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Poor Insight in Schizophrenia: *Overview and Impact on Medication Compliance*

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Overview

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, rather than a coping strategy. It may be comparable to the lack of awareness of neurological deficits seen in stroke, termed *anosognosia*. This symptom predisposes the individual to noncompliance with treatment and has been found to be predictive of ... an increased number of involuntary hospital admissions, poorer psychosocial functioning, and a poorer course of illness."¹

As co-chair of the last revision of the DSM text, I was asked to propose changes that would better reflect scientific consensus. Every change considered, including the expansion of the "Associated Features" section quoted in the preceding paragraph, had to be peer-reviewed by other scientists. In many instances, empiric articles and reviews had to be supplied to the reviewers. The expanded discussion of poor insight reflects scientific consensus in the field (as of 1999) that poor insight is common in schizophrenia,

is linked to executive (or frontal lobe) dysfunction and abnormalities, has a major impact on the course of the illness, and causes both partial and complete noncompliance. In this article, I describe the research that supports this statement and suggest ways in which we can counter one of the major problems caused by poor insight—partial and complete noncompliance with treatment.

What Is Insight?

Any review of the literature on insight requires a brief discussion of the terminology so that what is being discussed is clear. Descriptors such as "poor insight," "defensive denial," and "deficits in illness awareness"² often reflect important underlying conceptual differences in addition to semantic differences. For example, poor insight is understood as a psychological defense mechanism and also is conceptualized as a neurocognitive deficit. At the most fundamental level, poor insight in psychosis has been described as a lack of awareness of having an illness, of the deficits caused by the illness, the consequences of the disorder, and the need for treatment. In this article, terms such as "poor

insight" and "unawareness of illness" are used in this broadest sense unless specific aspects of insight, such as awareness of symptoms, are being described.

Prevalence

In the past 15 years, there has been an explosion of research into the problem of poor insight. Until recently, the lack of empiric methods and data, coupled with preconceptions about the causes of poor insight (ie, that it is always defensive denial), had hampered progress in this area. Despite these early misunderstandings, the topic has become increasingly important among researchers studying psychotic disorders. A MEDLINE search from 1998 through December 2005 in which the key words/terms "schizophrenia," "insight into illness," and "awareness of illness" were used revealed that 200 empiric studies of poor insight in schizophrenia have been published in the peer-reviewed scientific literature since 1991. Before that time, there were fewer than 10. Among those was a report by Carpenter and colleagues, from the World Health Organization International Pilot Study of Schizophrenia.³ They found that "poor insight" was among the 12 "most discriminating" symptoms for differentiating schizophrenia from other mental disorders. Wilson and colleagues found poor insight to be the most common symptom of schizophrenia, present in 81% of the sample studied.⁴ However, both studies used a simplistic (ie, dichotomous, single-item) rating of insight, which lacked reliability and likely overestimated the problem. Most studies using more psychometrically sound measures of insight find that approximately one half of patients with schizophrenia lack insight.

In a more recent study, completed as part of the *DSM-IV* field trials, more than 400 patients with psychotic disorders from 7 sites across the United States and 1 site in Mexico were examined⁵ and their insight measured with the Scale to assess Unawareness of Mental Disorder (SUMD),⁶ which captures different aspects of illness awareness. The SUMD rates insight on

a Likert scale rather than dichotomously; respondents were asked to specify their level of agreement with each of a list of statements—because it is believed that some patients can have a little insight. The team measured respondents' insight into having a mental illness and also their awareness of signs and symptoms. The results showed that nearly 60% of the patients with schizophrenia were unaware of being ill.

In clinical terms, when the patients enrolled in the study described in the preceding paragraph were asked whether they had any mental, psychiatric, or emotional problems, about one half answered "no." Usually, the negative response was emphatic and at times was followed by unusual explanations of why they were inpatients on a psychiatric ward. These ranged from "because my parents brought me here" to stranger beliefs, such as "I'm just here for a general physical." Whereas the majority of patients with depression and anxiety disorders actively seek treatment because they feel bad and want help, these individuals, by contrast, were unaware of having a serious mental illness. Unlike people with depression and anxiety, they never complained about having a mental illness because from their perspective, they did not have one. Indeed, their main complaint was usually feeling victimized by their family, friends, and doctors, who were pressuring them to accept treatment for an illness they believed they did not have.

Nearly 60% of the patients with schizophrenia and nearly 50% of the subjects with manic depression (with psychosis) were unaware of being ill.

In addition, a significant percentage of those studied were unaware of the various signs of the illness that had been diagnosed, despite the fact that everyone around them could read-

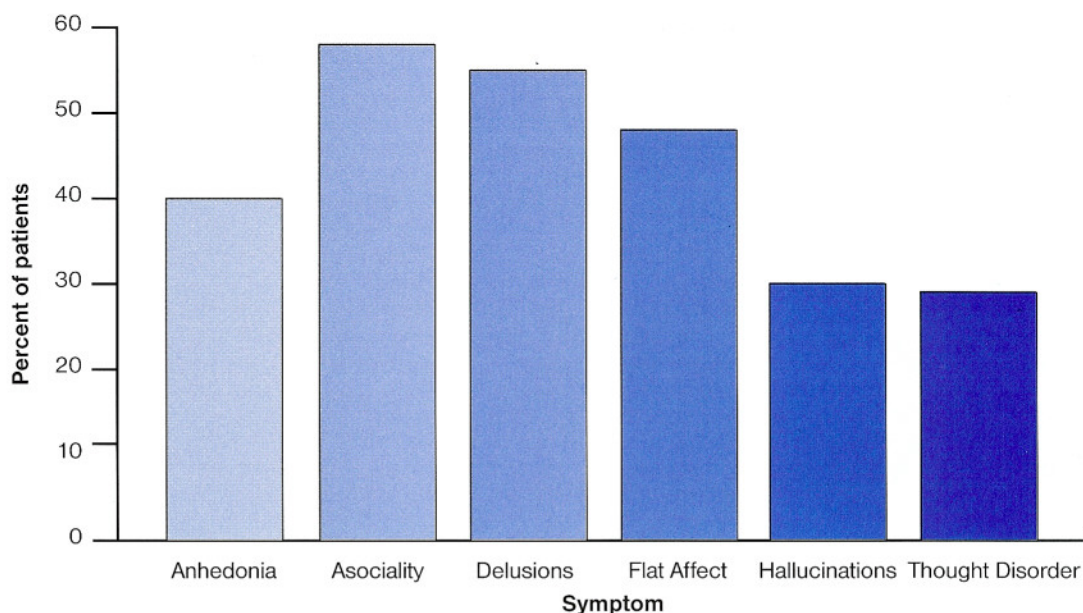


Figure. Percentage of patients with schizophrenia who were unaware of the signs and symptoms of their illness.⁵

ily recognize the symptoms (eg, thought disorder, mania, hallucinations). The pattern of pervasive unawareness of symptoms, shown in the Figure, was also found in all the other patients with a psychotic disorder whom we studied (except those with psychotic depression). This was the first time anyone had looked at this issue, so the team was surprised to learn that the problems with *illness awareness* did not stop at unawareness of a diagnosis. The unawareness we were documenting was severe and pervasive (ie, patients were unaware of their diagnosis and unable to see even the most obvious signs and symptoms of their illness).

In addition to being severe and pervasive, poor insight is consistently present in patients with schizophrenia, and like some negative symptoms, has a strong correlation with non-compliance and thus effectiveness of treatment.⁷ The fact that poor insight appears to be a trait of the disorder in many patients may help to further subtype patients with schizophrenia along a domain of psychopathology with strong predicative validity.^{7,8} In particular, my colleagues and I have proposed that severe and persistent unawareness of one's disease is a manifestation of the frontal lobe pathology that leads to significant problems with treatment adherence.

Etiology of Poor Insight

In my experience, many clinicians still believe that poor insight in schizophrenia is almost always a consequence of denial—a defensive coping strategy—or due to a lack of education about the illness (ie, the patient does not yet know the terms used to describe the illness and symptoms). In 1991, my colleagues and I hypothesized that poor insight shared an etiology with certain types of anosognosia in neurologic disorders.² Studies have looked at whether poor insight is best explained as due to denial, a lack of education about the illness, or neurocognitive deficit (ie, executive dysfunction). Studies conducted over the past decade clearly point to executive dysfunction rather than other causes as explaining severe and persistent lack of insight in schizophrenia. That does not mean that denial and psychoeducation are never relevant or clinically meaningful. However, these factors play a very small role in predicting poor insight in comparison with executive dysfunction.⁹

In the first study to test our hypothesis, Young et al¹⁰ found a significant correlation between unawareness of illness as measured by the SUMD and 2 variables on the Wisconsin Card Sorting Task (WCST), a neuropsychological test sensitive to frontal lobe dysfunction. The percentage of perseverative responses and number of categories completed on the WCST were found to significantly correlate with the total symptom awareness and total symptom attribution scores as measured by the SUMD. The researchers also classified the sample into high- and low-awareness groups and performed a discriminant function analysis to determine which of a set of variables most significantly distinguished between the high- and low-awareness groups. They found that a combination of perseverative errors and average symptom severity correctly categorized 83.9% of the high- and low-awareness groups. This study offered the first empiric support of our hypothesized relationship between poor insight and frontal lobe dysfunction. Studies that directly measured the relationship between poor insight and neuropsychological function have been comprehensively reviewed by Morgan and colleagues,¹¹ who determined that the overwhelming majority of studies testing this hypothesis have found significant relationships between measures of frontal function (in particular the WCST)

and measures of insight into illness.

The *DSM* text cited at the beginning of this article emphasizes that poor insight in schizophrenia is a *symptom of the disorder*. Today, there is widespread consensus in the field that schizophrenia is a biologically based brain disorder and that the symptoms of the illness (eg, delusions, negative symptoms) stem from brain dysfunction. More than 30 years of empiric research clearly characterize severe unawareness of illness in schizophrenia as a common feature of the disorder, and it is for this reason—as well as the studies finding correlations between unawareness and neuropsychological deficit—that one can state with confidence that severe and persistent unawareness of illness in schizophrenia is a symptom of schizophrenia. Furthermore, I believe that just as we label fixed, false beliefs that persist over time despite contradictory evidence as “delusions,” the time has come to label unawareness that is severe, persists over long periods of time, and is associated with cognitive deficits as anosognosia. Patients with such severe deficits in insight should be given a diagnosis of “anosognosia for schizophrenia” rather than “poor insight.”

Clinical Significance of Poor Insight

Poor insight is among the best predictors of nonadherence to treatment.¹² It is common sense really. Who would want to take medicine for an illness they did not believe they had? Not surprisingly, poor insight also predicts a poorer course of illness (eg, increased number of relapses and hospitalizations, and deteriorating work performance, social skills, quality of social relationships, and other measures of illness course and recovery). Whether these findings are a consequence of poor adherence (either complete and/or partial nonadherence) or a direct consequence of the underlying pathophysiology of anosognosia is unknown. What is well replicated, however, is that unawareness of illness is associated with a range of problems, not the least of which is nonadherence to medication.

Treatment Options To Improve Compliance

Very often clinicians are asked, “What medication is best?” The answer, if one relies on the research, is “none.” My experience and the science agree that we cannot reliably predict which medication will be best for any particular individual. When deciding on a specific medication, one needs to weigh—among other things—how well it is working against the side effects for that individual. In some instances, cost is also a deciding factor.

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That said, however, I do believe that certain generalizations can be made when it comes to choosing medications for people with a history of poor insight and compliance issues with

regard to taking their medication. In short, keep the dosing simple and make it easier for the person to continue taking the medicine.

It is far easier to monitor a patient's compliance when the medicine is taken biweekly or only once or twice a day than when it must be taken several times a day or more. And it is also easier for the person taking the medicine to remember and not succumb to an unconscious desire to skip a dose. The fewer the doses, the fewer the opportunities the person will have to consciously or unconsciously decide to skip a dose or simply to forget.

The problems that arise for patients, their caregivers, and the treatment team from such partial compliance can be more subtle, but no less significant, than what happens when the patients stop taking their medication completely. For one thing, if the doctor and family believe a patient is taking medication regularly and it does not appear to be working, they will assume it has been given a fair trial when that is far from the truth. I have seen many medications written off as ineffective for a particular individual because no one knew the person was missing many, but not all, doses. However, even if the medicine appears to have some—but not enough—benefit, the doctor may be afraid to raise a high dose even higher when, in fact, the patient is not taking the entire dose that was prescribed in the first place.

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Long-acting injectables are an effective method for reducing partial compliance or noncompliance. I often recommend a long-acting injectable drug, which not only makes it easier for the patient and easier for me to monitor compliance but also does away with other issues. For example, the person administering the dose does not have to ask the patient to open his or her mouth to prove that the pills have been swallowed. There is research that supports what I have learned from personal experience.¹³ This essential finding has been replicated numerous times.

As a final comment on the subject of medication, I would like to speak to a question I am frequently asked: *If anosognosia (poor insight) is a symptom of mental illness, like flat affect or hallucinations, can medications help?* Few studies have examined this question specifically. Generally, anosognosia, like other negative symptoms, appears to be resistant to drug treatment.

In Summary

Poor insight is common in schizophrenia. Approximately one half of all patients exhibit severe, pervasive, and persistent problems with insight. Psychoeducation does not remedy the problem because it stems from neuropsychological deficits. In such cases, I have proposed that the term "anosognosia for schizophrenia" be used instead of the broader term "poor insight." Anosognosia for schizophrenia results in a poorer course of illness and problems with treatment adherence. I have argued that when such patients are treated, simplification of dosing, increased supervision, and, if possible, long-acting injectable medications in preference to oral therapies are likely to be effective.

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