

Psychosis, Delusions and Hallucinations — Causes and Symptoms

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An individual suffering from psychosis loses contact with reality. A psychotic individual may experience delusions, hallucinations, and illusions. Delusions are unshakable false beliefs held by an individual despite being presented with rational and logical arguments and evidence to support the contrary. Hallucinations are deceptions in perceptions that occur in the absence of an external stimulus. Illusions are deceptions in perceptions that occur in the presence of an external stimulus, these perceptions are distorted by the individual's ideas. Psychosis can result in serious defects in judgment, loss of ability to evaluate reality and some cognitive disabilities. In this article, we will study in detail about the various types of delusions, hallucinations, and illusions.



Definition of Psychosis

Psychosis is a symptom in which an individual loses contact with reality.

Psychosis often involves hallucinations which are abnormal perceptions, delusions which are unusual belief systems and thought disorder in which there is a disturbance in the thought processes often noted with abnormal speech.

Due to **impairment in thoughts, perception, and judgment**, an individual has difficulty in differentiating real-world experiences from those that are not based on fact. These symptoms very often have an impact on a person's emotional and behavioral responses. It is a common disorder in society affecting 8 % of the population. It commonly affects teenagers around the age of 20.

Causes of Psychosis

Psychotic symptoms can be seen in a range of disorders such as:

- Schizophrenia
- Schizoaffective disorder
- Delusional disorder
- Schizophreniform disorder
- Bipolar disorder
- Major depressive disorder with psychotic features
- Brief psychotic disorder
- Shared psychotic disorder
- Substance abuse (marijuana, LSD, amphetamines, cocaine) and alcohol-induced psychotic disorder
- Delirium
- Dementia
- Severe depression (e.g. Postnatal depression)
- Loss of sleep
- Medical conditions(HIV, AIDS, malaria, syphilis, Alzheimer"s disease, Parkinson"s disease, lupus, multiple sclerosis, brain tumor).

Definition of Delusions

Delusions are unshakable false beliefs held by an individual despite being presented with rational and logical arguments and evidence to support the contrary. These beliefs are not shared by the people of the same cultural and religious background and cannot be accounted for by the individual's level of intelligence. Their beliefs are difficult to understand for others.

An individual can experience a wide variety of delusional experiences influenced by their personal, social, cultural and emotional background.

Types of Delusions

Delusions of persecution

This is the **most common type of delusion**. The individual believes that he is going to be harmed by a living or non-living thing, another person, group, organization or some force or power despite there being no evidence to support such belief. Occasionally the individual experiences the delusions without actually knowing who/what is going to harm him. Injury can be either physical injury or damage to his reputation. These delusions affect elderly people more and are known as paraphrenia. Delusions of persecution are seen in schizophrenia.

Example: My office colleagues are ganging up against me as I am better than them; they want to belittle me in front of my boss.

Delusions of grandeur

The individual believes that he or she is very famous, rich, talented (e.g. performing artist, scientist, inventor), is related to prominent people, etc. Delusions of grandeur **are seen in mania and schizophrenia**.

Example: President Trump is my family friend.

Delusions of guilt

The individual believes that he is a bad person and has done something terribly wrong for which he deserves to be punished. These delusions usually start off by the individual being overly critical of himself and by feelings of self-reproach. The patient feels unworthy of himself. Usually **seen in depressed patients and can lead to suicide or homicide.**

Example: It is because of me that my dad is ill.

Delusions of reference

The **individual misrepresents harmless, non-suspicious events** or mere coincidences as being strongly applicable to him. He takes the double meaning of everything spoken to him. Circumstances appear to him as mediated to examine him.

Example: an individual believes that the news being read out on TV is directly referencing him, music being played on the radio is played for him, and car number plates have a coded message for him.

Somatic delusions

Patient is preoccupied with his body and health and makes false perception of his body.

Example: His nose is too large; his teeth are misshapen, etc. even though they are fine.

Hypochondriacal delusions are a sub-type of somatic delusions where the individual believes to be suffering from a serious illness despite there being no evidence of the same through medical examination and investigations

Example: I have incurable bowel cancer.

Delusions of jealousy

The individual believes that his or her spouse is being unfaithful based on inconspicuous bits of information. It is seen in alcohol-dependent, schizophrenic and in suspicious/possessive personality individuals.

Example: my wife is having an affair with my best friend as I have noticed that her clothes are wrinkled.

Religious delusions

The **individual believes that he is God, a saint, an angel or has spiritual powers** or that he is born for a divine purpose.

Erotomania or delusions of love

Patient believes that the other person is in love with him/her. These delusions may lead to stalking behavior disturbing another person. Erotomania is usually seen in schizophrenia and organic psychoses.

Example: I am positively certain that Angelina Jolie loves me.

Nihilistic delusions

The individual believes that a major catastrophe is bound to occur, or that part or whole of his body does not exist. He cannot see himself in the mirror imaging his distortions. It is **seen in major depression with psychosis**.

Example: I am dead, I don't have lungs.

Fantastic delusions

These are bizarre delusions that have no logic or common sense.

Example: A woman daily gives birth to 100 babies, a patient is changing into a different animal or inanimate object every day, the building is melting, a supernatural force has removed all the internal organs of the patient and replaced them with someone else's internal organs without any visible cuts or scars, etc.

Delusional memory

The individual clearly remembers events which did not occur.

Example: he describes an event of being abducted by aliens; he was transported to earth on a golden star, etc.

Thought insertion

The individual believes that his thoughts are not his own, rather the thoughts are forcibly inserted into his mind by an outside force.

Thought withdrawal

The individual believes that his thoughts are actually extracted from his head by an outside force.

Thought broadcasting

The individual believes that his mind is open and thoughts can enter and leave and they can be picked up or heard by others.

Delusions of control

The individual believes that his actions are being controlled by an outside force/agent.

Example: The individual feels that he is a zombie and his actions are controlled by someone else's will power or whatever he is writing is not his own.

Definition of Hallucinations

Hallucinations are deceptions in perceptions that occur in the absence of an external stimulus. This perception cannot be experienced by other persons. They have the quality of normal perception and the individual perceives them vividly and clearly. They cannot be controlled voluntarily.

Types of Hallucinations

Auditory hallucinations

The most common type of hallucinations, usually seen in schizophrenia. The voices heard can be complimentary, critical or neutral and can be displayed in the patient's actions and behaviors. They can be subclassified as:

- **Elementary/rudimentary auditory hallucinations:** includes sounds like banging, tapping, musical sounds, pre-verbal whispers, muttering, etc.
- Individual words cannot be deciphered, though the patient may still imagine content for these sounds
- **Single hallucination:** only one voice is heard, these can occur sporadically
- **Mass hallucinations:** several voices can be heard, all talking at the same time

The individual may be able to recognize the voices like that of his friends or neighbors or even his own voice, or it could be the voice of a stranger. These **voices are distinct from the individual's own thoughts**. He may be able to localize the voice to a specific location around him (e.g. over my shoulder) or the voices can come from all around him.

He may localize the voice to come from a place outside the normal perception area (e.g. voice is speaking to him from China). The voices can command the individual to carry out an action, or they could be just in the background like a running commentary. The **voices usually occur spontaneously**.

Sometimes an additional external stimulus is required for the voices to be heard. These are called functional auditory hallucinations. For example, the individual hears voices when the tap is turned on, hearing the running water is necessary for the auditory hallucination to occur. Both the voices and the noise of running water can be heard distinctly and separately.

'Hearing voices' can sometimes occur in normal individuals when falling asleep (hypnagogic hallucinations) or while waking up (hypnopompic hallucinations), these are considered normal.

In certain religions, hallucinations may be part of a religious/spiritual experience.

Auditory hallucinations in schizophrenia can be induced by the activation of the subcortical nuclei, primary auditory cortex, and limbic structures.

Visual hallucinations

- Can be of formed objects (faces, people, crosses, tridents, crosses, angels, devils, parts of bodies, etc.) or formless (lights, shadows, shapeless images, etc.)
- Hallucinations, where the individuals experience visions of complete scenes, are called scenic or panoramic hallucinations (e.g. war scenes, mob fighting scenes)
- **Visual hallucinations are usually seen in organic states** like Lewy body dementia, drug intoxication, delirium; they are less commonly seen in Schizophrenia
- In elderly, visual hallucinations take the form of 'Silent boarders' where patient claims to see full sized silent figures around the house

Visual hallucination happens with the activation of the ventral visual pathway of the brain in specific regions.

Note: Visual hallucinations are less common than auditory hallucinations.

An auditory hallucination occurs in people who are patient of visual hallucination, visual hallucination can perform interactive conversations. The auditory hallucination without visual hallucination can occur with distinctive sounds heard.

Olfactory hallucinations

Olfactory Hallucinations **are also called phantosmia**. They are usually unpleasant smells, which the individual perceives and which are not normally present in the surrounding environment. Olfactory Hallucinations are seen in aura with epilepsy and aura with migraine.

Gustatory hallucinations

Gustatory hallucinations are quite rare. The individual has an abnormal perception of taste. For example, the individual complains of a persistent metallic taste or bitter taste. They **coexist along with olfactory hallucinations as flavor hallucinations**.

Somatic hallucinations

They are hallucinations of bodily sensations. These hallucinations are experienced due to increased activity of the primary somatosensory cortex, the posterior parietal cortex, and the thalamus. Somatic hallucinations are classified in different sub-types based on the specific sensation that is replicated.

Sub-type	Definition	Subdivision of Sub-type/Examples
External bodily hallucinations	<ul style="list-style-type: none"> • Also called superficial bodily hallucinations 	<ul style="list-style-type: none"> • Haptic/Tactile hallucinations: the individual has an abnormal perception of touch, it may also be painful <ul style="list-style-type: none"> • Example: A dead animal's limb is touching his face, a knife is stabbing him. • Special type of tactile hallucination is that of insects or ants crawling on the skin or just underneath the surface, called formication <ul style="list-style-type: none"> • Seen in cocaine withdrawal or alcohol withdrawal • Thermic hallucinations: individual has abnormal perception of heat or cold <ul style="list-style-type: none"> • Example: My hands are freezing, my feet are burning. • Hygric hallucinations: individual feels an abnormal perception of fluid on his body <ul style="list-style-type: none"> • Example: Juice is flowing over my back; all my blood is collected in my right arm.
Kinaesthetic hallucinations	<ul style="list-style-type: none"> • Individual has an abnormal perception of his joints and muscles 	<ul style="list-style-type: none"> • Example: He may feel his muscles being tied into knots, his legs and arms are being twisted.

<p>Internal visceral hallucinations</p>	<ul style="list-style-type: none"> • Are abnormal perceptions of internal organs • Individual complains of his internal organs being heavy, stretched or painful 	
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Definition of Illusions

Illusions are deceptions in perceptions that occur in the presence of an external stimulus, these perceptions are distorted by the individual's ideas. This differs from hallucinations where the external stimulus is absent. They are not symptoms of psychosis. They can occur even in normal individuals.

Different Types of Illusions

Illusions of completion

This depends on the inattention of the individual for their completion. It is **based on the human tendency to complete a familiar unfinished product**.

Example: we frequently overlook the spelling mistakes in a newspaper as we tend to read them as if the words were correctly written, but once we are aware of the misspellings, our perception is altered. It disappears with attention to the subject matter.

Illusions of affect

The perceptions of everyday objects change depending on the mood that is prevailing at that specific time.

Example: A child frightened of the dark wakes up in dim light and mistakes a rope for a snake. This is short lasting and disappears when the fear is dissipated by explanation and by properly noticing that the object was indeed a rope. In other words, this illusion is banished by attention.

Pareidolia

The individual is able to perceive a meaningful shape out of a random image.

Example: He may see shapes in clouds; he may see a particular shape in the pattern of tiles or windows/doors of a house (like that of a face).

Auditory illusions

The **shephard tone** is an example of auditory illusion where the listener hears the pitch of the sound to increase and decrease whereas, in reality, the pitch is constant.

Tactile illusions

Phantom limb is an example for tactile illusion, where the **amputee whose hand has been amputated will still feel that the hand is attached to his arm**, will feel sensations in the hand and can even feel that his hand is moving even though it is absent.

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