Schizophrenia

Schizophrenia

When I first had the breakdown, it was like dropping an egg on the kitchen floor. Part of the shell is intact, but part of it's shattered, and my personality is the yolk, leaking away. And I cannot get it back together."

~Anne Deveson, *Tell Me I'm Here*

Overview

- "Schiz" means split
- where is the split?
  - the split is between thoughts and reality
  - not between 2 separate minds

Who and How Many?

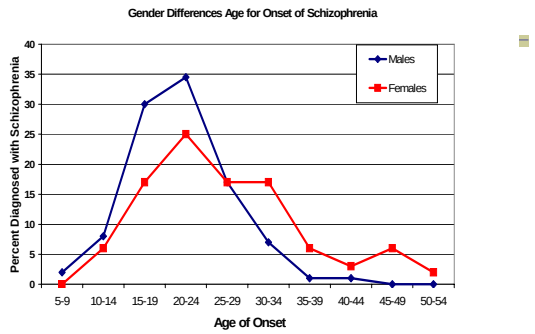
- People diagnosed with schizophrenia come from all different places, SES backgrounds, and life situations
  - Some increase in lower SES – downward drift?
- 1 in every 100 people, 1% in the U.S.
- similar world wide

Age of Onset

- generally late adolescence to early adulthood
  - 17-24 yrs in age
  - earlier with men
  - don't usually see schizophrenia in middle age
  - if see past age 45 - possibly indicative of biological illness such as dementia or stroke

Gender Differences

- Roughly similar rates for men and women
- Women more frequently diagnosed later in life



Schizophrenia is diagnosed earlier in males than in females

Diagnostic criteria for Schizophrenia

- A. Characteristic symptoms: Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated):
  - (1) delusions
  - (2) hallucinations
  - (3) disorganized speech (e.g., frequent derailment or incoherence)
  - (4) grossly disorganized or catatonic behavior
  - (5) negative symptoms, i.e., affective flattening, alogia, or avolition
- Note: Only one Criterion A symptom is required if delusions are bizarre or hallucinations consist of a voice keeping up a running commentary on the person's behavior or thoughts, or two or more voices conversing with each other.

Diagnostic Criteria

- Problems must be present for at least 6 months
- Must be active period with psychotic episode (for at least one month)
  - The course of schizophrenia may or may not include a prodromal stage
- Not due to a substance
- According to the current diagnostic criteria - never get out of having schizophrenia - stay in the residual phase

Negative symptoms

- Affective flattening : Avoidance of eye contact; immobile, expressionless face; monotonous voice, low and difficult to hear
- Alogia: Poverty of speech
- Avoiltion: No energy or motivation
- Apathy: Don't care
- Anhedonia: No interest in things
- Asociality: Not interested in interactions
- More negative symptoms (Type II) correlated with more problems and higher rates of permanent disability

Positive Symptoms

- Delusions
- Hallucinations
- Formal thought disorder
- Bizarre behavior
- More Positive symptoms (Type II) correlated with better response to medications, less permanent disability

Delusions

- Delusion of Persecution - perhaps the most common, belief that the CIA, Mafia or other group or individual is out to get you
- delusion of reference - events, objects, or people are given unusual significance. e.g., a nurse may be the Angel of Death
- Thought Broadcasting - the person believes that she or he can send thoughts to the minds of people in the external world

Formal Thought Disorder

- Disordered thinking and speech
  - Loose associations:
    - "The problem is insects. My brother used to collect insects. He's now a man 5 foot 10 inches. You know, 10 is my favorite number; I also like to dance, draw, and watch TV."
  - Neologisms:
    - "This desk is a cramstile"; "He's an easterhorned head"
  - Clang:
    - How are you? "Well, hell, it's well to tell"
    - How's the weather? "So hot, you know it runs on a cot"

Perception Problems

- Disturbances of Perception (positive symptom)
  - the most common are hallucinations - the perception of a stimulus where one does not exist (cf. delusion)

Hallucinations

- Tend not to be ongoing, more sporadic
- Sometimes command, some times not
- Different types indicate different problems (psychological, substance, neurological)

Auditory Hallucinations

- these are the most common
- person hears sounds that someone sitting next to him cannot hear
- experienced externally
- often a person with auditory hallucinations cannot complete tasks because "the voices" will not let them concentrate
- sometimes the schizophrenic patients will hear voices or sounds even during periods of remission

Example of Auditory Hallucination

- Example of auditory hallucination experienced by a patient with delusions of death and destruction

"You know Virginia's dead.
You know your father's dead.
You know the world is ending.
You know you've killed a lot of people.
You know you're responsible for the Californian earthquake, the death of the planet.
You know you have a mission.
You know you're the messiah."

Tactile hallucinations

- Feeling something that is not present
- less common
- include such things as tingling and burning sensations
- Frequently induced by drugs (stimulants)

Visual hallucinations

- seeing what isn't there
- not always found with schizophrenic patients
- may be more indicative of drug induced psychosis (hallucinogens, stimulants, MDMA)
- organic (neurological) mental disorder

Olfactory Hallucinations

- perception of odors which are not present
- so uncommon warrant a complete set of neurological tests – R/O the possibility of brain tumor or other biological problem

What Are the Symptoms of Schizophrenia?

- Psychomotor symptoms
  - People with schizophrenia sometimes experience psychomotor symptoms
    - Awkward movements, repeated grimaces, odd gestures
    - The movements seem to have a magical quality
  - These symptoms may take extreme forms, collectively called catatonia
    - Includes stupor, rigidity, posturing, and excitement

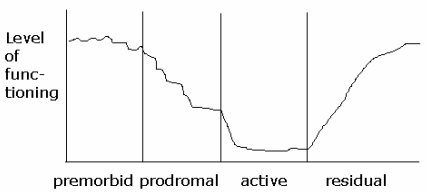
Other problems

- Relationships with the outside world are impaired
  - there is a tendency to withdraw from contact with other people
  - there is increased isolation
  - homelessness

Other problems

- eccentric grooming or dressing habits
- unusual bodily concerns (seemingly hypochondriacal in nature)
- memory impairment and/or confusion
- dysphoric mood (i.e., depression)

Course of Psychotic Episode



The Prodromal Stage

- clear deterioration in previous level of functioning prior to a psychotic episode
- increased social withdrawal
- increasingly less attention is paid to personal hygiene and grooming
- gradual increase in peculiar and eccentric behaviors

The Prodromal Stage

- affect becomes increasingly more blunted or inappropriate
- increased awareness of unusual perceptions

The Prodromal Stage

- People report a sense of:
  - perplexity - don't understand what's going on (cannot understand why people are against them)
  - feel isolated - feel alone in the world, this is when they start to withdrawal
  - anxiety and terror - people are scared to death that they are "descending" into this

The Prodromal Stage

- Prognosis based on the prodromal stage
  - worse if long, insidious downhill course over many years
  - better if sudden and is quickly followed by the Active phase of the disorder

Active Stage

- Presence of psychotic behaviors/symptoms
- Hallucinations
- Delusions
- Affective disturbance
- Psychomotor disturbance

Residual Stage

- gradual improvement in functioning.
- level of functioning expected for return is similar to the prodromal stage
- The features of the active period persist
  - But they are not as strong
  - “volume” is decreased
- Problem with social withdrawal

Favorable Prognostic Signs

- Absence of premorbid personality disorders
  - social skills
  - Adequate premorbid social functioning
- Presence of a clear precipitating event
- Abrupt onset
- later age of onset
  - first episode at 17 vs late twenties or early thirties

Complications Associated with Schizophrenia

- Shorter life expectancy
  - Some schizophrenic patients lead long lives
  - For the most part the life span is shorter

Shorter life expectancy

- there is an increased suicide rate for those diagnosed with schizophrenia
  - Up to 10% with schizophrenia
- highest period of risk is residual stage
- generally the individual has been through the whole cycle and expects it again
- decide to take action while they can

Complications Associated with Schizophrenia

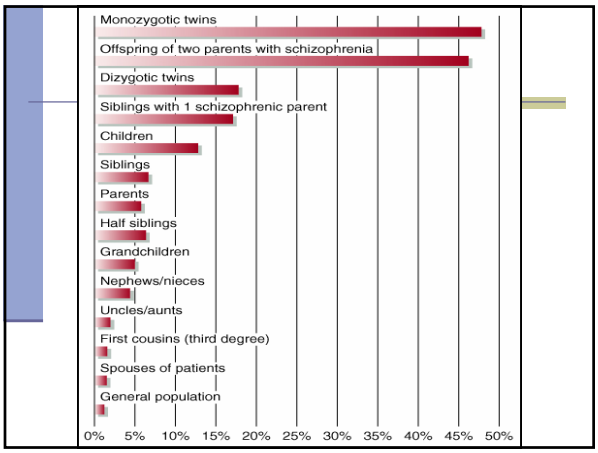
- general decrease in attention paid to oneself
- delusions can be self-threatening
- e.g., feet amputated because "voices" had told pt. to spend the night outside in the cold

Complications Associated with Schizophrenia

- institutional neglect must be considered as contributing to shorter life expectancy
- Deprived economic circumstances
  - employment problems
  - 25 to 50% of America's homeless suffer from some mental health disorder (most are diagnosable with schizophrenia or substance abuse disorders)

The genetic component

- concordance rates
  - monozygotic twins ranging from 44 to 50%
  - dizygotic rate is about 15%
  - these findings vary wildly
  - depends on how you define schiz (spectrum)



The genetic component

- genetics still can't account for everything
  - otherwise - 100% MZ concordance rates
- probably not some single gene +
- a critical analysis of twin studies and schizophrenia:
  - Rare disorder (schizophrenia) with rare phenomenon (identical twins)
  - Consider the rates:

The genetic component

0.40%	incidence of monozygotic twins (1/250)
1.0%	incidence of schizophrenia
0.004%	% of US population who is twin and schizophrenia
	joint probability of monozygotic and schizophrenia

Violence and schizophrenia

- Are patients diagnosed with schizophrenia dangerous?
  - control for history of substance abuse and violence prior to first schizophrenic episode
    - tend to be less violent that the general population
  - Paranoid schizophrenic patients are more dangerous
    - especially if you are part of their delusional system

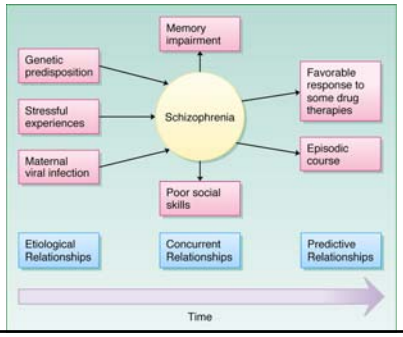
Diagnosing Schizophrenia

- The DSM-IV distinguishes five subtypes:
  - Disorganized – characterized by confusion, incoherence, and flat or inappropriate affect
  - Catatonic – characterized by psychomotor disturbance of some sort
  - Paranoid – characterized by an organized system of delusions and auditory hallucinations
  - Undifferentiated – characterized by symptoms which fit no subtype; vague category
  - Residual – characterized by symptoms which have lessened in strength and number; person may continue to display blunted or inappropriate emotions

Classification of Schizophrenic Disorders

- Problematic
- mental health professionals agree 80% whether or not a person suffers from a schizophrenic disorder
- percentage drops to 30 % when it comes to specific subtype
- different subtypes have slightly different prognoses
- treatment procedures are more or less the same for all types of schizophrenic disorders

Etiologic Theories of Schizophrenia



Etiologic Theories of Schizophrenia

- Family based theories
  - Schizophrenogenic Mother
    - from Fromm-Reichmann
  - psychodynamic concept
  - "research based"
    - clinical observations, client self-reports

Family based theories

- Schizophrenogenic Mother
  - mothers are rigid and moralistic
  - they are fearful of intimacy
  - insensitive to the needs of a child
  - cold and demanding
  - overly protective of the child
- there is NO research data that indicate that mothers cause schizophrenia

Family based theories

- Bateson's Double-bind hypothesis
- communications theorist
- required intense relationship with someone child is dependent upon
  - child cares about them

Family based theories

- Bateson's Double-bind hypothesis
  - the parent sends two conflicting messages simultaneously
    - Give me a big hug and becoming stiff and unreceiving
  - child can't comment on these mixed messages and cannot leave
  - the child then retreats into his or her own inner world
- Research does NOT support this theory

Family based theories

- Expressed Emotion (EE)
  - Brown, Vaughn & Leff
- *there are high and low EE families*
- In high EE families
  - high number of critical statements being made
  - over-involvement with the pt. And hostility toward disorder

Family based theories

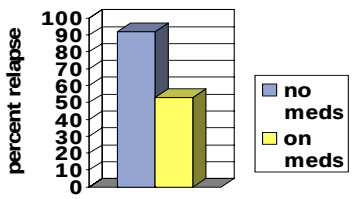
- Expressed Emotion (EE)
  - Data does NOT say that high EE *causes* schizophrenia
  - However, when patients diagnosed with schizophrenia come out of the hospital into high EE families - *patient is more likely to relapse*
- implication for treatment did come out of this relapse rate correlation

Treatment approaches

- Family Therapy
  - Effective for preventing relapse
  - Focus on interaction of family members with patient
    - Have used Vaughn & Leff's Expressed Emotion work
  - Look at hostility, blaming, isolating of patient
  - Look at teach more effective family interactions

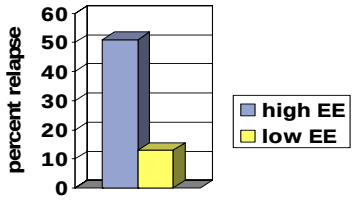
Differential relapse rates

- Patients in families with high levels of expressed emotions
- With and without medications

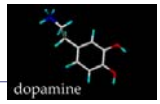


Differential relapse rates

- Patients on medications
- In families with high and low levels of expressed emotions



Biological Theories



- Dopamine (DA) Hypothesis
  - most popular hypothesis today
- schizophrenia is caused by excessive amounts of dopamine
  - could be hypersensitivity to DA

Dopamine Hypothesis

- could be damage or problems with particular receptor DA (2, 3, 4) sites
- indirect evidence for this
  - amphetamines block DA reuptake
    - leads to too much DA
    - amphetamine psychosis looks like Schiz
  - other substances produce hallucinations, but typically stimulants (MDMA)

Dopamine Hypothesis

- Parkinson's disease
  - caused by too little DA
  - administer L-DOPA
    - increase available DA
    - too much DA - get Schiz symptoms

Dopamine Hypothesis

- Phenothiazines and typical antipsychotics (chlorpromazine = Thorazine)
  - block DA receptor
  - get Parkinson's like symptoms - tardive dyskenesia

Dopamine Hypothesis

- one problem with this theory is that it indicates that medications may be necessary to constantly block the DA receptors -
  - historically, too toxic side effects
- another problem is that some people are not the least bit responsive to antipsychotics medication

Dopamine Hypothesis

- for all of its problems the advent of neuroleptic medication has been considered one of the greatest leaps in the treatment of mental disorders in this century.
  - reduced the number of people requiring hospitalization by as much as 90%.

Diathesis Stress Model

- People who have a genetic/biological vulnerability to the disorder
- probable environmental events that trigger the expression of the disorder
  - late adolescence and early adulthood is when you see this occur -- there are many stressors which occur at this time, may trigger the illness
  - this is a good explanation in that it looks at the individual in the environment
  - but it is only predictive of events that have already occurred
    - not predictive at all

Treatment

- Early Days -- sedation and locked up
  - Coma treatment - insulin coma
  - ECT - this was used but controlled studies indicate that it is not useful for schizophrenia
  - Psychosurgery - lobotomies (1930s-1950s)
    - turned people into avolitional “zombies”

Treatment

- resulted in the discovery of drug treatments
  - antihistamines had a calming effect on people
- Thorazine discovered
  - major tranquilizing properties
  - Thorazine in early 1950s
    - very commonly used antipsychotic med

Thorazine

- Dopamine antagonist
  - Block post-synaptic receptors
- potent side effects
- tardive dyskenesia
  - irreversible damage to nervous system
  - involuntary facial movement, grimacing, tongue protrusion
  - this is very distracting and distressing to the person
  - see Parkinsonian symptoms

Thorazine

- Do see noticeable decrease in hallucinations and delusional material
- affect is more appropriate
- more able to engage in social activity
- these must be used with great caution

Atypical Antipsychotics

- Clozapine, Risperdal, olanzapine
- do not appear to create these terrible side effects
- more effective than older drugs on both positive and negative symptoms
- tend to act on 5-HT and DA
  - some have specific bindings on DA receptors (possible D3 agonists, too)
- not sure why these work

Other therapies

- Milieu Therapy
  - put the person in a healing therapeutic environment
  - involves expectation that patients will behave in "normal" ways
  - expected to engage in group activities
  - expected to help one another and be supportive, to act responsibly, and to participate in decisions affecting the functioning of the ward

Other therapies

- Social Skills training to develop interaction skills
  - "train" client to interact appropriately with people including prospective employers
  - teach client how to reduce social stressors in the environment
  - teach client to present for treatment when symptoms begin to show up, before a full blown episode occurs
  - also educate person on hygiene skills
  - contingency shaped behaviors based on social feedback (research)

Psychological Views

- The psychodynamic explanation
  - Freud's theory posits that attempts to reestablish ego control from such a state fail and lead to further schizophrenic symptoms
  - Years later, another psychodynamic theorist elaborated on Freud's idea of harsh parents
    - The theory of schizophrenogenic mothers proposed that mothers of people with schizophrenia were cold, domineering, and uninterested in their children's needs
  - Both of these theories have received little research support and have been rejected by most psychodynamic theorists