

Concepts and Misconcepts of *Schizophrenia*

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ABSTRACT

Schizophrenia is a chronic, severe and disabling brain disorder affecting about 1% of the world population. People with *Schizophrenia* may hear voices, which other people don't hear. Furthermore, schizophrenic patients believe that others are reading their minds, controlling their thoughts or plotting to harm them. These experiences are terrifying and can cause terror, social withdrawal or extreme aggressiveness. The schizophrenics often make senseless and incoherent conversation. *Schizophrenia* can be diagnosed by the presence of atleast one of the positive symptoms together with any of the negative symptoms. This article covers historical, causes, prevalence, clinical signs and notable victims affected by *Schizophrenia* in different parts of the world.

"I am too terrified to walk out of my own house from the front door. My friends comment that, I just talk a load of rubbish. Sometimes I hear voices, when no one is around. I am confused while taking even minor decisions. I have serious doubts and suspicions; rather I am damn sure that my girl friend is delusional to me and has a secret love affair."

Psychosis:

The term psychosis is derived from the Greek word "psyche", which means "mind or soul" and "-osis" means "abnormal condition". It is a functional or organic kind of mental derangement marked by severe disturbance of personality involving autistic thinking, loss of contact with reality, delusions, hallucinations, bizarre behaviour, difficulty in social interaction and personal activities of daily living. The primary psychosis covers *Schizophrenia* and delusional disorders, but extreme cases of depression, substance-induced delirium and certain types of dementia also show the features of psychosis. However, some persons have unusual and distinct (unshared) unforgettable experiences at some point in their lives, without any impaired brain structure. Therefore, it has been argued that psychosis is not fundamentally separate from normal consciousness, but rather, is in continuum with normal consciousness. In this view, people who are clinically found to be

psychotic may simply be having particularly intense, passionate or distressing experience

What is not *Schizophrenia*?:

- A split personality
- A dual/multiple personality
- A developmental disability such as retardation
- All illness that makes people more violent or aggressive.

Definitions of terms related to psychosis:

Alcoholic psychosis:

It is a severe mental disorder caused primarily by alcoholism. This pathological condition also covers Korsakoff's psychosis.

Autism:

Autism has two meanings. The first, historically associated with schizophrenia, refers to the investment of a person's psychic energy in his or her own delusions, which prevents the person from investing in the outside world. The second refers to absence of development of communication with others beginning in infancy. Autism is a severely incapacitating development disorder characterized by three major types of symptoms, which appear during first three years of childhood and continue throughout life. These are known as autism spectrum disorders (ASDs) or pervasive development disorders

Key words :

Schizophrenia,
Psychosis, Alogia,
Delusion.

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Table 1: Types of psychiatric disorders		
Sr. No.	Name of disorder	Subtypes of disorder
1.	Anxiety disorders	<ul style="list-style-type: none"> - Generalized anxiety disorder - Obsessive-compulsive disorder - Panic attacks and panic disorder - Ethnic differences in anxiety disorder - Phobic disorders - Acute and post-traumatic stress disorders
2.	Dissociative disorders	<ul style="list-style-type: none"> - Depersonalization disorder - Dissociative amnesia - Dissociative fugue - Dissociative identity disorder - Culture- Bound dissociative syndromes
3.	Sexual disorders	<ul style="list-style-type: none"> - Gender identity disorder - Transsexualism - Paraphilias
4.	Substance-Related disorders (Depressant, Stimulants and Hallucinogens)	<ul style="list-style-type: none"> - Alcohol - Barbiturates - Opioids - Amphetamines - Anabolic steroid - Anxiolytics and sedatives - Nicotine - Ecstasy - Cocaine - Gamma hydroxybutyrate - LSD - Phencyclidine - Marijuana - Volatile solvents - Volatile nitrites
5.	Eating disorders	<ul style="list-style-type: none"> - Anorexia nervosa - Binge-eating disorder - Bulimia nervosa
6.	Factitious disorders (Factitious disorder with)	<ul style="list-style-type: none"> - Psychological symptoms - Physical symptoms - Psychological and physical symptoms - Factitious disorder not otherwise specified
7.	Mood disorders (Bipolar disorders and Unipolar disorders)	<ul style="list-style-type: none"> - Bipolar disorders - Cyclothymic disorder - Major depressive disorder - Dysthymic disorder
8.	Personality disorders (personality disorder characterized by)	<ul style="list-style-type: none"> - Odd or Eccentric behavior - Dramatic, emotional or erratic behavior - Anxious or fearful behaviour

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9.	Schizophrenia and other psychotic disorders	<ul style="list-style-type: none"> - Brief psychotic disorder - Delusional disorder - Schizoaffective disorder - Paraphernalia - Schizophreniform disorder - Substance induced psychotic disorder - Shared psychotic disorder - Schizophrenia spectrum disorder - Psychotic disorder due to a medical Condition
10.	Somatoform disorders	<ul style="list-style-type: none"> - Body dismorphic disorder - Conversion disorder - Hypochondriasis - Koro and dhat syndromes - Undifferentiated somatoform disorder - Pain disorder - Somatization disorder
11.	Suicidal behaviour	<ul style="list-style-type: none"> - Suicidal behaviour
12.	Sleep disorders	<ul style="list-style-type: none"> - Dys-somnias - Parasomnias
13.	Adjustment disorders (Adjustment disorder with)	<ul style="list-style-type: none"> - Depressed mood - Anxiety - Mixed anxiety and depressed mood - Mixed disturbance of emotions and conduct - Adjustment disorder unspecified

(PDDs) that cover impaired social interaction, problems with verbal and nonverbal communication and unusual or severely limited physical and mental interests. In most severe form, autism may include extreme self injurious, repetitive and aggressive behaviours.

Agoraphobia:

Agoraphobia involves intense fear of any place or situation, from where escape might be difficult. This terrible fear leads to avoidance of situations such as being alone, being without the company of family members, traveling in a car, bus or airplane. Panic symptoms often include rapid heartbeat, chest pain, difficulty in breathing, gastrointestinal distress, dizziness, weakness, sweating.

Anorexia nervosa:

An eating disorder marked by excessive fasting. It occurs most commonly in females between the ages of 12 and 21 but may also occur in old women and men.

ADHD (attention deficit hyperactivity disorder):

ADHD is a chronic developmental disorder that initially manifests in childhood. It is characterized by

hyperactivity, distractibility, day-dreaming, impulsivity and/or inattention. These symptoms can lead to difficulty in academic, emotional and social functioning.

Bipolar disorders:

(Manic Depressive Disorder) In this disorder, a person experiences swings in mood, where they have had at least one episode of being abnormally elevated in mood and also have episodes of depression at other times. Psychotic symptoms, when present, often fit in with the person's mood. For example, people, who are depressed may hear voices telling them that they should commit suicide, whereas someone who is manic may think that they are Jesus Christ or have special powers.

Bulimia nervosa:

A disorder marked by recurrent episodes of binge eating, self induced vomiting, diarrhea, excessive exercise, strict dieting or fasting and an exaggerated concern about body figure and weight.

Depressive disorders:

(Unipolar disorder) Unipolar depression is a mental illness characterized by a profound and persistent feeling of sadness or despair and/or loss of interest in things that once were pleasure-some.

Paranoia:

A form of psychosis with a disturbed thought process characterized by excessive cognitive modules, anxiety or fear, often to the point of irrationality and delusions.

A "paranoid" personality is characterized by suspicion and distrust of others. It is a tendency to look for hidden meaning behind other people's actions, argumentativeness, complaining, low tolerance for criticism and a constant display of one's own talents, accomplishments, independence or rationality.

Anxiety disorders:

Anxiety disorders include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, generalized anxiety disorder and phobias (social phobia, agoraphobia and specific phobia).

Obsessive-compulsive disorder:

A disorder characterized by recurrent obsessions and compulsions that cause marked distress. The most common obsessions are repeated thoughts as could occur with shaking hands, the need to have things in particular order, aggressive or horrific impulses and sexual imagery. Compulsions are repetitive behaviour (e.g. hand washing

ordering, checking) or mental acts (e.g. praying, counting, repeating words silently) the goal of which is to prevent or reduce anxiety or distress and not to provide pleasure or gratification.

Post-traumatic stress disorder:

The development of characteristic symptoms after a psychological traumatic event that is generally outside the range of human experience. The reaction to stress is highly individualized.

Schizoaffective disorder:

Schizoaffective disorders are basically a combination of psychotic disorders such as *Schizophrenia* and mood disorders such as mania or depression. The symptoms of these two different types of disorders either occur at the same time or within a few days of each other.

What is *Schizophrenia* ?

The word "*Schizophrenia*" means "split-mind". It refers to disruption of the usual balance of emotions and behaviour. *Schizophrenia* is a chronic, severe and disabling brain disorder affecting about 1% of the world population. People with *Schizophrenia* may hear voices, which other people don't hear. Furthermore, Schizophrenic patients believe that others are reading their minds, controlling their thoughts or plotting to harm them. These experiences are terrifying and can cause fearfulness, social withdrawal or extreme aggressiveness. The schizophrenics often make senseless conversation. They may sit alone for hours without moving and may seem perfectly fine until they talk about what they are really thinking.

Notable victims of *Schizophrenia*:

- John Nash – Mathematician/Nobel Prize Winner due to Hollywood movie "A Beautiful Mind"
- Jack Kerouac – a renowned Author
- Peter Green – Guitarist for the band Fleetwood Mac
- Lionel Aldridge – Super bowl football player
- Tom Harrell – Jazz Musician
- Meera Popkin – Broadway Star
- Albert Einstein's son – Eduard Einstein
- Dr. James Watson's son (Dr. Watson is a Nobel Prize winner)
- Andy Goram – Scottish Soccer Player/Goal Keeper
- Joe Meek – 1960's British record producer
- Charles "Buddy" Bolden - Jazz Musician
- Antoin Artaud – Dramatist, Artist
- Mary Todd Lincoln - wife of Abraham Lincoln (past-President of the U.S.A)
- Vaclav Nijinsky – Famous Russian Dancer

Williams sister Rose Williams (sister of tennis star players)

Historical background of Schizophrenia:

In early 18th century a single psychotic illness “Einheitspsychose” was known.

– Ancient Egyptian Ebers Papyrus - “the *Book of Hearts*” – Described the symptoms of Schizophrenia in 200 BC.

– *The Canon of Medicine*- “Avicenna” – Described Junun Mufrit (severe madness) a condition somewhat resembling to Schizophrenia.

– Ancient and medieval times described psychosis as “demonic possession”.

– Morel described the term demence precoce for psychosis in 1852.

– Hecker employed the term “hebephrenia” and

– Kahlbaum proposed “catatonia” to describe psychosis

– Schizophrenia was first described as a distinct mental disorder by Emil Kraepelin in 1893 .He called it Dementia Praecox (early dementia)

– Eugen Bleuler first described “The word Schizophrenia” in 1908, which translates roughly as “splitting of the mind”.

– Kurt Schneider described first rank symptoms of Schizophrenia.

– Bleuler identified the four A’s linked to Schizophrenia: Abnormal thoughts, Affective abnormality, Ambivalence, Autism.

The prevalence of Schizophrenia:

– 1% of the world population has Schizophrenia

– 45 million people worldwide are affected by Schizophrenia

– 7 in 1000 adults are affected with Schizophrenia

– 90% of people with untreated Schizophrenia are in developing countries

– More than 50% of the people are not receiving appropriate care (WHO report 2008)

– Around 4 million people suffer from Schizophrenia in India for a population of 1 billion

– 2.7 million people are suffering from Schizophrenia in U.S.A

– Approximately 1.1% of the adult population (around 18 years) suffer from Schizophrenia in U.S.A alone.

Causes of Schizophrenia

Viral infections:

Studies indicate that a viral infection during 2nd

trimester of pregnancy is responsible for developing Schizophrenia. A virus, invades the child through the mother. The infection would affect brain development of the neonate. As a result, Schizophrenia would be triggered during adolescence. Also, viral exposure during prenatal or infancy leads to Schizophrenia.

Accident during childhood:

Any accident/ injury to the head/ brain cells can lead to the development of Schizophrenia later in life. The brain is still developing up to the age of 15 yrs.

Birth trauma:

Some researchers feel that Schizophrenia may be the result of complications during the mother’s pregnancy or labor as low oxygen levels during birth (Kim, 2008).

Drug and alcohol abuse:

A distinction must be made between “drug/alcohol induced psychoses,” which may be temporary. Yet, it can trigger full-blown Schizophrenia. So, substance use and abuse can trigger Schizophrenia.

Chemical Imbalance in brain:

Two neurotransmitters namely viz., Dopamine and Serotonin in particular have roles to play in Schizophrenia (Alcaro *et al.*, 2007).

Malnutrition:

Deficiencies in vitamins, minerals and amino acids contribute to the sickness.

Stress:

It is well recognized that stressful incidents often precede the onset of Schizophrenia. These may act as precipitating events in vulnerable people. It is not, always clear whether stress is a cause or a result of Schizophrenia.

Environmental causes:

Physical or sexual abuse in childhood leads to Schizophrenia.

Shock/family set back:

A sudden shock (e.g. loss of job, court case and financial crises) or family set back (such as death of a closed relative/ spouse, divorce, etc).

The Genetic susceptibility:

Genetic factors appear to be important in the development of Schizophrenia, but they are not sufficient

to explain the entire pattern of occurrence. If an illness is entirely caused by genetic factors then identical twins share the same risk of the illness. In fact, in most studies of identical twins in which one twin has *Schizophrenia*, only about half of the other twins are affected. A number of genes are probably involved in the development of *Schizophrenia*, known as “hot spots” on a cluster of genes (Maier *et al.*, 2000).

Signs and symptoms of *Schizophrenia*:

- Early warning signs –
- Odd behavior
- Social withdrawal
- Suspicion
- Grandiose ideas
- Disturbed perceptions
- Impairment of eating, sleeping and/or hygiene habits
- Belief in unreal events
- Decreased emotional reactivity/ indifference
- Difficulty in concentrating or thinking
- Inability to cope up with tasks at work/ home
- Misunderstanding of what is heard/ read

“If an individual is diagnosed early and treated in time the chances of relapse are slimmer and the prognosis is better”.

Table 1: Probable susceptibility of developing *Schizophrenia*

Condition	Percentage- risk
General population	1%
If brother/ sister suffers from <i>Schizophrenia</i>	8-10%
One grandparent has <i>Schizophrenia</i>	4%
Either father/ mother has <i>Schizophrenia</i>	12-15%
Both parents have <i>Schizophrenia</i>	40%
Identical twin has <i>Schizophrenia</i>	50%

Symptoms of *Schizophrenia*:

Positive symptoms:

An enhancement or distortion of normal behaviour:

Hallucinations:

A hallucination is something a person sees, hears, smells or feels, which no one around confirms. The most common hallucination is hearing voices which sound very real. Seeing persons or imaginary feelings like invisible fingers touching their bodies.

Delusion:

False beliefs or thoughts with no basis in reality. False beliefs may be of persecution (thinking that others are

plotting against you), grandeur thinking (that you are Jesus or someone famous or powerful).

Disorganized thoughts:

The person speaks out of context incoherently, slipping off topic .The patient may respond to question in a confused manner.

Disorders of movements:

People with *Schizophrenia* can be clumsy and uncoordinated. They may also exhibit involuntary movements and may grimace or exhibit unusual mannerisms. They may repeat certain movements over and over again or, in extreme cases, may become catatonic (a state of immobility).

Negative symptoms:

A decreased degree of otherwise normal behaviour: Negative symptoms include five types of symptoms, classified as under (all starting with letter A)

- Alogia: It refers to loss of content and fluency of speech.
- Avolition: Loss of initiative, loss of enthusiasm, loss of interest in life and general activities.
- Anhedonia: A lack of enjoyment in usually pleasurable activities such as eating, social events and sexual function.
- Affective flattening: Range and intensity of emotional expression is diminished. The patient shows vacant eyes, flat response and indifferent attitude.
- Attentional impairment: Difficulty in concentrating and screening outside stimuli.

Cognitive symptoms:

Cognitive symptoms are subtle and are often detected only, when neuropsychological tests are performed. Cognitive impairments often interfere with the patient’s ability to lead a normal life and earn a living. They can cause great emotional distress. They include the following:

- Poor “executive functioning” (the ability to absorb and interpret information and make decisions based on that information)
- Inability to sustain attention
- Problems with “working memory” (the ability to keep recently learned information in mind and use it right away)

Subtypes of *Schizophrenia*:

There are five subtypes of *Schizophrenia*

Paranoid Schizophrenia:

The key feature of this subtype of *Schizophrenia* is the presence of false beliefs (delusions) and imaginary voices (auditory hallucinations), with almost normal emotions and cognitive functioning. The delusions of paranoid schizophrenics usually involve thoughts of being prosecuted or harmed by others or exaggerated opinions of their own importance, but may also reflect feelings of jealousy or excessive religiosity. Paranoid schizophrenics function at a higher level of intelligence than other schizophrenics, but are at risk for suicidal or violent behavior under the influence of their delusions.

Disorganized Schizophrenia-

Disorganized *Schizophrenia* (formerly called hebephrenic *Schizophrenia*) is marked by disorganized speech, thinking and behavior on the patient's part, coupled with flat or inappropriate emotional responses to a situation (affect). The patient may act silly or withdraw socially in a bizarre manner. Most patients in this category have weak personality structures prior to their initial acute psychotic episode.

Catatonic Schizophrenia:

Catatonic *Schizophrenia* is characterized by disturbances of movements that may include rigidity, stupor, agitation, bizarre posturing and repetitive imitations of the movements or speech of other people. These patients are at risk for malnutrition, exhaustion or self-injury. Catatonia as a symptom is most commonly associated with mood disorders.

Undifferentiated Schizophrenia:

Patients in this category have the characteristic positive and negative symptoms of *Schizophrenia* but do not meet the specific criteria for the paranoid, disorganized or catatonic subtypes.

Residual Schizophrenia:

This category is used for patients who have had at least one acute schizophrenic episode but do not presently show strong positive psychotic symptoms, such as delusions and hallucinations. They may show negative symptoms, such as withdrawal from others, or mild forms of positive symptoms, which indicate that the disorder has not completely resolved.

Diagnosis of Schizophrenia***Diagnostic Criteria for Schizophrenia:***

The diagnostic guidelines specified by the American Psychiatric Association (Diagnostic and Statistical Manual

IV of Mental Disorder) are as under:

Characteristic symptoms:

Two (or more) of the following symptoms or presence of atleast one of the positive symptoms together with any of the negative symptoms for around one month period:

- Delusions
- Hallucinations
- Disorganized speech (e.g. frequent derailment or incoherence)
- Grossly disorganized or catatonic behaviour
- Persistent bizarre behaviour
- Affective flattening, alogia, avolition or anhedonia

Social/occupational dysfunction:

Significant problems in functioning at work places, school or home.

Duration:

Continuous signs of schizophrenia for atleast 6 months, with active symptoms (A) for around 1 month.

Substance/general medical condition exclusion:

No other mental health disorder, medical issue or substance abuse problem is causing the symptom

Relationship to a pervasive developmental disorder:

If there is a history of Autistic Disorder or another Pervasive Developmental Disorder, the additional diagnosis of Schizophrenia is made only if prominent delusions or hallucinations are present for at least a month (or less if successfully treated).

Key-points:

- 1% of the world population suffers from *Schizophrenia*.
- *Schizophrenia* has nothing to do with split/ dual/ multiple personality.
- *A Genius person and a schizophrenic patient share several common features.*
- Schizophrenic patients need sympathy and compassion.

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