Chapter 13

Schizophrenia

PSY 440: Abnormal Psychology

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- https://www.youtube.com/watch?v=9ZEUnzRzvGg

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- ***psychotic disorders*** **–**
  disorders so severe that the person has essentially lost touch with reality

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- schizophrenia (a psychotic disorder) is characterized by the disruption of:
  - normal perceptual and thought process
  - personality
  - affect

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Nature of Schizophrenia and Psychosis: An Overview, 1

- Schizophrenia vs. Psychosis
  - Psychosis – Broad term referring to hallucinations and/or delusions; noted in several disorders
  - Schizophrenia – A type of psychosis with disturbed thought, language, and behavior

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Nature of Schizophrenia and Psychosis: An Overview, 2

- Historical Background

  - Emil Kraeplin – Used the term dementia praecox, "loss of the inner unity of thought, feeling , and acting".
  - Eugen Bleuler – Introduced the term "schizophrenia" or "splitting of the mind"; the 4 As:
    - Associations, Affect, Ambivalence, Autism

  - Many of Kraeplin and Bleuler's ideas are still with us
  - Understanding onset and course considered important

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Nature of Schizophrenia and Psychosis: An Overview, 3

- Schneider – first rank vs. second rank symptoms
- Contemporary practice –
  - Complex syndrome – heterogeneous
    - Spectrum diagnosis
      - Separate diagnoses that "look like" or share some of the same symptoms as schizophrenia – but are separate psychotic disorders

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DSM-5 Criteria: Schizophrenia (1 of 3)

A. Two (or more) of the following, each present for a significant portion of time during a one-month period:
   - (1) delusions
   - (2) hallucinations
   - (3) disorganized speech (e.g., frequent derailment or incoherence)
   - (4) grossly disorganized or catatonic behavior
   - (5) negative symptoms (i.e., diminished emotional expression or avolition)

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DSM-5 Criteria: Schizophrenia (2 of 3)

B. For a significant portion of the time since the onset of the disturbance, level of functioning in one or more major areas, such as work, interpersonal relations, or self-care, is markedly below the level achieved prior to the onset.

C. Continuous signs of the disturbance persist for at least six months.

D. Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out.

E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.

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DSM-5 Criteria: Schizophrenia (3 of 3)

F. If there is a history of autistic spectrum disorder or a communication disorder of childhood onset, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations, in addition to the other required symptoms of schizophrenia, are also present for at least one month (or less if successfully treated).

From American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

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"Positive" Symptoms of Schizophrenia, 1

- **The Positive Symptoms-Active manifestations of abnormal behavior, distortions of normal behavior**
  - **What people with schizophrenia have that normal people do not**
- **Delusions: Gross misrepresentations of reality**

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"Positive" Symptoms of Schizophrenia, 2

- **Types of Delusions:**
  - **Persecution – "out to get me"**
  - **Reference – "talking about me"**
  - **Being controlled – "aliens make my body move"**
  - **Grandeur – "I invented rock and roll"**
  - **Truman Show delusion – "I am the star of a reality TV show."**
  - **Capgras delusion – "my loved one has been replaced by a double."**





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"Positive" Symptoms of Schizophrenia, 3

- **Delusions typically have a "bizarre" quality – implausible, not understandable, not based on ordinary life experiences**
  - Most common:
    - Delusions of grandeur
    - Delusions of persecution

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"Positive" Symptoms of Schizophrenia, 4

- **<u>Hallucinations:</u> Experience of sensory events without environmental input; type of perceptual disturbance**
  - **Can involve all senses; auditory most common 70%**
  - **Not unique to schizophrenia**
  - **Typically hear voices**

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"Negative" Symptoms of Schizophrenia, 1

- **<u>The Negative Symptoms</u> -Absence or insufficiency of normal behavior**
  - **Examples are emotional/social withdrawal, apathy, and poverty of thought/speech**

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"Negative" Symptoms of Schizophrenia, 2

- Spectrum of Negative Symptoms
  - Avolition (or apathy) – Refers to the inability to initiate and persist in activities
  - Alogia – Refers to the relative absence of speech
  - Anhedonia – Lack of pleasure, or indifference to pleasurable activities
  - Affective flattening – Show little expressed emotion, but may still feel emotion

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"Negative" Symptoms of Schizophrenia, 3

- Other Negative Symptoms:
  - Cognitive deficits
    - Primacy of impaired cognition
  - Social Withdrawal

- Negative symptoms more debilitating than positive symptoms

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"Disorganized" Symptoms of Schizophrenia, 1

- The Disorganized Symptoms-Include severe and excess disruptions in speech, behavior, and emotion
  - Examples include rambling speech, erratic behavior, and inappropriate affect

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"Disorganized" Symptoms of Schizophrenia, 2

- **Disorganized Speech**
  - **Cognitive slippage – Refers to illogical and incoherent speech**
  - **Tangentiality – "Going off on a tangent" and not answering a question directly**
  - **Loose associations or derailment – Taking conversation in unrelated directions**

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"Disorganized" Symptoms of Schizophrenia, 3

- Thought disorders can lead to the formation of:
  - Clang Associations
  - Perseveration
  - Word Salad

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"Disorganized" Symptoms of Schizophrenia, 4

- **Nature of Disorganized Affect**
  - **Inappropriate emotional behavior (e.g., crying when one should be laughing)**
- **Nature of Disorganized Behavior - includes a variety of unusual behaviors**
  - **Catatonia – Spectrum from wild agitation, waxy flexibility, to complete immobility**
  - **Difficulties performing activities of daily living**

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"Disorganized" Symptoms of Schizophrenia, 4

- Nature of Disorganized Affect
  - Inappropriate emotional behavior (e.g., crying when one should be laughing)

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"Disorganized" Symptoms of Schizophrenia, 5

- Nature of Disorganized Behavior - includes a variety of unusual behaviors
  - Catatonia – Spectrum from wild agitation, waxy flexibility, to complete immobility
  - Difficulties performing activities of daily living

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"Disorganized" Symptoms of Schizophrenia, 6

- Attentional Deficits
- Sensory Processing Deficits
- Social Problems

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Subtypes of Schizophrenia: A Thing of the Past

- Schizophrenia was previously divided in to subtypes based on content of psychosis
- This is no longer the case in *DSM-5*, but outdated terms are still in partial use
- Included paranoid, catatonic, residual (minor symptoms persist after past episode), disorganized (many disorganized symptoms) and undifferentiated

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Other Schizophrenia Spectrum Disorders

- Schizophreniform disorder
  - Psychotic symptoms lasting between one and six months (less than six months = schizophrenia)
- Brief psychotic disorder
  - Psychotic symptoms lasting less than one month
- Both disorders associated with relatively good functioning
  - Most patients resume normal lives

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Other Schizophrenia Spectrum Disorders: Schizoaffective Disorder

- Schizoaffective disorder
  - Symptoms of schizophrenia + additional experience of a major mood episode (depressive or manic)
  - Psychotic symptoms must also occur outside the mood disturbance
  - Prognosis is similar for people with schizophrenia
  - Such persons do not tend to get better on their own

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Delusional Disorder

- Key feature: Delusions that are contrary to reality
  - Lack other positive and negative symptoms
  - Types of delusions include:
    - Erotomanic
    - Grandiose
    - Jealous
    - Persecutory
    - Somatic
  - Extremely rare
  - Better prognosis than schizophrenia

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Catatonia

- Unusual motor responses, particularly immobility or agitation, and odd mannerisms
- Tends to be severe and quite rare
- May be present in psychotic disorders or diagnosed alone
- May include:
  - Stupor, mutism, or maintaining the same pose for hours
  - Opposition or lack of response to instructions
  - Repetitive, meaningless motor behaviors
  - Mimicking others' speech or movement

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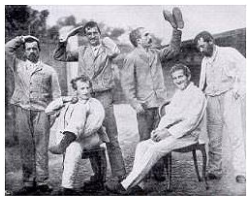
Waxy Catatonia



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Psychotic Disorders due to Other Causes

- Psychosis may occur as the result of substance use, some medications and some medical conditions
- Knowing these causes is important for treatment
  - Address underlying cause
- Include:
  - Substance/medication-induced psychotic disorder
  - Psychotic disorder associated with another medical condition

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Schizophrenia in Childhood

- Very rare
- Uses the same criteria as adults
- High incidence rate of trauma

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Schizophrenia: Statistics, Part 1

- Onset and prevalence of schizophrenia worldwide
  - About 0.2% to 1.5% (or about 1% population)
  - Often develops in early adulthood
  - Can emerge at any time; childhood cases are extremely rare but not unheard of

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Schizophrenia: Statistics, Part 2

- **Schizophrenia – Gender Differences**
  - **Females tend to have a better long-term prognosis**
  - **Onset –males 18-25 years; females – 25-35 years & after 40**
  - **Men more negative symptoms; women more affective, positive**
  - **African Americans more likely to be misdiagnosed with schizophrenia**

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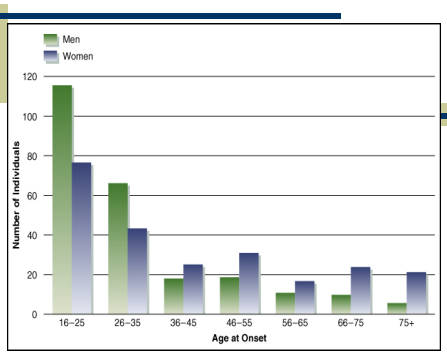

Figure 13.2
Gender differences in onset of schizophrenia in a sample of 470 patients

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Schizophrenia: Statistics, Part 3

- Schizophrenia is generally chronic
  - Most suffer with moderate-to-severe lifetime impairment
  - Life expectancy is slightly less than average
    - Increased risk for suicide
    - Increased risk for accidents
    - Self care may be poorer

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Schizophrenia: Statistics, Part 4

- Schizophrenia affects males and females about equally
  - Females tend to have a better long-term prognosis
  - Onset slightly earlier for males
- Cultural factors
  - Psychotic behaviors not always pathologized
  - Yet schizophrenia is found at similar rates in all cultures

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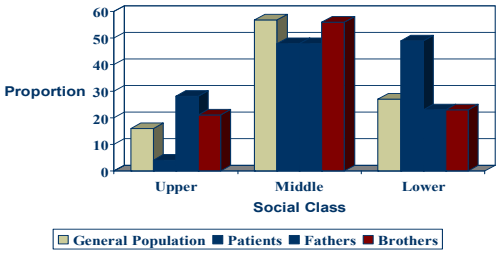
SCHIZOPHRENIA AND SOCIAL CLASS



Source : *After E. M. Goldberg and S. Linda. Morrison, "Schizophrenia and Social Class."* British Journal of Psychiatry, 109 (1963); 785-802.

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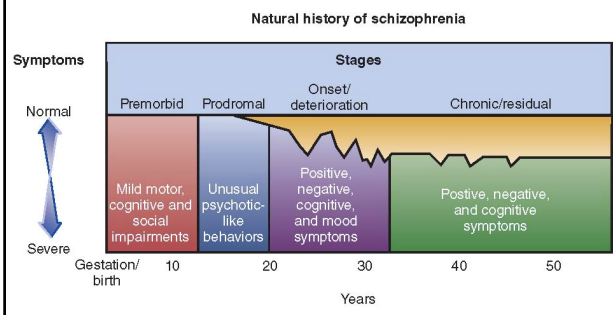
Course of Schizophrenia



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Causes of Schizophrenia: Findings From Genetic Research, Part 1

- There is no single cause for schizophrenia
  - Seems to be caused by multiple factors acting together

- Family studies
  - Inherit a tendency for schizophrenia, not specific forms of schizophrenia
  - Risk increases with genetic relatedness
    - For example, having a twin with schizophrenia incurs greater risk than having an uncle with schizophrenia

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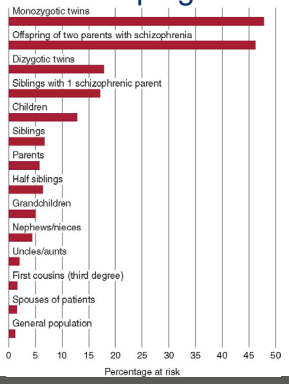
Risk of Developing Schizophrenia



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Causes of Schizophrenia: Findings From Genetic Research, Part 2

- Twin studies
  - Monozygotic twins versus fraternal (dizygotic) twins
    - At greater risk if your identical twin has schizophrenia – supports role of genes
  - Adoption studies
    - Adoptee risk for developing schizophrenia remains high if a biological parent has schizophrenia
    - But risk is lower than for children raised by their biological parent with schizophrenia – healthy environment is a protective factor

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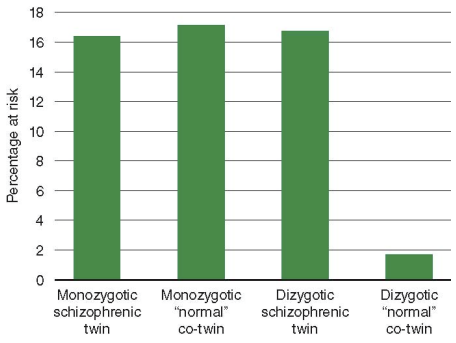
Schizophrenia Among Children of Twins



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Search for Genetic and Behavioral Markers of Schizophrenia

- Genetic markers: Linkage and association studies
  - Schizophrenia is likely to involve multiple genes
- Behavioral markers: Smooth-pursuit eye movement
  - Schizophrenia patients show reduced ability to track a moving object with their eyes
  - Relatives of schizophrenic patients also have deficits in this area

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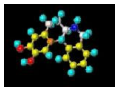
Causes of Schizophrenia: Neurobiological Influences

- The dopamine hypothesis: Schizophrenia is partially caused by overactive dopamine
  - Drugs that increase dopamine (agonists) result in schizophrenic-like behavior
  - Drugs that decrease dopamine (antagonists) reduce schizophrenic-like behavior
    - Examples – neuroleptics, L-dopa for Parkinson's disease
- Problem: Overly simplistic
  - Many neurotransmitters are likely involved



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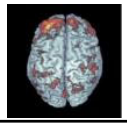
Causes of Schizophrenia: Other Neurobiological Influences

- Structural and functional abnormalities in the brain
  - Enlarged ventricles and reduced tissue volume
  - Hypofrontality – less active frontal lobes
    - A major dopamine pathway
- Viral infections during early prenatal development
  - Findings are inconclusive



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Other Neurobiological Influences

- Marijuana use also increases the risk for developing schizophrenia in at-risk individuals
- Conclusions about neurobiology and schizophrenia
  - Schizophrenia reflects diffuse neurobiological dysregulation
  - Structural and functional brain abnormalities
    - Not unique to schizophrenia

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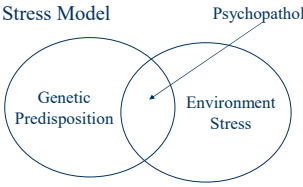
Causes of Schizophrenia: Psychological and Social Influences, Part 1

- The role of stress
  - May activate underlying vulnerability
  - May also increase risk of relapse

- Diathesis Stress Model



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Causes of Schizophrenia: Psychological and Social Influences, Part 2

- Family interactions
  - Unsupported theories
    - Schizophrenogenic mother
    - Double bind communication
  - High expressed emotion (EE) – associated with relapse

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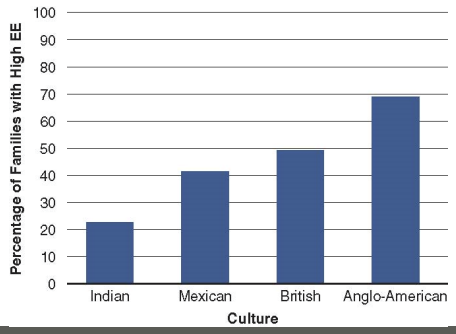
Cultural Differences in Expressed Emotion



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Causes of Schizophrenia: Psychological and Social Influences, Part 3

- The role of psychological factors
  - May function as the *diathesis* in a diathesis-stress model
  - Exert only a minimal effect in producing schizophrenia

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Medical Treatment of Schizophrenia

- Historical precursors
- Development of antipsychotic (neuroleptic) medications
  - Often the first line treatment for schizophrenia
  - Began in the 1950s
  - Most reduce or eliminate positive symptoms
  - Acute and permanent side effects are common
    - Parkinson's-like side effects
    - Tardive dyskinesia
    - Compliance with medication is often a problem
  - Noncompliance with medication

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Table 11-1 Antipsychotic Medications

First-generation (typical) agents

Chlorpromazine	Perphenazine
Droperidol	Pimozide
Fluphenazine	Prochlorperazine
Haloperidol	Thioridazine
Loxapine	Thiothixene
Mesoridazine	Trifluoperazine
Molindone	

Second-generation (atypical) agents

Aripiprazole	Olanzapine
Asenapine	Paliperidone
Brexpiprazole	Pimavanserin
Cariprazine	Quetiapine
Clozapine	Risperidone
Iloperidone	Ziprasidone
Lurasidone	

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Medication	Calculated Optimal Dose	Recommended Maximum Dose
amisulpride*	537 mg/day	1,200 mg/day
aripiprazole oral	11.5 mg/day	30 mg/day
aripiprazole LAI	463 mg/4 weeks	882 mg/4 weeks
asenapine	15.0 mg/day	20 mg/day
brexpiprazole	3.36 mg/day	4 mg/day
cariprazine	7.6 mg/day	6 mg/day
clozapine	567 mg/day	600 mg/day
haloperidol oral	6.3 mg/day	20 mg/day
iloperidone	20.13 mg/day	24 mg/day
lurasidone	147 mg/day	160 mg/day
olanzapine oral*	15.1 mg/day	20 mg/day
olanzapine LAI	277 mg/2 weeks	300 mg/2 weeks
paliperidone oral	13.4 mg/day	12 mg/day
paliperidone LAI	120 mg/4 weeks	234 mg/4 weeks
quetiapine	482 mg/day	800 mg/day
risperidone oral	6.3 mg/day	16 mg/day
risperidone LAI	36.6 mg/2 weeks	50 mg/2 weeks
sertindole	22.5 mg/day	24 mg/day
ziprasidone	186 mg/day	200 mg/day

*For patients with predominantly negative symptoms, low-dose treatments of 72.4 mg/day amisulpride and 6.5 mg/day olanzapine were calculated as optimal.
Source: Stefan Leucht, M.D., et al., *AJP in Advance* 2019

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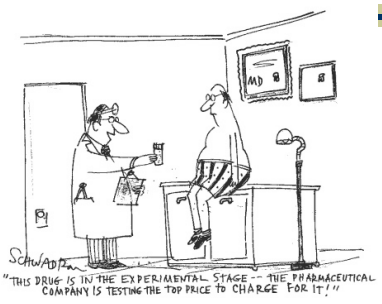

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Psychosocial Treatment of Schizophrenia, Part 1

- Historical precursors
- Psychosocial approaches
  - Behavioral (i.e., token economies) on inpatient units: Reward adaptive behavior
  - Community care programs
  - Social and living skills training
  - Behavioral family therapy
  - Vocational rehabilitation

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Psychosocial Treatment of Schizophrenia, Part 2

- Psychosocial approaches *cont.*
  - Illness management and recovery: Engages patient as an active participant in his/her care, focusing on goal setting and dealing with functional impairment
  - Cultural considerations: Important to take into account cultural factors that influence individuals' understanding of their own illness
  - Prevention: Identify at-risk children and intervene (e.g., with supportive, nurturing environments, social skills training)

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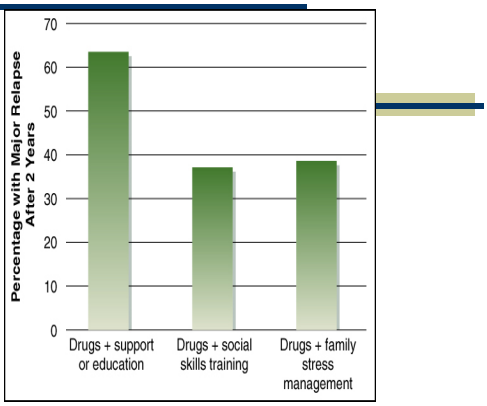

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