INSIGHT AND PSYCHOPATHOLOGY IN SCHIZOPHRENIA

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ABSTRACT

Among a group of patients with schizophrenia, severity of psychopathology was significantly correlated with dimensional measures of awareness of the abnormal experiences whereas a similar relationship with global measures of insight could not be demonstrated. The awareness of the abnormal nature of individual items of psychopathology does not necessarily overlap with insight as measured by awareness of the concept or consequences of mental illness or the need for treatment.

Key words: insight, psychopathology, schizophrenia

The concept of insight has been explored from the perspectives of philosophy, psychology and psychiatry. The broader meaning of the term has proved notoriously difficult to define. In psychiatric literature the term insight generally refers to the patients' ability to recognize themselves as having a mental illness, their capacity for self observation and self-knowledge about their psychopathological experience, and awareness of the kind, severity and consequences of their mental disorder. This ability is inferred from their speech and behaviour as judged by the clinician.

The relationship between dimensions of insight into illness and clinical, sociodemographic and neuropsychological variables has been the subject of much research. The association between insight and severity of psychopathology in particular has received considerable attention (David et al., 1992; Markova & Bernos, 1992; Kulhara et al., 1992; Amador et al., 1993; Aga et al., 1995). However, the results of these studies have not been consistent.

In the study by David et al. (1992), PSE total score, which is a global measure of severity of illness, correlated moderately with total insight score on the Schedule for the Assessment of Insight (SAI). Of the constructs measured by this scale (recognition of illness, relabelling of psychoses and hypothetical contradiction) only the second showed significant correlation. There was no significant difference between mean insight scores of patients with and without hallucinations.

Kulhara (1992) demonstrated a consistent negative correlation between BPRS total and the SAI dimension scores. However, the correlation did not reach statistical significance until after two weeks of treatment.

Amador (1993) found no correlation between summary scores on the Scale to Assess Unawareness of Mental Disorders (SUMD) and the global and individual symptom scores on the Positive and Negative Symptom Scales. The one exception to this was a modest correlation between current awareness of mental disorder and total score on the Scale for the Assessment of Positive symptoms.

Sanz (1998) demonstrated moderate correlation of Brief Psychiatric Rating Scale (BPRS) total scores with most insight measures. The scales used were the Markova and Berrios Insight Scale, the schedule for assessment of insight (David, 1990), the Insight and Treatment Attitudes Questionnaire (ITAQ) McEvoy et al. (1989) and the Positive and Negative Syndrome Scale for Schizophrenia (PANSS) (Key et al., 1987). The correlation during the acute stage of the illness was lower than after treatment was initiated, similar
to the findings of Kulhara et al. (1992).

This study attempts to further explore the relationship of insight to psychopathology in schizophrenia using global and dimensional measures of both insight and psychopathology.

MATERIAL AND METHOD

Patients receiving treatment from one of two adult general units of the department of psychiatry, Christian Medical College & Hospital, Vellore, between October, 1998 and October, 1999 were screened for a chart diagnosis of schizophrenia. Those between the ages of eighteen and sixty five years and were able to speak Tamil, Hindi or English were further interviewed by B.Saravanan (B.S.). Exclusion criteria were the presence of organic brain disease, history of alcohol or drug abuse or dependence, severe psychopathology precluding interview, lack of positive symptoms currently, absence of an accompanying relative or lack of informed consent.

The patient and relative were interviewed and the chart was reviewed by B.S. towards confirming the diagnosis on ICD-10 criteria and gathering details of history and mental state.

**Psychopathology rating:** The Brief Psychiatric Rating Scale (BPRS) (Overall & Gorham,1962; 24 item) and the Positive and Negative Syndrome Scale PANSS (Kay et al.,1987) were administered by B.S. to quantify positive and negative symptoms of schizophrenia.

**Insight rating:** The Scale to assess Unawareness of Mental Disorder SUMD (Amador et al.,1994; see appendix 1) was used administered by A. Tharyan (A.T.) to assess insight.

This scale allows scoring of current insight or ‘unawareness’ on nine dimensions: 3 global measures (items I - III) 3 based on positive symptoms (items IV - VI) and 3 based on negative symptoms (items VII - IX).

Each dimension is scored on 4 points scale

0 : When the scale dimension is not relevant.

1 : for complete awareness as revealed by the subject's response

2 : for partial awareness either because of uncertainty in the subject's mind about the correct answer or because of logical gaps in the answers or because answer do not appear to be thought through completely.

Example: "I sometimes wonder where the voices come from"

3 : for definite lack of awareness.

Where spontaneous responses were not elicited, the rater offered probe questions such as "Why do you think your relatives have brought you to hospital" or "Do you think everybody around you also hears these voices".

This version of the scale unlike the longer version does not include awareness regarding previous episodes of illness or attributions made regarding the nature of abnormalities experienced. The assessment of unawareness on the SUMD is based almost entirely on the patients' judgement regarding the pathological nature of experiences judged to be abnormal by professional. In contrast other scales involve a greater degree of judgement on the part of the interviewer.

The SUMD ratings were done by A.T., blind to measures of psychopathology. However, if at the interview, evidence for the presence of any of the symptoms relevant to items IV - IX on the SUMD was not forthcoming, from the patient, the relatives opinion regarding presence or absence of the symptom or sign was ascertained. If the relative judged the symptom to be absent a score of zero was given and in effect scoring of unawareness on that particular dimension was not performed.

The correlation between dimensions of insight and with psychopathological scores was calculated with Pearson's product-moment correlation coefficient.

RESULTS

Out of 432 charts which were screened, 67 patients could be contacted and fulfilled inclusion criteria. Men outnumbered women (male 58, female 27) there were equal numbers
of married and single subjects (married 31, single 36), mean age was 31.9 years, (s.d. 8.5 years, range 21-53 years) and most had completed a primary education (mean number of years of education 9.9, s.d. 4.5, range 0-17). Age at onset of illness ranged from 16 to 50 years (mean 25.63 years s.d. 6.96) and duration of illness varied from 9 months to 25 years (mean 6 years s.d. 5 years). All except four were taking antipsychotic medication at the time of interview. All subjects had a moderate level of psychopathology (mean BPRS score 44 range 0 - 168; mean PANSS positive score 16; mean PANSS negative score 20; range 0 - 49 on each). As shown in table 1, delusions were the most common form of psychopathology and thought disorder was the least common.

**Measures of insight :** Table 2 shows the prevalence of unawareness as scored on each SUMD item. Mild to moderate unawareness of having a mental disorder is seen in 74.7% of this sample. Unawareness of the same degree on specific aspects of psychopathology ranges from 72% on thought disorder and hallucinations to 92% on flat affect.

As shown in table 3 the average score on awareness of the general measures ranges from 1.82 to 2.25, and on the symptom items ranges from 2.05, s.d. 1.2 on delusional thinking (item V) to 0.93, s.d. 1.3. on flat affect (item VII).

The score on item I is in essence a global measure of awareness of illness, items IV - IX on the other hand, test awareness regarding a simpler and more focussed subjective experience. Considerable variation is apparent between the subjects in prevalence and degree of unawareness as scored on item I alone versus the score on item IV - IX. A test of correlation was performed in order to study the relation between the global and dimensional measures. Table 4 shows a statistically significant correlation between the measures of global and dimensional awareness.

### TABLE 2
PREVALENCE OF INSIGHT

| SUMD dimensions                        | Aware | Moderately | Unaware |
|----------------------------------------|-------|------------|---------|
| Awareness of mental disorder           | n     | %          | n       | %       | n       | %       |
| Social                                 | 17    | 25.3       | 21      | 31.4     | 29      | 43.3     |
| Consequences of medication             | 14    | 20.9       | 22      | 32.8     | 31      | 46.3     |
| Efficacy of medication                 | 21    | 33.3       | 25      | 39.7     | 17      | 27       |
| Hallucinations                         | 15    | 28         | 10      | 18       | 29      | 54       |
| Delusions                              | 7     | 13         | 13      | 23       | 35      | 64       |
| Thought disorder                       | 5     | 28         | 5       | 28       | 8       | 44       |
| Unaware                                | 29    | 43.3       | 31      | 46.3     | 13      | 28       |
| Hallucinations                         | 6     | 9          | 25      | 24       | 5       | 13       |
| Delusions                              | 8     | 17         | 25      | 13       | 28      | 55       |
| Thought disorder                       | 3     | 5          | 20      | 24       | 6       | 13       |
| Unaware                                | 25    | 37         | 9       | 13       | 28      | 55       |
| Flat affect                            | 25    | 37         | 9       | 13       | 28      | 55       |
| Unaware                                | 17    | 25.3       | 21      | 31.4     | 29      | 43.3     |
| Flat affect                            | 15    | 28         | 10      | 18       | 29      | 54       |
| Unaware                                | 7     | 13         | 13      | 23       | 35      | 64       |
| Delusions                              | 5     | 28         | 5       | 28       | 8       | 44       |
| Thought disorder                       | 29    | 43.3       | 31      | 46.3     | 13      | 28       |
| Unaware                                | 6     | 9          | 25      | 13       | 28      | 55       |
| Flat affect                            | 8     | 17         | 25      | 13       | 28      | 55       |
| Unaware                                | 3     | 5          | 20      | 24       | 6       | 13       |
| Hallucinations                         | 25    | 37         | 9       | 13       | 28      | 55       |
| Delusions                              | 17    | 25.3       | 21      | 31.4     | 29      | 43.3     |
| Thought disorder                       | 15    | 28         | 10      | 18       | 29      | 54       |
| Unaware                                | 7     | 13         | 13      | 23       | 35      | 64       |
| Delusions                              | 5     | 28         | 5       | 28       | 8       | 44       |
| Thought disorder                       | 29    | 43.3       | 31      | 46.3     | 13      | 28       |
| Unaware                                | 6     | 9          | 25      | 13       | 28      | 55       |
| Flat affect                            | 8     | 17         | 25      | 13       | 28      | 55       |
| Unaware                                | 3     | 5          | 20      | 24       | 6       | 13       |
| Hallucinations                         | 25    | 37         | 9       | 13       | 28      | 55       |
| Delusions                              | 17    | 25.3       | 21      | 31.4     | 29      | 43.3     |
| Thought disorder                       | 15    | 28         | 10      | 18       | 29      | 54       |
| Unaware                                | 7     | 13         | 13      | 23       | 35      | 64       |
| Delusions                              | 5     | 28         | 5       | 28       | 8       | 44       |
| Thought disorder                       | 29    | 43.3       | 31      | 46.3     | 13      | 28       |
| Unaware                                | 6     | 9          | 25      | 13       | 28      | 55       |
| Flat affect                            | 8     | 17         | 25      | 13       | 28      | 55       |
| Unaware                                | 3     | 5          | 20      | 24       | 6       | 13       |

| SUMD items                             | Unawareness | Score |
|----------------------------------------|--------------|-------|
| Awareness of mental disorder           | 2.18         | 82    |
| Consequences of mental disorder        | 2.25         | 79    |
| Efficacy of medication                 | 1.82         | 89    |
| Hallucinations                         | 1.85         | 1.1   |
| Delusions                              | 2.05         | 1.2   |
| Thought disorder                       | 0.57         | 1.0   |
| Flat affect                            | 0.93         | 1.3   |
| Unaware                                | 1.45         | 1.1   |
| Flat affect                            | 1.40         | 1.2   |

### TABLE 3
UNAWARENESS SCORES ON THE SUMD IN SCHIZOPHRENIA

| SUMD items   | Unawareness | Score |
|--------------|-------------|-------|
| Awareness of mental disorder           | 2.18         | 82    |
| Consequences of mental disorder        | 2.25         | 79    |
| Efficacy of medication                 | 1.82         | 89    |
| Hallucinations                          | 1.85         | 1.1   |
| Delusions                                | 2.05         | 1.2   |
| Thought disorder                        | 0.57         | 1.0   |
| Flat affect                              | 0.93         | 1.3   |
| Unaware                                   | 1.45         | 1.1   |
| Flat affect                              | 1.40         | 1.2   |

### TABLE 4
CORRELATION BETWEEN GLOBAL AND DIMENSIONAL MEASURES OF INSIGHT

|    | I   | II  | III | IV  | V   | VI  | VII | VIII | IX  |
|----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| SUMD | r=1.0000 | 0.90 | 0.51 | 0.31 | 0.29 | 0.08 | 0.12 | 0.20 | 0.21 |

* Pearson’s r degrees of freedom = 6
p=2 failed test of significance
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**TABLE 5**

**CORRELATION OF INSIGHT AND PSYCHOPATHOLOGY**

| SUMD item | BPRS Score | PANSS + ve | PANSS - ve | PANSS glob |
|-----------|------------|------------|------------|------------|
|           | r         | p         | r         | p         | r         |
| I         | .13       | .31       | .08       | .53       | .08       | .52       | .10       | .41       |
| II        | .12       | .32       | .12       | .33       | .05       | .67       | .09       | .45       |
| III       | .12       | .33       | .07       | .57       | .09       | .42       | .15       | .21       |
| IV        | .34       | .005      | .38       | .001      | .03       | .72       | .31       | .01       |
| V         | .36       | .003      | .42       | .001      | .02       | .83       | .36       | .002      |
| VI        | .20       | .10       | .15       | .23       | .11       | .35       | .18       | .16       |
| VII       | .10       | .37       | -.11      | .39       | .32       | .008      | .19       | .11       |
| VIII      | .06       | .60       | -.15      | .22       | .14       | .27       | .08       | .49       |
| IX        | .19       | .11       | -.01      | .92       | .30       | .01       | .20       | .09       |

PANSS +ve: positive Symptom Score on PANSS
PANSS -ve: Negative Symptom Score on PANSS
PANSS Glob: Global Psychopathology Score on PANSS

The results of this study point to a robust correlation between insight as measured by awareness of individual aspects of psychopathology and severity of psychopathology as measured by BPRS and PANSS. The most likely reason for this finding is that the measurement of insight has been limited to a simple and narrow dimension of the concept. Most scales to measure insight are based on a broad definition and include aspects such as attribution, treatment compliance and awareness of the effects of the illness.

The abridged version of the SUMD has the advantage of allowing measurement of global measures of insight on the first three items and dimensional measures of insight on the other six items. It is simple to use and tolerated by acutely ill patients. The scoring of insight is based on the patients report and is less dependent on the examiner's judgement of the patients level of awareness. The results of this study suggest that the aspect of insight reflected by awareness of abnormal experiences on SUMD correlates more closely to severity of illness than the measurement of insight as a complex, multidimensional whole.

In keeping with this finding, the global measure of insight as measured by SUMD item 1, correlates with scores on item 2 and 3, but not with items 4 to 9. It would therefore appear that global and dimensional measures of insight sample different aspect of the whole.

The awareness of individual symptoms or symptoms of psychopathology is more closely...
related than global measures to severity of psychopathology is not surprising. The experience of the symptom or sign is more real to the patient than the concept of mental disorder which is inferred from the experience of symptoms. It is therefore a shorter step from experience of illness to awareness of the illness as measured by awareness of the symptoms than as measured by awareness of concept of mental illness.

Insight scored on the basis of the patient's report appears to be more closely related to severity of illness than insight judged by the examiner from more complex behavior such as treatment compliance. That insight is not a good predictor of treatment compliance is a finding which has emerged from research and is observed in everyday clinical experience.

In conclusion, the concept of insight is multidimensional and the results of this study suggest that there is a need to focus future studies on the difference between dimensional and global measures of insight.

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APPENDIX

SCALE TO ASSESS UNAWARENESS OF MENTAL DISORDER (ABRIDGED)

RATING KEY

Unk : Unknown (inadequate information to assess)
0 : Not applicable (item is not relevant)
1 : Aware (subject clearly believes that he/she has a mental disorder)
2 : Somewhat aware (subject is unsure about whether he/she has mental disorder but can entertain the idea)
3 : Severely unaware (subject believes he/she doesn't have a mental disorder).

SCALE

1. Awareness of mental disorders: In the most general terms, does the subject believe that he/she has a mental disorder?
2. Awareness of the consequences of mental disorder: What is the subject's belief regarding the reason(s) he/she has been unemployed, evicted, hospitalized, etc.
3. Awareness of the effects of medication: Does the subject believe that medications have diminished the severity of his/her symptoms?
4. Awareness of hallucinatory experience: Does the subject believe that he/she experiences hallucinations as such? Rate his/her ability to interpret this experience as primarily hallucinatory.
5. Awareness of delusions: Does the subject believe that he/she experiences delusions as such, that is, as internally produced erroneous beliefs? Rate his/her awareness of the implausibility of the belief if applicable.
6. Awareness of thought disorder: Does the subject believe that his/her communications are disorganized?
7. Awareness of flat or blunt affect: Rate the subject's awareness of his/her affect as communicated by his/her expressions, voice, gestures, etc. Don't rate his/her evaluation of his/her mood.
8. Awareness of anhedonia: Is the subject aware that his/her behaviour reflects an apparent decrease in experiencing pleasure while participating in activities normally associated with such feelings?
9. Awareness of asociality: Is the subject aware that he/she shows no interest in social relationships?