Patients of chronic schizophrenia who lack insight more often require hospitalisation than those who recognise their illness. While comparing improvement, 66% of chronic undifferentiated

“acceptor” patients improve and only 27% of the “deniers” improve [6]. An important component in the management of schizophrenia is insight. Poor insight is a good indicator of poor compliance [7] and can predict the prognosis of any psychiatric patient including schizophrenia [8]. This study was aimed at contrasting the gain in insight before and after treatment among various sub-groups of patients with schizophrenia.

## MATERIALS AND METHODS

A cross-sectional study was conducted at the Acharya Vinobha Bhave Rural Hospital, Wradha, Maharashtra after getting approval from the Institutional Ethics Committee (MG/MS/IEC/Psy/24). Written informed consent was obtained from patients as well as care givers before including them in the study. The patients were included for over a period of 12 months, from January 2018-December 2018 during which 700 patients admitted to the psychiatry ward were screened. Of these, 100 eligible patients with schizophrenia were enrolled.

**Inclusion and Exclusion criteria:** This study included patients that satisfied the diagnostic criteria of schizophrenia according to the ICD-10 [9]. It included patients of both sexes aged above 18 years. Any patients having a physical disorder in addition to schizophrenia, other disorders attributable to organic disease, a disorder related to alcohol or drug-related intoxication, dependence, withdrawal, any patient pregnant or in the postpartum period were excluded from the study.

Insight was graded from 0 to 5. Starting at an insight of 0, where the patient denies the illness, it progresses to the patient realising

he/she is unwell but denying the need for treatment (grade 1), claiming the illness to not be due to psychiatric but organic or external factors (grade 2), or due to unknown causes (grade 3). Gradually at grade 4 or intellectual insight, the patient is able to accept his/her psychiatric illness but doesn't relate this to their future experiences whereas at grade 5 or emotional insight he/she is able to apply this knowledge to modify future attitude and behaviour [10].

## Data Collection

After diagnosing patients with schizophrenia as per the ICD-10 classifications [9], The Schedule for Assessment of Insight Scale (SAI) [2] was used to determine the patient's level of insight. Improvement in insight was objectively observed on a daily basis and the SAI was reapplied before discharge. The SAI is a semi-structured clinical interview that determines three aspects of insight. The lowest score of each dimension is zero, treatment compliance and relabeling of psychotic phenomena can be scored a maximum of 4 while recognition of illness can be scored a maximum of 6.

## STATISTICAL ANALYSIS

The insight scores of 100 patients with schizophrenia were obtained and tabulated. The proportion of patients with distinct socio-demographic characteristics, clinical profile, psychiatric diagnosis, and SAI scores were calculated. A paired t-test was used for elaborating the results. Analysis was done by strata 10 and the results were documented in percentage format. The p-value <0.05 was considered significant.

## RESULTS

Socio-demographic characteristics revealed that majority of the sample were males (62%), between ages 21-40 years of age (68%) and Hindu by religion (86%). Despite 60% of the sample being from rural areas, 57% had completed at least primary education. Of the total sample size, 39% had been diagnosed with schizophrenia for less than 2 years and paranoid schizophrenia was the most common diagnosis [Table/Fig-1-3].

On SAI scale maximum score of 8 was noted for 6% of patients and zero was noted for 7% patients.

Age group in years	Males	Females
18-20	10	3
21-30	24	13
31-40	15	16
41-50	11	5
51-60	1	1
>60	1	-
Total	62	38

[Table/Fig-1]: Distribution of patients by sex and age group.

On the contrary, most of these patients showed a good insight at the time of discharge. One patient noted a score of five; five percent of patients noted score six, and seven percent of eight on the SAI scale. Two thirds (62%) of patients who noted scores from 9 to 12 on the SAI scale, demonstrated sustained gains in insight. A maximum score of 14 was noted by two percent of patients. The changes in insight scores from the time of admission (4.15) to the time of discharge (9.28) were statistically significant and similar in both males and females [Table/Fig-4] and results were statistically significant according to marital status [Table/Fig-5]. Significant improvement was seen in patients irrespective of their employment status [Table/Fig-6] or their educational status [Table/Fig-7].

Significant improvement in insight was seen in patients from both

Socio-demographic variable	No. of patients
<b>Religion</b>	
Hindu	86
Muslim	03
Buddhist	11
<b>Diagnosis</b>	
Rural	60
Urban	40
<b>Education</b>	
Illiterate	07
Primary education	57
Secondary education	32
Tertiary education	04
<b>Marital status</b>	
Unmarried	29
Currently married	61
Separated/divorced	08
Widow	02
<b>Type of family</b>	
Nuclear	78
Extended Nuclear	17
Joint	05
<b>Employment status</b>	
Employed	55
Unemployed	16
Student	08
Home maker	20
Retired	01

[Table/Fig-2]: Socio-demographic profiles of the patients.

Type of Schizophrenia	Male	Female	Total No. of patients
Paranoid	51 (82.2%)	36 (94.8%)	87
Hebephrenic	4 (6.5%)	0 (0%)	4
Catatonic	2 (3.2%)	1 (2.6%)	3
Undifferentiated	4 (6.5%)	0 (0%)	4
Residual	1 (1.6%)	1 (2.6%)	2
Total	62 (100%)	38 (100%)	100

[Table/Fig-3]: Type of schizophrenia V/S gender.

Sex	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Males (n=62)	4.19±1.94	9.30±1.91	<0.05*
Females (n=38)	4.07±2.09	9.23±1.42	<0.05*

[Table/Fig-4]: Mean of SAI scores for gender.  
\*p-value <0.05 is significant

Marital status	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Unmarried (n=29)	4.10±1.65	9.24±1.45	<0.05*
Currently married (n=61)	4.18±2.23	9.50±1.83	<0.05*
Separated/Divorced (n=8)	4.37±1.30	8.50±1.06	<0.05*
Widow (er) (n=2)	3	6	<0.05*

[Table/Fig-5]: Mean of SAI scores for marital status.  
\*p-value <0.05 is significant

rural and urban areas [Table/Fig-8]. When comparing the types of schizophrenia, improvement in insight was seen in all the types. The p-value was significant for paranoid type of schizophrenia

Employment	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Employed (n=55)	4.10±1.88	9±1.74	<0.05*
Unemployed (n=16)	3.68±2.33	8.87±1.40	<0.05*
Student (n=8)	4.12±1.24	9.25±0.88	<0.05*
House wife/Home maker (full time) (n=20)	4.65±2.30	10.4±1.87	<0.05*
Retired (n=1)	4	9	-

**[Table/Fig-6]:** Mean of SAI scores for employment of patients.  
\*p-value <0.05 is significant

Education	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Illiterate (n=7)	3.71±2.36	8.85±2.73	<0.05*
Completed primary education (n=57)	4.01±2.08	9.56±1.71	<0.05*
Completed secondary education (n=32)	4.62±1.69	9.56±1.71	<0.05*
Completed tertiary/Further education (n=4)	3±2	8.25±1.25	<0.05*

**[Table/Fig-7]:** Mean of SAI scores for educational status of patients.  
\*p-value <0.05 is significant

Domicile	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Rural (n=60)	4.56±1.86	9.23±1.76	<0.05*
Urban (n=40)	3.52±2.03	9.35±1.70	<0.05*

**[Table/Fig-8]:** Mean of SAI scores for domicile of patients.  
\*p-value <0.05 is significant

Domicile	SAI scores		p-value
	At the time of admission (Mean±SD)	At the time of discharge (Mean±SD)	
Paranoid (n=87)	4.03±1.88	9.12±1.68	<0.05*
Hebephrenic (n=4)	6.25±2.21	10.25±2.62	>0.05
Catatonic (n=2)	4.66±2.08	9.66±0.57	>0.05
Undifferentiated (n=4)	4±2.44	10±1.82	>0.05
Residual (n=2)	4.5±3.5	12	>0.05

**[Table/Fig-9]:** Mean of SAI scores for diagnoses.  
(\*denotes p-value <0.05)

[Table/Fig-9].

## DISCUSSION

Based on SAI scale scores the insight scores changed significantly from admission to before discharge. Seven percent of patients noted zero scores on the SAI scale on admission, suggesting complete denial of illness. A retrospective study showed a significant variability of insight in single episodes from the rest of the sample [11]. These findings are supported by a study that observed that as many as 80% of patients with schizophrenia either partially or completely deny acceptance of their mental illness [12].

Structured interventions and therapy proved to help improve and sustain better insight and treatment acceptance in hospitalised patients in a study conducted by Pijnenborg GHM et al., [13]. In this centre as well, Authors have done the intervention in the form of pharmacotherapy and psycho-education of family members. Insight evidently improves independent of psychotic symptoms remission, suggesting insight to be a distinct element of recovery [8,14]. While comparing the gain in insight during a hospital stay, it was found to be equal in males and females. It was higher in

the married population. When comparing types of Schizophrenia, though improvement in insight was seen in all types, the p-value was significant in only paranoid type of Schizophrenia.

The literature on psychiatry and psychology readily acknowledges the importance of insight into the diagnosis and treatment of psychoses. The patients premorbid personality, duration of untreated psychoses, symptom intensity, intellectual level as well as social stigma may all contribute to the level of insight [15]. As persons with psychopathology start acknowledging their illness, they also realise the social stigma surrounding their condition making them prone to depression and low self-esteem [16]. A similar prospective study has shown that patients with a better insight into their illness show better compliance towards treatment and hence more improvement, other studies contradict these findings [17]. In conclusion, the results of present study provided an evidence to reinforce the findings of those studies which imply that poor insight prevails in patients of schizophrenia and that insight gradually improves during admission and treatment of functional psychoses [5,7,8,14,17,18].

## Limitation(s)

As the study was time bound, it is better to have large sample, longer follow-up period and many other variables like type of anti-psychotics, treatment duration, dose and medication compliance with various grading of insight. Duration of admission was not considered as a variable in this study.

## CONCLUSION(S)

This study showed that the insight changes as the patient improves during the hospital stay. The change in insight scores as measured by SAI on admission and before discharge is statistically significant. This study highlights that poor insight is commonly seen in psychotic patients and the treatment considerably improves their insight.

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#### PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Jun 12, 2020
- Manual Googling: Oct 12, 2020
- iThenticate Software: Dec 10, 2020 (9%)

#### ETYMOLOGY: Author Origin

#### AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Jun 11, 2020**

Date of Peer Review: **Jul 16, 2020**

Date of Acceptance: **Oct 13, 2020**

Date of Publishing: **Dec 15, 2020**