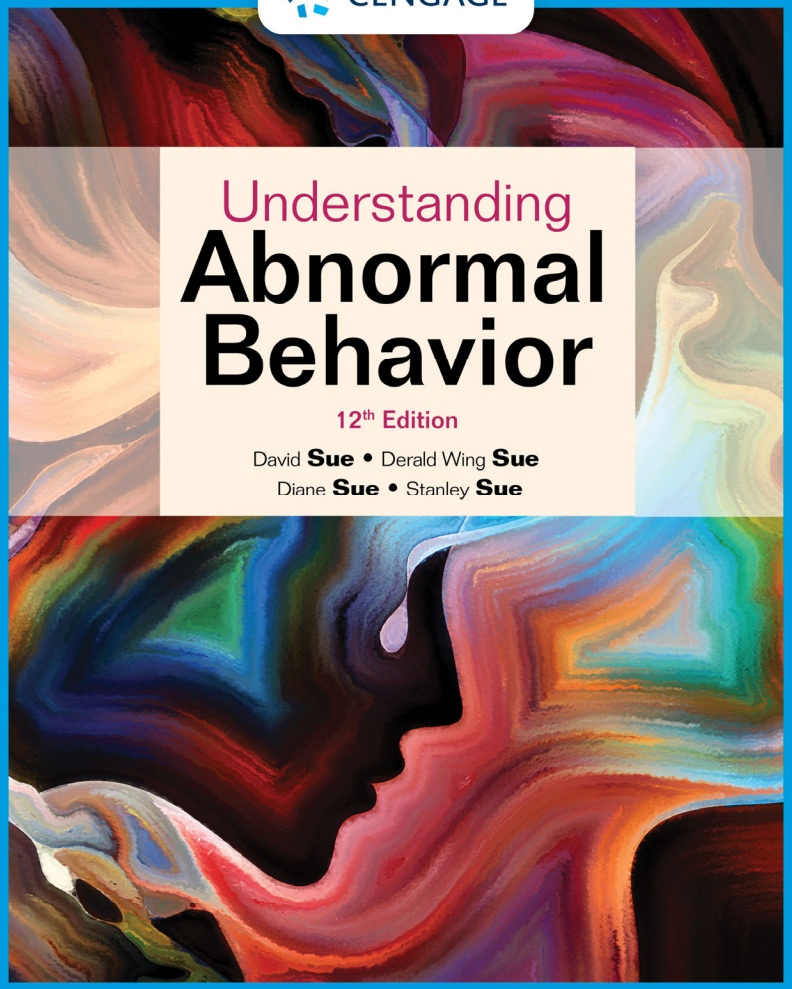


Understanding Abnormal Behavior, 12e

Chapter 12: Schizophrenia Spectrum Disorders

CENGAGE

Learning Objectives

After studying this chapter, you will be able to:

12-1 Describe the symptoms of schizophrenia spectrum disorders.

12-2 Debate the potential for recovery from schizophrenia.

12-3 Discuss the factors associated with the development of schizophrenia.

12-4 Describe the treatments currently available for schizophrenia and discuss their effectiveness.

12-5 Differentiate between schizophrenia and the other psychotic disorders.

12-1 Symptoms of Schizophrenia Spectrum Disorders

Introduction

Disorders on the schizophrenia spectrum

- Involve **psychosis** (hallucinations and delusions), impaired cognitive processes, unusual or disorganized motor behavior, and uncommon behaviors affecting social interactions

Psychosis is highly distressing because the hallucinations seem real, and the delusions seem logical

Symptoms of Schizophrenia Spectrum Disorders

Symptoms fall into four categories:

- Positive symptoms
- Psychomotor abnormalities
- Cognitive symptoms
- Negative symptoms

CENGAGE

Positive Symptoms

Positive symptoms refer to the “added” sensations and behaviors associated with schizophrenia.

- Delusions
- Hallucinations
- Disorganized or incoherent speech
- Disordered thinking
- Peculiar behavior

Symptoms can range in severity and duration

Positive Symptom - Delusions

Photo Credit: David Sinclair

False personal *beliefs* that are **consistently held despite evidence or logic**

- A lack of insight common
- "Safety" behaviors may prevent encountering disconfirmatory evidence

Paranoid ideation - often connected with *persecutory delusions*

Capgras delusion - involves a belief in the existence of identical doubles or imposters who replace significant others

CENGAGE

Delusion Themes

- Delusions of **grandeur**: Individuals may believe they are someone famous or powerful (from the present or the past).
- Delusions of **control**: Individuals may believe that other people, animals, or objects are trying to influence or control them.
- Delusions of **thought broadcasting**: Individuals may believe that others can hear or can control their thoughts.
- Delusions of **persecution**: Individuals may believe that others are plotting against, mistreating, or even trying to kill them.
- Delusions of **reference**: Individuals may believe they are the center of attention or that all happenings revolve around them.
- Delusions of **thought withdrawal**: Individuals may believe that someone or something is removing thoughts from their mind.

Delusions Example

- Aaron's therapists reminded him that he was a scientist and asked him to explain how it would be possible for rats to enter his brain. Aaron had no explanation, but he was certain that he would soon lose functions controlled by the area of the brain that the rats were consuming. To prevent this from happening, he banged his head so that the "activated" neurons would "electrocute" the rats. Realizing he was not losing his sight even though the rats were eating his visual cortex, he entertained two possible explanations: Either his brain had a capacity for rapid regeneration or the remaining brain cells were compensating for the loss. Whenever information became too discrepant, Aaron depended on his enhanced thought processes or "Deep Meaning," a system he believed transcended scientific logic (Stefanidis, 2006).

Positive Symptom - Hallucinations

Perception of a **nonexistent or absent *stimulus***

- Auditory (hearing) most common type of hallucination
- Visual (seeing)
- Olfactory (smelling)
- Tactile (feelings)
- Gustatory (tasting)

Hallucinations are particularly distressing when they involve dominant, insulting voices

Photo Credit: New York Public Library; “Seein’ Things”

Positive Symptom - Cognitive Symptoms

Disorganized thinking, communication*, and *speech

- Common characteristics of schizophrenia

Loosening of associations (cognitive slippage)

- Continual shifting from topic to topic without apparent logical or meaningful connection between thoughts

Over-inclusiveness

- Abnormal categorization

Response to words or phrases in a very concrete manner

Moderately severe to severe impairment in executive functioning

Psychomotor Abnormalities

Catatonia

- Extremes in activity level, peculiar body movements/positions, strange gestures, grimaces

Withdrawn catatonia

- Peculiar body movements or postures
  - May persistently resist attempts to change their position
  - May exhibit a waxy flexibility, allowing their bodies to be arranged in almost any position

Excited catatonia

- Agitated, hyperactive, and lack inhibition
- Loud, inappropriate laughter
- Sleep little and are continually on the go

Catatonia Video Examples

- Bush Francis Catatonia Rating Scale
- Department of Psychiatry at the University of Rochester Medical Center
- https://www.youtube.com/playlist?list=PLDIWX3558_y9P1hTkbqnofVMGInW1JjyI

CENGAGE

Negative Symptoms

Decreased ability (“removes something”) to initiate actions or speech, express emotions, or feel pleasure

- *Avolition*: inability to take action or become goal-oriented
- *Alogia*: lack of meaningful speech
- *Asociality*: minimal interest in social relationships
- *Anhedonia*: reduced ability to experience pleasure
- *Diminished emotional expression*: facial expression, voice intonation, and gestures

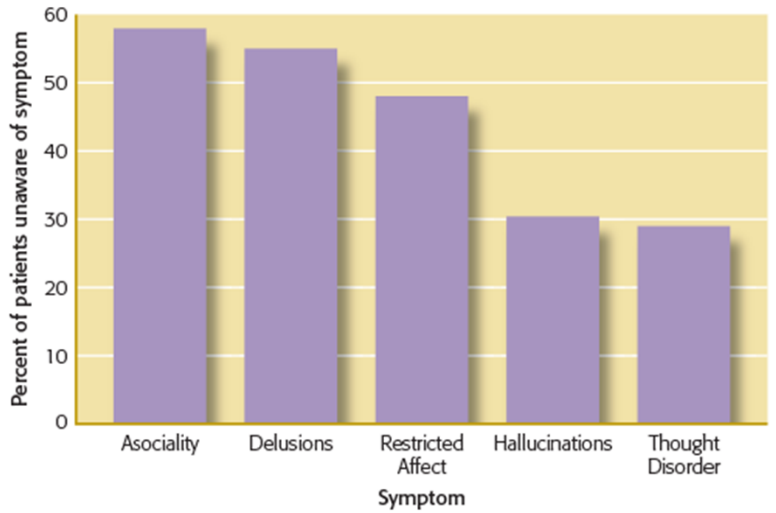
Common in >50% of patients

Important to distinguish between symptoms that are primary from those that are secondary effects

Anosognosia - an inability to recognize one's own mental confusion

- The doctor asked a patient who insisted that he was dead: "Look. Dead men don't bleed, right?" When the man agreed, the doctor pricked the man's finger and showed him the blood. The patient said, "What do you know, dead men do bleed after all." (Walkup, 1995)

Figure 12.1 Lack of Awareness of Psychotic Symptoms in Individuals with Schizophrenia



▸ Details

SOURCE: Amador, X. (2006). Percentage of patients with schizophrenia who were unaware of these signs and symptoms of their illness. http://mentalillnesspolicy.org/medical/lack-of-insight-schizophrenia.pdf. Used by permission of Dr. Xavier Amador.

12-2 Understanding Schizophrenia

Understanding Schizophrenia

Diagnosis involves presence of at least two of the following symptoms:

- Delusions
- Hallucination
- Disorganized speech
- Gross motor disturbance
- Negative symptoms

Deterioration from a previous level of functioning/impairment in work, relationships, or self-care

Symptoms must be present most of the time for at least 1 month, and the disturbance must persist for at least 6 months

CENGAGE

Phases of Schizophrenia

Lifetime prevalence – 1% in U.S.

Many show impairment in premorbid functioning

- Abnormalities prior to major symptom onset

Prodromal phase

- Non-specific onset and buildup of symptoms over weeks or > 1 year
- Social withdrawal, changes in sleep, apathy, mood swings, changes in thinking patterns

Active phase

- Full-blown symptoms

Residual phase

- Symptoms no longer prominent

Long-Term Outcome Studies

Increased optimism regarding course of the disorder

Follow-up study results

- 5-year follow-up study – 50% in remission; only 4% deteriorated
- 20-year study- 63% percent of patients who never displayed negative symptoms had 1+ year of recovery

Factors associated with a positive outcome include gender (women have a better outcome), higher levels of education, and having a higher premorbid level of functioning

Varying Outcomes With Schizophrenia

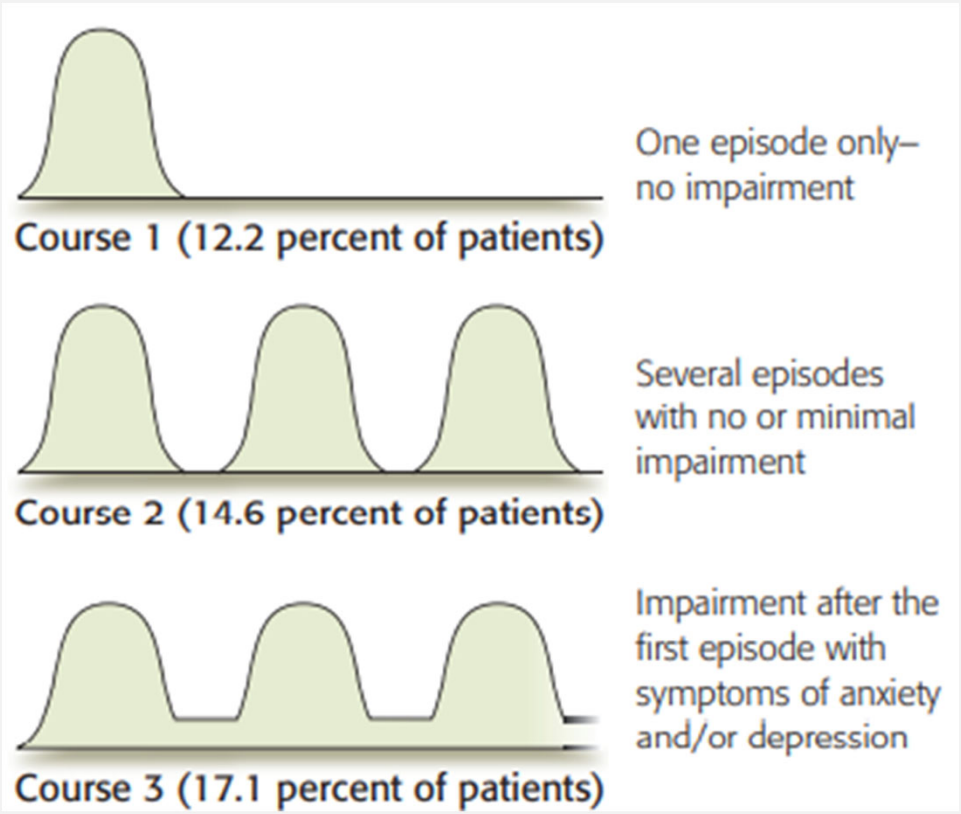
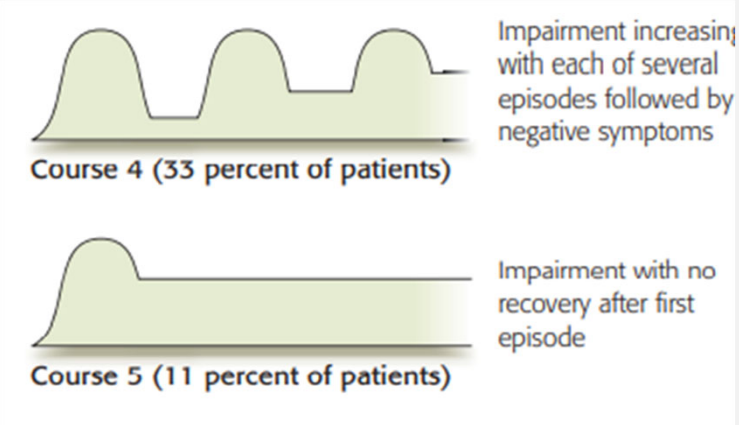


Figure 12.3 Varying Outcomes With Schizophrenia This figure shows five trajectories and outcomes experienced by individuals with schizophrenia during a 15-year follow-up study.



CENGAGE

12-3 Etiology of Schizophrenia

Etiology of Schizophrenia

Best understood using a multipath model

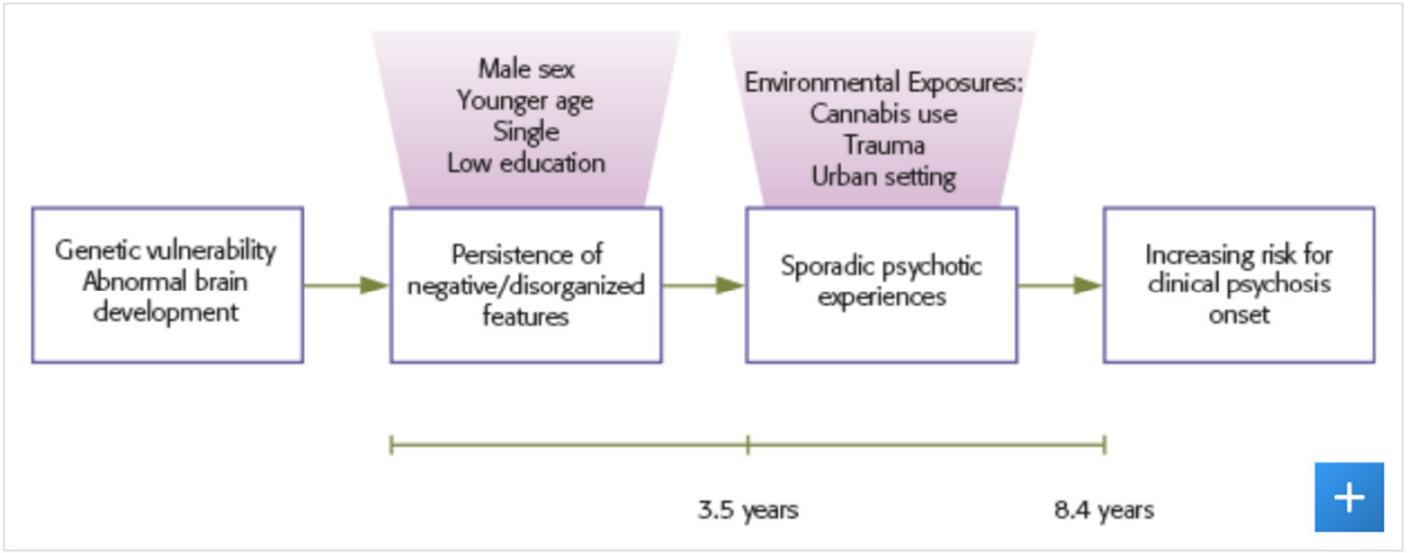
- Integration of heredity, psychological characteristics, cognitive processes, and social adversities

Each dimension interacts with the others

- Underlying biological vulnerability combined with other risk characteristics can result in the development of prodromal symptoms of schizophrenia
- Psychotic features may appear or intensify if additional environmental risk factors (e.g., cannabis use, trauma, abuse, bullying) occur.

Interactive Variables and the Onset of Clinical Psychosis

Figure 12.5 Interactive Variables and the Onset of Clinical Psychosis



▶ Details

SOURCE: Dominguez, M. D. G., Saka, M. C., Lieb, R., Wittchan, H.-U., & Van Os, J., 2010.

Multipath Model of Schizophrenia

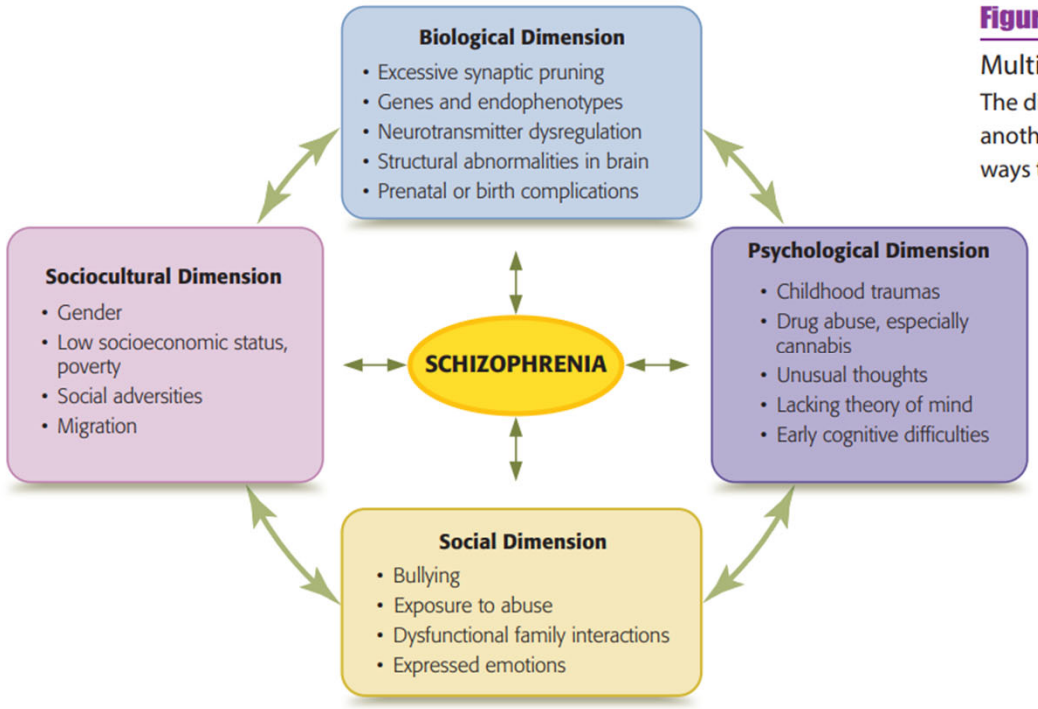


Figure 12.4

Multipath Model of Schizophrenia

The dimensions interact with one another and combine in different ways to result in schizophrenia.

Biological Dimension

Genetics and heredity play a role

- Interactions among many different genes

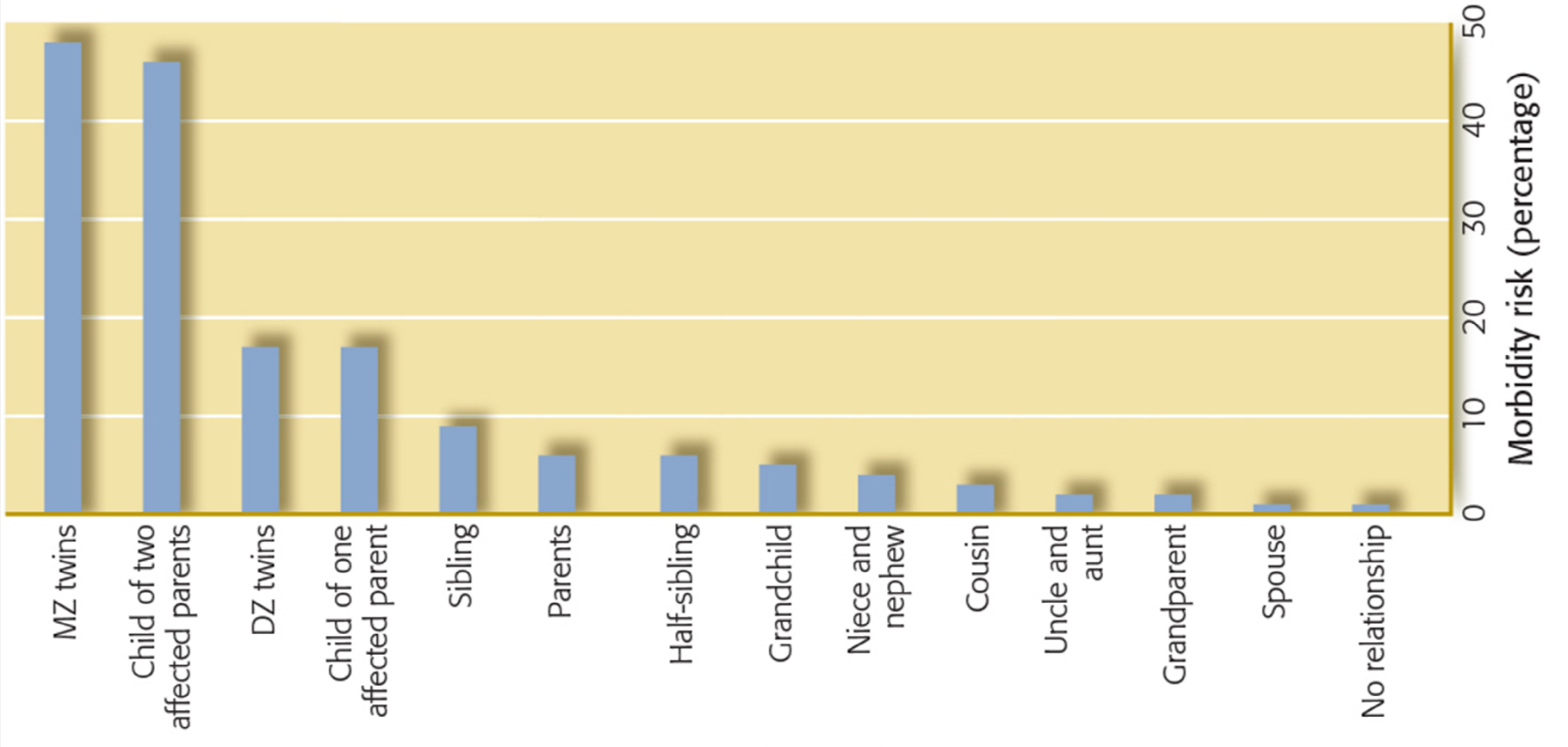
Closer blood relatives have greater risk

- 16% chance for close relatives (e.g., mother and son)
- 4% chance for distant relatives (e.g., aunt and niece)
- 1% for general population

C4 alleles are now believed to have a strong association with schizophrenia

- during late adolescence alleles of the C4 gene are turned on for the “pruning” of excessive synapses
- It is hypothesized that some of the symptoms in schizophrenia result from an abnormal and overactive pruning process

Genetic Risk of Schizophrenia



Endophenotypes

Endophenotypes are hypothesized to underlie heritable illnesses (such as schizophrenia)

- Exist in the individual before the disorder, during it, and following remission
- Characteristics found with higher frequency, although in milder forms, among “non-ill” relatives of individuals with schizophrenia
- Irregularities in working memory, executive function, sustained attention, and verbal memory

Neurostructures

- The **limbic system** is **overactive** in response to neutral stimuli
  - May lead to hypervigilance, delusional thoughts, and a tendency to respond to situations as “threatening”
- Dysfunctions in the **striatum** - difficulties modifying illogical thoughts or delusions
- **Decreased volume** in the **cortex (gray matter), amygdala, hippocampus, thalamus**
- **Ventricle enlargements**
  - Rapid loss of brain cells over six-year period
  - Ineffective communication between different brain regions
    - May lead to the cognitive, negative, and positive symptoms

Biochemical Influences (1 of 2)

Dopamine hypothesis

- Schizophrenia may result from excess dopamine activity in certain brain areas
- Supported from research with drugs that affect dopamine (phenothiazines, L-dopa, and Amphetamines)
  - Can mimic psychosis and other symptoms of schizophrenia in people without schizophrenia

The use of cocaine, amphetamines, alcohol, and especially cannabis increase the risk of developing schizophrenia

Biochemical Influences (2 of 2)

- **Cannabis** - structural changes in the brain similar to schizophrenia
  - Reductions in **grey matter**
  - Cannabis **alters the neurotransmission pathways and neurodevelopment** (particularly in adolescent brain)
- **Estrogen** - protect against psychotic symptoms
  - The age of onset 4–6 years earlier in men
  - The gender ratio shifts by the mid-40s and 50s (more women diagnosed as their estrogen levels decrease)
- **Prenatal or postnatal neurodevelopment** that have been associated with schizophrenia
  - Pregnancy and birth complications, prenatal infections such as influenza and measles, and head trauma

Psychological Dimension

- **Deficits in empathy**
  - A tendency to focus only on one's own thoughts and feelings appears to compromise social interactions
- **Deficits in the theory of mind**
  - Individuals with schizophrenia may operate based on their own perspectives, without understanding that others have their own point of view
- Association between **early developmental delay** and schizophrenia
  - Low cognitive ability test scores in childhood and adolescence
  - Cognitive decrements may be an indication of brain abnormalities
- **Misattributions and negative attitudes**

Negative Expectancy Appraisals Associated with Negative Symptoms

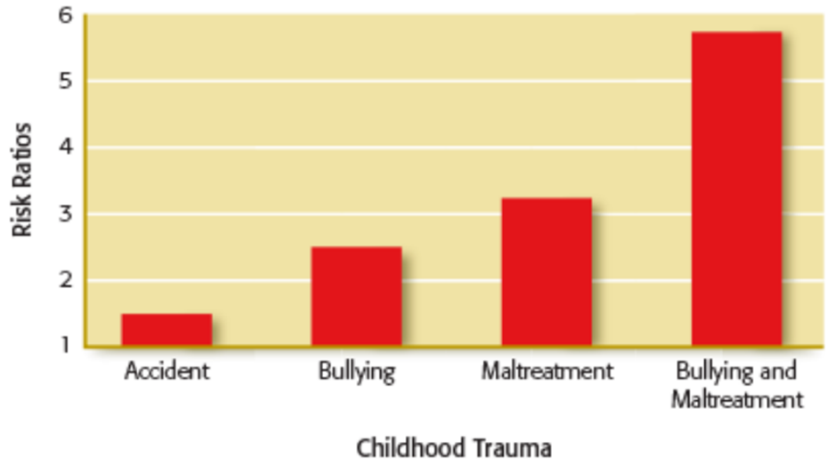
Table 12.1 Negative Expectancy Appraisals Associated With Negative Symptoms

Negative Symptom	Low Self-Efficacy (Success)	Low Satisfaction (Pleasure)	Low Acceptance	Low Available Resources
Restricted affect	If I show my feelings, others will see my inadequacy.	I don't feel the way I used to.	My face appears stiff and contorted to others	I don't have the ability to express my feelings.
Alogia	I'm not going to find the right words to express myself.	I take so long to get my point across that it's boring.	I'm going to sound weird, stupid, or strange.	It takes too much effort to talk.
Avolition	Why bother, I'm just going to fail.	It's more trouble than it's worth.	It's best not to get involved.	It takes too much effort to try.

Social Dimension

- Long ago, dysfunctional family patterns were considered the primary cause
  - Generally debunked and harmful to blame families
- Certain social factors have influence

Figure 12.8 Risk of Psychotic Symptoms at Age 11 Associated with Cumulative Childhood Trauma

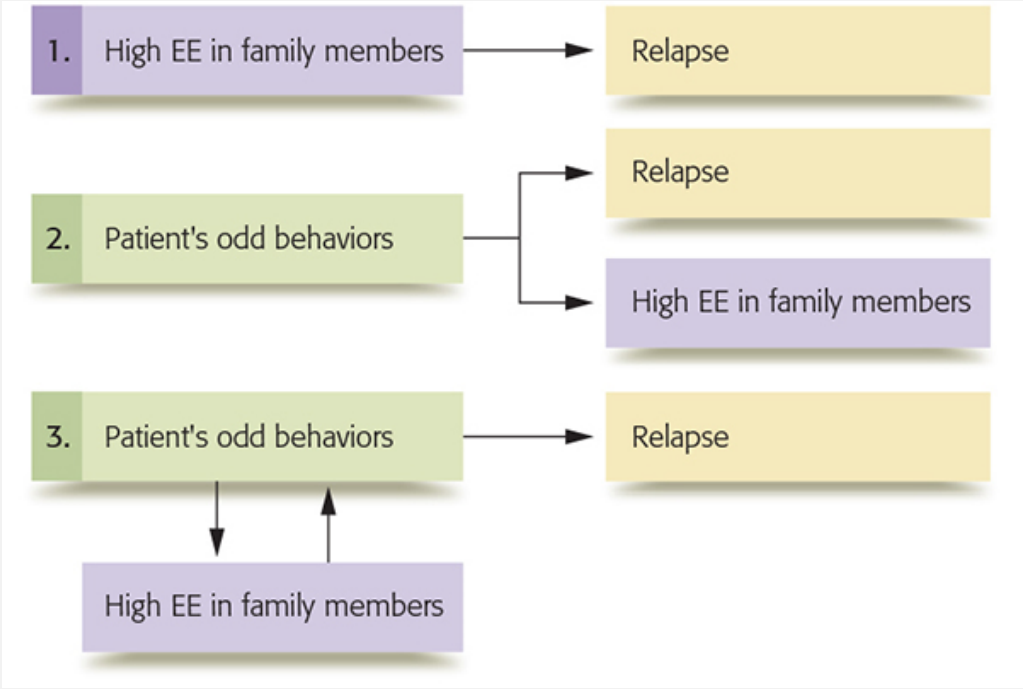


Details

SOURCE: Arseneault et al., 2011

Relationships Between Expressed Emotion and Relapse Rates

Figure 12.9 Possible Relationships Between High Rates of Expressed Emotion and Relapse Rates in Patients With Schizophrenia



Sociocultural Dimensions

Ethnic differences

- **Hispanic** and **African Americans** are **more likely to receive a diagnosis** of schizophrenia than non-Hispanic Whites
- Difference may be due to clinician bias or misinterpretation of symptoms
- Possibility of “healthy paranoia” by African Americans due to actual discrimination

Other factors

- Being unemployed, of lower socioeconomic status and educational level, and living in impoverished urban areas
- Immigration experiences appear to increase susceptibility to schizophrenia
  - Stress of migration and experiences of discrimination

CENGAGE

Cultural Issues with Schizophrenia

Culture affects how people view or interpret symptoms

- Highly stigmatized in Japan
  - Change in terminology in the year 2000 resulted in more patients being told of their disorder

Many psychiatrists in Turkey will not mention diagnosis to clients or family

Belief of supernatural causation in India

Differing views on etiology influence receptiveness to taking medication for symptoms

Explanatory Models of Illness in Schizophrenia Among Ethnic Groups

Table 12.2 Explanatory Models of Illness in Schizophrenia Among Four Ethnic Groups

	Biological Explanation	Social Explanation	Supernatural Explanation	Nonspecific Explanation
African Caribbean	6.7%	60.0%	20.0%	23.3%
Bangladeshi	0.0%	42.3%	26.9%	30.8%
West African	10.7%	31.0%	28.6%	21.4%
Anglo (in the United Kingdom)	34.5%	31.0%	0.0%	34.5%
SOURCE: McCabe & Priebe (2004).				

12-4 Treatment of Schizophrenia

Treatment of Schizophrenia

Early treatment - prefrontal lobotomy

Focus on illness and deficit has shifted to one of recovery and promotion of health, competencies, independence, and self-determination

Schizophrenia is now treated from a much more holistic perspective

- Medications
- Cognitive-behavioral therapies
- Cognitive enhancement therapy

Antipsychotic Medication

- **First-generation antipsychotics** (“typical” or “conventional antipsychotics”) - 1950s
  - Reduce dopamine levels (dopamine hypothesis)
  - Thorazine, Haldol, Prolixin
  - Still viewed as effective treatments
- **Second-generation (“atypical antipsychotics”)** – 1980s
  - Act on both dopamine and serotonin
  - Abilify, Zyprexa, Risperdal, Seroquell
  - Less side effects (next slide)

1/3 do not benefit at all from antipsychotic medication

Side Effects of Antipsychotic Medications

First generation – Extra-pyramidal Symptoms

- **Parkinsonism** - muscle tremors, shakiness, immobility
- **Akathesia** - motor restlessness
- **Dystonia** - involuntary muscle contractions in limbs and tongue
- **Tardive dyskinesia** – involuntary, repetitive movements of the mouth/tongue
- **Neuroleptic malignant syndrome** – muscle rigidity

CENGAGE

Side Effects of Antipsychotic Medications

Second generation – Metabolic side effects

- Weight gain, type 2 diabetes
- Excessive sedation
- Mixed effects on cognitive functioning and motivation

Many patients wish to stop medications once the symptoms have been resolved

- Tendency for relapse in the first 6–10 months after medication discontinued
- Individuals who discontinue after 3 years of stability have more favorable outcomes

Psychosocial Therapy (1 of 2)

Psychotherapeutic work often focuses on interpersonal deficits

Direct teaching of **conversational, behavioral, and social skills**

Social communication may also be problematic because of difficulties with emotional perception and understanding the beliefs and attitudes of others

Social cognition and interaction training (SCIT)

Psychosocial Therapy (2 of 2)

Work-Focused Cognitive Behavioral Therapy

- Increasing positive attitudes toward work, bolstering coping and problem-solving skills, and improving social interactions skills

Cognitive-Behavioral Therapy

Teach coping skills that allow clients to manage their positive and negative symptoms

18-month follow up results:

- Those receiving CBT demonstrated more days of normal functioning compared to those treated with medication and contact with a psychiatric nurse
- May delay or prevent relapse

Cognitive-Behavioral Therapy Steps

Psychoeducation and engagement

Assessment and normalization

Cognitive restructuring and identification of negative beliefs

Normalization

Collaborative analysis of symptoms

Development of alternative explanations

In mindfulness training, clients learn to let go of angry or fearful responses to psychotic symptoms

- Enhances feelings of self-control and significantly reduces negative emotions

Computer Based Programs

Aims to ameliorate the neurocognitive deficits found in individuals with schizophrenia

Cognitive enhancement therapy (CET)

Increase mental capabilities in processing speed, cognitive flexibility and memory, and social cognition.

Integrated psychological therapy (IPT)

Basic impairments in neurocognition, social cognition, solving day-to-day problems

Appears to help prevent the return of serious illness

Interventions Focusing on Family Communication and Education

Normalize family experience

Demonstrate concern, empathy, sympathy

Educate family members about schizophrenia

Avoid blame

Identify strengths and competencies

Develop problem solving and stress management skills

Strategies for coping

Strengthening communication skills

12-5 Other Schizophrenia Spectrum Disorders

Other Schizophrenia Spectrum Disorders (1 of 2)

Delusional disorder

- Persistent delusions that are not accompanied by other unusual or odd behaviors
- Common themes involved in delusional disorders include the following
  - Erotomania—the belief that someone is in love with the individual; this delusion typically has a romantic rather than sexual focus.
  - Grandiosity—the conviction that one has great, unrecognized talent, special abilities, or a relationship with an important person or deity.
  - Jealousy—the conviction that one's spouse or partner is being unfaithful.
  - Persecution—the belief that one is being conspired or plotted against.
  - Somatic complaints—convictions of having body odor, being malformed, or being infested by insects or parasites.

Other Schizophrenia Spectrum Disorders (2 of 2)

Brief Psychotic Disorder

- Presence of one or more psychotic symptoms, including at least one symptom involving delusions, hallucinations, or disorganized speech, that continue for at least 1 day but last less than 1 month

Schizophreniform Disorder

- Two or more of the following symptoms: delusions, hallucinations, disorganized speech, gross motor disturbances, or negative symptoms. At least one of these symptoms must involve delusions, hallucinations, or disorganized speech. This condition lasts between 1 month and 6 months

Schizoaffective Disorder

- Is diagnosed when someone demonstrates psychotic symptoms that meet the diagnostic criteria for schizophrenia combined with symptoms of a major depressive or manic episode

12-6 Contemporary Trends and Future Directions

Contemporary Trends and Future Directions

Move from pessimistic views regarding outcome to recovery model

- Not necessary to be symptom-free in order to move beyond label of being mentally ill and achieve one's potential

Early identification and treatment of high-risk individuals

- Common in children and adolescents
  - Most symptoms appear by age 18
- Ability to talk with a therapist beneficial