e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2025; 17(1); 291-296

Original Research Article

A Prospective Study of Insight in Schizophrenia

Tutika Santhi[1], V.M. Ram[2], U. Raghava Rao[3], Garikimukku Swetha[4]

[1]Assistant Professor, Department of Psychiatry, Rangaraya Medical College, Kakinada, Andhra Pradesh, India

[2]Assistant Professor, Department of Psychiatry, DRIEMS Institute of Health Sciences and Hospital, Tangi, Cuttack, Odisha, India

[3]Professor of Psychiatry, Siddhartha Medical College, Vijayawada

[4]Assistant Professor, Department of Psychiatry, Andhra medical college, Visakhapatnam, Andhra Pradesh, India

Received: 25-10-2024 / Revised: 23-11-2024 / Accepted: 26-12-2024
Corresponding Author: Dr. Garikimukku Swetha
Conflict of interest: Nil

Abstract:

Background: Schizophrenia, a complex and chronic mental health disorder, characterized by disturbances in thought, perception and behavior. Insight in schizophrenia is critical in influencing the prognosis and management of the disease.

Aim: To study the level of insight in patients with schizophrenia.

Materials and Methods: 40schizophrenia patients who met inclusion criteria were included for the study. Study was conducted for a period of 18 months. ICD-10 diagnostic criteria, BPRS for assessing symptom severity, and SUMD (scale for assessment of unawareness in mental disorders) to assess the level of insight were used for the current study.

Results: Mean age of patients was 36.9 years, mean insight scores of all items of SUMD showed statistically significant improvement in insight scores at 4weeks follow up. On comparing the insight and severity of psychotic symptoms we found a positive correlation between 1c, 1p,2c,2p items of SUMD and BPRS. No statistical significance was established on comparing the duration of illness and insight in schizophrenia.

Conclusion: the study concluded that insight improves with treatment and poor insight is associated with severe psychotic symptoms.

Keywords: Schizophrenia, Insight, SUMD, BPRS.

Introduction

Schizophrenia, a complex and chronic mental health disorder, is characterized by disturbances in thought, perception, and behavior. [1]

Insight in schizophrenia refers to the individual's ability to recognize that they have a mental illness, understand the consequences of the disorder, and acknowledge the need for treatment.

Lack of insight, often referred to as anosognosia, is a common and challenging feature of schizophrenia. It is estimated that up to 50–80% of individuals with schizophrenia experience varying degrees of impaired insight (Amador & David et al., 1998). [2] Studies suggest that insight is not a static trait but a dynamic process influenced by cognitive functioning, neurobiological changes, and psychosocial factors (Gerretsen et al., 2014). [3] Research indicates that impaired insight is linked to dysfunction in the prefrontal cortex (Lysaker et al., 2013), [4] anterior cingulate cortex, and temporoparietal junction. These areas are responsible for self-reflection, error monitoring, and perspective-taking, all of which are crucial for insight (Morgan et al., 2014). [5] Furthermore, deficits in executive functions, such as cognitive flexibility and self-monitoring, often correlate with impaired insight (Shad et al., 2007). [6] Despite considerable global research, most Indian studies are cross-sectional, providing only a snapshot of insight levels without accounting for changes over time. Lack of longitudinal research on the trajectory of insight finds a need for the present study.

Aims & Objectives

Aim: To study the level of insight in patients with schizophrenia.

Objectives:

1. To assess the correlation between insight and severity of psychosis.

2. To compare the level of insight at initiation of treatment and the 4th week follow up.
3. To find out association of duration of illness and prior treatment history with level of insight.

Materials & Methods

The study was conducted at a tertiary care hospital. 40 schizophrenia patients aged above 18 years who were diagnosed using ICD 10 were included for the study. Both outpatients and inpatients were included for the study. It was a hospital based prospective study conducted for a period 18 months. Substance induced and organic psychosis and non-communicative patients were excluded from the study. Institute ethical clearance and informed consent from the patients was taken prior to the study.

Tools used:

1. Patients meeting the, ICD 10 criteria for schizophrenia diagnosis were considered for the study. Consecutive patients meeting all the inclusion criteria were included in each.

2. The socio-demographic proforma, clinical profile proforma were applied to the patients.

3. Brief Psychiatric Rating Scale (BPRS) was applied to assess the severity of psychosis in these patients.

4. Scale for assessment of unawareness in mental disorders (SUMD) was applied to assess the insight. It is a 74item scale, the first item 1c measures current awareness of mental disorder. The second item1p measures awareness of mental disorder in the past. The third item 2c measures current awareness of achieved effects of medication. The fourth item2p measures awareness of achieved effects of medication in past. The fifth item 3c measures current awareness of social consequences of mental disorder. The sixth item3p measures past awareness of social consequences of mental disorder. The remaining 68 items are grouped into 17 groups. The 17 signs and symptoms taken into consideration are Hallucination, Delusion, Thought disorder, Inappropriate affect, unusual appearance, Stereotypic behavior, Poor social judgment, Poor control of aggressive impulses, Poor control of sexual impulses, Alogia, Flat affect, Avolition-Apathy, Anhedonia /Asociality, Poor attention, Confusion-Disorientation, Unusual eye contact, Poor social relationships.

For each of these 17 items, (hereafter referred to as "items 4-20 of SUMD") current awareness, retrospective awareness, current attribution and retrospective attribution were assessed. All scores range from 1-5 with higher scores indicating poorer insight.

5. All the scales and proformas were translated into that language patient is comfortable with as and when required.

6. For all statistical analysis, statistical package for social sciences version 21(SPSS) was used. Values were presented as means and percentages, Chi-square test was used for analysis of categorical data. Student t-test was used for comparison of means.

Pearson correlation coefficient was used for measuring the strength of associations. For all statistical analysis P<0.05 was considered significant.

Observations and Results

Table 1: Sociodemographic variables of the patients

Sociodemographic Variable	Schizophrenia
Age (Mean ± SD)	36.8750±11.7303
Sex (Males)	16 (40%)
Socio economic status (low)	30 (75%)
Region (Rural)	28 (70%)
Marital Status (Married)	30 (75%)
Education (Illiterates)	18 (45%)
Religion (Hindu)	22 (55%)
Prior treatment (Nil)	8 (20%)
Unemployment	20(50%)

The mean age of patients in the current study was 36.9 years and 16 (42.5%) of patients were male. 20(50%) were unemployed.

Table 2: Insight in Schizophrenia at the initiation of treatment VS4 week's follow-up for items 1-3 of SUMD

Unawareness of ill-ness (SUMD item)	At initiation of Treatment		At 4th week Follow up		t value	Df	P value
	Mean	SD	Mean	SD			
1c	4.634	0.8109	2.5546	1.0860	12.23	39	0.0001
2c	4.910	0.4471	2.9164	1.3549	9.34	39	0.0001
3c	4.924	0.4771	3.2541	1.2649	8.50	39	0.0001
1p	4.2012	0.9961	2.0925	1.1982	8.94	39	0.0001
2p	4.2031	0.9922	2.5694	1.1395	8.55	39	0.0001
3p	4.8001	0.6559	2.9246	1.2578	8.24	39	0.0001

c-current; p-past. SUMD-Scale to assess Unawareness of Mental disorder

Comparing the mean insight scores at initiation of treatment and at 4 weeks follow-up, using the t-test, it was found that insight at the end of 4 weeks was statistically significant (lower the SUMD score better the insight).

Table 3: Insight in schizophrenia at the initiation vs 4weeksfollow-up for items 4-20 of SUMD

Unawareness of (SUMD item)	At initiation of treatment		At 4th week follow up		t value	df	P value
	Mean	SD	Mean	SD			
Hallucination(c-aw)	4.498	0.9281	1.856	.9922	12.3	39	0.0001
Hallucination(p-aw)	4.084	1.3587	2.256	1.1810	6.29	39	0.0001
Hallucination(c-at)	4.642	0.8101	2.978	1.1942	7.29	39	0.0001
Hallucination(p-at)	4.187	1.1940	2.265	1.4884	6.37	39	0.0001
Delusion(c-aw)	5.244	0.0000	2.350	1.4710	12.4	39	0.0001
Delusion(p-aw)	4.578	0.8770	2.447	1.2969	8.60	39	0.0001
Delusion(c-at)	5.087	0.0087	2.748	1.2648	11.6	39	0.0001
Delusion(p-at)	4.785	0.7327	2.100	1.3904	8.85	39	0.0001
Thought disorder(c-aw)	3.545	2.3204	1.785	1.5055	4.02	39	0.0003
Thought disorder(p-aw)	3.400	2.2960	1.676	1.6140	3.88	39	0.0004
Thought disorder(c-at)	3.565	2.3204	1.989	1.6610	3.49	39	0.0012
Thought disorder(p-at)	3.474	2.2960	1.985	1.7802	3.24	39	0.0024
poor social relations(c-aw)	4.565	0.8770	1.988	1.1940	11.01	39	0.0001
Poor social relations (p-aw)	4.454	0.9281	1.783	1.1591	11.37	39	0.0001
poor social relations(c-at)	4.575	0.8256	2.155	1.1940	10.54	39	0.0001
poor social relations(p-at)	4.604	0.8101	1.996	1.2946	10.8	39	0.0001
Aggression (c-aw)	1.400	2.2535	0.7546	1.3485	1.55	39	0.1292
Aggression(p-aw)	1.456	2.2585	0.6486	1.2457	1.97	39	0.0560
Aggression(c-at)	1.507	2.4565	0.7666	1.3872	1.69	39	0.0990
Aggression(p-at)	1.468	2.2964	0.6463	1.2563	1.98	39	0.0548
Confusion (c-aw)	2.454	2.3745	1.153	1.2385	3.07	39	0.0039
Confusion(p-aw)	2.443	2.3752	0.8586	1.0759	3.84	39	0.0004
Confusion(c-at)	2.697	2.4875	1.286	1.3587	3.14	39	0.0032
Confusion(p-at)	2.437	2.3785	1.056	1.2178	3.26	39	0.0023

Of the remaining items between 4-20 of SUMD, all items showed statistically significant improvement in insight at 4 weeks follow-up than at the initiation of treatment except for aggression.

Table 4: Correlation between severity of psychotic symptoms and unawareness at initiation of treatment in Schizophrenia

SUMD item	1c	1p	2c	2p	3c	3p
Correlation with BPRS	0.524	0.378	0.357	0.398	-	-0.566
P value	0.073	0.082	0.122	0.198	-	0.145

In schizophrenia at initiation of treatment, when correlation was analyzed between unawareness at admission and total BPRS score, we found positive correlation between 1c,1p, and BPRS. i.e., more the unawareness more severe the psychotic symptoms. There is a negative correlation between 3p and BPRS.

Table 5: Correlation between severity of psychotic symptoms and unawareness at 4weeks follow-up in Schizophrenia

SUMD item	1c	1p	2c	2p	3c	3p
Correlation with BPRS	0.224	0.515	0.334	0.261	0.278	0.178
P value	0.354	0.025	0.187	0.291	0.336	0.536

In schizophrenia at 4 weeks follow-up of treatment, when correlation was analyzed between unawareness at 4 weeks follow-up with total BPRS score, no statistical significance was found.

Table 6: The association between Insight and duration of schizophrenia at the initiation of treatment

Unawareness of (SUMD item)	Duration(years)				t value	df	P Value
	< 2		>2				
	Mean	SD	Mean	SD			
1c	4.701	0.7785	4.5000	0.9282	0.742	38	0.462
1p	4.1000	1.4447	4.2500	1.8805	0.282	38	0.778
2c	5.200	0.0000	4.7500	0.7011	1.297	38	0.333
2p	4.2600	1.0447	4.5000	0.9582	0.946	38	0.349
3c	5.0200	0.00000	5.0000	0.0000	-	-	-
3p	4.6201	0.7850	5.0000	0.0000	2.164	38	0.036

The schizophrenia patients were divided as those with less than 2 years duration and those with greater than 2 years duration of illness. Insight did not vary significantly between these two groups with respect to the first 3 items in SUMD (t-test).

Table 7: The association between Insight and duration of schizophrenia at 4weeks follow-up

Un awareness of (SUMD item)	Duration(years)				T value	df	P value
	≤2 (n=20)		>2 (n=20)				
	Mean	SD	Mean	SD			
1c	2.3333	0.9473	2.6000	1.1421	0.804	38	0.426
1p	1.7840	0.4693	2.5000	1.4805	2.062	38	0.046
2c	2.3011	1.3548	3.2000	1.5186	1.97	38	0.055
2p	2.3000	1.0447	2.2500	1.1186	0.1461	38	0.884
3c	2.8340	1.3712	3.7500	1.3510	2.128	38	0.039
3p	2.6667	1.5470	3.2700	1.6905	2.114	38	0.196

The schizophrenia patients were divided as those with less than 2 years duration and those with greater than 2 years duration of illness. Insight did not vary significantly between these two groups with respect to the first 3 items in SUMD (t-test).

Table 8: The association between insight and prior treatment in schizophrenia at initiation of treatment in schizophrenia

Unawareness of (SUMD item)	Prior treatment						P value
	Nil(n=8)		Regular(n=18)		Irregular(n=14)		
	Mean	SD	Mean	SD	Mean	SD	
1c	5.0000	0.00000	4.8778	0.6666	7.000	4.1419	0.207
1p	5.0000	0.00000	3.8257	1.6241	4.2133	0.7553	0.018
2c	5.0000	0.00000	4.3478	0.6666	5.0000	0.0000	0.478
2p	5.0000	0.00000	3.8457	0.8892	4.5426	.07593	0.022
3c	5.0000	0.00000	5.0000	0.0000	5.0000	0.0000	-
3p	5.0000	0.00000	5.0000	0.0000	4.4476	0.9759	0.112

Among the schizophrenia patients, 8 had no prior treatment, 18 had regular treatment and 14 had irregular treatment. On using ANOVA (Analysis of Variance) and comparing the insight in these 3 groups, for the first 3 items of SUMD, no statistical significance was observed.

Table 9: The association between insight and prior treatment in schizophrenia at 4weeks follow-up in schizophrenia

Un awareness of (SUMD item)	Prior treatment						P value
	Nil(n=8)		Regular(n=18)		Irregular(n=14)		
	Mean	SD	Mean	SD	Mean	SD	
1c	3.7000	1.0000	2.4444	1.0000	1.8715	1.6904	0.052
1p	2.9100	1.1485	1.7778	1.5409	1.7514	0.9790	0.377
2c	4.1000	2.0000	2.2222	1.0000	2. 9163	1.3013	0.164
2p	2.9001	1.9185	1.9999	1.0409	1.8771	1.6904	0.777
3c	4.6010	1.0000	2.5556	1.2085	3.1000	1.5470	0.053
3p	4.7000	2.0000	3.0000	1.0000	2.3429	1.0604	0.067

On using ANOVA and comparing the three groups no statistical significance was found in the first 6 items at 4 weeks follow up.

Discussion

The present study aimed to know the insight in schizophrenia. Literature highlights that insight in schizophrenia is influenced by a complex interplay of clinical, cognitive, and social factors. The duration of illness and its impact on insight have also been explored, with mixed results. Amador et al. (1994), [7] has reported that patients with chronic schizophrenia often exhibit poorer insight due to cumulative cognitive and functional decline over the years. On the other hand, Startup (2006) [8] argued that insight might improve over time as patients gain more experience with their illness and treatment. In our study, we found that greater illness severity, regardless of duration, was significantly associated with poorer insight. This finding underscores the importance of addressing illness severity directly, rather than assuming that insight will naturally improve with time.

The association between symptom severity and levels of insight in schizophrenia is well documented. Lysaker et al. (2005) [9] reported that higher severity of positive symptoms, particularly delusions and hallucinations, often correlates with poorer insight. This is thought to be due to distortion of individual's perception of reality, making it harder for them to their illness. Similarly, Mintz et al. (2003) [10] found that negative symptoms, such as emotional blunting and social withdrawal, also negatively effect insight, potentially by reducing the individual's engagement with their environment and self-reflection. Our study's findings are consistent with these results, emphasizing that the psychopathological features of schizophrenia are integral to the development and maintenance of insight deficits. The significant association between illness severity and insight observed in our study has important clinical implications. It suggests that reducing symptom severity through early therapeutic interventions may directly improve insight. The improvement in insight following treatment initiation is a crucial area of study in schizophrenia, as it has significant effect on treatment adherence, functional outcomes, and long-term prognosis. Several studies have reported that short-term antipsychotic treatment can lead to improvements in insight by reducing the severity of psychotic symptoms. Xia et al. (2011) [11] found that insight improved significantly within four weeks of initiating treatment, particularly when positive symptoms were effectively controlled. In our study, we observed a statistically significant improvement in insight after four weeks of treatment, which aligns with the hypothesis that symptom reduction enhances patients' ability to reflect on their condition. This suggests that early and effective symptom management is crucial for improving insight in schizophrenia. Insight is closely linked to cognitive processes such as executive functioning, self-awareness, and memory. Shad et al. (2004) [12] reported that cognitive improvements during antipsychotic treatment could lead to better insight, as patients become more capable of processing information about their illness. While our study did not specifically measure cognitive changes, the significant improvement in insight observed after four weeks may partly reflect underlying cognitive recovery alongside symptom control. The relationship between prior treatment history and insight in schizophrenia is a complex and multifaceted area of research. Several studies have suggested that a history of prior treatments is associated with better insight in schizophrenia. Amador et al. [13] (1993) proposed that repeated exposure to treatment environments, psychoeducation, and therapeutic interactions could gradually improve patients' understanding of their illness. Our study aligns with these findings, showing a significant association between a history of prior treatment and improved insight. Future research should explore the specific aspects of treatment history, such as the duration and type of interventions, to further clarify their role in fostering insight.

Despite the overall improvement in insight observed in our study, some patients showed minimal changes. This variability may be due to factors such as the severity of baseline cognitive impairments, duration of untreated illness, and resistance to antipsychotic medication. Patients with chronic schizophrenia or significant neurocognitive deficits may require longer treatment durations or targeted interventions to achieve meaningful improvements in insight. More research is needed in understanding the neurobiology of insight and its correlation with treatment adherence in psychiatric illnesses.

Summary and Conclusions

A group of 40 patients with schizophrenia who were attending both inpatient and outpatient Psychiatry Departments were studied on sociodemographic profile and clinical variables. Validated scales were used to assess insight and severity of psychosis at admission and discharge. We found that insight improves during treatment. It was also observed that better insight is associated with lower psychotic symptoms. We did not find any association between insight and duration of illness in schizophrenia. We found that patients with prior treatment had better retrospective insight as compared to those who had no treatment.

Limitations

1. Smaller sample size
2. The investigator did not receive any formal training in administering SUMD.
3. Study being a naturalistic design did not control the treatment variables.

References

1. National Institute of Mental Health (NIMH). (n.d.). Schizophrenia: Overview.
2. Amador, X. F., & David, A. S. Insight and Psychosis: Awareness of Illness in Schizophrenia and Related Disorders. Oxford University Press.1998.
3. Gerretsen, P., Chakravarty, M. M., Mamo, D., & Graff-Guerrero, A. Frontotemporal deficits and impaired insight in schizophrenia. Journal of Psychiatric Research.2014; 50, 42-49.
4. Lysaker, P. H., Dimaggio, G., &Brüne, M. Insight and metacognition in schizophrenia. Schizophrenia Research.2013; 150(1), 57-62.
5. Morgan, K. D., et al. Grey matter abnormalities in schizophrenia and the role of impaired insight. Schizophrenia Bulletin.2014; 40(1), 67-77.
6. Shad, M. U., Tamminga, C. A., Cullum, C. M., Haas, G. L., &Keshavan, M. S. Insight and frontal cortical function in schizophrenia. Schizophrenia Research.2007; 89(1-3), 22-31.
7. Amador, X. F., Flaum, M., Andreasen, N. C., Strauss, D. H., & Yale, S. A. "Awareness of illness in schizophrenia and schizoaffective and mood disorders." Archives of General Psychiatry. 1994; 51(10), 826–836.
8. Startup, M. "Insight and recovery in psychosis." Schizophrenia Bulletin.2006; 32(1), 87–94.
9. Lysaker, P. H., & Bell, M. D. "Insight and coping in schizophrenia: Comparisons of levels of insight and coping strategies." Schizophrenia Research.2005; 71(1), 89–96.
10. Mintz, A. R., Dobson, K. S., & Romney, D. M. Insight in schizophrenia: A meta-analysis. Schizophrenia Research.2003; 61(1), 75-88.
11. Xia, J., Merinder, L. B., &Belgamwar, M. R. "Psychoeducation for schizophrenia." Cochrane Database of Systematic Reviews.2011; Issue 6. Art. No.: CD002831.
12. Shad, M. U., Tamminga, C. A., Cullum, C. M., Haas, G. L., &Keshavan, M. S. (2004). "Insight and frontal cortical function in schizophrenia." Schizophrenia Research. 2004; 71(2-3), 473–479.
13. Amador, X. F., Strauss, D. H., Yale, S. A., & Gorman, J. M. "Awareness of illness in schizophrenia and schizoaffective and mood disorders." Archives of General Psychiatry.1993; 50(10), 791–798.