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**INSIGHT IN PSYCHIATRY: A REVIEW**

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**ABSTRACT**

Insight is an ability highly valued by clinicians because it is assumed that there is a strong link between good insight and treatment compliance, relapse, prognosis and better quality of life. Insight is a multidimensional construct and various definitions have been proposed. At present the consensus is that the definition should include the recognition of the presence of a mental illness, the ability to adhere to treatment, and attribution of signs and symptoms to a disorder and the need for medical intervention. He categorized patients in those with insight and those with no insight. Van Putten et al.¹¹ divided patients into with and without insight based on patients’ acknowledgment about their awareness of emotional illness. Insight was defined as present “if there was some awareness of emotional illness” and absent if the patient vigorously denied that he was disturbed according to the International Pilot Study of schizophrenia.¹² Correct attribution of signs and symptoms to a disorder and the need for the treatment was not included in this definition of insight. Lin et al.¹³ defined insight “as recognition of existence problems and the need for medical intervention”. Heinrich et al.¹⁴ described insight as a patients ability during the early phase of a decompensation, to recognize that he or she is beginning to suffer relapses of his or her psychotic illness. Barkto et al.¹⁵ explained lack of insight as the patients’ failure “to acknowledge his or her emotional state or behavior, assessed as pathological by his physician and does not perceive the necessity of treatment”. According to Malla et al. “insight is a complex and multidimensional construct that encompasses the recognition of the presence of a mental illness, ability to adhere to treatment, and attribution of unusual perceptual experiences to pathological phenomena.”

**INTRODUCTION**

The concept of insight is a poorly understood phenomenon. Earlier it was viewed as all or none phenomenon and as a unitary construct. Subsequently it was realized that insight is a multidimensional and continuous construct, and that there are facets and degrees of insight. Over time various terms reflecting different conceptualizations have been used for insight, viz. “sealing over”, “defensive denial”, “attitudes about illness”, “indifference reaction” “evasion” and “external attributions”. Some have conceptualized insight as a psychological defense mechanism, while others have conceptualized it as a neurocognitive deficit. However, whatever the nature of reality, the phenomenon of interest here is one in which an individual’s perception of himself is grossly at odds with that of his community and culture.

In 18⁰ century the issue of insight was occasionally raised by lawyers in defense of insanity which led to the concept of partial insanity. At the beginning of the 19⁰ century, partial insanity had two meanings: intermittent (i.e., periods of madness interspersed with lucid intervals), and incomplete (i.e., monomania or madness affecting one region of the psyche). In early 19⁰ century, the official view of insanity was based on the presence of delusions and in this a crucial element was the lack of insight. The development of several psychological notions like consciousness (awareness), introspection and of self in the late 19⁰ century brought a new dimension to the research of insight. These concepts introduced an element of subjectivity i.e. description of inner experiences, into the definition of insanity. Knowledge about the way patients actually experienced their illness became essential for diagnosis and classification. Eskey defined insight as verbalized awareness by the patients that impairment of intellectual function existed. He categorized patients in those with insight and those with no insight. Van Putten et al.¹¹ divided patients into with and without insight based on patients’ acknowledgment about their awareness of emotional illness. Insight was defined as present “if there was some awareness of emotional illness” and absent if the patient vigorously denied that he was disturbed according to the International Pilot Study of schizophrenia. Correct attribution of signs and symptoms to a disorder and the need for the treatment was not included in this definition of insight. Lin et al.¹³ defined insight “as recognition of existence problems and the need for medical intervention”. Heinrich et al.¹⁴ described insight as a patients ability during the early phase of a decompensation, to recognize that he or she is beginning to suffer relapses of his or her psychotic illness. Barkto et al.¹⁵ explained lack of insight as the patients’ failure “to acknowledge his or her emotional state or behavior, assessed as pathological by his physician and does not perceive the necessity of treatment”. According to Malla et al. “insight is a complex and multidimensional construct that encompasses the recognition of the presence of a mental illness, ability to adhere to treatment, and attribution of unusual perceptual experiences to pathological phenomena.”
Greenfield et al.\textsuperscript{1} described five factors to define insight including:

1. Patient’s view about the symptoms,
2. Views about the existence of an illness,
3. Speculation about etiology,
4. Views about vulnerability and

According to David\textsuperscript{2} insight is composed of three distinct but overlapping dimensions:

1. Recognition by the individual that he or she is suffering from a mental illness,
2. A compliance with treatment and
3. An ability to relabel unusual mental events (e.g. delusions and hallucinations) as pathological.

Amador et al.\textsuperscript{3} stressed the distinction between awareness and attribution of psychotic symptoms. Mentally ill persons cannot be just divided into those having good insight or poor insight. The patient may not see himself as ill but still accept treatment so that it might help. So here awareness refers to recognition of having a mental disorder which has contributed to one’s long standing problems or that taking medication is associated with decreased hospitalizations. They acknowledge that insight is a complex, continuous and multidimensional phenomenon. They argue that insight involves processes of awareness, or recognition of signs and symptoms of illness, and attribution or explanations about the cause or source of these signs and symptoms.

**MODELS OF INSIGHT**

**Psychological models of insight**

1. **Psychological defense:** In 1920 Mayer-Gross\textsuperscript{18} classified the defensive strategies of patients of schizophrenia into four categories: denial of the future, creation of a new life after the illness, denial of the psychotic experience and melting of the psychotic experience into a new set of life experiences. These form a continuum of defense which helps the patient adapt to their abnormal experience. In the denial of the future category patients were observed to deny the possibility of positive future events. In the denial of the psychotic experience category, patients were typically lacking awareness of the signs and symptoms of the illness. He further proposed that the degree of denial changes over the course of recovery. McGlashan and Carpenter\textsuperscript{19} in their review of literature found the relationship between post psychotic depression (PPD) and denial in schizophrenia. According to them PPD is a stage of recovery from psychosis that either follows a more “primitive” defense state characterized by denial or precedes the reinstatement of psychotic denial. They share the view that PPD stems from a lessening of defensive denial, resulting in the patients awareness of his or her illness. In short, this view states that the patients, who accept rather than deny the reality of their psychotic experiences, are prone to depression. In another work, McGlashan et al.\textsuperscript{20} suggested that there is a continuum of recovery styles with integration, a merging of the illness into the a continuous set of life values, and sealing over, a splitting-off, of the psychotic experience itself, being at opposite ends of the continuum. Integrators regard their symptoms as a part of their life and they gain information about them which results in a more flexible and variable attitude about their psychotic experiences. In contrast patients with seal over isolate their psychotic experience, view it as alien and interruptive to their lives, and consequently seek to encapsulate it.

2. **Cognitive models:** According to this theory insight includes attributions or beliefs about mental illness. Poor insight in schizophrenia may be the result of an over use of normally adaptive cognitive distortions that are designed to protect self esteem\textsuperscript{7},\textsuperscript{20}. According to Lewinsohn et al.\textsuperscript{21} non depressed individuals manifest distortions in their self perceptions and possess an halo of illusory self enhancement.

3. **Cognitive dissonance theory:** This theory explains how the dilemmas are handled by the patients as they attempt to re-orient their self concept in the wake of a psychotic episode and in relation to diagnostic and prognostic stereotypes\textsuperscript{22,23}.

4. **Attribution theory:** Moore\textsuperscript{24} described “dispositional shift” in which there is a shift from a situational to a dispositional attribution, about the self, which occurs over time in an individual following a key event or experience. Thus people initially blame internal factors for the breakdown, but with time they acknowledge internal and personal factors as relevant. This is called “engulfment” when it becomes excessive and as “integration” when it is adaptive.

**Neuropsychological model:**

1. **Anosognosia:** Anosognosia which is unawareness of illness in neurological disorders, strongly resembles poor insight in schizophrenia. Anosognosia patients have lack of knowledge and awareness of disease. Various terms have been used for anosognosia which includes lack of insight, imperceptions of disease, denial of illness and organic repression. Galin\textsuperscript{25} in 1974 proposed that there are differences between the two hemispheres in affective reactions and coping strategies that appear following cerebral injury. Denial of illness was most often seen following right lesions and depressive reactions were most often seen following left lesions. According to Stuss and Benson\textsuperscript{26} unawareness deficit have in common, an inability to be self monitoring or to self correct and intact prefrontal function is needed for self awareness. The deficit of self monitoring and self correction results in a general deficiency in reality testing. Although frontal lobe damage has not been demonstrated in most disorders of awareness, an argument can be made that a functional disturbances exists. McGlynn and Schater\textsuperscript{27} divided neuroanatomy based theories of anosognosia into two:

   1. Those that attribute this deficit to focal brain lesions and
   2. Those that emphasize brain damage. While the deficit in anosognosia is probably caused by focal or diffuse brain damage, impaired frontal lobe functioning as the cause of poor insight has still not been proven. However, the evidence for a prominent role of the frontal lobe (as well as other brain structures) is impressive, and certainly merits further detailed inquiry.

2. **Frontal lobe deficit:** Neuroanatomic abnormalities are now a well documented in schizophrenia. Specific brain regions have been implicated in the phenomenon of poor insight. Some of the abnormalities like smaller brain volume, smaller hippocampal volume, enlarged ventricles, a reduction in dorsolateral prefrontal cortex neurophil i.e a synaptic tissue
between axons and overall reduction and disorganization of synapses may be a unique function of schizophrenia rather than just reflection of symptoms. Significantly greater reduction of frontal, temporal, and parietal grey cortical matter has been demonstrated in subjects with childhood schizophrenia. Decreased oligodendroglial size and density in the prefrontal cortex of schizophrenia patients suggests that decreased frontal lobe volume and tissue atrophy reported in other studies may be in part due to a specific deficit in glial cells that act as neuronal satellites and myelinating agents for other brain cells. Several authors have made specific connections between frontal lobe deficits and impaired insight. Amador et al. first hypothesized the relationship between poor insight and frontal lobe dysfunction. Takai et al. found relationship between poor insight and brain ventricular enlargement. Young et al. found significant correlation between unawareness of illness and frontal lobe dysfunction. Other areas of brain which have been implicated are right parietal lobe, right hemisphere, and diffuse cerebral regions. Lysaker et al. reported that patients of poor insight schizophrenia with neuropsychological dysfunction of the frontal lobes did not show improvement in insight following psychological treatment compared to a poor insight schizophrenia group that did not display frontal lobe dysfunction. Keeve coined the term “autoneotic agnosia” which refers to an inability to distinguish between internally and externally generated mental events. He believed that disconnection of specific brain regions from one another are responsible for this phenomenon. The most precise correlation to date was demonstrated by Flashman et al., who tested insight in schizophrenia patients as a function of neuroanatomic abnormalities in 15 sub regions of the frontal lobe. They found an inverse correlation between volumes of some frontal lobe regions (bilateral mid-frontal gyrus, right gyrus rectus, left anterior cingulated gyrus, and bilateral superior frontal gyrus) and unawareness of illness. The specific aspects of insight was correlated with each anatomic sub region and it was seen that overall unawareness of psychiatric illness was associated with smaller mid-frontal gyrus, right gyrus rectus, and left anterior cingulate gyrus, while misattribution of specific symptoms was associated with reduced superior frontal gyrus volume. Few studies have indicated that schizophrenia patients with impaired insight perform poorly on tasks that require frontal lobe activation and add evidence to the hypothesis that frontal lobe deficits are an important part of declining insight. While neuropsychological deficits may be an important correlate of poor insight, this has not yet been conclusively established.

**PREVALENCe OF INSIGHT**

In the past two decades, there has been much research into the problem of poor insight. Until recently progress in this area was hampered by the lack of empiric methods and data, coupled with preconceptions about the causes of poor insight (i.e., it is always defensive denial). Despite these early difficulties, the topic has become increasingly important among researchers studying psychotic disorders. As reported by Carpenter and colleagues in the World Health Organization International Pilot Study of Schizophrenia poor insight was among the 12 “most discriminating” symptoms for differentiating schizophrenia from other mental disorders. Another study reported that poor insight was the most common symptom of schizophrenia, present in 81% of the sample studied. However, both studies used a simplistic (i.e., dichotomous, single-item) rating of insight, which lacked reliability and overestimated the problem. Most studies using more psychometrically sound measures of insight found that approximately one half of patients with schizophrenia lack insight. However a recent work by Amador et al. showed that psychotic patients, even those compliant with treatment, displayed at least some impairment in their awareness of the mental disorder. In addition, awareness of past illness is more readily appreciated or acknowledged than awareness of current illness, a phenomenon known as “dispositional shift “in attribution theory.

**INSIGHT IN SCHIZOPHRENIA**

According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR), “A majority of individuals with schizophrenia lack insight regarding the fact that they have a psychotic illness”. Evidence suggests that poor insight is a manifestation of the illness itself, as in anosognosia. Lack of insight predisposes the individual to treatment noncompliance, and is predictive of increased number of involuntary hospital admissions, poorer psychosocial functioning, and a poorer course of illness. In the World Health Organization’s study (IPSS, 1973) on schizophrenia, 85% of the subjects denied that they have illness. According to Carpenter et al. lack of insight would discriminate in favor of a diagnosis of schizophrenia. Another study found that 69% of the patients of schizophrenia who were readmitted twice in hospital had no insight. In a study of medication compliance, it was reported that 76% of drug refusers and 40% of the drug compliers had no insight into the presence of illness. In contrast to these reports, some researchers have found schizophrenia patients to be somewhat more aware of their illness. Soskis and Bowers found that though substantial number of patients had insight into their illness, but the extent to which these subjects attributed their distress to an illness was not clear.

**INSIGHT IN MOOD DISORDERS**

One study assessed 42 patients of schizophrenia, 13 of mania and 22 patients of depression and observed that depressive patients had good insight on admission, patients of schizophrenia had poorest followed by patients of mania. Insight improved significantly after treatment in mania and schizophrenia. Ghaemi et al. found that insight is impaired in about 50% of manic episodes, irrespective of the presence or absence of psychosis. Another study reported that at admission mania patients had more insight impairment of insight than depressive ones; depressive patients with psychosis had poorer insight than those without psychosis; and mania patients had poor insight irrespective of the presence of psychotic symptoms. At discharge some insight impairment was observed in mania. In their study Stefano et al. found that patients with psychotic unipolar depression had less poor insight than schizophrenia but did not differ from patients with bipolar disorders.
In empirical studies of primary psychiatric disorders, insight is not notably impaired in unipolar nonpsychotic depression. In mood disorders, impaired insight appears to be limited to mania; in depressive states, insight is generally not impaired. Though there are exceptions; denial of depressive symptoms can occur in individuals with depression secondary to medical illnesses or persons with psychotic depression.  

INSIGHT AND PSYCHOPATHOLOGY  
There are conflicting and equivocal results regarding the relationship between insight and psychopathology. Some early studies examining this relationship found inverse correlation between them. Some other studies have found positive correlation between insight and psychopathology. Most recent reports indicate that they are independent of each other. Another study showed that the degree of insight was not consistently related to the severity of acute psychopathology, nor did changes in insight during hospitalization vary consistently with changes in acute psychopathology. These data suggest that the mechanism responsible for insight and positive symptoms of schizophrenia are independent. Later on McEvoy et al. found that while degree of psychopathology diminished during hospitalization for both voluntary and involuntary patients, only the voluntary patients’ insight improved over the course of hospitalization. This finding distinguishes between poor insight and delusional beliefs. Increased insight into the falseness of delusional beliefs is an indicator of improvement in the severity of delusion.  

Some researchers have found that insight was positively related to symptom clusters used in clinical assessments. David et al. evaluated 91 psychotic patients and showed that there was a moderate correlation between total insight and severity of psychopathology. Takai et al. reported significant relationship between insight and total severity of symptoms. In addition, after evaluating 19 patients with schizophrenia, Markova and Berrios also proclaimed that insight is related to symptomatology. Michalkaes et al. in their study found that the patients improved in insight during hospitalization but the relationship between improved psychopathology and improved insight was inconsistent. A study by Amador et al. failed to completely clarify the nature of the relationship between poor insight and symptoms of psychosis. According to him the level of awareness was generally unrelated to symptoms severity, and delusions, thought disorder and disorganized behavior were all moderately correlated with decreased awareness of mental disorder, social consequences of mental disorder, and several positive symptoms. Ghaemi et al. found that low insight was correlated with poor course of illness, poor treatment adherence and involuntary hospitalization. Kim et al. found that positive symptoms were associated with poor insight and disorganized symptoms. A group of 29 patients were studied during acute hospital admission to examine the relationship between changes in insight and positive and negative symptomatology in schizophrenia and it was found that insight improved significantly during the course of in-patient treatment. An association between psychopathology and insight level was evident both at the time of admission and discharge but of different types. Improvement in psychopathology correlated significantly with increased insight into past symptoms but not current illness. There was a significant relationship only with negative symptom improvement but not with improvement in positive symptoms. The greater the trend towards negative symptom predominance, the lesser is the tendency to improve in the awareness of current symptoms. An inverse relationship with enduring negative symptoms was seen in this study. However, another study found only moderate association between insight and symptoms of depression and disorganization. There was no consistent relationship with positive and negative symptoms. Carroll et al. found that being more aware of being mentally ill may be a risk factor for hopelessness about the future. In contrast to this, Moore et al. reported that patients with greater unawareness of illness had relatively less depressive symptomatology and relatively greater self-deception. This relationship was especially strong for unawareness of the social consequences of having a mental disorder. These results suggested that the presence of depressive symptomatology in schizophrenia is related to the level of insight. Maneul et al. showed that insight and psychopathology are semi independent domains and higher the negative and disorganization symptoms the less the attitude to treatment varies. Mintz et al. observed that patients of schizophrenia having pronounced global, positive and negative symptoms have low degree of insight. On the other hand if patients are depressed their insight increases. Sevy suggested that unawareness of symptoms is related to severity of illness, insight into illness and its social consequences is more closely tied to positive symptoms than other aspects of insight, and insight into the effects of medication is more closely related to cognitive impairment.  

MEASUREMENT OF INSIGHT:  
Various methods have been described for measuring insight. These are:  
1. **Clinical description of free responses**: The majority of early studies on insight in schizophrenia fall into this category. This method is based on patients’ belief about whether or not they are mentally ill. In this method the investigator places no restrictions on the patients responses, nor are restrictions necessarily placed on the investigators own categories for describing the responses. The investigator simply notes the spontaneous behavior of schizophrenia patients, speaks with the patients, or examines their writings. A major advantage of this method is that it does not restrict observations or hypothesis making and maximizes the chances of observing new phenomenon. The drawback is its extreme variability of the eliciting stimuli and responses making replication difficult.  
2. **Clinical description of free responses to a controlled stimulus**: In this method with the implementation of a controlled stimulus, some ambiguity can be reduced. Any structured psychiatric interview, when interpreted without standardized scoring fall under this category. The most widely used clinical test used under this category is Mental Status Examination (MSE). Insight as generally assessed in MSE is considered present “if patient realizes that he is ill and the problem is in his own mind”. The advantage of this method
is lessening of ambiguity, possibility of direct comparison between schizophrenia patients and other groups. The disadvantage is the subjectivity in the clinical observation of the patients’ responses.

3. **Systematized scoring of free responses:** In this method a system is devised to categorize patients’ responses, making comparisons between studies easier. This method includes the use of continuous variables within each category. The benefit of this method is that it allows for the quantification of the dependent measure, permitting statistical analyses. The limitation is that some responses may not fit into the categories created and so the information is lost.

4. **Systematized scoring of response to a standard stimulus:** In this method there is use of a standardized stimulus to elicit responses. The subject can respond in variety of ways but the response is scored in terms of predetermined categories. The Scale to assess Unawareness of Mental Disorder (SUMD) comes under this method. The advantage of this method is that eliciting stimuli are consistent from subject to subject, and the criteria by which one categorizes responses can be carefully defined. The disadvantage is that many responses cannot be scored meaningfully using the scoring schemes.

5. **Multiple choice:** In this method, the patient is presented with a standardized stimulus and given the choice between two or more alternative responses. It is an easy method for obtaining multiple sources of information. All the above five methods for measuring insight have relative strengths and weaknesses. The choice of the method requires an assessment of the goals of the investigation. If the goal is exploratory, hypothesis generating study, the first two methods are appropriate but if the goal is to generate replicable research, the last three methods are more appropriate.

There are various rating scales to measure insight. Some of the scales are as under:

**The Insight and Treatment Attitude Questionnaire:** This standardized eleven item questionnaire is based on questions relating to patient’s attitude towards admission, medication and the need for evaluation. It assesses insight as a continuous process by defining insight in terms of correlation between the judgment made by patients and by clinicians.

**Schedule for assessment of insight and its expanded version:** Here insight is defined in terms of compliance with the treatment.

**Scale to assess Unawareness of Mental Disorder (SUMD):** It is a standardized scale on which ratings are made on the basis of direct patients’ interview. It assesses three basic dimensions of insight on the basis of past and current status.  
 a). Awareness of mental disorder  
b). Awareness of achieved effect of medication  
c). Awareness of social consequences of mental disorder  
It also assesses the awareness of various symptomatology and their attribution on the basis of both past and current status.

**The Beck Cognitive Insight Scale (BCIS):** It is a 15 items self report questionnaire. It has 9 items which are in the self reflectiveness subscale and 6 items are in the self certainty subscale. A composite index of the BCIS reflecting cognitive insight is calculated by subtracting the score for the self certainty scale from that of the self reflectiveness scale. The scale has good convergent, discriminant and constructs validity.

**CONCLUSION**

The phenomenon of insight, despite its importance in assessment and management of psychiatric disorders, is not fully understood. While recent research have clarified some issues and resulted in advances in assessment of insight but other areas like neurobiology of insight is poorly understood. It is hoped that future research will clarify these issues.

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