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Review article

Impaired insight and its implications in Schizophrenia

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Summary

In Psychiatry insight refers to the conscious awareness and understanding of one's own psychodynamics and symptoms of maladaptive behavior, highly important in effecting changes in the personality and behavior of a person. Impaired insight into illness is common. It has direct or indirect impacts on almost all phases of the diagnosis and treatment protocols. Not surprisingly, there is scarcity of summarized outline of evidence based importance of insight in psychiatry. This article aimed at fulfilling this scarcity. For this purpose, thirty articles were selected through searching internet and reviewed. This article reviews recent research related to impaired insight in major mental illness and its consequences for cognitive, behavioral, legal, and treatment compliance issues affecting this population. It discusses efforts to find the neurobiological basis for lack of insight and the various structures or circuits of the brain that have been implicated in schizophrenia. In the search for a more reliable and valid measure of insight for treatment decisions, the development of various assessment instruments is summarized. Impaired insight is shown to be related to a poorer course of the illness and noncompliance with necessary treatment in schizophrenia. The implications of these findings for treatment decisions, legal interventions, and ongoing treatment monitoring are discussed.

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Introduction

Lack of insight into illness (clinical insight) is recognized as a multidimensional construct that exists on a continuum, that is consists of four core domains: awareness of having a serious mental illness; awareness and attribution of symptoms to the illness; acceptance of the need for treatment and awareness of the social, occupational or other negative consequences (i.e. hospitalization, legal issues, etc.) of the illness[1].The current study explored the self-experience of persons with Serious Mental Illness (SMI) by investigating the associations between different insight and self-stigma clusters, self-clarity, hope, recovery, and functioning. One hundred seven persons diagnosed with a SMI were administered six scales: self-concept clarity, self-stigma, insight into the illness, hope, recovery, and functioning.[2] As obstacles to involuntary treatment for serious mental illness have increased over the years, so have the number of disheveled, mentally ill, homeless people on our streets (estimated as more than 150,000 nationwide) and the number of incarcerated people with mental illness in our jails and prisons also increased.[3,4] Among the patients with major mental illnesses for whom involuntary treatment decisions are often required because they lack insight about their illness, the two diagnoses most frequently encountered are schizophrenia and bipolar affective disorder.[5,6,7]

Impaired insight is shown to be related to a poorer course of the illness and noncompliance in schizophrenia, so assessment of insight has become a burning issue. This article aimed to summarize the implications of these findings for better treatment decisions, functional outcome, compliance to drug and better prognosis of schizophrenia.

Methodology

Study documents were identified through searching Google Scholar and Pub Med. Used searching keys were mainly Impaired insight in schizophrenia and then search was done using management of different types of implications of impaired insight in schizophrenia separately, The purpose of the review was to summarize the key findings of the impaired insight and their implication in diagnosis, treatment and prognosis of schizophrenia. So, full free articles focusing only on implication of impaired insight in psychiatric diseases, both original and review type, were included. Thus, total 30 articles were finally selected among 45 primarily selected articles and findings were summarized after reviewing.

Discussion and Findings

Insight

Insight is generally defined as an abstract concept that involves a clear grasp or understanding of meaningful relationships within a situation. When used in the context of severe psychiatric disorders such as schizophrenia, it relates to the individual's understanding of his or her illness or the motivation underlying the individual's own behavior. [5,8]

Etiology

Deficits in insight have implications for numerous clinical inpatient hospitalization issues, including the decision to hospitalize a patient voluntarily or involuntarily in the first place. Other insight-related issues include adherence to treatment after discharge, guardianship or capacity assessments, readiness for discharge decisions, the choice of oral medications versus long-acting depot medication, recommendations for placement in a structured setting after discharge, and the referral of patients to appropriate psychotherapy on hospital discharge.

The etiology of lack of insight has been variously conceptualized as:

- Stemming from neuropsychological (brain) deficits
- Part of the primary psychiatric illness itself
- A form of defensive denial protecting the patient against the distress of awareness of illness

Regardless of the theoretical model—and it is likely that all apply in different circumstances—the assessment of insight should be detailed and well documented in the clinical record.[9]

Grades of insight: 5 grades of insight

1. Complete denial of illness 2. Slight awareness of being sick and needing help but denying it at the same time 3. Awareness of being sick but blaming it on others, on external events, on medical or unknown organic factors 4. Intellectual Insight is admission of illness and recognition that symptoms or failures in social judgment are due to irrational feelings or disturbances; without applying that knowledge to future experiences 5. True Emotional Insight is the emotional awareness of the motives and feelings within, of the underlying meaning of symptoms; and whether this awareness leads to changes in personality and future behaviour, openness to new ideas and concepts about self 6. Impaired Insight means diminished ability to understand the objective reality of a situation. A person with very poor recognition or acknowledgement is referred to as having 'poor insight' or 'lack of insight'. The most extreme form is 'Anosognosia' that is the total absence of insight into one's mental illness.[10]

Neurobiological Basis of Impaired Insight in Schizophrenia

Awareness of mental illness and social judgment to neuropsychological tests showing decreased functioning of the prefrontal lobes and the right and left parietal lobes of the brain. Other researchers have proposed that the basal ganglia, structures of the inner brain, may be centrally involved in the dysfunctional neural circuits found in schizophrenia.[11] These structures are believed to be involved in "habit learning" and may build up cognitive patterns for the development of self-awareness (identity), may influence one's perception of reality, may result in abnormal cognitive experiences and, through inability to sort out reality from hallucinations, may lead to an inability to separate self from other.[12] Impaired insight into illness (clinical insight) in schizophrenia has negative effects on treatment adherence and clinical outcomes. Based on our previous research, which showed that impaired insight into illness was associated with increased left hemisphere volume relative to right.[13]

Lack of Insight has been correlated with

Worse outcomes, More admissions, Worse Psycho-social functioning, Reduced success rates in outpatient treatment of relapses, Longer intervals between onset of symptoms and seeking treatment.[14]

Consequences of Impaired Insight

When ill, patients with schizophrenia are unable to screen out irrelevant information and integrate relevant information needed to make a decision. For some persons these deficits occur primarily during a period of decompensation and relapse. However, for many people with mental illnesses such as schizophrenia, the deficits exist to some degree even when stabilized on medication[5,8,15] These deficits will inevitably impact their insight and ability to make logical and constructive decisions, and this viewpoint has been widely supported by clinical experience as well as research.[5,8,15,16,17]

Frequency of Impaired Insight in Schizophrenia

Impaired insight is a very common symptom of schizophrenia. In reviewing two large multinational studies on the major symptoms of schizophrenia, researchers found that lack of insight was the most frequently present symptom of schizophrenia, occurring in 89 percent of patients in one study and in 81 percent of patients in the second study.[8] More recent efforts have used a variety of assessment instruments to provide increasingly valid measures of insight. Using the Scale to Assess Unawareness of Mental Disorder (SUMD) developed to measure insight, another study has assessed 412 inpatients diagnosed with schizophrenia and report that 57.[4] Percent of these patients demonstrated a moderate to severe lack of awareness of having a mental disorder, 31.[5] percent had a severe unawareness of the social consequences of mental disorder and 21.[7] percent had a severe unawareness of the efficacy of medication.[14,18] SKQ results and the severity of patients' psychopathology in this study,[11] although such a relationship was seen between the ITAQ and severity of illness in their earlier study.[19] Another study has also found that impaired insight was a frequent deficit in schizophrenia and reported that 74 percent of long-term schizophrenic patients believed that their treatment was unnecessary because they were not psychiatrically ill.[20]

Assessment of Insight

Several studies have shown a positive relationship between insight and both treatment compliance and outcome, consistent and valid measures are needed to help clinicians assess insight and make more appropriate treatment decisions. As described above, insight has been assessed through a variety of brief scales based on semistructured interviews that allow the clinician to rate different aspects of insight on a continuum, including the SUMD, the ITAQ, the SKQ and other brief questionnaire.[11,14,18,19,24,25] These approaches have provided more valid and reliable assessments of the individual's insight and ability to comply with treatment recommendations, as well as a means to correlate these measures withboth neuropsychological measures

and outcome variables. Another approach to assessing insighthas used patients' ratings of how similar describing patients with classic symptoms of schizophrenia and bipolar disorder.[23,26,27] The results revealed that at time of hospitalization, in contrast to the ratings of their clinicians and unlike those with bipolar disorder, patients with schizophrenia showed less awareness of their positive symptoms of mental illness such as conceptual disorganization.[21,26] The recent study by Startup in contrast, suggested that patients with schizophrenia who had poor insight were able to recognize the psychotic symptoms in others as being related to mental illness, but were unable to identify the symptoms as indicative of their own mental illness.[27] With few exceptions, the majority of studies indicate that insight is negatively correlated with illness severity and chronicity.[22,23,25,28,29] Schizophrenic patients with good insight showed greater improvement after long-term hospitalization; those with poor insight were more frequently rehospitalized.[23]

Implications for Treatment

Several of the studies mentioned above indicate that impaired insight is a neuropsychological deficit that is persistent throughout the illness for a large percentage of people with schizophrenia, even for those who have been stable and maintained in the community with residential supervision. These findings suggest three necessary aspects of treatment. First, intensive case management programs are necessary for a large proportion of these individuals, to include careful ongoing monitoring, closer supervision of medication compliance, and objective assessment of their symptoms and abilities to cope with daily demands. Second, continuous patient education should be a basic part of any treatment plans, so as to improve compliance for those who are able to understand the factors that cause their symptoms and how to be constructively involved in their own treatment. Third supplemental information from significant others is needed for deciding issues of future voluntary versus involuntary treatment, especially for those with a past history of noncompliance. Finally, even with these steps, there will be a significant proportion of patients who lack the insight and understanding of their illness that is needed to comply with necessary, appropriate treatment. Rather than condemning this group to frequent re hospitalizations, deterioration of mental and physical health, homelessness, and incarceration, these patients can be identified with present screening methods and closely monitored. When their noncompliance is demonstrated to result in the above negative consequences, the humane action is to take legal and therapeutic steps to provide coerced and supervised treatment that will prevent their decompensation. A modification of some treatment and commitment laws are essential to accomplish this goal.[30]

Insight and quality of life

A study has pointed that greater sense of emotional wellbeing being was associated with awareness into need for the treatment. A recent study published in this area suggested that increasing the hope of persons with schizophrenia may directly and positively increase both their quality of life and the usefulness of their insight into their illness.[31]

Insight and functional outcome

Most of the studies of insight and functional outcome in schizophrenia have focused on general level of functioning whereas others concentrated on specific aspects like work and social functioning. A Study held in Chennai, India, compared insight in 183 schizophrenia patients who had received treatment with 143 who were never treated (and had less insight). Different variables correlated with insight in the two groups, even after multivariate modeling. The authors argued that this was because treatment improved insight, except in an"unmasked" group of refractory illnesses, with absence of insight in effect being a negative symptom. Thus, the group with poor insight would have a very poor prognosis because their illness itself differed.[32] A recent study has found that awareness among schizophrenia subjects of their social behavioral problems is affected by their cognitive capacity and this applies not only to current behaviors but also to the retrospective estimation of their behaviors in the social domain.[33] A very recent publication from Spain, which measured insight, treatment compliance and functioning longitudinally, found that poor insight correlates with symptom severity and global functioning but also has some trait value for schizophrenia, which is apparent once acute psychotic symptomatology is not prominent.[34]

General interventions to maximize compliance

Conduct an assessment of compliance history and risk factors, including substance abuse and financial or other practical barriers, as part of the evaluation of every patient. Allow sufficient time to know the patient as a person and to understand his or her personal goals, concerns, and psychodynamic issues. Use a negotiated approach to medication. Create a therapeutic environment where deviation from recommendations can be discussed openly, rather than concealed. Show an interest in medication by asking in a nonauthoritarian manner how much is being taken and the effects. Involve the patient in medication treatment by allowing self-regulation of dosage, if possible. Maximize efficacy and minimize side effects in choosing agents and dosages. Attend seriously to all side effects and actively elicit and respond to concerns. Educate patient and family regarding the biological underpinnings of illness, relapse prevention, and medication side effects. Enlist support in the community, including family, friends, and employers. If needed, arrange for supervised medication administration. Employ cognitive and memory-enhancing strategies if disorganization or forgetfulness is a problem. When the patient is rendered incompetent because of illness, be prepared to recommend judicial intervention. If the patient will not comply and is competent, manage countertransference to allow for a continued relationship and the possibility of future treatment. Promote the patient's participation in activities that can compete with psychosis as sources of gratification and self-esteem.[35]

Therapy for improving insight

A study has proposed a brief pragmatic psychological intervention, namely compliance therapy aimed at improving insight, attitudes to illness and treatment, and medication compliance in acutely psychotic patients. The intervention employs a collaborative approach with patients, and draws from the principles of motivational interviewing as well as cognitive techniques.[36] Another study has found that one of the factors related to insight and compliance prior to discharge was whether or not compliance therapy was given.[37] In a review of cognitive behaviour therapy for schizophrenia a researcher has found that short insight focused CBT demonstrated significantly greater improvement in insight into compliance with treatment and ability to relabel their psychotic symptoms as pathological.[38] Moreover, the efficacy of cognitive behavior therapy for improving medication adherence seems to be more promising than that of traditional individual psychoeducation approaches, which have been consistently disappointing in their failure to show adherence benefits.[39]

Conclusion

Lack of insight in schizophrenia is universal. In recent years, there has been a surge of research into the conceptualization and assessment of insight in schizophrenic patients. However, these studies have yielded inconsistent results. Neurobiology of insight in schizophrenia is still poorly understood. A precise definition and assessment of insight and insight dimensions is a necessary precondition for conclusive insight research. Very few studies were originally designed to investigate the role of insight in schizophrenia. Different dimensions of insight are probably related to different aspects of outcome, and this needs to be reflected in the study planning phase. Psychiatrists would assess and treat patients more accurately as well as enhance patient's adherence to treatment if they had an accurate understanding of insight. The concept of insight has stimulated research into difficult theoretical and practical areas such as self-awareness and treatment compliance, respectively. Despite several methodological limitations, this work gives a brief summarized format of the current state of evidence based treatment approaches from a practical perspective and can therefore be seen as an important and helpful paper for further research as well as for day to day clinical practice in particular.

Conflict of interest

None

References

1. David AS. Insight and psychosis. Br J Psychiatry 1990; 156(6) : 798-808.

2. Hasson-Ohayon I, Mashiach-Eizenberg M, Lysaker PH, Roe D. Self-clarity and different clusters of insight and self-stigma in mental illness. Psychiatry Res 2016; 240 : 308-13.

3. Torrey EF. Out of the shadows: confronting America's mental illness crises. New York: John Wiley and Sons; 1997 .

4. Husted JR, Nehemkis A. Civil commitment viewed from three perspectives: professional, family and police. Bull Am Acad Psychiatry Law 1995; 23(4) : 533-46.

5. Keefe RSE, Harvey PD. Understanding schizophrenia. New York: Free Press; 1994.

6. Goodwin FK, Jamison KR. Manic depressive illness. 2nd ed. New York: Oxford University Press; 1990.

7. Torrey EF. Surviving schizophrenia. 3 rd ed. New York: Harper Perennial; 1995.

8. Amador XF, Strauss DH, Yale SA, Gortnan JM. Awareness of illness in schizophrenia. Schizo phr Bull 1991; 17(1) : 113-32.

9. Cooke MA, Peters ER, Kuipers E, Kumari V. Disease, deficit or denial? Models of poor insight in psychosis. Acta Psychiatr Scand 2005; 112 : 4-17.

10. Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Comprehensive Textbook of Psychiatry. 9th ed. Philadelphia: Lippincott Williams and Wilkins 2009; 907-18.

11. McEvoy JP, Hartman M, Gottlieb D, Godwin S, Apperson LJ, Wilson W. Common sense, insight and neuropsychological test performance in schizophrenia patients. Schizophr Bull 1996; 22(4) : 635-41.

12. Graybiel AM. The basal ganglia and cognitive pattern generators. Schizophr Bull 1997; 23(3) : 459- 69.

13. Gerretsen P, Menon M, Mamo DC, Fervaha G, Remington G, Pollock BG, Graff-Guerrero A, et al. Impaired insight into illness and cognitive insight in schizophrenia spectrum disorders: resting state functional connectivity. Schizophr Res 2014; 160 : 43-50.

14. Amador XF, Strauss DH, Yale SA, Flaum MM, Endicott J, Gorman JM. Assessment of insight in psychosis. Am J Psychiatry 1993; 150(6) : 873-9.

15. Andreason NC. Brain function in schizophrenia: application of neurobiological studies, in schizophrenia: from Mind to Molecule. Washington, DC: American Psychiatric Press; 1994.

16. Bogerts B. The temporolimbic system theory of positive schizophrenic symptoms. Schizo phr Bull 1997; 23(3) : 423-35.

17. Morice R, Delahunty A. Frontal/executive impairments in schizophrenia. Schizophr Bull 1996; 22(1) : 125-37.

18. Amador XF, Flaum M, Andreasen NC, Strauss DH, Yale SA, Clark SC, et al. Awareness of illness in schizophrenia and schizoaffective and mood disorders. Arch Gen Psychiatry 1994; 51(10) : 826-36.

19. McEvoy JP, Applebaum PS, Apperson LJ, Geller JL, Freter S. Why must some schizophrenic patients be involuntarily committed? The role of insight. Compr Psychiatry 1989; 30(1) : 13-7.

20. MacPherson R, Jerrom B, Hughes A. Relationship between insight, educational background and cognition in schizophrenia. Br J Psychiatry 1996; 168(6) : 718-22.

21. Swanson CL Jr, Freudenreich O, McEvoy JP, Nelson L, Kamaraju L, Wilson W. Insight in schizo phrenia and mania. J Nerv Ment Dis 1995; 183(12) : 752-5.

22. Kasper JA, Hoge SK, Feucht-Haviar T, CortinaJ, Cohen B. Prospective study of patients' refus al of antipsychotic medication under a physician discretion review procedure. Am J Psychia try 1997; 154(4) : 483-9.

23. Schwartz HI, Vingiano W, Perez CB. Autonomy and the right to refuse treatment: patients' attitudes after involuntary medication. Hosp Community psychiatry 1988; 39(10) : 1049-54.

24. Dickerson FB, Boronow JJ, Ringel N, Parente F. Lack of insight among outpatients with schizophrenia. Psychiatr Serv 1997; 48(2) : 195-9.

25. Schwartz-RCC, Ohen BN, Grubaugh A. Does insight affect long-term treatment outcome in chronic schizophrenia? Comp Psychiatry 1997; 38(5) : 283-8.

26. McEvoy JP, Schooler NR, Friedman E, Stein-gard S, Allen M. Use of psychopathology vignettes by patients with schizophrenia or schizoaffective disorder and by mental health professionals to judge patients' insight. Am J Psychiatry 1993; 150(11) : 1649-53.

27. Startup M. Awareness of own and others' schizophrenic illness. Schizophr Res 1997; 26(2-3) : 203-11.

28. Kent S, Yellowlees P. Psychiatric and social reasons for frequent rehospitalization. Hosp Community Psychiatry 1994; 45(4) : 347-50.

29. Fenton WS, Blyler CR, Heinssen RK. Determinants of medication compliance in schizophre nia :empirical and clinical findings. Schizophr Bull 1997;23(4):637-51.

30. Husted RJ. Insight in severe mental illness: Implications for Treatment decisions. J Am Acad Psychiatry Law 1999; 27(1) : 33-49.

31. Hasson-Ohayon I, Kravetz S, Meir T, Rozencwaig S. Insight into severe mental illness, hope, and quality of life of persons with schizophrenia and schizoaffective disorders. Psychiatry Res 2009; 167(3) : 231-8.

32. Tirupati S, Padmavati R, Thara R, McCreadie RG. Insight and psychopathology in never-treated schizophrenia. Compr Psychiatry 2007; 48(3) : 264-8.

33. Yoshizumi M, Hirao K, Ueda K, Murai T. Insight in social behavioral dysfunction in schizo phrenia: Preliminary study. Psychiatry Clin Neurosci 2008; 62(6) : 669-76.

34. Parellada M, Fraguas D, Bombin I, Otero S, Castro Fornieles J, Baeza I, et al. Insight correlates in childand adolescent-onset first episodes of psychosis: results from the CAFEPS study. Psychol Med 2009; 39(9) : 1433-45.

35. Fenton WS, Blyler CR, Heinssen RK. Determinants of Medication Compliance in Schizophrenia: Empirical and Clinical Findings. Schizophr Bull 1997; 23(4) : 637-51.

36. Kemp R, Hayward P, Applewhaite G, Everitt B, David A. Compliance therapy in psychotic patients: randomised controlled trial. BMJ 1996; 312(7027) : 345-9.

37. Kemp R, David A. Psychological predictors of insight and compliance in psychotic patients. Br J Psychiatry 1996;169(4) : 444-50.

38. Rathod S, Turkington D. Cognitive-behaviour therapy for schizophrenia: a review. Curr Opin Psychiatry 2005; 18(2) : 159-63.

39. Zygmunt A, Olfson M, Boyer CA, Mechanic D. Interventions to improve medication adherence in schizophrenia. Am J Psychiatry 2002; 159(10) : 1653-64.