Lecture 33
Therapy and Treatment:
Drugs and Behavior

1

III. BIOMEDICAL THERAPY
   A. Drug Therapy

- Psychopharmacology: The study of the effects of drugs on mind and behavior.
- **1. Antidepressant Drugs:** Serve to replenish missing neurotransmitters of Serotonin or Norepinephrine
  - **MAO Inhibitors**: MAO breaks down the released Neurotransmitter (Nardil)
  - **Tricyclic**: Works to inhibit the uptake of Serotonin and Norepinephrine back to the neuron from which it came. (Elavil, Imiperine)
  - **SSRI**: Specific Serotonin Reuptake Inhibitor (Prozac)

III. BIOMEDICAL THERAPY
   A. Drug Therapy

- **2. Antipsychotic Drugs:** Used in the treatment of schizophrenia by reducing the sensitivity of dopamine receptors sites in the brain.
  - Reduces patients' agitation and delusions and can shorten a schizophrenic episode
  - Does not affect other symptoms including jumbled thoughts, concentration problems, and interaction difficulties.
    - Older antipsychotics: Chlorpromazine, Haloperidol
    - Newer antipsychotics: Clozapine, Risperidone

III. BIOMEDICAL THERAPY
   A. Drug Therapy

- **3. Tranquilizers:** Works by increasing the activity of GABA (which dampens neural activity)
  - Often wrongly prescribed to treat depression or panic disorders.
  - Tranquilizers include Valium, Xanax
- **4. Special Category:** Lithium Carbonate is prescribed for people diagnosed with bipolar disorder.
  - Moderates levels of Norepinephrine or protects against the influence of other neurotransmitters.

III. BIOMEDICAL THERAPY
    B. Other Techniques

- **Psychosurgery:** Surgery designed to destroy selected area of the brain thought to be the cause of the disorder.
    - Prefrontal Lobotomy: Cut or crush nerves connecting the prefrontal cortex to the rest of the brain.
    - Depicted in *One Flew Over the Cuckoo's Nest* It is not considered effective and rarely performed now.
- **ECT** (Electroconvulsive or Shock Therapy): A treatments for severe depression.
    - An electrical current of 70 to 130 volts is administered to both sides of the head.
    - After 2-4 weeks: 80% improve w/o damage.

IV. ASSESSMENT
    A. Design Issues

- Psychotherapy and Biotherapy need to be evaluated for their effectiveness as closely as any other medical treatment.
    - Central in the evaluation is a Placebo Control group.
    - Placebo Control is a group who falsely believe they are receiving an effective treatment and assesses the effect of expectations, enthusiasm, and beliefs on therapeutic outcome.
    - Placebos are surprisingly very effective.
- WITHOUT PLACEBO CONTROL ALL ASSESSMENTS OF MEDICAL TREATMENTS ARE WORTHLESS!

III. BIOMEDICAL THERAPY
    B. NIMH Study of Depression

- The NIMH study the effectiveness of four groups in treating depression.
    1. Imiperine treatment
    2. Cognitive-Behavior Therapy
        Treatment for depressive's irrational cognitions
    3. Interpersonal Therapy
        An Insight approach which is client centered
    4. Placebo Control group
        Received an ineffective drug but there was no control group for therapy.
- Depressed individuals were randomly assigned to one of these four groups, making this a causal/ experimental design.

III. BIOMEDICAL THERAPY
    B. NIMH Study of Depression

- **The Results**

Condition	Overall Reduction
Imiperine	50-60% (quickest)
Cognitive Therapy	50-60%
Interpersonal Therapy	50-60%
Placebo	19%

- Factors influencing success were different for different treatments.
    - Such factors included social functioning, cognitive functioning, work functioning, severity of depression, expectation of improvement.

III. BIOMEDICAL THERAPY
    B. NIMH Study of Depression

- Conclusions & Implications
    - Different treatments can have the same kind of recovery rates.
    - No one treatment may be successful for all people.
    - There needs to be a match between a person's characteristics and the characteristics of the treatment.

III. BIOMEDICAL THERAPY
    B. NIMH Study of Depression

- Different approaches to therapy with their differing assumptions about the causes, nature, and treatment of depression:
    - 1. Produce the same outcome for groups of people (50-60% improvement)
    - 2. Which group actually improves may be different for the different treatment approaches
- This fits perfectly with the model.
    - Many interacting bio-psycho-social causes for depression so breaking down interactions at one point is effective.
    - Some points may be more effective for certain people!

III. BIOMEDICAL THERAPY
    B. NIMH Study of Depression

Genes
1. Evolution
2. Behavioral Genetics

Biology

Cognition

Environment
1. Contingency
2. Social context

Culture

Behavior

3