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The Multiple Dimensions of Insight in Schizophrenia-Spectrum Disorders

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The concept of insight is used to indicate the propensity of patients with schizophrenia and other severe mental disorders to recognize their illness and engage in treatment. Thus, insight may have notable consequences for the ill individual: Those who lack insight are at higher risk of nonadherence to treatments, negative clinical outcomes, and worse community functioning. Although insight is an intuitive concept, its essence remains difficult to capture. However, many rating scales are available to aid assessment, both for clinical and research purposes. Insight cannot be reduced to a symptom, a psychological mechanism, or a neuropsychological function. It is likely to have dynamic relationships with all these dimensions and with responses to personal events and contextual factors. In particular, social consequences of mental illness and explanatory models that are alternative to the medical model may fundamentally shape insight and treatment choice. Moreover, the cultural or individual stigmatization of mental illness may turn the acquisition of insight into a painful event and increase the risk of depression. Clinicians need to carefully evaluate and promote insight through a personalized approach to aid patient process of care and personal growth.

Key words: schizophrenia/insight/stigma/depression/adherence/social cognition

What Is Insight?

In the common language, the term "insight" refers to "*the capacity to gain an accurate and deep understanding of someone or something*." In the psychiatric jargon, however, the term indicates the "*awareness of a mentally ill person that his/her experiences are not based on external reality*."[1] In clinical practice, "insight" is used to indicate the ability of an individual to critically elaborate on his/her mental disorder and, by extension, the propensity to engage in treatment. Generally, the study of insight pertains to individuals having schizophrenia or other psychotic disorders, which are characterized by distorted contact with reality.

Although insight is a fairly intuitive concept to grasp, it eludes a precise definition. Moreover, its definition has undergone profound changes as a result of the integration of different points of view. Traditionally, the lack of insight was variously regarded as an intrinsic symptom of the disorder, a neuropsychological deficit, or a psychological defense.[2] More recently, the impact of social and cultural aspects has been also acknowledged,[3,4] and it has become widely accepted that insight is multi-determined.[5,6] This review aims to provide a concise, nontechnical overview of the concept of insight, its development, as well as its correlates and assessment.

The ongoing debate around insight not only has theoretical implications, it is, first and foremost, of clinical utility. It is estimated that about half of patients having schizophrenia lack insight, but what are the consequences of this lack? The need to improve patient insight is widely agreed upon, but *how* can we achieve this goal?

Why Is Insight Important?

Insight may influence the outcomes of patients with schizophrenia and other psychoses.[7] With regard to schizophrenia, individuals with lower levels of insight have a poorer prognosis in terms of quality of life, social relationships, work, or vocational outcomes across different countries.[6,8–11] Intuitively this would largely depend on the refusal of treatment that leads to increased likelihood of relapses.[12] However, some patients who deny their illness may nonetheless accept treatment or hospitalization. Conversely, patients with good levels of insight may not adhere to prescriptions for various reasons,[13–15] including the preference for alternative care.[16,17] The link between insight and adherence to antipsychotics is stronger in

the months after discharge and decreases with time. Subsequently, patients may discontinue medications if they experience side effects, engage in illicit drug use, or perceive a decreased risk of relapse, regardless of insight.[18] Nevertheless, insight and positive attitudes toward medications are still important factors that predict adherence to antipsychotics.[18,19] Interestingly, insight may also be involved in the uptake of psychotherapy.[20] Overall, it is necessary but not sufficient to ensure adherence to medications[18,19] and engagement with mental health services.[21]

Another supposed consequence of poor insight is increased aggressive behavior. Research findings on this issue are not entirely consistent.[18,22] Uncertainty may depend not only on difficulties in obtaining reliable information on violent behaviors[22,23] but also on cross-cultural variations in both insight and violence.[24] The link between insight and aggressive behavior seems stronger in forensic populations[12] in the presence of psychopathic traits or severe positive symptoms.[25]

The Assessment of Insight

Many definitions of insight have been proposed, with varying degrees of complexity.[5] Since the development of the Insight and Treatment Attitude Questionnaire by McEvoy et al,[26] various assessment tools have been proposed accordingly, prompting evidence-based research.[18]

Rating scales are more frequently administered by clinicians than compiled by patients, given that the judgment of the clinician is expected to diverge from that of the patient.[18] Instruments may be mono- or multi-dimensional, meaning they can rate single or multiple dimensions of insight. Table 1 reports a list of commonly used rating scales, drawn from a recent review.[27] Two aspects are covered most frequently: The awareness of having a mental disorder, meaning how convinced a subject is that he/she is ill, and the recognition of treatment need. The most widely used mono-dimensional rating is the G12 item of the Positive and Negative Syndrome Scale (PANSS).[28] This item, however, rates the levels of both insight and *judgment*. Judgment is crucial to clinical practice but not entirely pertinent to insight, making the PANSS G12 item a less specific measure. By contrast, an important ad hoc scale is the Schedule for the Assessment of Insight (SAI).[29] The SAI examines (1) the ability to label certain mental events as pathological, (2) the subject's recognition that he/she has a mental disorder, and (3) acceptance of treatment. A later expanded version also rates the awareness of adverse consequences of the illness, as well as the awareness of 4 symptoms.[30] Like the SAI, the Birchwood Insight Scale[31] encompasses 3 domains of insight but it is one of the few self-administered instruments available. Patients are asked if they endorse 8 statements that pertain to the awareness of the illness, the awareness of treatment need, and the relabeling of symptoms. The Scale to Assess Unawareness of Mental Disorder (SUMD), another widespread assessment tool,[32] includes the following aspects, in addition to those described earlier: (1) distinct ratings for symptom awareness and *attribution* (the recognition of symptoms as part of an illness and the explanations on their nature, respectively), (2) several ratings of insight for individual symptoms, and (3) distinct ratings for insight of current and past symptoms.[32] The SUMD prompted a comprehensive assessment of

Table 1. Overview of Common Tools for Assessing Insight

Instrument	Domains	No. of Items
PANSS item G12 (lack of judgment and insight)	Unidimensional, but rating is based on (1) nonrecognition of past or present psychiatric illness or symptoms; (2) denial of need for psychiatric hospitalization or treatment; (3) decisions characterized by poor anticipation of consequences, and unrealistic short-term and long-range planning	1
ITAQ	(1) Recognition of mental illness; (2) need for hospitalization; (3) need to take medications	11
SAI, SAI-E	(1) Awareness and relabeling of symptoms; (2) awareness of illness; (3) treatment compliance	8 (original version), 12 (expanded version)
SUMD	(1) Insight into mental disorder; (2) insight into need for treatment; (3) insight into social consequences; (4) insight into presence of symptoms; (5) insight into attribution of symptoms	74
BIS	(1) Awareness of illness; (2) awareness of need for treatment; (3) relabeling of symptoms	8 (self-report)
BCIS	(1) Self-reflectiveness (expression of introspection and willingness to acknowledge fallibility); (2) self-certainty (certainty about beliefs or judgments)	15 (self-report)

Note: PANSS, Positive and Negative Syndrome Scale; ITAQ, Insight and Treatment Attitudes Questionnaire; SAI-E, Schedule for the Assessment of Insight, Expanded version; SUMD, Scale to Assess Unawareness of Mental Disorder; BIS, Birchwood Insight Scale; BCIS, Beck Cognitive Insight Schedule. All instruments are intended to rate clinical insight, except for the BCIS which is intended to measure cognitive insight. For a more in-depth description, see the review by Lincoln and colleagues.[18]

insight, but its length makes it impractical for everyday clinical use.[33] Finally, research has recently seen the formulation of cognitive insight, which is assessed by the Beck Cognitive Insight Scale.[34] Cognitive insight essentially refers to flexibility in thinking, which is deemed to constitute the basis of clinical insight. The lack of cognitive insight implies the inability to put experiences into perspective, overconfidence in judgments, and the inability to correct cognitive distortions with the help of others.[35] Several of these scales have been translated for use in non-English-speaking populations, although precise instructions on how to deal with cultural factors are lacking.[3]

The Elephant in the Room: Social, Cultural, and Cross-cultural Points of View

Insight and its assessment are irremediably permeated by social and cultural factors. However, lack of insight does not merely depend on insufficient education.[36] Providing patients with notions on mental illness through psychoeducation may increase adherence but does not necessarily improve insight.[37,38] Indeed, the understanding of an illness emerges from a complex mixture of cultural background and personal experiences, beliefs and expectations that are collectively termed "explanatory model."[3] For instance, in a landmark study explanatory models of schizophrenia held by Western-acculturated patients more often involved medical or psychosocial factors, whereas immigrants relied more frequently on spiritual factors (possession, spells) or traumatic events.[39] Notably, alternative explanations do not necessarily exclude the willingness to engage in treatment[11,16,40] and people (with or without psychosis) have been shown to hold different, contradictory explanatory models simultaneously.[3,11,41]

The evaluation of insight must also weigh the implications of mental diagnoses in the social context. Negative stereotypes of mental disorders, discrimination, and social inequity are still widespread in both high- and low-income countries.[42] Stigmatization leads people to reject diagnoses and refuse treatment, even when they are aware of their symptoms.[13,43,44] Even in times of easy access to information, the lay public remains generally prejudiced against individuals with psychosis, which highlights the need for strategies to reduce stigmatization.[42,45,46]

The cultural background of the clinician is also important in the evaluation, or rather, the "negotiation" of insight with the patient.[39] Several authors contend that modern psychiatry is too heavily rooted in the medical–scientific model[47] and, particularly in the "Western" world,[48] psychiatrists pay insufficient attention to cultural, spiritual, and social factors.[39,43,49] However, it has been argued that clinicians during their everyday clinical work may simply adopt implicit, pragmatic models that shift according to the needs of the particular consultation.[50] To avoid the risk to underestimate patient insight, its assessment should be based on the individual's cultural standards rather than on disciplinary notions.[48,51,52] Particular efforts must therefore be made to facilitate communication between patients and clinicians from different cultural backgrounds.[53]

What Is the Time Course of Insight and Its Relationship With Psychopathology?

Insight should not be considered as a stable feature of the individual. In schizophrenia, insight seems more impaired during the first episode of illness, then improves in midlife, but declines again in older age.[54] Marked variations have also been observed over shorter periods. Several patients acquire insight after the resolution of the acute psychotic phase, possibly as an effect of medications,[55,56] psychosocial interventions,[57] or coping with the consequences of the illness.[11] Of note, improvement in insight is at least partly related to changes in symptom severity.[58]

Several studies have examined the relationship between insight and psychotic symptoms, particularly in schizophrenia.[59] Not surprisingly, this relationship is inverse: Severe symptoms, such as delusions, are accompanied by lack of insight, or the inability to criticize such themes. The same inverse relationship has been found with regard to hallucinations, disorganization, and negative symptoms.[60] However, these associations are, on the whole, *weak*, meaning that other factors play an important role. The only symptom dimension that correlates *positively* (but again, weakly) with insight is depression.[27] This phenomenon has been described as the "insight paradox": The acquisition of insight should be beneficial to the patient, but *paradoxically* leads to another problem. The insight paradox is often related to "post-psychotic depression," a phase of recovery when patients develop feelings of shame and sadness as they acquire insight.[61] However, insight may be associated with improved self-esteem in later periods.[9] Again, it may be accompanied by demoralization and hopelessness among older patients with chronic disorders.[62] Finally, the relationship between insight and depression is shaped by external factors, including the tendency to stigmatize mental illness by the patient[62,63] or relatives,[64,65] expectations that treatment will be ineffective, insufficient engagement with mental health services, or low socioeconomic status.[66]

The existence of a link with depression prompts the question of whether good insight may increase the risk of suicide. Study results have been mostly negative, but, again, there may be complex effects due to the course of the illness.[67] Improvements in insight *after treatment* have been associated with a reduced risk of suicide, whereas subsequent reductions may have an opposite effect.[68,69] Because most suicides in schizophrenia occur during the first years of illness, young patients must be carefully monitored for insight, signs of depression—particularly hopelessness[70]— and communications related to suicide.[71] These findings suggest that the acquisition of insight is a

complex and delicate process that depends on individual clinical characteristics, personal history, and environmental circumstances.[37]

Does Insight Depend on Neurocognitive, Metacognitive, or Social-Cognitive Abilities?

Cognitive abilities have been investigated as constituents of insight. Research suggests that insight is more specifically related to memory and executive functions, rather than to global intelligence. However, the association is of modest strength, suggesting that intact neurocognitive abilities are a precondition for insight, rather than the essence of it.[72]

Insight also seems to be essentially related to higher-order thinking skills, namely metacognition and social-cognition. Although the exact boundaries between these constructs are difficult to define, metacognition traditionally includes the ability to reflect on one's own mental processes and form integrated ideas about the self, whereas social-cognition entails the mental processes underlying social relationships.[6,73,74] The relevance of these dimensions is clear if we consider that insight requires the capacity to shift back and forth from one's own perspective, to form integrated views of oneself and one's mental processes, and to trust and accept help from others.[74] Individuals who display greater metacognitive and social-cognitive abilities are more likely to give meaning to life events, including mental illness, and to construct integrated narrative accounts that form the basis of insight.[74] Consistently, interventions that tackle metacognitive abilities by means of a narrative, meaning-oriented approach have shown promising results in terms of improving awareness.[6,8,75,76]

Other Points of View: Psychoanalysis, Phenomenology, and Neuroscience

The psychoanalytic literature has formalized the concept of defense mechanisms, which ward off painful emotions stemming from awareness. Primitive defenses, such as denial or projection, are particularly implicated in reality distortion and delusions.[77] As such, lack of insight (ie, denial of the illness) would protect the individual from the painful awareness of being mentally ill. By definition these theories are difficult to test; nonetheless, a few studies have used questionnaires assessing "self-deception" to estimate the tendency to enact denial. In 1 of 2 such studies, greater self-deception was indeed associated with worse levels of insight.[78,79] In other studies, the coping style termed "sealing over" has been seen to characterize the tendency of individuals with low levels of insight to repress the awareness of their psychosis or to regard it as irrelevant.[80]

A radically different account of insight is found in the phenomenological literature. In this view, schizophrenia is characterized by alarming and alienating self-experiences such as an abnormal sense of the body, body ownership and agency, and a primary disturbance of the *structure of experience* (termed "basic self-world structure").[81] Thus, psychotic experiences are indistinguishable from real ones even in the presence of evident contradictions. Therefore, insight is regarded not as a problem of self-reflection, but rather as a consequence of the altered structure of experiencing.[82]

Finally, research has started to unravel the neurobiological basis of insight. Several brain areas have been found to subserve insight,[83] including the prefrontal and cingulate cortices, temporal and parietal lobes, the hippocampi, and cerebellum.[83,84] In particular, poor insight would emerge from impaired function of self-processing areas.[85] Finally, genetic research is also underway.[86]

Conclusions

Here, we provide a nontechnical, narrative overview on the nature, importance, and assessment of insight in schizophrenia-spectrum disorders. Insight is a key multidetermined clinical dimension, likely to influence both adherence to treatment and clinical outcomes. Although it eludes simple definitions, insight can be readily assessed with the aid of standardized rating instruments. However, particular attention must be paid to the patient's specific cultural, social, and personal background. Nonmedical explanatory models, social disadvantage, and stigmatization may hinder the recognition of mental disorders and the acceptance of treatment. Insight generally improves as symptoms abate during treatment but may lead to depression, shame, and hopelessness. In such cases, suicidal ideas should be thoroughly investigated.[71] Lack of insight has been traditionally viewed as a symptom, a cognitive deficit, or a defense mechanism, whereas modern accounts tend to point to impairments of metacognitive and social-cognitive abilities. These predisposing factors hinder patients' ability to make sense of their illness in a structured and narrative manner. By contrast, an integrated, culturally sensitive view of insight is paramount to promote awareness and personal growth in patients with severe psychotic disorders.[6,87,88]

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