COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Science of Psychology

PSY W1001 Section 2
MW 8:40-9:55 Fall 2012

Monday, November 26

Disorders

Announcements

- Exams can be picked up at the end of lecture

- Written assignment grading is underway

Disorders

- What can we learn from mental illness?
  - "In discovering what goes wrong in psychological disorder, we learn what the mind must do in order to run trouble free"

Disorders

- "Medical students disease"
- Symptoms, symptoms everywhere…
  - Where to get help
    - **Counseling and Psychological Services**
      - 8th floor, Lerner Hall (212) 854 2878
        http://www.health.columbia.edu/docs/services/cps/index.html
  - When to get help
    - Whenever you think you might benefit
      - Would you go to the doctor if you thought you had pneumonia?

Identifying Psychological Disorders

- "Psychological Disorder" is a relatively new invention
  - "madness" = possessed by demons/spirits
  - God's punishment for wrongdoing
  - Treated like criminals
- Medical model
- DSM-IV-TR
  - The politics of the DSM

Defining the Boundaries of Normality

- Deviation from average?
- DSM-IV-TR—three key elements for symptoms to qualify as a potential mental disorder
  - manifested in symptoms that involve disturbances in behavior, thoughts, or emotions
  - symptoms associated with significant personal distress or impairment
  - symptoms stem from an internal dysfunction
    - Biological, psychological, or both
- DSM-V
  - Due in May, 2013

Classification & Causation

- Problems with Medical Model/DSM diagnosis
  - Reliability
  - Interpretation rather than observable behavior
  - Patient self report
  - Comorbidity

Classification & Causation

- Integrated perspective
  - biological factors
  - psychological factors
  - environmental factors
    - Multiple causes rule out single cures.
- Diathesis-stress model—predisposed with a trigger (internal and external)
  - heritable
  - stressful conditions, though, needed to trigger

Consequences of Labeling

- Why do 70% of people with diagnosable mental disorders do not seek treatment?

- Erroneous beliefs
  - mental disorder is a sign of personal weakness
  - psychiatric patients are dangerous
  - education about mental disorders dispels the stigma

Schizophrenia

- Definition:
  - A disorder characterized by the profound disruption of basic psychological processes
    - Distortion of perceptual reality
    - Altered or blunted emotion
    - Disturbances in
      - Thought
      - Motivation
      - Behavior

Positive Symptoms

- Delusions
  - of persecution
  - of reference
  - of being controlled
  - of grandeur
  - of guilt
  - thought insertion and withdrawal
- Hallucinations
  - Tactile, taste, visual, olfactory, but usually auditory

Negative Symptoms

- Slowing down of bodily movements

- Flattened affect

- Poverty of speech (alogia)

- Loss of basic drives and motivation (avolition)

- Lack of desire to form relationships (asociality)

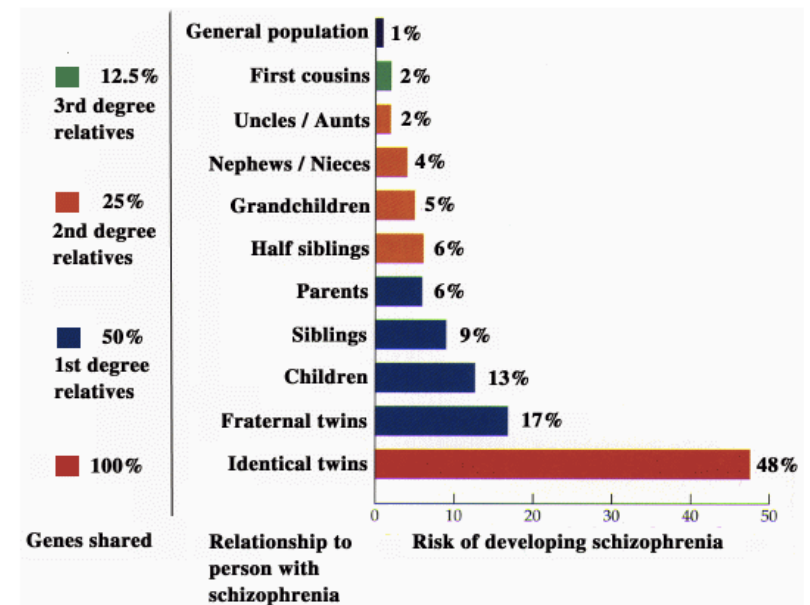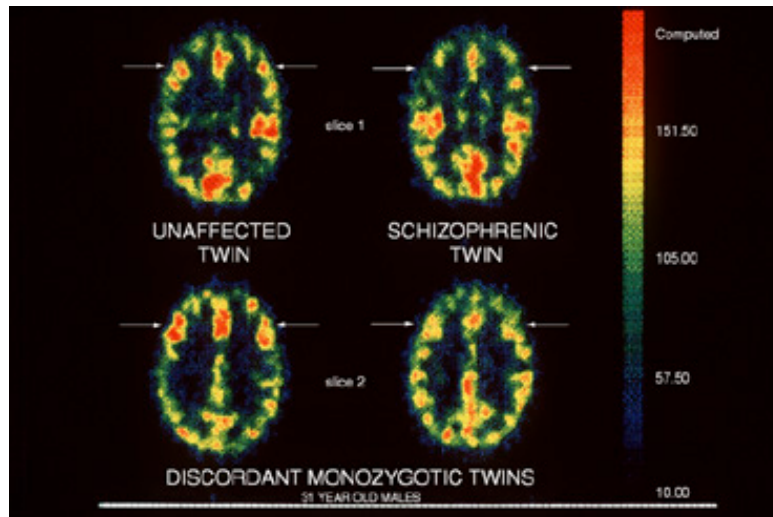- Loss of ability to experience pleasure (anhedonia)

Cognitive Symptoms

- Working memory (WM) may be most impaired cognitive function
  - First-degree relatives of patients with SCZ are impaired on WM as well, even if they don't have any symptoms
  - In prodromal individuals WM impairment is best predictor of developing full-blown SCZ.
  - When a patient is stabilized on medication WM is best predictor of functional outcome (e.g., social and occupational success)

Schizophrenia - Subtypes

- Not all symptoms seen in every individual with schizophrenia
  - Paranoid
    - Positive symptoms
  - Catatonic
    - Negative smptoms
  - Disorganized
    - Emotional distortion/blunting
  - Undifferentiated
    - Changing symptoms
  - Residual
    - Remission, mild

Schizophrenia: Biological factors

- Genetic predisposition

(Source: Gottesman, 1991)

- Early environmental disruptions
  – Prenatal trauma, maternal influenza, oxygen deprivation during birth
- Neurodevelopmental abnormalities
  - abnormal pruning that leads to loss of cell bodies and grey matter.
  - enlarged ventricles
  - tissue loss in parietal lobe progressing to much of brain

Too much Dopamine?

- Dopamine Hypothesis
  - Actions of drug therapies
  - Psychostimulants and psychosis
  - PFC and striatal abnormalities

- Newer Hypotheses
  - Glutamate hypothesis
  - Hippocampal abnormalities

- Very active area of research at Columbia

Study Questions

- What can we learn from studying psychological disorders?
- Describe the medical model of psychiatric disorders and why this was an important step for identification and treatment.
- What is "normal"?
- What is the DSM? What are the key elements that the DSM requires for a potential mental disorder?
- Discuss the diathesis stress model of mental disorders. Be prepared to apply this to any disorder discussed.
- Why don't people with diagnosable disorders hesitate or refuse to seek treatment? What is schizophrenia? Describe the positive versus negative symptoms.
- What are 5 different subcategories of schizophrenia?
- Describe the biological factors of schizophrenia, including heritability and any neuroanatomical differences observed.
- What is the dopamine hypothesis of schizophrenia? What evidence support this theory? Include information on the mechanism of action of drugs that treat schizophrenia, the effects of amphetamine overdose, l-DOPA treatment, and brain scans of patients with schizophrenia.