REVIEW ARTICLE

Insight and Psychosis

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Abstract : *An evaluation of patients' insight into their mental illness has long been included in the standard mental state examination. The last 10 years have shown a resurgence of interest in insight, with better definitions and operationalizations of the concept. Insight into psychosis is seen as the ability of patient for self observation and knowledge about his illness. This has received scant attention in past due to confusion and inconsistent use of the term 'insight' in psychosis. We have reviewed current concepts relating to insight, its possible relation to disease pathophysiology and its implications for management of patients with psychosis. This article reviews (i) components of insight (ii) Models of insight (iii) Various scales to assess insight in psychosis (iv) impact of disease on insight and vice-versa (v) implications for management of insight and disease per se.*

INTRODUCTION:

The concept of insight into psychosis has received scant attention in the clinical psychiatry. It is well-established that many patients with psychosis are unaware of their disorders and symptoms.[1] 'Insight' often refers to patient's ability to recognize themselves as having a mental illness, their capacity for self-observation and self-knowledge about their psychopathological experiences, 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.

In order to judge its importance, various dimensions of insight into illness have been correlated with clinical, socio- demographic and neuropsychological variables. In this way insight has been related to treatment compliance,[2- 4] severity of global psychopathology,[2, 5-8] cognitive impairment,[9-16] frontal lobe dysfunction.[17-20] Finally, some authors have studied the value of the insight as a predictor of outcome and compliance.[2, 18, 21-23.]

The results of these studies have been contradictory and inconsistent. As Markova & Berrios suggest, one reason for variability in the results relates to confusion surrounding the term insight, which has been used to mean awareness, belief, attitudes, understanding, conscious recognition and knowledge.[24] In the past, various authors have defined 'insight' differently. Despite the widespread use of the term 'insight' there is no unitary and approved definition. The Meaning of Insight in Clinical Psychiatry Insight can be defined in terms of people's understanding of their illness, the term 'insight' encompasses a complex concept which should not be considered as an isolated symptom which is present or absent. Instead, it may be more appropriate to think of insight as a continuum of thinking and feeling, affected by numerous internal and external variables.

In the description of psychological phenomena, various terms are used with unclear meaning. One such term is 'insight'. The Oxford English Dictionary defines insight as 'an inner sight, discernment, wisdom, or a glimpse of you beneath the surface'.

In Psychiatry the term 'insight' refers to a state of mind or 'mental act', knowledge of which is inferred from the patient's response to illness.

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Whether a patient does or does not, have insight is a claim made on the basis of the speech content and behavior of the patient.[25]

Thus conceptualized, 'insight' plays a crucial role in psychoanalytic,[26, 27] gestalt[28] and phenomenological[29] approaches to mental illness. Inferences about patient's insight are also important to evaluate severity of illness, suicidal risk, compliance and response to treatment. Insight is assessed as part of the standard mental state examination, but no guidelines exist on how to qualify or quantify it. Patient are said to have no insight, good insight, or partial insight such statements convey little about insight itself.

HISTORICAL BACKGROUND

The term 'insight' has a relatively short history, notions such as self-examination and self-knowledge can be traced back to ancient Greek philosophy and Plato.[30] It is unclear when the concept of insight as a 'Symptom' was first introduced into western psychiatry, but during the latter part of the 19th century, work was already being done on the effects of mental illness on self-awareness.[31] During the same period interest also developed into the psychological functions that might be affected in phenomena such as the anosognosias. The historical exploration of 'insight' suggests two aspects of 'insight'; its constitution as a concept, and its validity as inferential knowledge concerning patient's understanding of their illness.

INSIGHT AS PHENOMENOLOGICAL CONCEPT AND AS PATIENT'S RESPONSE TO ILLNESS

Karl Jasper was one of the firsts to explore these two aspects of insight. He observed that in the early stage of their illness his patients became perplexed, this being an understandable reaction to the new experiences they were undergoing. As the illness progresses the patients tried to make sense of their experiences.[29]

Jasper described how, when the illness produced changes in personality, a patient's attitude to the illness became less understandable to others as he/she could appear indifferent or passive to the most frightening delusions. He also observed that while transient insight may occur during acute psychosis, there was no lasting or complete insight. In fact, he stated that when insight persisted, the patient was more likely to be suffering from a personality disorder than a psychosis. He also noted that it was dependent on patient's ability, probably a neuropsychological dimension of insight.

Conrad in 1958 described early stage of schizophrenia as 'trema' and found that patients were unable to express their feelings and experiences. He believed that the common theme was a feeling of oppression, awareness that something was not right and a sense of restriction of one's freedom. During the next stage of the illness, the 'apophany' patients attributed meaning to feelings and experiences. In this stage patients believed themselves to be the centre of the world.[28]

He also described further stages during which destructive processes were followed by partial resolution and postulated that schizophrenia was an illness affecting the higher mental functions. Thus, it affected the whole self-concept and, in particular, the ability of the individual to effect the normal transition from looking at oneself from within to looking at oneself from the outside, by the eyes of the world.

Probably Freud in his 1900's paper also referred to concept of insight, although he also acknowledged the role of psychopathological processes. Although there have been disparate views on this concept for long, a lot of work has been done in nineties and early part of this decade, on insight as a useful measure in psychotic patients.

This is now well understood that acute and chronic schizophrenics differ in cognitive

functions.[9] The degree and nature of insight also varies with cultural and social background whereas insight depends on various components including awareness of mental illness and the ability to identify psychotic symptoms as abnormal – a social and anthropological view needs to be incorporated.

COMPONENTS OF INSIGHT

The concept of insight goes to the heart of our thinking about psychosis and has important implications for management. Present day psychiatry views insight as an interplay of various aspects of psychosis.It is suggested by Markova et al[25] that insight has at least three components:

a) Awareness of illness , b) The capacity to relabel psychotic experiences as abnormal. c) Treatment compliance.

These components of insight interplay with each other at variable levels e.g. a patient with complete 'insight' into illness might be fully compliant with treatment or treatment compliance may be present without awareness of illness. On the other hand a fully aware patient might relabel psychotic experiences or be afraid of it and become treatment non compliant. Markova proposed that 'insight' is not an 'all-or-none' phenomenon but is composed of these three components. When these three components are present, patient may have complete 'insight' into his illness.

MODELS OF INSIGHT

There are various models to explain impaired insight. These include ;

- Psychodynamic Model
- Neurological Model
- Cognitive Model
- Learning Model

PSYCHODYNAMIC MODEL :

This Model emphasizes insight as a process making use of the ego-function of self-observation in both experimental and reflective forms of awareness of oneself or of the world as it affects oneself. It is as an ability to see and move freely through the inner world that contains both changing and stable representations of the self and of other environmental objects as a bridging of different levels of the mind and so on. This model explains lack of insight and denial of illness as a continuum of ego defense mechanism.

NEUROLOGICAL MODEL :

Many patients with schizophrenia demonstrate unawareness of their illness, including difficulty in identifying their symptoms and recognizing that they have a mental disorder. It has been noted that unawareness of symptoms in neurological disorders (i.e. anosognosia) is similar in nature to unawareness in schizophrenia. Anosognosia is typically associated with lesions in the right parietal lobe and bilateral frontal lobes.

Consistent with this model, there is evidence to suggest a relationship between unawareness of illness in schizophrenia and neuropsychological deficits of the frontal and parietal lobes. Several investigators have found unawareness to be inversely correlated with performance on a frontal lobe task, the Wisconsin Card Sorting Test[19,32- 34] and measures associated with bialeteral parietal lobe functioning including right – left orientation and finger localization.[19]

COGNITIVE MODEL

This model views insight as a concept that summarises a set of attributions or beliefs about mental symptoms.[35] Macpherson et al[36] found that only 26% of long term psychiatric patients believed they were psychiatrically ill. Impaired insight was associated with the belief that treatment was unnecessary and a wish to stop treatment. Similarly, it was found that schizophrenic patients with insight were more likely to co-operate with treatment.[2]

Impaired intelligence is a plausible mechanism for lack of awareness of illness as has been seen in many schizophrenics. Further even, it was reported that premorbid I.Q. is significantly correlated with total insight score on SAI (Schedule for Assessment of Insight)[5]. This is also compatible with Learning Model.

LEARNING MODEL

In addition to the previously proposed models to explain impaired insight in schizophrenics, a further model which could be defined as 'Learning Model' may be important. It is suggested that the ability to understand illness and treatment is partly dependent on educational background. This model stresses the level of intelligence and information processing required to understand and assimilate models of illness and treatment. It was found from various studies that impaired intelligence is a possible mechanism underlying impaired appreciation of aspects of schizophrenia illness, and recent reports suggest an association between schizophrenia and educational background[36]. Jones et al suggested a circular interaction between a patient's background, the illness and impaired insight/attitude to the illness.[37]

MULTIFACTORIAL MODEL

Rob Macphereson et al proposed a Schematic Model that represents factors affecting the development of insight in schizophrenia[36]. The findings of their study suggest that a multifactorial model may best explain this complex concept. This model explains that core intellectual potential determine the level and quality of general education. On the other hand psychotic disorder leads to continuing florid symptoms and cognitive impairment which finally determines the patient's education and learning about illness. These two factors independently determine the level of insight comprising awareness of illness, attitude to treatment and attribution of symptoms.

The findings of their study support 'clinical' 'neuropsychological' and 'learning' models of impaired insight, and suggest that a multifactorial model may best explain this complex concept. The finding that cognitive psychological approaches and patient education have increased insight in schizophrenia implies that viewing this problem in terms of disordered cognitions may be conceptually appropriate and of clinical value.

CURRENT CONCEPTS

Presently, insight in psychotic patients is viewed as important part of evaluation and management of such patients. Insight is correlated with various aspects of the disease including - culture and social functioning, cognitive functioning, psychopathology, neuropsychological functioning, frontal lobe dysfunction, insight and depression and treatment compliance.

INSIGHT, CULTURE AND SOCIAL FUNCTIONING

In an interesting review, Sarvanan et al emphasized that while measuring insight, social and cultural background must be taken into account and insight scales be developed accordingly[38]. Johnson and Orrel strongly argued that insight is influenced by cultural background and prevailing perception of illness.

Various studies emphasized that Social and cultural factors also affect patient's understanding of his/her illness.[39] The greater the difference between the backgrounds of doctor and patient, the greater will be the potential gap between concepts of mental illness.

Degree of insight is strongly influenced by the perceptions of mental illness prevailing in the cultural background from which the patient comes. Studies found that patient's attitudes and degree of knowledge about mental illnesses tend to resemble closely those of their social class.[40-42]

Bhughra emphasized on value judgments about the mentally ill and public tolerance to close contact with them, suggesting that fear and hostility remain widespread.[43] Lally described that schizophrenics view themselves in a struggle to maintain a positive view of self, often first by rejecting a schizophrenic identity and later by re-evaluating mental illness and treatment in a more positive way.[44]

Researches on stigma suggest that an attempt to preserve a positive self concept and social identity is a possible reason for denial of mental illness. Studies on beliefs about the nature and cause of mental illness indicate that patients' understanding of their illness may be shaped by perception of mental illness and treatment prevailing in their culture and social groups. Work by social scientist on cultural and social variations in lay perception of mental illness and on stigma attached to mental illness suggests that these varying views are likely to be one of the influence on insight. This requires further exploration and research on this subject.

INSIGHT AND COGNITIVE FUNCTIONING

Initially Goldstein suggested that patients of schizophrenia with different symptom profile differ in their cognitive performance.[9] Attempts to compare cognitive performance in different groups of schizophrenics face a major problem because of heterogeneity of illness. Goldstein & Halperin found differences in the performance of paranoid and non-paranoid patients.[10] Though it was not found by other study.[11] Other studies report that patients with predominantly negative symptoms perform less well than patients with predominantly positive symptoms.[12] Robertson & Taylor classified a sample of schizophrenic patients into four groups (deluded, mixed symptoms, atypical and simple schizophrenia) and a distinctive profile of cognitive performance emerged.[13]

So it can be suggested that one appropriate way to investigate the relationship between schizophrenic symptoms and cognitive function is to start with an attempt to identify syndrome by analysis of the correlations between symptoms, and then to examine the correlation between syndrome scores and cognitive performance.

A number of studies have shown that acute patients differ from chronic patients in cognitive performance.[9] Insofar as symptom profiles differ between acute and chronic patients, this implies at least an indirect association between the type of symptom and cognitive performance, but it is possible that a factor relating to the degree of chronicity of the symptoms, rather than symptoms type per se, influences cognitive performance.

PF Liddle suggested that it is possible that a study of cortical neurological signs, together with symptoms and cognitive performance might contribute to an understanding of the nature of the relationships between symptoms and cognitive performance. The authors examined relationship between group of symptoms, cognitive functioning and cortical neurological signs and found that the syndromes identified by analysis of the correlations between symptoms were associated with performance. It was also found that neurocognitive functions and insight are related to deficits in executive functions and may be a compromise of frontal lobe dysfunction.[32] Another meta analysis suggested that insight is associated with substantial cognitive impairment.[16]

INSIGHT AND PSYCHOPATHOLOGY

There is general agreement that lack of insight is a common feature of schizophrenia. Various studies suggested that poor insight is a prevalent feature of schizophrenia and that severe unawareness is more common in patients with schizophrenia than in those with schizoaffective disorder or MDP with or without psychosis.[45] Over

half of patients with schizophrenia (57%) had moderate to severe unawareness of having a mental disorder. This finding is in agreement with the other studies. Recently a consensus has emerged that the concept of insight is both a multidimensional and a continuous construct.[6, 46]

The association between dimensions of insight and socio demographic variables, psychopathology and severity has received attention in recent studies.[2, 5, 6, 47- 49] McEvoy et al. failed to identify any relationship between the degree of insight and severity of psychopathology and concluded that the deficiency in insight could not be explained on the basis of psychopathology.[2] David et al., reported a moderate correlation between insight and severity of illness in schizophrenics in a subsequent study.[5] Amador et al reported moderate correlation between insight and course of illness, age of onset and number of hospitalizations.[6] Education did not influence the level of insight.

No significant relationship was identified between total insight score and psychopathology. A recent study investigated whether insight changes with time and how it relates to psychopathology.[7] Though certain dimensions of insight improved over time, the insight and psychopathology were largely independent of each other. Psychopathology and insight did not show any consistent relationship. No significant correlation was found between changes in psychopathology and insight.

Anna & Saravanan found significant positive correlation between psychopathology and dimensional measure of awareness of the abnormal experiences like hallucinations and delusions. But similar relationship with global measure of insight could not be demonstrated.[8]

Majority of these studies were criticized on the ground that these studies attempted to study the relationship of insight and psychopathology at a single point of time and ignored the dynamic aspects of insight. In many longitudinal studies psychopathology and insight did not show any consistent relationship at two assessment points and no significant correlation was found between changes in psychopathology and insight over time.[49]

In many studies, the degree of insight had increased during the observation period irrespective of type of recovery. The process of insight is to some degree independent of psychopathology and severity of illness. This lends credence to the view that particular brain areas especially frontal lobe may contribute to poor insight.

INSIGHT AND NEUROPSYCHOLOGICAL FUNCTIONING

It has been a matter of debate in recent years whether poor insight in psychotic disorders can, in part, be explained by neuropsychological dysfunction. It has been observed in a recent meta – analysis that neuropsychological dysfunction, specifically error monitoring and impairment of set shifting contributes to poor insight in psychosis.[16] However, this does not appear to be totally independent of cognitive function. It has been observed that in patients with a psychotic disorder the relationship between Wisconsin card sorting test performance and insight was significantly stronger than the association with intelligence quotient. With regard to the cognitive mechanisms of insight, WCST performance has been suggested to be of particular relevance. Cognitive flexibility is important, as it refers to the capacity 'to hold' an abstract representation related to an actual situation, but different from it, at the same time as the more obvious immediate representation.[50] This capacity would enable people to evaluate their own perceptions, thought and behavior in relation to knowledge of symptoms of mental illness, shaped by social and cultural influences.

Drake & Lewis reported a specific strong

correlation between insight and perseverative errors. This is consistent with the notion that a failure to change cognitive set and to monitor error responses may lead to impaired insight. Although 'perseveration' is widely recognized as a key cognitive process during WCST performance, the cognitive processes underlying WCST performance remain poorly understood.[50] Specific relation with different dimension of insight and the putative role of meta cognitive functions requires further study.

INSIGHT AND FRONTAL LOBE DYSFUNCTION

Despite progress in defining and measuring insight, the nature of unawareness of illness in patients with schizophrenia remains poorly understood. The more recent, empirical literature points in several directions. First, insight might simply be a part and parcel of schizophrenia, a symptom that can not be further reduced. Secondly, lack of insight could stem from a neurological deficit to anosognosia. Amador and colleagues were the first to note the clinical similarities between patients with schizophrenia and anosognosia and propose that the frontal lobes would be the site of pathology.[45] The first study to test this hypothesis used the wisconsin card sorting test (WCST) and found an association between frontal lobe dysfunction and impaired insight.[34] There is evidence to suggest a relationship between unawareness of illness in schizophrenia and neurological deficits of the frontal and parietal lobes. Several investigators[32, 19, 34] have found unawareness to be inversely correlated with performance on a frontal lobe task, the Wisconsin card sorting Test and measures associated with bilateral parietal lobe functioning, including right – left orientation and finger localization.[19]

It was reported that lack of insight into having an illness, as defined by a single item on the Present State Examination, was correlated with increased ventricle-to-brain ratios.[51] Laura and Thomas have demonstrated a smaller brain size is associated with unawareness of illness and may be a phenomenological component.[20] Freudenreich and Deckersback reported that the pathological nature of symptoms is better recognized by patients who experienced dysphoric affect. Neither severity of psychotic symptoms nor frontal lobe cognitive deficits correlated to symptom awareness. Lack of insight, which can be partial for symptoms of the illness, might be a non-reducible symptom of schizophrenia. Various other works have suggested a role of frontal lobe dysfunction in lack of insight however this aspect is not very well established.[52]

INSIGHT AND DEPRESSION

There is a very high prevalence of suicidal behaviour among individuals with schizophrenia. Between 20% and 42% of patients with schizophrenia attempt suicide and 10-15% are successful.[53] Researches suggest that patients with 'insight' into the fact that they have mental illness are at greater risk for suicidal behaviour. Such individuals develop a sense of hopelessness and demoralization that leads to suicidal behaviour. But these studies were criticized on the ground that they are lacking in the systematic assessment of insight.[54, 55] A systematic study by Xavier and Amador suggested an association between insight and depression. More awareness of negative symptom and delusions leads to more suicidal thoughts.[46] There is good evidence for a cross sectional association between better insight and depressive symptoms. Various researchers found an increase in insight correlated with an increase in depressed mood during an educative programme after treatment for acute illness.[56-58] Smith also found that depression increased as awareness of illness improved.[59] However, Kemp and Lambart found that association between insight and depression on admission disappeared by the time of follow-

up 3 to 6 weeks later.[60] In a recent study Crumblish et al [61] concluded that six months after presentation, the more people recognize the presence of a mental illness, the more depressed they will be at 4 years, and the greater the likelihood that they will have attempted suicide by then.

This may have implications for disclosure of diagnosis. Drake and Pickles concluded good insight predicts depression particularly at baseline but association between paranoia and depression at every stage of follow-up. Neither relationship was mediated by self-esteem. There was a weak association of lower self-esteem with greater depression and better insight. They further concluded paranoia is a strongest predictor of depression. So the classical idea of resolving psychosis is leading to better insight, which in turn is the main cause of emerging depression as a result of reduced self-esteem was clearly rejected in their study.[62] However, it seems treatment of paranoia or delusions is an important method of reducing depression at any stage.

Amador et al suggested awareness of having delusions, flat affect, associality may be damaging to self concept and degree of hopelessness about the future.[56] They further concluded that psychological interventions aimed at increasing awareness of illness should be targeted and specific. The goal should be to increase awareness of the aspects of illness associated with lack of acceptance of treatment and allow other aspects of poor awareness to persist. Attention should be given to the effects of greater awareness on the individuals' degree of demoralization, self concept and hopelessness about the future.

INSIGHT AND TREATMENT COMPLIANCE

The degree to which patients comply with the treatment is of importance in clinical practice. Up to 80% of psychotic patients fail to comply with their treatment.[63] Kemp and David, found that neuropsychological function, insight and compliance are weekly related in acute patients.[4] Later on, insight and compliance are more closely related[4.] Similarly, Crumlish et al[61] suggested that early insight is related to depression, suicide and compliance. Most of the authors conclude that insight aids compliance.[62] McEvoy et al concluded that insight and compliance be regarded as separate though over lapping constructs which contribute to insight.[2]

Among the most powerful predictor of compliance are attitudes to treatment and insight into illness. Other possible determinants include culture and ethnic group, response to treatment side effects symptoms e.g. delusions about drug treatment or of grandeur and the relationship between patient and health professional (treatment alliance).

MEASUREMENT AND MANAGEMENT

Insight is a complex multidimensional construct which is shaped by individual psychology and the constraints of biology (as in cognitive impairment) and is influenced by the social concepts of illness and culturally specific explanatory models. 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] Standardized tools for the assessment and quantification of insight have been developed over the past 15 years. Some of these are:

I. INSIGHT AND TREATMENT ATTITUDES QUESTIONS (ITAQ) (MCEVOY ET AL)[2]

The ITAQ has been used in large samples of patients with schizophrenia and has been shown to be reliable and valid. An 11 item questionnaire, the ITAQ assesses patients' attitudes about whether they have a mental illness and whether they need treatment. Though predictive of several measures of clinical outcome and compliance,

the ITAQ fails to assess many of the psychological domains that other investigators believe constitute "Insight".

II. SCHEDULE FOR THE ASSESSMENT OF INSIGHT (SAI) (DAVID, 1990) [64]

This measure assesses insight based on a patient's recognition of having a mental illness, compliance with treatment, and ability to label unusual events, such as delusions and hallucinations, as pathological. This measure does not however, consider how insight may vary from symptom to symptom, nor does it consider differences between current and retrospective insight into illness.

III. SCHEDULE FOR THE ASSESSMENT OF INSIGHT (SAI) EXPANDED VERSION (KEMP & DAVID, 1997) [65].

The SAI has been expanded to include awareness of change, difficulties resulting from mental illness condition and key symptoms. The maximum score is 24.

IV. SCALE TO ASSESS UNAWARENESS OF MENTAL DISORDER (SUMD) (AMADOR ET AL 1993) [6]

In addition to the independent assessment of awareness and attribution, the SUMD distinguishes current and retrospective awareness of (1) having a mental disorder, (2) the effect of medication, (3) the consequences of mental disorder, and (4) the specific signs and symptoms. The assessment of insight regarding specific symptoms offers at least two important benefits. First, it can provide data on moderating variables useful for studies of psycho educational strategies, second, these assessments are of importance theoretically, as they can provide data on the nature and pervasiveness of poor insight. Since its development, the SUMD has gained widespread acceptance as a multidimensional measure of insight and has been validated and studied on a range of clinical samples.

V. MARKOVA AND BERRIOS INSIGHT SCALE (MARKOVA & BERRIOS 1992) [66]

It is a self-rated insight scale consisting of 32 items that are answered yes, no, or don't know, the Insight scale attempts to broaden the measurement of insight by assessing deficits in self-knowledge not only related to illness, but also to how the illness affects a patient's interaction with the world.

VI POSITIVE AND NEGATIVE SYNDROMES SCALE FOR SCHIZOPHRENIA (PANSS) (KAY ET AL 1987) [67]

PANSS has a single item assessing insight (PANSS, (s2)) which appears on the general psychopathology subscale (item G12). The patient is rated on a scale from 1 to 7 with 1 signifying the "absence or lack of judgement and insight" and 7 representing "extreme lack of judgement and insight. "although the PANSS has recommended interview probes designed to elicit different dimensions of insight, the rating scale itself defines the degree of insight unidimensionally. Because it consists on single item, as a measure of insight it is inherently less reliable and lacking in construct validity compared to other measures reviewed here.

VII. MANUAL FOR ASSESSMENT & DOCUMENTATION OF PSYCHOPATHOLOGY (GUY AND BAN 1979, IN SPANISH) [68]

It is a comprehensive psychopathological inventory consisting of 100 items scoring from 0 to 2.

Most of these scales are moderately correlated. These scales reflect correlation of insight with neuropsychological tests, diagnostic group, substance abuse, drug compliance and frequency of hospitalization. These scales are able to predict compliance.

MANAGEMENT

Many strategies to improve compliance have been

suggested in studies. Settzer et al found improved compliance in a controlled study of a psycho-educational therapy[69]. Other studies by Eckman et al on an intensive, comprehensive, behaviorally oriented program on how to manage drug treatment also showed similar result[70]. These studies are limited to long term effect on compliance. Compliance therapy is a prognostic method for improving compliance with drug treatment in psychotic inpatients and its gains persist for at least six months. Over all functioning may also be enhanced. Multiple studies conducted by Roisin Kemp suggested that compliance therapy improves insight, attitudes to illness and treatment and medication compliance in psychotic patients. The intervention employs a collaborative approach with patients and draws from the principle of motivational interviewing as well as cognitive technique in current use with psychotic patients.

Study by Kemp et al, showed the effectiveness of compliance therapy in improving functioning and community tenure after an acute psychotic episode. They emphasized compliance therapy is a pragmatic intervention which is acceptable to patients and easily applicable to the typically busy clinical settings[71]. Survival of community tenure prior to readmission was improved after the intervention. This intervention systematically reviews the patient's unique experience of treatment and considers the benefits and drawbacks of treatment for that individual. Roisin Kemp et al concluded compliance therapy is a pragmatic method for improving insight[4].

Clinicians are interested in insight because of its key influence on several clinical aspects of outcome. insight is found to be an important part of psychosis, from psychopathology view, understanding and evaluating disease as well as for management. Various methods or scales have been developed to assess insight. Various studies confirmed a relationship between lack of insight and poor treatment adherence. Poor insight is related to involuntary admission, violence and positive symptoms. Recognition of need for treatment is associated with reduced rehospitlization rates. Therefore many treatment modalities are in use for management of insight as cognitive behaviour therapy, Psycho-educational Therapy, Psychoanalytically oriented Psychotherapy and Compliance Therapy. However, having poor insight may not be altogether negative because a considerable body of literature has found association between insight and depression.

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