THE BASIC PRINCIPLES OF PSYCHOLOGY FOR INTRODUCTORY COURSES

INTRODUCTION
- DEFINITION: Scientific study of behavior and mental processes and how they are affected by an organism's physical and mental state and external environment
- GOALS: Describe, understand, predict and control (or modify) behavior or mental processes
- PSYCHOLOGY AS A SCIENCE:
  1. Descriptive studies - describe but not explain
  a. Case history - description of one individual
  b. Observation
    i. Naturalistic - natural environment
    ii. Laboratory - setting controlled by researcher
  c. Surveys - questionnaires and interviews
  d. Tests -
    i. Reliability - used to measure whether individual differences in test scores are due to actual differences in the characteristic being measured or due to chance errors and fluctuations.
    ii. Validity - refers to the extent to which a test measures what it purports. The validity of a test must be empirically established - relating the test to particular criterion that it claims to measure.
  2. Correlational Studies - strength of relationships between variables, does not show causation
  3. Experiment - researcher controls variable(s) to discover its effect on other variables
    a. Independent variable - manipulated/controlled by researcher
    b. Dependent variable - measured by researcher/data
    c. Experimental and control groups - only experimental group exposed to independent variable, otherwise treated the same
    d. Change in dependent variable caused by independent variable, since all else remained the same
    e. Confounding Variable - an observed effect that may be due to an intervening third variable between the dependent and independent variables. The confounding variable must be systematically controlled or, if possible, eliminated, otherwise obtained results are invalid.
    f. Inferred Variable - a non-observable variable that is inferred as the mediator between two observed events. For instance, inferring the experience of "fear" from certain measurable physiological anxiety responses. It is frequently difficult to avoid circular explanations in positing an inferred variable.
    g. Subject Variable - a condition that is part of the subject's make-up and cannot be assigned randomly, e.g., sex, height, hair-color etc. Because of their non-randomizability, causal conclusions cannot be derived from subject variable experiments.
    h. Non-Subject Variable - a characteristic that is not part of a subject's make-up, and thus can be randomly assigned, e.g., whether the subject received a certain drug or a placebo.

LEARNING CONTINUED
- c. Stimulus discrimination - different responses are made to stimuli which are similar to the CS
- OPERANT CONDITIONING
  1. Reinforcer (reward) - increases response probability
    a. Positive reinforcement - response followed by presentation of reinforcing stimulus
    b. Negative reinforcement - response followed by removal of unpleasant stimulus
  2. Punishment - stimulus that follows response decreases probability response will occur
  3. Principles of Operant Conditioning
    a. Extinction - response no longer reinforced
    b. Stimulus generalization - response will occur to similar stimuli
    c. Stimulus discrimination - responses do not occur to different stimuli
    d. Timing of reinforcers - the sooner a reinforcer or punisher follows an action, the greater its effect
  e. Schedules of reinforcement
    i. Continuous reinforcement - a particular response is always reinforced
    ii. Intermittent reinforcement - reinforcing only some responses
      a. fixed ratio (FR) - reinforcement after a fixed number of responses, high rate of responding
      b. variable ratio (VR) - reinforcement after average number of responses, very high, steady rates of responding
      c. fixed interval (FI) - reinforcement after fixed amount of time, scalloped response pattern
      d. variable interval (VI) - reinforcement after a variable amount of time, low, steady rate of response
    f. Shaping - reinforce successive approximations to the desired response
    g. Chaining - a method of connecting responses into a sequence of behaviors. At the end of the chain there must always be a reinforcer. The chain is constructed by beginning at the end and working backward; all behaviors have to be previously conditioned into the organism's repertoire.

4. Cognitive Behavior Modification
   The principles of learning theory are applied to alter undesirable thoughts, rather than only observable behaviors.
   a. Social Learning Theory - (Bandura) four processes which influence learning are:
      i. Attention
      ii. Memory
      iii. Behavior
      iv. Motivation
   b. Specific cognitive processes that are recognized:
      i. Attribution
      ii. Expectancy
      iii. Logical
      iv. Verbal
      v. Imaginal
   c. Rational emotive therapy - (Ellis) considers the central core of dysfunctional behavior to be due to irrational beliefs. The therapy focuses on the alteration of these irrational beliefs.
   d. Problem-solving therapy - focuses on enhancing the patient's ability to make decisions and solve problems in stressful or difficult situations.
   e. Paradoxical interventions - patients are instructed to purposely perform undesirable symptomatic behaviors on command in an effort to demonstrate their ability to gain control over these behaviors.
   f. Attribution therapy - attempts to facilitate the patient's ability to re-attribute undesirable feelings and symptoms to something less threatening and more acceptable.

BIOLGICAL BASES OF PSYCHOLOGY
- STRUCTURE OF THE NERVOUS SYSTEM
  1. Central - brain and spinal cord
  2. Peripheral - sensory and motor nerves which transmit information
    a. Somatic - control skeletal muscles
    b. Autonomic - regulates internal organs and glands
    i. Parasympathetic - conserves energy
    ii. Sympathetic - expends energy
  3. COMMUNICATION WITHIN NERVOUS SYSTEM
    a. Neuron - basic unit of nervous system
      i. Cell body - keeps neuron alive
      ii. Dendrites - receive information from other neurons
      iii. Axons - send information to other neurons
      iv. Synaptic junctions enable information to be transmitted faster
    b. Communication between Neurons
      i. Synapses - gaps between neurons
      ii. Message travels through axon to synaptic knob on axon's tip
      iii. Synaptic vesicles open and release neurotransmitter into synaptic gap
      iv. Neurotransmitter fits into receptor sites on receiving dendrite, causing it to be more or less likely to fire
  4. THE BRAIN
    a. Hindbrain - medulla, pons, reticular activating system, cerebellum
    b. Midbrain - responsible for reflexive, automatic behavior
    c. Forebrain
      i. Thalamus - directs sensory messages
      ii. Hypothalamus - emotion and survival drives
      iii. Pituitary gland - controls many other endocrine glands
      iv. Cerebral cortex
        i. Occipital lobes - vision
        ii. Parietal lobes - sensory information
        iii. Temporal lobes - process sounds
        iv. Frontal lobes - motor movements
        v. Four brain hemispheres
          i. Each one controls opposite side of body
          ii. Left hemisphere dominant for most people

STRESS AND HEALTH
- STRESS - EMOTIONAL AND PHYSICAL RESPONSES TO STIMULI
  1. Caused by stimuli and the way those stimuli are perceived
  2. Biological reaction
    a. Fight or flight - increase heart rate, breathing, tense muscles
    b. Increased activity in the sympathetic nervous system
    c. Adrenal glands secrete epinephrine (adrenaline) and norepinephrine
  3. Coping with stress
    a. Reappraise situation
    b. Maintain control over the stressful situation

PSYCHOLOGY AND ILLNESS
- 1. Heart disease
    a. Type A personalities - hard-working, competitive, increased incidence of heart disease
    b. Type B personalities - easy going
  2. Cancer
    a. Exposure to carcinogens increases the risk
    b. Psychological factors influence functioning of immune system

HEALTH AND SOCIAL RELATIONSHIPS
- 1. Friends - assisted coping
    a. Emotional, cognitive and tangible support
    b. Cultural differences in the value placed on friendships
    2. Friends as stress producers
      a. Contagion effect - others can exaggerate stress
      b. Friend under stress can increase your stress level
      c. Burden of caring for others can increase stress
SENSE AND PERCEPTION

- SENSATION - Awareness of physical changes
- MEASURING SENSATION
  1. Absolute thresholds - detection of signal 50 percent of time
  2. Difference thresholds (j.n.d. - just noticeable difference)
     a. Difference in sensation detectable 50 percent of time
     b. Weber's Law - change necessary for j.n.d. is a proportion of original stimulus

THE EYE
1. Light enters through the cornea
2. Lens focuses light on the retina
3. Retina - at the back of the eyeball
   a. Rods - respond to dim light
   b. Cones - respond to color
   c. Fovea - center of retina, contains only cones, site where vision is sharpest

THE EAR
1. Outer ear - collects sounds waves
2. Middle ear - waves strike eardrum which passes them to three tiny bones which intensify the force of the vibrations
3. Inner ear - contains receptor cells (hair cells) located within the cochlea which initiate nerve impulses which travel to the brain

TASTE
1. Four basic tastes - salty, sour, bitter and sweet - each associated with different receptors or taste buds

SMELL
1. Receptors in mucous membrane of nasal passage

SKIN SENSES
1. Touch (pressure), warmth, cold and pain

PERCEPTION - organization and interpretation of sensations
1. World seen as constant, although the sensations may change
2. Needs, beliefs, emotions and expectations all influence perception

LANGUAGE, THINKING AND INTELLIGENCE

- LANGUAGE - Rule-governed system of symbols used to represent and communicate
  1. Understanding language
     a. Phonology - knowledge of sounds
     b. Semantics - knowledge or word meanings
     c. Syntax - knowledge of grammatical structure
  2. Acquiring language
     a. Rules and strategies are innate
     i. Basic timing and sequence of language development is similar across cultures
     ii. Children learn the rules of their native language, (i.e., overgeneralization) b. Particular language acquired is based on experience
  3. Language and thought - language has an impact on how easily we process information

THINKING
1. Using concepts - apply past experiences to present thoughts
   a. Concept - a mental grouping of a set of objects or events on the basis of important common features
   b. Must be learned through definition or example
   c. Concepts aid in predicting and interpreting events and organizing experiences
  2. Problem solving - set of information used to achieve goal
     a. Strategies
        i. Define the problem

MEMORY

- ABILITY TO RETAIN AND RETRIEVE INFORMATION

1. Information must be encoded to be processed by brain
   a. Storage - retention of information
   b. Retrieval - accessing information
  2. Three memory systems
     a. Sensory - literal copy of information - held for 1-2 seconds
     b. Short-term
        i. Limited capacity (7 + or - 2 items)
        ii. Information held for about 30 seconds; then it is forgotten or further encoded and placed in long-term memory
     c. Long-term
        i. Unlimited capacity
        ii. Information stored and retrieved by category
  3. FORGETTING
     a. In sensory memory - through decay
     b. In short-term memory
        i. Limited capacity subject to "filling up"
        ii. Can retain information through rehearsal
           (a) Maintenance (rote) rehearsal
           (b) Elaborative rehearsal - associating new with old information
     c. In long-term memory
        i. Decay - information fades if not used
        ii. Forgetting
           (a) Interference - similar items interfere
           (b) Motivated - conscious or unconscious "hiding" a memory
           (c) Cue-dependent - unable to gain access to the information
           (d) Zeigarnik effect - interrupted, or incomplete tasks seem to be better remembered than completed tasks.
           (e) Non-verbal memory - pictures are remembered significantly better than words; motor memory seems to be impervious to decay.

ROLES - A social position governed by norms
1. Norms - conventions by which we live
2. Zimbardo's Prison Study
   a. Students assigned to "guard" or "prisoner" roles
   b. Student behavior reflected their assigned roles
3. Milgram's Obedience Study
   a. Participants thought they were part of an experiment in learning
   b. "Teacher" was instructed to shock "learner" for wrong answer
   c. Majority of "teachers" complied with the instructions to administer shock

SOCIAL COGNITION - how the social environment influences thoughts, perception and belief
1. Attribution - motivation to explain behavior
   a. Situational - caused by the environment
   b. Dispositional - caused by something within individual
   c. Fundamental attribution error - overestimate dispositional and underestimate situational causes
   d. Self-serving bias - use dispositional attributions for good behaviors and situational attributions to excuse our own behaviors
2. Stereotypes - summary impressions when all members of a group share common traits
3. Attitude - a relatively enduring opinion including both cognitive and emotional components
   a. Attitudes and behavior influence each other
   b. Cognitive dissonance - when an attitude and behavior conflict, we are motivated to make them consistent
4. Prejudice - unjustified negative attitudes toward a group

CONFORMITY - behavior that occurs as a result of real or imagined group pressure

OBEYENCE - following orders from an authority

INDIVIDUALS AND GROUPS
1. Groupthink - tendency for all group members to think alike and suppress dissent
2. Group Polarization - tendency of a group to take a more extreme position than those of individual members
3. Responsibility
   a. Diffusion of responsibility - avoidance
   b. Social loafing - individual slows down to let the group shoulder the load
   c. Bystander apathy will not occur when one perceives the need to help
   d. Decides to take responsibility
   e. Weighs the costs of helping
   f. Knows how to help

LOVE - (Sternberg)
1. Has three related components:
   a. Intimacy
   b. Passion
   c. Commitment
2. Depending on the combination of these elements, produces different dimensions in a relationship:
   a. Liking - intimacy alone
   b. Companionate Love - intimacy and commitment
   c. Empty Love - commitment alone
   d. Fatuous Love - passion and commitment
   e. Infatuation - passion only
   f. Romantic Love - intimacy and passion
   g. Consummate Love - intimacy, passion, and commitment
DEFINITIONS
1. Learning - influence of experience (nurture)
2. Maturation - unfolding of biological patterns (nature)
3. Critical Periods - early development periods during which particular early experiences are essential
4. Stages - organization of behaviors and thoughts during particular early periods of development - defined by relatively abrupt change

COGNITIVE DEVELOPMENT
1. Major:
a. Assimilation - fit new information into what is known
b. Accommodation - change existing beliefs in response to new knowledge
c. Stages of development
   i. Sensorimotor stage (birth - 2) - object permanence
   ii. Preoperational stage (2-7) - use of symbols and language; egocentric; lack the principles of conservation
   iii. Concrete operational stage (7-11) - understands conservation, identity, grounded in concrete experiences
   iv. Formal operations stage (12-adult) - abstract reasoning
2. Language development - acquisition depends on biological readiness and experience

SOCIAL DEVELOPMENT
1. Attachment - emotional tie between infant and caregiver (Harlow's monkey studies)
2. Sex typing - learning "masculine" or "feminine"
   a. Identification with the same sex parent
   b. Rewards and punishments for sex appropriate behavior
3. Erikson's stages
   a. Trust Versus Mistrust: 0 - 2 years of age
   b. Autonomy Versus Doubt and Shame: 2-3 years of age
   c. Initiative Versus Guilt: 3 - 6 years of age
   d. Industry Versus Inferiority: 6 - 11 years of age
4. MORAL DEVELOPMENT - Kohlberg
   Theory:
   i. Preconventional morality - obey because ordered to or will be punished
   ii. Conventional morality - based on trust, loyalty, or understanding social order
   iii. Postconventional morality - laws are situational and can be changed

CHRONOLOGICAL DEVELOPMENT
1. Newborn Child
   a. Reflexes - automatic behaviors, rooting, sucking, swallowing, startle, etc.
   b. Vision - nearsighted, interested in novelty
   c. Social skills
   i. Smile at 4-6 weeks in response to faces
   ii. Rhythmic "conversations"
2. Adolescence
   a. Biological development - increased hormone production; sex organs mature; growth spurt
   b. Intellectual development - formal operational (abstract reasoning), independent questioning
3. Aging
   a. Transition Theories - unanticipated, anticipated, nonevent, chronic hassle
   b. Major Milestones - starting out, marriage or living alone, parenthood, empty nest, midlife crises, retirement, widowhood

PERSONALITY
Distinctive patterns of behavior, thoughts and emotions that characterize individual's patterns of adaptation

THE ORIGINS OF PERSONALITY
1. Biological and genetic influences
2. Experience - cultural and unique
3. Stability and change
   a. Genetic characteristics relatively stable through life
   b. Less active, hostile and impulsive with age
   c. Personality changes as a result of life experiences

FREUD
1. Personality consists of three parts
   a. Id - basic biological urges; unconscious
   b. Ego - gratifies urges within acceptable bounds; conscious
   c. Superego - values and ideals of society; conscience

2. Psychosexual development
   a. Oral stage (0-1) - sucking, feeding, etc.
   b. Anal stage (2-3) - defecation
   c. Phallic stage (3-5) - sexual attraction to the opposite sex parent producing the Oedipus complex
   d. Latency period (5-puberty) - sexual feelings forgotten; child concentrates on skill development
   e. Genital stage - adult sexual relationships
3. Anxiety - unjustified fears resolved by ego through use of defense mechanisms
   a. Repression - active exclusion of unconscious impulses from consciousness
   b. Projection - attribute to others our thoughts and feelings
   c. Reaction formation - behavior patterns opposite to our anxiety producing urge
   d. Displacement - redirects anxiety producing behaviors to a more acceptable target
   e. Rationalization - substitute "good" reasons for real reasons for behavior
4. Defensive Mechanisms
   a. Denial - the refusal to acknowledge an external source of anxiety
   b. Fantasy - utilizing imagination to satisfy desires that are, in reality, highly unlikely (e.g., sexually fantasizing about a celebrity)
   c. Intellectualization - the repression of the emotional component of an anxiety-provoking event. The event is treated in a purely analytical manner
   d. Regression - resorting to infantile behaviors as a means for avoiding anxiety and/or responsibility
   e. Identification - identifying with the anxiety-producing stimulus in an attempt to reduce one's own anxiety (opposite of projection)
   f. Overcompensation - an attempt to conceal perceived deficiencies in oneself by excelling in another; e.g., a student with poor academic performance becomes an excellent athlete
   g. Sublimation - the re-channeling of sexual or aggressive impulses in a socially acceptable direction; e.g., an aggressive person becomes a professional boxer

HUMANISTIC THEORIES - people are rational, capable of choice and desire to achieve personal growth
1. Carl Rogers - self-concept directs behavior, conflict between real and ideal self
2. Abraham Maslow - individual strives for self-actualization - fulfillment of potential

EXISTENTIAL PSYCHODYNAMICS
1. Valos - primary drive of the individual is to derive meaning from the complexities of their life experiences; to understand a structure, rationale, or justification to the events they have experienced. Failing this, life is seen as absurd and pointless, leading to despair, depression, and existential crises. The primary concerns of this approach to psychotherapy deal with confronting the issues of death, freedom, existential isolation, and meaninglessness.

SOCIAL COGNITIVE THEORY - how and under what situations thoughts and behaviors are learned

CONSISTENCY IN PERSONALITY
1. Trait - relatively enduring quality or characteristic
2. Cross-situational - most central to self-concept

PERSONALITY ASSESSMENT
1. Assessment methods must be:
   a. Reliable - same results over time
   b. Valid - measure what it is supposed to measure
2. Interview
   a. Advantage - tailored to individual's previous answers
   b. Disadvantage - low reliability
3. Observation
   a. times particular behavior occurs
   b. Good reliability
4. self-report
   a. MMPI - to diagnose psychological disorders
   b. Ten primary scales measure personality dimensions
5. Projective techniques - individual provides an interpretation of ambiguous material
   a. Rorschach inkblots
   b. Thematic Apperception Test (TAT)
   c. Concerns about reliability and validity since interpretations are subjective

CONSCIOUSNESS

JAYNES' THEORY
1. Consciousness not only evolves neurobiologically, but is also formed by the individual's interactions with culture.
2. The foundation of consciousness is based in the physiology of the brain's left and right hemispheres. There are three fundamental forms of human awareness that are the outcome of this process:
   a. Bicameral - controlled by right hemisphere of brain, which dominates left-hemisphere activity. Individual subordinates consciousness of self to control by a group, a higher power, or other individual.
   b. Modern - the dominance of the right brain hemisphere over the left is weakened as civilization develops and humans become more autonomous and independent. As humans become more independent, individual consciousness emerges.
   c. Throwbacks to bicameralism - the re-emergence of bicameral consciousness in modern life is manifested by episodes of schizophrenia, hypnosis and poetic and religious frenzy.

SLEEP RHYTHMS
1. REM - rapid eye movements associated with dreaming
2. Stages of brain waves
a. Alpha Waves - regular, high-amplitude, low frequency wave
b. Stage 1 - small, irregular brain waves, light sleep
c. Stage 2 - bursts of sleep spindles
d. Stage 3 - delta waves; deep sleep
e. Stage 4 - extremely deep sleep
f. Entire cycle is 30-45 minutes and then reverses

WAKEFULNESS
1. Conscious processes
2. Subconscious processes - can be brought into consciousness when necessary
3. Nonconscious processes - remain outside awareness but influence behavior

ALTIRED STATES
1. Meditation - eliminate distracting thoughts
2. Psychoactive drugs - influence perception, thinking or behavior
   a. Stimulants - speed up nervous system activity - cocaine, amphetamines
   b. Depressants - slow central nervous system activity - alcohol, tranquilizers
   c. Opiates - relieve pain and produce euphoria - opium, morphine, heroin
   d. psychedelic drugs - alter consciousness - LSD, mescaline
3. Hypnosis - heightened state of suggestibility when subjects can sometimes control unconscious body functions
4. Well's Theory
   a. Humans have an innate drive to experience states of non-ordinary consciousness
   b. Individuals and cultures experiment with ways to change their ordinary states of consciousness
   c. Altered states of consciousness are common; e.g., daydreaming, sleepwalking, etc.
   d. Individuals often are unaware they are in the midst of an experience of non-ordinary consciousness; e.g., daydreams, or alcoholic 'black-out' episodes.
   e. Altered states of consciousness form a continuum or spectrum ranging from normal, alert, waking consciousness to sensory deprivation, to coma.
   f. Psychotropic and psychedelic drugs do not cause altered states of consciousness - they are merely a way to elicit such states.
g. Understanding the mechanisms of altered states of consciousness can be an avenue to greater understanding of the nervous system; furthermore, such knowledge may lead to the discovery of untapped human potential and a better understanding of ordinary waking consciousness.

TYPES
1. Statistical deviation
2. Violation of cultural standards
3. Maladaptive behavior
4. Emotional distress
5. Legal (impaired judgment and lack of self-control)

ANXIETY DISORDERS
1. Generalized anxiety disorder - chronic anxiety
2. Phobia - fear of specific situation, activity or thing
3. Obsessive-compulsive disorder
   a. Obsessions - recurrent thoughts
   b. Compulsions - repetitive behaviors

MOOD DISORDERS - (depression & mania)
1. Causes
   a. Biological (brain chemistry)
   b. Social (life situations)
   c. Attachment (disturbed relationships)

PERSONALITY DISORDERS
1. Paranoid - excessive suspiciousness
2. Narcissistic - exaggerated sense of self-importance
3. Antisocial - lack of social emotions

DISSOCIATIVE DISORDERS - amnesia, multiple personality

SOMATOFORM DISORDERS - take the form of physical disorders

PSYCHIC DISORDERS
1. Schizophrenia - bizarre delusions, hallucinations, severe emotional problems, withdrawal
   a. Family dynamics - distorted patterns of communication
   b. Biological - brain disease(s) or abnormalities in neurotransmitters
   c. Stress - combination of heredity and stress
2. Organic brain disorders - i.e. diseases, brain injury

VIEW ON THE REALITY OF MENTAL ILLNESS
1. Szasz's Objection - the concept of "mental illness" is a socially constructed myth for the purpose of advancing certain social and political agenda. Clinical psychology is an instrument of repression to enforce conformity and stigmatize non-conformists as "deviant" people with the label "mentally ill."
2. Reform Definition - something is a mental illness if, and only if, it is an abnormal and involuntary process that does mental harm and should best be treated by medical means.

*Note - "abnormal" is used in the constructivist or normative sense, and not in the statistical or idealistic sense, as "normal" is a relative term determined by society.

MEDICAL TREATMENTS
1. Antipsychotic drugs (major tranquilizers) - schizophrenia
2. Antidepressant drugs (stimulants) - mood disorders
3. Surgery - to destroy brain areas believed responsible for emotional disorders
4. Electroconvulsive therapy - induces seizures used to treat major depression

PSYCHOTHERAPY
1. Psychodynamic (insight) therapies - explore the unconscious dynamics of personality
   a. Freud - i. Understanding past produces insight
   ii. Free association and transference
   b. Neo-Freudians - use Freud's techniques, usually time limited
2. Behavioral therapies
   a. Systematic desensitization - exposure to a hierarchy of stimuli while relaxing to decrease fears
   b. aversive conditioning - punishment for unwanted behavior

TREATMENT AND THERAPY
1. Implosion - client required to imagine the anxiety-producing stimuli in its most vivid and extreme manifestation; client experiences full anxiety response without suffering any harm. Consequently, the stimulus no longer elicits anxiety due to extinction of the response.
2. Flooding - same procedure and theory as implosion, but real or realistically depicted stimuli are used instead of imaginary ones
3. Cognitive therapy - to correct unrealistic thinking
4. Humanistic therapy
   a. Client-centered - Carl Rogers
   b. Gestalt - Frederick Perls - self-actualization
5. Family and Group therapies - theorize that problems develop in a social context and must be dealt with in that context

EVALUATING THERAPIES
1. Therapies are less effective with serious disorders
2. Relationship between client and therapist is critical
3. Certain therapies are effective for certain specific problems

MEDICAL TREATMENTS
1. Advantages of Medical Model - promotes a more humane understanding of patients; aids in the understanding of some organic mental disorders and further initiates research in brain function
2. Disadvantages of Medical Model - environmental variables are unduly minimized or neglected; diagnostic and treatment methods are questionable, thus fostering an institutionalization syndrome. This approach removes responsibility for recovery from the patient while promoting a dependence upon hospitals and chemicals.

BEHAVIORISM
1. Cognitive components to behavior (e.g., expectations, verbalization, imitation etc.) are unduly minimized or ignored
2. Overly operationalistic - physical correlates are closely identified with mental states (e.g., fear is identified with the physiological manifestations of anxiety). Overlooks the possibility that the interpretation of observable physical symptoms can determine their reality. For instance, the physiological correlates of anxiety may be interpreted as fear, excitement, anger, or sexual arousal depending upon prior expectations, cultural values etc.
3. Ignores the role played by intervening inferred cognitive variables.

COGNITIVE BEHAVIORISM
1. Difficult to avoid circular definitions in invoking the meaning of certain mental constructs
2. Difficult to determine what extent to allow increasingly operationalizable mental entities
3. The role of psychosomatic variables may be overlooked or minimized
4. Some argue that the underlying cause of observable symptoms is ignored by behavioral therapies
Note - Clinically, both behaviorism and cognitive behaviorism only seem effective in the treatment of very specific disorders; e.g., phobias, specific undesirable behaviors. Cannot effectively be applied to amorphous problems such as undifferentiated existential depression.

PSYCHOANALYSIS
1. Freud's initial theory based only on case studies and anecdotal evidence, and a patient population which was very limited, atypical, and selective
2. Postulates entities that are by definition unobservable and cannot be operationalized for valid scientific evaluation
3. Psychoanalysis has been demonstrated (by Eysenck) to be ineffective in treating emotional disorders
4. In reaction to criticism and undermining evidence against their theory, Neo-Freudians have modified their theory with post hoc hypotheses to the point that it is no longer scientifically testable even in principle.