

Schizophrenia

IIE 366: Developmental Psychology
 Greg Francis
 Lecture 19

Schizophrenia

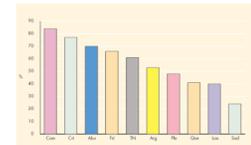
- Mental illness
- Characterized by “acute episodes”
 - Thinking and experience become distorted
 - Severe episodes lead to
 - » Intense panic, anger, depression, elation, over-activity
- Around 1 in 100 people suffer such an episode over their lifetime

Symptoms

- Vary in nature and severity
- Several types
 - Positive
 - Negative
 - Cognitive
 - Affective

Positive symptoms

- Hallucinations
 - Auditory (most common)
 - » 60% of sufferers
 - » Hearing voices
 - » Not always unpleasant
 - » Can give commands
 - » Carry on conversations
 - » Usually interpreted as an external speaker who cannot be seen
 - The voice is not real, but the experience is real



Positive symptoms

- Hallucinations
 - Visual
 - Tactile (touch)
 - Olfactory (smell)
 - Gustatory (taste)
 - Get a taste of the experience in Second Life
 - » <http://www.ucdmc.ucdavis.edu/ais/virtualhallucinations/>
- Agitation
- Delusions
 - Irrational belief, not persuaded by arguments
 - May believe they are a great prophet, paranoia, aliens
- Disorganized thinking

Negative symptoms

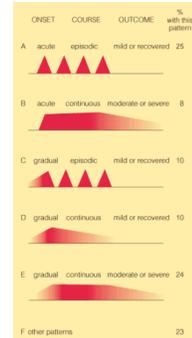
- Loss of capabilities that most people have
 - Lack of interest
 - Withdrawal from normal social activities
 - » Speech, work, friends
 - In some very severe cases the schizophrenic becomes catatonic
- Sometimes co-exist with positive systems
 - Sometimes appear later

Cognitive/Affective symptoms

- Cognitive problems with
 - Memory
 - Attention
 - Planning
 - Often persist even when other systems are not evident
- Affective/emotional problems
 - Depression
 - Elation
 - Inappropriate states
 - » Smile while telling bad news
 - » Sometimes these are appropriate for the current hallucinations

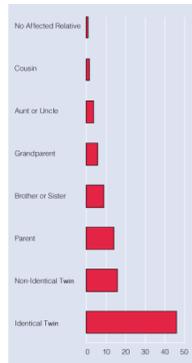
Disease progression

- 25 percent of patients return to normal with 5 years
 - 10-15% suffer long-term problems
- Often can be treated with antipsychotic drugs
 - Operate on the neurotransmitter level of the brain
- Mortality
 - Unhealthy lifestyles
 - 30-40% attempt suicide
 - 10% commit suicide



Causes

- Multiple influences
- Genetic: risk increases if an identical twin suffers from schizophrenia
- Abnormal brain development
 - Distribution of cells
 - Size of ventricles
 - Inappropriate connections during fetal development
 - All of these effects are present before an episode, so some environmental factors are also important

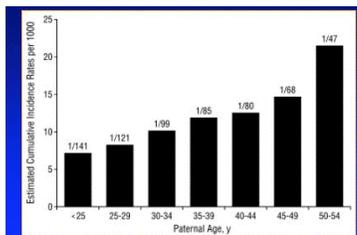


Causes

- Virus infection
 - Polio, Flu virus
- Birth complications (all small effects)
 - Bleeding, diabetes
 - Low birth weight, small head
 - Asphyxia (lack of oxygen)
- Head injury
- Stress during first trimester of pregnancy
 - E.g., death in family
 - Only for people with a family history of mental illness
- Psychological
 - Stress in life often triggers an episode

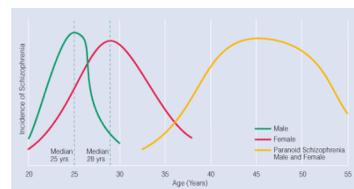
Causes

- The appearance of schizophrenia is related to the father's age
 - It's a fairly small effect



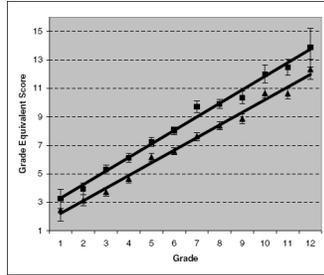
Age of onset

- Not seen before the age of 5
- Rare before adolescence
 - Hallucinations and delusions are unheard of before adolescence



Cognitive differences

- Even with absent symptoms, there are differences between people who become schizophrenics and those who do not
 - Academic performance
- The differences get (slightly) bigger as the children age



Famous schizophrenics

- Schizophrenia often strikes people before (ages 17-28) they become famous
- Nevertheless, some well known people have suffered from some form of schizophrenia
 - John Nash - Nobel laureate in economics
 - Andy Goram - Scottish Soccer Player/Goal Keeper
 - Lionel Aldridge - Superbowl-winning Football Player
 - Peter Green - Guitarist for the band Fleetwood Mac
 - Syd Barrett – member of the band Pink Floyd

Famous schizophrenics

- Even more historical people are suspected of being schizophrenics
 - Jesus
 - Buddha
- It is probably not accidental that prophets hear god speaking to them when under intense stress
 - Fasting in the desert
 - Major life events (moving, marriage, birth of child)

Schizotypal personality

- Similar to schizophrenia but symptoms are usually more mild
- Five or more of the following
 1. Ideas of reference (excluding delusions of reference)
 2. Odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms (e.g., superstitiousness, belief in clairvoyance, telepathy, or "sixth sense"; in children and adolescents, bizarre fantasies or preoccupations)
 3. Unusual perceptual experiences, including bodily illusions
 4. Odd thinking and speech (e.g., vague, circumstantial, metaphorical, over elaborate, or stereotyped)
 5. Suspiciousness or paranoid ideation
 6. Inappropriate or constricted affect
 7. Behavior or appearance that is odd, eccentric, or peculiar
 8. Lack of close friends or confidants other than first-degree relatives
 9. Social anxiety that tends to be associated with paranoid fears rather than negative judgments about self

Schizotypia

- Often measured with questionnaires
 - "It has seemed at times as if my body was melting into my surroundings."
 - "Sometimes I have had the feeling that a part of my body is larger than it usually is."
 - » (note, these are both common reports from people who practice meditation)
 - "It is not possible to harm others merely by thinking bad thoughts about them."
 - "I have felt that there were messages for me in the way things were arranged, like in a store window."

Creativity

- Often associated with mental illness
- highly creative people have higher scores on measures of psychopathology than less creative people
- Relatives of schizophrenic or other psychotic patients have a higher incidence of creative achievement
- productive periods of most famous creative individuals occurred when their symptoms of mental illness were less severe

Famous schizotypics

- Many highly creative people were probably schizotypic
- Vincent Van Gogh, Albert Einstein, Emily Dickinson, Isaac Newton

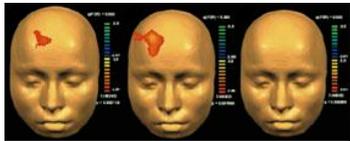


Mental health

- Most of us are too "normal" to really make big changes in the world
- It takes a person with a really different view of the world to think of something really ground breaking
- These are the people with mental illnesses
 - But not too severe or they cannot function at all
 - And these are people that most of us find to be "odd"

Schizotypics

- These differences can be measured with brain scans
 - While doing creative tasks
 - Left: schizotypics versus normals
 - Middle: schizotypics versus schizophrenics
 - Right: schizophrenics and normals



Next time

- The basics of language
- Words
- Grammar
- Rules