

# Insight in Patients of Schizophrenia

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**Abstract:** **Introduction:** Insight is defined as the capacity to gain an accurate and deep understanding of things; in psychiatry, insight refers to awareness of aspects of oneself. Lack of insight was found to be almost invariably associated with a diagnosis of acute schizophrenia. Previous studies estimate that between 50-80% of patients with schizophrenia do not believe they have a disorder. Present study thus aimed to assess insight in patients with schizophrenia and their treatment outcome. **Materials & Methods:** A Prospective Observational study was conducted at Department of Psychiatry of a tertiary care hospital. Consecutive type of non-probability sampling was used and a total of 50 diagnosed cases (DSM V criteria) of schizophrenia fulfilling the eligibility criteria were taken for study after informed consent. Both a self-report scale Birchwood Insight Scale and semi-structured interview Insight and Treatment Attitude Questionnaire (ITAQ) used to assess insight in schizophrenic patients. Severity of schizophrenia was rated using semi-structured scale (PANSS Scale). Assessments were done at baseline and repeated after 6 weeks with treatment for schizophrenia. **Results:** Lack of insight was observed in about 44% patients. Increased duration of symptoms correlates significantly with lack of Insight ( $p < 0.05$ ). Symptoms of Schizophrenia i.e. positive, negative and general all correlates inversely with insight i.e. increased severity of symptoms causes decrease in patient's insight ( $p < 0.05$ ). Insight of patients improved significantly following treatment in cases of schizophrenia as observed by mean increase in both objective and subjective insight scale scores ( $p < 0.05$ ). Change in Positive and general symptoms of schizophrenia both correlated significantly with change in insight post-treatment, which shows that improvement in symptoms of schizophrenia leads to improvement in insight. **Conclusion:** Poor insight is common in schizophrenia with approximately half of all patients exhibiting lack of insight. There appears to be a clear association between insight and treatment during active phase of illness. Insight also correlates with improvement in symptoms following anti-psychotic therapy.

**Keywords:** Insight, Schizophrenia, Anti-psychotic therapy

## 1. Introduction

Insight is a complex multidimensional construct which is shaped by individual psychology (i.e. motivation and denial) and the constraints of biology (as in cognitive impairment and anosognosia) and is influenced by social constructions of illness and culturally specific explanatory models [1]. In everyday language, insight is defined as the capacity to gain an accurate and deep understanding of things; in psychiatry, insight refers to awareness of aspects of oneself.

Lack of insight was found to be almost invariably associated with a diagnosis of acute schizophrenia across all countries and cultures surveyed within the World Health Organization International Pilot Study of Schizophrenia [1]. Lack of Insight has always been considered a salient component of phenomenology and clinical examination, and also used as a diagnostic criterion of schizophrenia as in the Flexible System and Present State Examination [2]. Previous studies estimate that between 50-80% of patients with schizophrenia do not believe they have a disorder [3].

The DSM-IV-TR addresses the issue of insight in schizophrenia with the following statement: "a majority of individuals with schizophrenia have poor insight regarding the fact that they have a psychotic illness. Evidence suggests that poor insight is a manifestation of the illness itself rather than a coping strategy [4]." There are persuasive reasons to connect lack of insight with poor outcome. Most importantly, insight may cause noncompliance with treatment because patients are not likely to comply with psychiatric treatment for a problem they do not believe to be either present ("I am not ill") or mental in cause ("All I need is some rest"). Also, patients with low insight might be more

prone to develop a delusional interpretation of hallucinations and act upon it, possibly resulting in impulsive or aggressive behaviour [5].

Present study was thus conducted to assess insight in patients with schizophrenia and their treatment outcome. We also aimed to assess changes observed in insight with treatment.

## 2. Materials and Methods

**Study Design:** Prospective Observational study

**Study Duration:** 1<sup>st</sup> October 2014 to 31<sup>st</sup> August 2016

**Study Area:** Department of Psychiatry of a tertiary care hospital

**Sampling Technique & Sample Size:** Consecutive type of non-probability sampling was used and a total of 50 diagnosed cases (DSM V criteria) of schizophrenia fulfilling the eligibility criteria were taken for study after informed consent.

### Inclusion Criteria

1. Patients above age and 18 years and diagnosed with schizophrenia.
2. Patients of both gender.
3. OPD and IPD patients diagnosed with schizophrenia.
4. Patients who consented to participate in this study.

### Exclusion Criteria

1. Patients with comorbid medical, neurological and other psychiatric disorders including substance abuse.

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2. Patients with subnormal intelligence clinically determined.
3. Patients who are not willing to follow up.

### Methodology

- Both a self-report scale Birchwood Insight Scale and semi-structured interview Insight and Treatment Attitude Questionnaire (ITAQ) used to assess insight in schizophrenic patients.
- Severity of schizophrenia was rated using semi-structured scale (PANSS Scale).
- All the observations were recorded on a specially designed proforma.
- Assessments were done at baseline and repeated after 6 weeks with treatment for schizophrenia

**Statistical Analysis:** All the collected data was entered in Microsoft Excel Sheet 2007. The data was then transferred and analyzed using SPSS ver. 17. Appropriate statistical tests were applied based on the type and distribution of data. A p-value of < 0.05 was taken as level of significance.

### 3. Results

Mean age of study subjects was 36.63 years with almost half of the subjects (48%) were between 20 – 30 years of age. Female predominance was observed in study with 58% females to 42% males. As per Birchwood Insight Scale and Insight and Treatment Attitude Questionnaire (ITAQ) Scale, lack of insight was observed in 42% and 46% of patients respectively. Out of various socio-demographic variables, lack of education and positive family history of schizophrenia was significantly associated with lack of Insight ( $p < 0.05$ ) (Table 1). Increased duration of symptoms correlates significantly with lack of Insight in schizophrenia patients ( $p < 0.05$ ). Symptoms of Schizophrenia i.e. positive, negative and general all correlates inversely with insight i.e. increased severity of symptoms causes decrease in patient's insight ( $p < 0.05$ ) (Table 2). Mean positive (27.10 vs 24.95), negative (29.05 vs 27.11) and general (58.0 vs 54.05) PANSS score decreased significantly after treatment i.e. patients showed significant improvement ( $p < 0.05$ ) (Table 3). Insight of patients improved significantly following treatment in cases of schizophrenia as observed by mean increase in both objective and subjective insight scale scores ( $p < 0.05$ ) (Table 4). As per Birchwood Insight Scale, percentage of patients with lack of insight reduced from 42% to 26% post-treatment ( $p < 0.05$ ) while as per Insight and Treatment Attitude Questionnaire (ITAQ) Scale, it reduced from 46% to 24% ( $p < 0.05$ ). Change in Positive and general symptoms of schizophrenia both correlated significantly with change in insight post-treatment, which shows that improvement in symptoms of schizophrenia leads to improvement in insight in such patients (Table 5).

### 4. Discussion

Insight is generally defined in terms of awareness of the disease, its social consequences, specific signs and symptoms and need for treatment. Lack of awareness of illness can lead to refusal to seek psychiatric attention or treatment. Wilson and colleagues in the earliest research on

insight in patients of schizophrenia, found poor insight to be the most common symptom of schizophrenia, present in 81% of the sample studied [6]. However, they used a simplistic (ie, dichotomous, single-item) rating of insight, which lacked reliability and likely overestimated the problem. Most studies using more psychometrically proven scales of insight find that approximately one half of patients with schizophrenia lack insight. In a more recent study, completed as part of the DSM-IV field trials, more than 400 patients with psychotic disorders from 7 sites across the United States and 1 site in Mexico were examined and their insight measured with the Scale to assess Unawareness of Mental Disorder (SUMD). The results showed that nearly 60% of the patients with schizophrenia were unaware of being ill [7].

Before the past two decades, it was accepted that perceived lack of insight in patients was a coping mechanism manifesting as denial. More recently, other theories have emerged, but there remains scientific support for the denial theory — studies have shown a correlation between increased self-deception and decreased insight in schizophrenia. Moreover, multiple studies have established a positive correlation between insight and depression, supporting the theory that insight may be a psychological reaction to mental illness [8].

No. of risk factors for poor insight has been described, such as relatively early onset, having significant positive symptoms (including disorganization and delusions), and having a severe presentation [5,9-12]. Literature also suggests that a longer duration of untreated psychosis and lower premorbid intelligence correlates with decreased insight into illness, especially in the early acute phase [9,13]. In present study lack of education, positive family history and increased duration of schizophrenia was significantly associated with lack of Insight ( $p < 0.05$ ).

#### Correlation of Insight with Symptoms of Schizophrenia

Symptoms of Schizophrenia i.e. positive, negative and general all correlates inversely with insight i.e. increased severity of symptoms causes decrease in patient's insight ( $p < 0.05$ ). Change in Positive and general symptoms of schizophrenia both correlated significantly with change in insight post-treatment, which shows that improvement in symptoms of schizophrenia leads to improvement in insight in such patients. Both positive and negative symptoms inversely correlate with insight, as do overall global symptoms [9-12].

#### Positive Symptoms

Van Putten et al. described that patients with schizophrenia have a “delusion of health”, resist taking medications and thus “wish” to remain unwell [14]. A meta-analysis by Mintzet al. demonstrated that during acute episode of psychosis, the relationship found between insight and positive symptoms were stronger [15], depicting a modest negative relationship through mean effect sizes across studies ranging from -0.16 to -0.33. Amador et al. reported that insight correlated strongly with positive symptoms such as delusions and disorganisations symptoms [3]. Nieto et al. demonstrated that insight had a significant association with positive symptoms and general symptoms but not with

negative symptoms in a sample of 96 acutely ill psychotic patients [16]. Furthermore, poor insight has been recently reported to be linked to greater positive symptoms and violence.[17] Positive symptom score correlated significantly with insight among never-medicated patients as well as chronic medicated schizophrenia patients in a sample from Chennai.[18] According to a study by Kim et al, positive symptoms, primarily, delusions, hallucinations and disordered thought demonstrated a significant negative correlation with insight [19]. In present study too, we observed positive symptoms of Schizophrenia to correlates inversely with insight i.e. increased severity of symptoms causes decrease in the insight of patients ( $r = -0.610$  &  $-0.530$  for Birchwood & ITAQ scale;  $p < 0.05$  for both).

### Negative Symptoms

Negative symptoms form an important dimension of schizophrenia and they are constituted by blunting of affect/emotions, reduced speech output, lack of motivation, poor socialisation and reduced attention [20]. They are considered to be among the “core symptoms” of the illness with a significant relationship to the pathology [21].

Various studies have attempted to study the relationship between insight and negative symptoms. In a study by Tirupathi et al., poor insight demonstrated significant correlation with negative symptoms among treated patients [18]. Lack of insight showed a modest association with negative symptoms and neurocognitive measures in chronically ill patients with psychosis.[22] Similarly, Debowska et al. reported that insight had a significant relationship to negative symptoms and other psychopathology.[23] Similar intricate relationship between poor insight and negative symptoms has been highlighted in first episode psychosis cohorts also.[24] In the meta-analysis by Mintzet al., a small negative relationship between insight and negative symptoms was demonstrated [15].

In a study by Kemp et al., it was reported that in subjects who improved with treatment, insight had a specific correlation with negative symptoms.[25] Similarly, improvement in insight with long acting risperidone and its relationship with negative symptoms was demonstrated in another study.[26] Poor insight and symptoms including the negative dimension of illness in schizophrenia predicted poor therapeutic alliance of psychotherapy.[27] In addition, the relationship between lack of insight and negative symptoms could explain poor treatment adherence among patients with schizophrenia.[28,29]. In present study too, we observed negative symptoms of Schizophrenia to correlates inversely with insight i.e. increased severity of symptoms causes decrease in the insight of patients ( $r = -0.412$  &  $-0.310$  for Birchwood & ITAQ scale;  $p < 0.05$  for both).

### Effect of Treatment on Insight

Improving insight through different treatment methodologies has been studied including Cognitive behavior therapy, motivation, psychoeducation, community programs, family therapy and use of anti-psychotics [30]. In 2002, Aguglia et al. [12] showed that positive and negative symptoms were reduced after the administration of second-generation antipsychotics and insight levels improved significantly. In a study by Gharabawi GM et al. [26] at baseline, 314 (51.1%)

patients had impaired insight and 26.4% achieved normal or near normal ratings at endpoint. Symptom severity corresponded with insight: baseline mean $\pm$ SD PANSS total scores were 56.0 $\pm$ 14.4 in patients without impaired insight, 73.4 $\pm$ 15.7 with mild-moderate impairment and 86.0 $\pm$ 17.4 with severe impairment (G12=5-7). These scores improved significantly in each group at endpoint ( $P < 0.001$ ). Improved insight ratings correlated with improvements in PANSS disorganized thought ( $r = 0.46$ ); negative symptoms ( $r = 0.32$ ); and anxiety/depression ( $r = 0.24$ ;  $P < 0.001$  all comparisons). Pallanti S et al. in their study observed that clozapine treatment is associated with heightened insight and reduced involuntary movements. Their results confirm the effectiveness of clozapine not only in enhancing neurocognitive function, but also in increasing awareness of illness in schizophrenic patients [31]. In present study too, insight of patients improved significantly following treatment ( $p < 0.05$ ).

### 5. Conclusion

Poor insight is common in schizophrenia with approximately half of all patients' exhibiting lack of insight. There appears to be a clear association between insight and treatment during active phase of illness. Insight also correlates with improvement in symptoms following anti-psychotic therapy. So, strict treatment adherence should be maintained in such patients for early improvement. Psychoeducation at various stages of treatment is of significance to improve treatment adherence. However, more research needs to be focused on anatomic etiologies of poor insight that may help in developing effective treatment strategies and thus improving prognosis in this population

### References

- [1] Saravanan B, Jacob KS, Johnson S, Prince M, Bhugra D, David AS. Assessing insight in schizophrenia: East meets West. *The British Journal of Psychiatry*. 2007 Mar 1;190(3):243-7.
- [2] Endicott J, Nee J, Fleiss J, Cohen J, Williams JB, Simon R. Diagnostic criteria for schizophrenia: reliabilities and agreement between systems. *Arch Gen Psychiatry* 1982; 39: 884-889
- [3] Amador XF, Gorman JM. Psychopathologic domains and insight in schizophrenia. *Psychiatr Clin North Am* 1998; 21: 27-42
- [4] Diagnostic and Statistical Manual-Text Revision (DSM-IV-TRim, 2000). American Psychiatric Association, 2000.
- [5] Lincoln TM, Lüllmann E, Rief W. Correlates and long-term consequences of poor insight in patients with schizophrenia. A systematic review. *Schizophrenia bulletin*. 2007 Nov 1;33(6):1324-42.
- [6] Wilson WH, Ban TA, Guy W. Flexible system criteria in chronic schizophrenia. *Compr Psychiatry*. 1986;27:259-265.
- [7] Amador XF, Flaum M, Andreasen NC, et al. Awareness of illness in schizophrenia and schizoaffective and mood disorders. *Arch Gen Psychiatry*. 1994;51(10):826-36.



- [8] Bastiaens JA, Agarkar S. A Case Review of Poor Insight in Schizophrenia: How Much Do We Know?. *Psychiatric Annals*. 2014 May 1;44(5):207-10.
- [9] Arango C, Amador X. Lessons learned about poor insight. *Schizophr Bull*. 2011;37(1):27-28.
- [10] Lysaker PH, Buck KD, Salvatore G, Popolo R, Dimaggio G. Lack of awareness of illness in schizophrenia: conceptualizations, correlates and treatment approaches. *Exp Rev Neurother*. 2009;9(7):1035-1043.
- [11] Buckley PF, Wirshing DA, Bhushan P, et al. Lack of insight in schizophrenia: impact on treatment adherence. *CNS Drugs*. 2007;21(2):129-141.
- [12] Aguglia E, De Vanna M, Onor ML, Ferrara D. Insight in persons with schizophrenia: effects of switching from conventional neuroleptics to atypical antipsychotics. *Prog Neuropsychopharmacol Biol Psychiatry*. 2002;26(7-8):1229-1233.
- [13] Parellada M, Boada L, Fraguas D, et al. Trait and state attributes of insight in first episodes of early-onset schizophrenia and other psychoses: a 2-year longitudinal study. *Schizophr Bull*. 2011;37(1):38-51.
- [14] Van Putten T, Crumpton E, Yale C. Drug refusal in schizophrenia and the wish to be crazy. *Arch Gen Psychiatry* 1976;33:1443-6.
- [15] Carpenter WT, Strauss JS, Bartko JJ. Flexible system for the diagnosis of schizophrenia: report from the WHO International Pilot Study of Schizophrenia. *Science*. 1973;182(118):1275-8.
- [16] Nieto L, Cobo J, Pousa E, Blas-Navarro J, Garcia-Pares G, Palao D, et al. Insight, symptomatic dimensions, and cognition in patients with acute-phase psychosis. *Compr Psychiatry*. 2012;53:502-8.
- [17] Ekinici O, Ekinici A. Association between insight, cognitive insight, positive symptoms and violence in patients with schizophrenia. *Nord J Psychiatry*. 2013;67:116-23.
- [18] Tirupati S, Padmavati R, Thara R, McCreddie RG. Insight and psychopathology in never-treated schizophrenia. *Compr Psychiatry* 2007; 48: 264-268.
- [19] Kim Y, Sakamoto K, Kamo T, Sakamura Y, Miyaoka H. Insight and clinical correlates in schizophrenia. *Compr Psychiatry*. 1997;38:117-23.
- [20] Blanchard JJ, Kring AM, Horan WP, Gur R. Toward the next generation of negative symptom assessments: The collaboration to advance negative symptom assessment in schizophrenia. *Schizophr Bull*. 2011;37:291-9.
- [21] Wible CG, Anderson J, Shenton ME, Kricun A, Hirayasu Y, Tanaka S, et al. Prefrontal cortex, negative symptoms, and schizophrenia: An MRI study. *Psychiatry Res*. 2001;108:65-78.
- [22] Buckley PF, Hasan S, Friedman L, Cerny C. Insight and schizophrenia. *Compr Psychiatry*. 2001;42:39-41.
- [23] Debowska G, Grzywa A, Kucharska-Pietura K. Insight in paranoid schizophrenia--its relationship to psychopathology and premorbid adjustment. *Compr Psychiatry*. 1998;39:255-60.
- [24] Mutsatsa SH, Joyce EM, Hutton SB, Barnes TR. Relationship between insight, cognitive function, social function and symptomatology in schizophrenia: The West London first episode study. *Eur Arch Psychiatry ClinNeurosci*. 2006;256:356-63.
- [25] Kemp RA, Lambert TJ. Insight in schizophrenia and its relationship to psychopathology. *Schizophr Res*. 1995;18:21-8.
- [26] Gharabawi GM, Lasser RA, Bossie CA, Zhu Y, Amador X. Insight and its relationship to clinical outcomes in patients with schizophrenia or schizoaffective disorder receiving long-acting risperidone. *IntClinPsychopharmacol*. 2006;21:233-40.
- [27] Wittorf A, Jakobi U, Bechdolf A, Muller B, Sartory G, Wagner M, et al. The influence of baseline symptoms and insight on the therapeutic alliance early in the treatment of schizophrenia. *Eur Psychiatry*. 2009;24:259-67.
- [28] Fenton WS, Blyler CR, Heinssen RK. Determinants of medication compliance in schizophrenia: Empirical and clinical findings. *Schizophr Bull*. 1997;23:637-51.
- [29] Kao YC, Liu YP. Compliance and schizophrenia: The predictive potential of insight into illness, symptoms, and side effects. *Compr Psychiatry*. 2010;51:557-65.
- [30] Markova IS, Berrios GE. Insight in clinical psychiatry. *J NervMent Dis* 1995; 183: 743-751.
- [31] Pallanti S, Quercioli L, Pazzagli A. Effects of clozapine on awareness of illness and cognition in schizophrenia. *Psychiatry Res*. 1999;86(3):239-249

## Tables

**Table 1. Distribution of Subjects based on mean Insight score among various sub-groups.**

Birchwood Insight Scale (n-50)				
Variables		Mean	SD	p- value
Sex	Male (n-21)	10.12	2.48	0.23
	Female (n-29)	9.23	2.12	
Education	Illiterate/ Primary (n-12)	8.93	3.09	<0.05
	Secondary and above (n-38)	10.21	2.00	
Occupation	Employed (n-22)	9.01	2.01	0.56
	Unemployed/ Housewives (n-28)	10.13	2.67	
Marital Status	Married (n-24)	9.78	2.13	0.63
	Unmarried/ Separated (n-26)	10.18	2.47	
Socio-economic Status	Lower (n-26)	9.44	2.10	0.12
	Middle/ Upper (n-24)	10.23	2.75	
Family History of Schizophrenia	Yes (n-22)	9.29	2.39	<0.05
	No (n-28)	10.56	2.99	

**Table 2:** Correlation of Insight scale scores with Schizophrenia symptoms and Duration

Pearson's Correlation	Birchwood Insight Scale		ITAQ	
	Negative Symptoms	r- value	-0.412	r- value
	p- value	< 0.05	p- value	0.090
Positive Symptoms	r- value	-0.610	r- value	-0.530
	p- value	< 0.01	p- value	< 0.01
General Symptoms	r- value	-0.481	r- value	-0.440
	p- value	< 0.05	p- value	< 0.05
Duration of Symptoms	r- value	-0.405	r- value	-0.410
	p- value	< 0.05	p- value	< 0.05

**Table 3:** Comparison of Pre- and post- treatment PANSS scores

Variables		Mean	SD	p- value
PANSS Score (Positive)	Baseline	27.10	6.87	<0.05
	F/U	24.95	6.57	
PANSS Score (Negative)	Baseline	29.05	7.34	<0.05
	F/U	27.11	6.94	
PANSS Score (General)	Baseline	58.00	12.60	<0.05
	F/U	54.05	13.72	

**Table 4:** Comparison of Pre- and Post-treatment Insight scale scores

Variables		Mean	SD	p- value
Birchwood Insight Scale	Baseline	9.98	2.23	<0.05
	F/U	11.02	2.44	
ITAQ	Baseline	18.19	3.17	<0.05
	F/U	20.78	3.91	

**Table 5:** Correlation between Post-treatment PANSS score and Insight scale scores

Pearson's Correlation (After Treatment)	Insight Scale		ITAQ	
	Negative Symptoms	r- value	-0.385	r- value
	p- value	0.070	p- value	0.090
Positive Symptoms	r- value	-0.543	r- value	-0.512
	p- value	< 0.01	p- value	< 0.01
General Symptoms	r- value	-0.510	r- value	-0.427
	p- value	< 0.05	p- value	< 0.05