Anosognosia, also called lack of insight, is a symptom of SMI that prevents people from knowing that they are experiencing symptoms such as delusions or hallucinations and is the most common reason for not seeking or maintaining treatment among people with SMI. Early psychosis interventions, antipsychotic medications, some psychotherapeutic interventions, and tDCS may be effective at improving insight for some people with severe mental illness.

What is anosognosia?
When someone with severe mental illness insists that there is nothing wrong and as a result, refuses to accept treatment, it can be frustrating to caregivers and treatment providers who just want to see their loved one or patient avoid further deterioration and get well. However, research shows that an individual’s refusal to accept treatment is typically due to anosognosia, a debilitating symptom of severe mental illness.

Anosognosia, also called lack of insight, is a biological condition that prevents many people with severe mental illness from knowing that they have a mental illness. It is different from denial and defensiveness. People who are in denial about having a mental illness recognize that something about their mental state has changed but would not call this change an ‘illness’ and do not think treatment would help. Someone with anosognosia, on the other
[When patients] 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 people with depression and anxiety disorders actively seek treatment because they feel bad and want help, these people, by contrast, were unaware of having a serious mental illness – Dr. Xavier Amador, PhD

hand, typically has no idea that there has been any change or decline in their mental state, behavior or functioning. Anosognosia is thought to be the most common reason for treatment refusal and treatment drop-outs for people with severe mental illness.1

Anosognosia is estimated to be present to some extent in approximately 60% of people with schizophrenia and other psychotic disorders and 50% of people with bipolar disorder.2,3,4 Approximately 30% of people with schizophrenia and 20% of people with bipolar disorder have severe anosognosia with no awareness of their illness or symptoms.

While some people with anosognosia lack insight into having a mental illness at all, others may lack awareness only of specific symptoms. For example, while approximately 30% of people with schizophrenia had no awareness of having a disorder at all, 60% of people with schizophrenia had no awareness of their delusions, and 40% had no awareness of having hallucinations, according to one study.5 For some people, especially those with bipolar disorder, the level of insight someone has into their condition is likely to fluctuate over time.6,7

Causes of anosognosia in severe mental illness

Anosognosia was first discovered by physicians who noticed that after a traumatic brain injury or a stroke, some patients would become unable to recognize changes in their abilities, such as being unable to move one side of their body. Anosognosia can also occur in people with Alzheimer’s disease. Former president Ronald Reagan, for example, had full awareness of having Alzheimer’s disease at the onset of his illness and even publicly announced his diagnosis. However, as his symptoms became more severe, he lost awareness of having a disease and even became unable to recognize his family members.9 As with Alzheimer’s disease and traumatic brain injury, anosognosia in severe mental illness is thought to be caused by changes or differences in brain structure due to brain damage.

Our understanding of the relationship between anosognosia and various parts of the brain is still evolving. However, based on current research, there are several brain structures that may be related to anosognosia, including:
The frontal lobe

The frontal lobe is an important part of the brain for cognitive skills like memory, problem solving, and metacognition. Accordingly, damage to the frontal lobe may make it difficult for people with psychosis to make sense of their past symptoms and experiences, accurately compare their current abilities with what they could do in the past, and understand the beliefs of family members, friends, and care providers. Low insight into having an illness has been associated with smaller prefrontal grey matter volume in schizophrenia patients, higher frontal lobe dysfunction, and poor memory of autobiographical life events. In addition to smaller gray matter volume, people with schizophrenia and low insight also have less brain activity in areas of the prefrontal cortex.

The right hemisphere

Many studies have found a relationship between damage or decreased volume in the right hemisphere of the brain and anosognosia. This relationship between right hemisphere damage and anosognosia has been found in both stroke survivors and people with severe mental illness. Specific areas of the right hemisphere impacted include the inferior temporal lobe, the dorsal lateral prefrontal cortex, and the inferior parietal lobe.

Brain volume & gray matter

Gray matter, also called unmyelinated neurons, are cells that process information in the brain. People with schizophrenia and anosognosia have less gray matter than people with schizophrenia who do not have anosognosia. Smaller amounts of gray matter have been found in many areas of the brains of people with severe mental illness and anosognosia, such as the medial superior frontal gyrus, inferior frontal gyrus, inferior temporal gyrus, cerebellum, left posterior cingulate cortex, right precuneus, cuneus, left superior, left middle and right inferior temporal gyri, right inferior parietal lobule, right supramarginal gyrus, right anterior cingulate, left posterior cingulate, and inferior temporal region on both sides of the brain.

In addition to lower gray matter volume, people with anosognosia have been found to have smaller overall brain volume, smaller white matter volume, and smaller cortical thickness in many areas of the brain than people without anosognosia.
Other research has also shown associations between anosognosia and brain connectivity, hemispheric asymmetry, and impairments in midline brain structures, among others. Because of the biological and anatomical underpinnings of anosognosia, it is important to recognize that people who experience anosognosia cannot overcome it from willpower, nor can they be convinced that their delusions or hallucinations are not real. However, it is also important to note that in some people, anosognosia can improve with treatment.

**Treatment options for anosognosia**

**Interventions for early psychosis**

Anosognosia may be prevented or diminished by early, effective treatment. Early psychosis programs are a type of intervention for people experiencing their first episode of psychosis. In these programs, a team of social workers, peer specialists, and other care providers work together to provide treatment. These programs have been shown to improve short- and long-term outcomes for people with psychosis. There is also some evidence to support the effectiveness of early psychosis programs on improving insight. People with schizophrenia who were enrolled in an early intervention program improved their insight more than those in an alternative treatment program. The largest increases in insight took place in the first six months of joining the program.

**Antipsychotic medications**

Antipsychotic medications can be a useful tool for many people with severe mental illness to manage their symptoms and improve their quality of life. There is some evidence to suggest that antipsychotic medications can also improve insight with the biggest improvements in insight occurring during the first three months of treatment. However, despite the significant impact of insight in treatment adherence, few studies of antipsychotic medications have examined changes in insight.

**Psychological interventions**

Given the prevalence of medication non-adherence in people who have anosognosia, researchers have explored several strategies within psychotherapy that can help people with severe mental illness to improve insight. There are several psychological interventions for people with severe mental illness that have been shown to improve insight to some extent, according to research. These include:

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**EXPERIENCING ANOSOGNOSIA AND DELUSION**

To illustrate the how delusions are experienced by people who have anosognosia, Dr. Xavier Amador provides the following example based on his clinical experience:

“Imagine I told you that you did not live where you live. You might laugh and tell me to stop joking around. But what if I produced a restraining order from a court that ordered you to stay away from what you told me was your home address? Taking it further, let’s say you live with other people, perhaps members of your family, and you saw that they had signed off on this court order. What would you think? Then, imagine that you then called them to ask why they’d signed off, and they said something like, ‘You seem like a nice person, but if you keep coming around here, we are going to call the police. You don’t live here, and we don’t want to press charges, but we will if you put us in that position. Please stop calling us. You need help!’ If you can imagine something like this happening to you, then you have idea of what it is like for someone with a mental illness to have a delusion and anosognosia.”

(Excerpt from the book: “I’m Not Sick, I Don’t Need Help”, Vida Press, NY, 2020, p.59)
- Cognitive behavioral therapy for psychosis
- Motivational interviewing
- Metacognitive reflection and insight therapy
- Mindfulness-based treatments

Importantly, some psychological interventions, such as motivational interviewing, can also help people with anosognosia to improve their medication and treatment adherence, even when insight does not increase.

**tDCS**

Transcranial Direct Current Stimulation (tDCS) is a type of non-invasive brain stimulation that is safe, painless, and inexpensive, and it has been shown to improve symptoms for a variety of mental illnesses, particularly major depressive disorder.

tDCS has also been shown to improve insight for people with schizophrenia. In a systematic review that examined the impact of tDCS on insight in thirteen randomized controlled trials, patients with schizophrenia who received at least ten sessions of tDCS had improved insight into their illness, compared to those who did not receive tDCS.

While there are many treatments that have been shown to improve anosognosia in some people with severe mental illness, it is important to note that insight does not improve with treatment for all patients. Further research in this field is needed to identify treatments that may help to improve anosognosia for patients whose insight does not improve with treatment.

**Anosognosia and adverse outcomes**

Anosognosia can negatively impact the lives of people with severe mental illness in a variety of ways. People who lack insight into having a mental illness are often those with more severe symptoms and may be at risk for many negative outcomes. There is also evidence to suggest that those with impaired insight may:

- be more likely to relapse and be readmitted to a hospital
- have poor quality of life
- have more severe symptoms
- have lower community functioning, including social contact, social support, social skills, and prosocial behavior
- be more likely to commit violent acts
- be less likely to adhere to treatment
- be less likely to be employed for pay or volunteer

One of the most important of these may be treatment nonadherence.
While the relationship between anosognosia and non-adherence to treatment is understandable, it has significant consequences. People with schizophrenia who do not adhere to treatment may have lower self-reported quality of life and be more likely to relapse. Medication noncompliance is also one of the best predictors of violence for people with severe mental illness.

Other considerations with anosognosia

Psychological wellbeing

Good awareness of having a mental illness is associated with better treatment compliance and a variety of other positive outcomes. However, it is also important for people with severe mental illness, their loved ones, and their care providers to know the unique challenges that come with having insight into one’s own severe mental illness.

High levels of insight into mental illness have been associated with higher levels of depression, self-stigma, emotional distress, and suicidality, as well as lower hope and self-reported quality of life. The association between insight and psychological distress may exist because people with anosognosia are protected from the stigma attached to a severe mental illness diagnosis, because they do not believe they have an illness. They may also be protected from the distress of experiencing psychotic symptoms without full knowledge of their abnormality.

Cultural considerations

When determining whether a person with severe mental illness has anosognosia, it may be important to consider their cultural and religious background. The idea that severe mental illness is a biological disease is not present in all cultures. It would not be appropriate to determine that a person has anosognosia because of differences in beliefs about the causes or necessary treatments for their symptoms.

One review of studies proposed that a person should be determined to have insight if they know there has been a change in their body or mind that has impacted their ability to function and acknowledge the need to restore their previous abilities. Using this definition, a person could be determined to have insight even if they do not believe their symptoms represent an illness. The author notes that a person with delusional explanations for their symptoms (i.e., those that differ from family and local cultural explanations) would not be considered to have insight using this definition.

Conclusion

Anosognosia is a symptom of severe mental illness. Someone with anosognosia is unable to recognize that they are experiencing symptoms of a mental illness. This can have tragic consequences, such as refusal to accept treatment, which can increase the likelihood of lower quality of life and a host of other negative outcomes. Anosognosia appears to be caused by differences in brain structure and cognition. It is different from defensiveness, denial, self-stigma, and delusion. Early psychosis interventions, antipsychotic medications, some psychotherapeutic interventions, and tDCS may be effective at improving insight for some people with severe mental illness. In some cases, these interventions can also help people with anosognosia because they do not need to accept their diagnosis to participate and benefit. People with anosognosia and their loved ones may want to note the importance of normalizing and addressing the difficult emotions that may emerge as insight improves.

“Logically, persons who are sure of their own good health would not take medications to treat a disease that they do not have” – Dr. Kozlowski Gibson, PhD
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