

Module 2: Models of Abnormal Psychology

Module 2 Outline

- 2.1. Uni- vs. Multi-Dimensional Models of Abnormality
- 2.2. The Biological Model
- 2.3. Psychological Perspectives
- 2.4. The Sociocultural Model

Module 2 Learning Objectives

- Differentiate uni- and multi-dimensional models of abnormality.
- Describe how the biological model explains mental illness.
- Describe how psychological perspectives explain mental illness.
- Describe how the sociocultural model explains mental illness.

2.1 Uni- vs. Multi-Dimensional Models of Abnormality

Section 2.1 Learning Objectives

- Define the uni-dimensional model.
- Explain the need for a multi-dimensional model of abnormality.
- Define model.
- List and describe the models of abnormality.

Section 2.1 Key Terms

Biological model: Includes genetics, chemical imbalances in the brain, the functioning of the nervous system, etc. in explaining the cause of a mental disorder.

Model: A representation or imitation of an object.

Multi-dimensional model of abnormality: Explains the cause of a mental disorder using multiple factors.

Psychological model: Includes learning, personality, stress, cognition, self-efficacy, and early life experiences in explaining the cause of a mental disorder.

Sociocultural model: Includes factors such as one's gender, religious orientation, race, ethnicity, and culture in explaining the cause of a mental disorder.

Uni-dimensional model of abnormality: Explains the cause of a mental disorder using one factor.

Section 2.1 Key Takeaways

- The uni-dimensional model proposes a single factor as the cause of psychopathology while the multi-dimensional model integrates multiple causes of psychopathology and affirms that each cause comes to affect other causes over time.
- There is no individual model that completely explains human behavior and so each model contributes in its own way.

Section 2.1 Review Questions

1. What is the problem with a uni-dimensional model of psychopathology?
2. Discuss the concept of a model and identify those important to understanding psychopathology.

2.2 The Biological Model

Section 2.2 Learning Objectives

- Describe how communication in the nervous system occurs.
- List the parts of the nervous system.
- Describe the structure of the neuron and all key parts.
- Outline how neural transmission occurs.
- Identify and define important neurotransmitters.
- List the major structures of the brain.
- Clarify how specific areas of the brain are involved in mental illness.
- Describe the role of genes in mental illness.
- Describe the role of hormonal imbalances in mental illness.
- Describe the role of viral infections in mental illness.
- Describe commonly used treatments for mental illness.
- Evaluate the usefulness of the biological model.

Section 2.1 Key Terms

Absolute refractory period: After the neuron fires, it will not fire again for a certain period of time, regardless of how much stimulation it receives.

Action potential: Refers to when a neuron is stimulated and becomes depolarized.

Adrenal glands: Part of the endocrine system; located on top of the kidneys, they release cortisol to help the body deal with stress.

All-or-nothing principle: Neurons will not fire unless the action potential is met (i.e., it reaches -55mv).

Amygdala: Part of the brain responsible for evaluating sensory information and quickly determining its emotional importance.

Anti-anxiety medications: Used to treat anxiety.

Antidepressant medications: Used to treat depression.

Antipsychotic medications: Used to treat psychosis.

Autonomic nervous system: Regulates the functioning of blood vessels, glands, and internal organs, such as the bladder, stomach, and heart.

Axon: Part of a neuron; it sends signals/information to neighboring neurons.

Axon terminal: Part of a neuron; the end of the axon where the electrical impulse becomes a chemical message and passes to an adjacent neuron.

Basal ganglia: A group of structures found deep within the cerebral hemispheres; responsible primarily for motor control.

Central nervous system (CNS): The control center for the nervous system, which receives, processes, interprets, and stores incoming sensory information; includes the brain and spinal cord.

Cerebrum: Part of the brain responsible for the integration of complex sensory and neural functions and the initiation and coordination of voluntary activity in the body. Comprised of four lobes: frontal (motor cortex), parietal (somatosensory cortex), occipital (visual cortex), and temporal (memory, perception, and memory).

Cerebellum: Part of the brain involved in our sense of balance and for coordinating the body's muscles so that movement is smooth and precise. Involved in the learning of certain kinds of simple responses and acquired reflexes.

Dendrites: Part of a neuron; receive information from neighboring neurons and resemble the branches of trees.

DNA: The acronym for deoxyribonucleic acid; the carrier of genetic information.

Dopamine: A neurotransmitter that controls voluntary movements and is associated with the reward mechanism in the brain.

Electroconvulsive therapy (ECT): A procedure performed under general anesthesia, in which small electric currents are passed through the brain, intentionally triggering a brief seizure; a last-resort treatment when other standard treatments have failed; effective for severe depression.

Endorphins: Neurotransmitters involved in reducing pain and making us feel calm and happy.

Enzymatic degradation: When enzymes destroy excess neurotransmitters in the synaptic space.

GABA: A neurotransmitter that blocks the signals of excitatory neurotransmitters responsible for anxiety and panic.

Glial cells: Support cells in the nervous system.

Glutamate: A neurotransmitter associated with learning and memory.

Hippocampus: Part of the brain; our 'gateway' to memory and allows us to form spatial memories so that we can accurately navigate through our environment; helps us to form new memories about facts and events.

Hypothalamus: Part of the brain involved in drives associated with the survival of both the individual and the species. It regulates temperature by triggering sweating or shivering and controls the complex operations of the autonomic nervous system.

Ions: Charged particles found both inside and outside the neuron.

Medulla: Part of the brain that regulates breathing, heart rate, and blood pressure.

Mood stabilizer medications: Used to treat bipolar disorder and, at times, depression, schizoaffective disorder, and disorders of impulse control.

Myelin sheath: Part of a neuron; a white, fatty covering that (1) provides insulation so that signals from adjacent neurons do not affect one another and (2) increases the speed at which signals are transmitted.

Nerves: A group of axons bundled together like wires in an electrical cable.

Nucleus: The control center of a cell, including neurons.

Neuron: The fundamental unit of the nervous system.

Neurotransmitter: The actual code passes from one neuron to another in a chemical form.

Norepinephrine: A neurotransmitter that increases the heart rate and blood pressure and regulates mood.

Parasympathetic nervous system: Calms the body after the sympathetic nervous system has been engaged and the threat avoided or defeated.

Peripheral nervous system: All neurons outside the brain and spinal cord.

Pineal gland: Part of the endocrine system; helps regulate the sleep-wake cycle.

Pituitary gland: The 'master gland' that regulates other endocrine glands; it influences blood pressure, thirst, contractions of the uterus during childbirth, milk production, sexual behavior and interest, body growth, and the amount of water in the body's cells, as well as other functions.

Pons: Part of the brain that acts as a bridge connecting the cerebellum and medulla and helps to transfer messages between different parts of the brain and spinal cord.

Psychosurgery: A field of surgery consisting of stereotactic operations on the brain to alter abnormal physiology by severing certain connections between the frontal lobe and the rest of the brain, including the cortex, the nuclei or other brain pathways; used infrequently.

Receptor sites: Each type of neurotransmitter has its own receptor sites, where it attaches on the adjoining neuron.

Relative refractory period: A short time after firing, the neuron can fire again, but needs greater than normal levels of stimulation to do so.

Repolarize: Once the action potential passes from one segment of the axon to the next, the Na channels close and potassium (K) channels open. K⁺ has a positive charge, so the neuron becomes negative again on the inside and positive on the outside.

Resting potential: Also referred to as 'polarized'; when the neuron has a negative charge inside and a positive charge outside.

Reticular formation: Part of the brain responsible for alertness and attention.

Reuptake: The process of the presynaptic neuron taking up excess neurotransmitters in the synaptic space for future use.

Serotonin: A neurotransmitter that regulates pain, sleep cycle, and digestion; leads to a stable mood, so low levels of serotonin lead to depression.

Soma: The cell body of a neuron.

Somatic nervous system: Allows for voluntary movement by controlling the skeletal muscles and carries sensory information to the CNS.

Stimulant medications: Increase one's alertness and attention and are frequently used to treat ADHD.

Substantia nigra: Structure located in the midbrain that plays an important role in reward and movement.

Sympathetic nervous system: Provides the strength needed to fight back or flee (fight-or-flight instinct); part of the autonomic nervous system.

Synapse: Space between the dendrite of one neuron and the axon of an adjacent neuron; this is where neurotransmitters pass from one neuron to the next; also referred to as the synaptic space, gap, or cleft.

Thalamus: Part of the brain; the major sensory relay center for all senses except smell.

Threshold of excitation: If it receives sufficient stimulation, the polarity inside the neuron rises from -70 mV to -55mV; at this point, the neuron will 'fire' or send an electrical impulse down the length of the axon.

Thyroid gland: Part of the endocrine system; regulates the body's energy levels by controlling metabolism and the basal metabolic rate (BMR).

Section 2.2 Key Takeaways

- Proponents of the biological model view mental illness as being a result of a malfunction in the body to include issues with brain anatomy or chemistry.
- Neurotransmitter imbalances and problems with brain structures/areas can result in mental disorders.
- Many disorders have genetic roots, are a result of hormonal imbalances, or caused by viral infections such as strep.
- Treatments related to the biological model include drugs, ECT, and psychosurgery.

Section 2.2 Review Questions

1. Briefly outline how communication in the nervous system occurs.
2. What happens at the synapse during neural transmission? Why is this important to a discussion of psychopathology?
3. How is the anatomy of the brain important to a discussion of psychopathology?

4. What is the effect of genes, hormones, and viruses on the development of mental disorders?
5. What treatments are available to clinicians courtesy of the biological model of psychopathology?
6. What are some issues facing the biological model?

2.3 Psychological Perspectives

Section 2.3 Learning Objectives

- Describe psychodynamic theory.
- Outline the structure of personality and how it develops over time.
- Describe ways to deal with anxiety.
- Clarify what psychodynamic techniques are used. Evaluate the usefulness of psychodynamic theory.
- Describe learning.
- Outline respondent conditioning and the work of Pavlov and Watson.
- Outline operant conditioning and the work of Thorndike and Skinner.
- Outline observational learning/social-learning theory and the work of Bandura.
- Evaluate the usefulness of the behavioral model.
- Define the cognitive model.
- Exemplify the effect of schemas on creating abnormal behavior.
- Exemplify the effect of attributions on creating abnormal behavior.
- Exemplify the effect of maladaptive cognitions on creating abnormal behavior.
- List and describe cognitive therapies.
- Evaluate the usefulness of the cognitive model. Describe the humanistic perspective.
- Describe the existential perspective.
- Evaluate the usefulness of humanistic and existential perspectives.

Section 2.3 Key Terms

Acceptance techniques: In cognitive behavioral therapy, used to help a client reduce his or her worry and anxiety.

Anal stage: In Freud's stages of psychosexual stages of personality development; the libido is focused on the anus as toilet training occurs (ages 2–3).

Attribution theory: The idea that people are motivated to explain their own and other people's behavior by attributing causes of that behavior to personal reasons or dispositional factors that are in the person themselves or linked to some trait they have; or situational factors that are linked to something outside the person.

Behavioral model: Explains maladaptive behavior in terms of learning gone awry. For example, a child's temper tantrums were reinforced by a parent giving in to what the child wants.

Behavior modification: The process of changing behavior.

Cognitive model: States that people can create their own problems by how they come to interpret events experienced in the world around them.

Cognitive-behavioral therapy (CBT): Focuses on helping people learn how to identify and change destructive or disturbing thought patterns that have a negative influence on behavior and emotions.

Cognitive coping skills training: A strategy used in cognitive behavioral therapy; involves teaching social skills, communication, assertiveness through direct instruction, role playing, and modeling.

Cognitive restructuring: Also called rational restructuring; maladaptive cognitions are replaced with more adaptive ones.

Conditioning: A type of associative learning where two separate events become connected.

Conscious: One of Freud's three levels of consciousness; includes everything within our conscious awareness.

Counterconditioning: The unlearning of previously learned behavior.

Denial: One of Freud's ego-defense mechanisms; when something about our lives is so bad that all we can do is deny that it exists or deny that it is as bad as it is to avoid feeling overwhelmed.

Displacement: One of Freud's ego-defense mechanisms; when we satisfy an impulse with a different object because focusing on the primary object may get us in trouble.

Dream analysis: Used by Freud to understand a person's innermost wishes; involves examining the manifest and latent content of dreams.

Ego: According to Freud, one of the three parts of our personality; attempts to mediate the desires of the id against the demands of reality, and eventually, the moral limitations or guidelines of the superego.

Ego-defense mechanisms: Protect us from emotional distress but are considered maladaptive if they are misused and become our primary way of dealing with stress.

Enactive learning: Learning by doing.

Eros: According to Freud, the drive of life, love, creativity, and sexuality, self-satisfaction, and species preservation.

Existential perspective: Stresses the need for people to re-create themselves continually and be self-aware, acknowledges that anxiety is a normal part of life, focuses on free will and self-determination, emphasizes that each person has a unique identity known only through relationships and the search for meaning, and finally, that we develop to our maximum potential.

Extinction: If a learned behavior is not reinforced, it will eventually stop.

Fixed interval schedule (FI): A type of reinforcement schedule; reinforcing after a set length of time.

Fixed ratio schedule (FR): A type of reinforcement schedule; reinforcing after the subject has displayed the desired behavior a set number of times.

Flooding: In the process of unlearning fears (e.g., phobias), exposing the person to the maximum level of the stimulus, and as nothing aversive occurs, the link between the conditioned stimulus (CS) and unconditioned stimulus (UCS) producing the conditioned response (CR) of fear should break, leaving the person unafraid.

Free association: A psychoanalytic technique developed by Freud; involves the patient describing whatever comes to mind during the session.

Fundamental attribution error: When we automatically assume a dispositional reason for another person's actions and ignore situational factors.

Genital stage: In Freud's stages of psychosexual stages of personality development; sexual impulses reawaken and unfulfilled desires from infancy and childhood can be satisfied during lovemaking (begins at adolescence).

Habituation: When we simply stop responding to repetitive and harmless stimuli in our environment, such as a fan running in your laptop as you work on a paper.

Humanistic perspective: Emerged in the 1960s and 1970s as an alternative viewpoint to the largely deterministic view of personality espoused by psychoanalysis and the view of humans as machines advocated by behaviorism. Key features of the perspective include a belief in human perfectibility, personal fulfillment, valuing self-disclosure, placing feelings over intellect, an emphasis on the present, and hedonism.

Id: According to Freud, one of the three parts of our personality; the impulsive part that expresses our sexual and aggressive instincts.

Identification: One of Freud's ego-defense mechanisms; when we find someone who has found a socially acceptable way to satisfy their unconscious wishes and desires, and we model that behavior.

Intellectualization: One of Freud's ego-defense mechanisms; when we avoid emotion by focusing on the intellectual aspects of a situation, such as ignoring the sadness we are feeling after the death of our mother by focusing on planning the funeral.

Latency stage: In Freud's stages of psychosexual stages of personality development; children lose interest in sexual behavior, so boys play with boys and girls with girls. Neither sex pays much attention to the opposite sex (ages 6–12).

Latent content: In dream analysis, the hidden or symbolic meaning in dreams.

Learning: Any relatively permanent change in behavior due to experience and practice.

Libido: According to Freud, the psychic energy that drives a person to pleasurable thoughts and behaviors.

Maladaptive cognitions: Irrational thought patterns.

Manifest content: In dream analysis, the actual content of the dream.

Modeling: In observational learning, when the model demonstrates the desired behavior.

Negative punishment: Removal of a positive stimuli when an undesired behavior is displayed (e.g., a child being restricted from playing video games due to bad grades in school).

Negative reinforcement: Removing a negative stimuli (e.g., a buzzing sound or electric shock) when the desired behavior is displayed; for example, some cars are equipped with a buzzer (negative stimuli) that will not stop until you put on your seatbelt (desired behavior).

Observational/social-learning theory: When we learn by observing the world around us, as well as by observing the behavior of others.

Operant conditioning: Takes a naturally occurring stimulus and response (i.e., salivating at the sight of food) and associates the response with a new stimulus (i.e., salivating when a bell is rung) by pairing the original stimulus (i.e., food) with a new stimulus (i.e., the ringing of a bell) until the new stimulus alone elicits the response (i.e., salivating).

Oral stage: In Freud's stages of psychosexual stages of personality development; the libido is focused on the mouth (birth to 24 months).

Perception: How we make meaning out of raw sensory data (i.e., obtained via sight, hearing, touch, taste, or smell).

Phallic stage: In Freud's stages of psychosexual stages of personality development; the libido is focused on the genitals, and children develop an attachment to the parent of the opposite sex and are jealous of the same-sex parent (ages 3 to 5–6).

Positive reinforcement: Applying a positive stimuli (e.g., food) when the desired behavior is displayed.

Postconditioning: After learning has occurred, establishes a new and not naturally occurring relationship of a conditioned stimulus (CS; previously the NS) and conditioned response (CR; the same response).

Preconditioning: In classical conditioning, it means that some learning is already present.

Preconscious: One of Freud's three levels of consciousness; includes all of our sensations, thoughts, memories, and feelings that can be brought into conscious awareness.

Projection: One of Freud's ego-defense mechanisms; when we attribute our own threatening desires or unacceptable motives to others.

Punishment: Applying a negative stimuli or removing a positive stimuli when an undesired behavior is displayed, which decreases the likelihood of the behavior occurring again.

Psychodynamic theory: Developed out of Freud's psychoanalytic theory; early childhood experiences are highly influential in shaping our adult personalities; emphasizes internal conflicts, motives, and unconscious desires.

Positive punishment: Applying a negative stimuli when an undesired behavior is displayed, which decreases the likelihood that the behavior will be displayed again in the future.

Positive reinforcement: Applying a positive stimuli (e.g., food) when the desired behavior is displayed, which increases the likelihood that the behavior will be displayed again in the future.

Rationalization: One of Freud's ego-defense mechanisms; when we offer well-thought-out reasons for why we did what we did, but these are not the real reasons, as they are a way to reduce stress or save face.

Reaction formation: One of Freud's ego-defense mechanisms; when an impulse is repressed and then expressed by its opposite.

Reinforcement: Applying a positive stimuli (e.g., food) or removing a negative stimuli (e.g., a buzzing sound or electric shock) when the desired behavior is displayed, which strengthens the likelihood of the behavior occurring again in the future.

Reinforcement schedule: When and how often we will reinforce the desired behavior.

Regression: One of Freud's ego-defense mechanisms; when we regress from a mature behavior to one that is infantile in the face of overwhelming stress.

Repression: One of Freud's ego-defense mechanisms; when unacceptable ideas, wishes, desires, or memories are blocked from consciousness, such as forgetting a horrific car accident that you caused.

Respondent conditioning: Also referred to as classical or Pavlovian conditioning; occurs when we link a previously neutral stimulus with a stimulus that is unlearned or inborn, called an unconditioned stimulus.

Respondent discrimination: When only a single conditioned stimulus or a narrow range of conditioned stimuli elicit the conditioned response (e.g., teaching Pavlov's dogs to respond to a specific bell and ignore the whistle).

Respondent extinction: When the conditioned stimulus no longer paired with the unconditioned stimulus, so the conditioned response is not displayed.

Respondent generalization: When many similar conditioned stimuli or a broad range of conditioned stimuli elicit the same conditioned response. In the example of Pavlov's dogs and salivation, respondent generalization would occur if the dogs started salivating after hearing a whistle (because it sounds similar to a bell ringing).

Schemas: A cognitive short-cut; a set of beliefs and expectations about a group of people, presumed to apply to all members of the group, and based on experience.

Self-serving bias: When we attribute our success to our own efforts (dispositional) and our failures to external causes (situational).

Sensation: Information obtained via the five senses (i.e., sight, hearing, touch, taste, or smell).

Sensitization: When our reactions are increased due to a strong stimulus, such as an individual who experienced a mugging and now panics when someone walks up behind him/her on the street.

Social cognition: The process of collecting and assessing information about other people.

Spontaneous recovery: When the conditioned stimulus elicits the conditioned response after extinction has occurred.

Sublimation: One of Freud's ego-defense mechanisms; when we find a socially acceptable way to fulfill a desire, such as spending a lot of time working out at the gym while your spouse is away on a business trip.

Superego: According to Freud, one of the three parts of our personality; represents society's expectations, moral standards, and rules, and represents our conscience.

Thanatos: According to Freud, the death instinct.

Transference: In psychoanalytic therapy, the process through which patients transfer attitudes he/she held about a parent or other authority figure during childhood to the therapist.

Variable interval schedule (VI): A type of reinforcement schedule; varying the length of time before reinforcing.

Variable ratio schedule (VR): A type of reinforcement schedule; varying the number of times the desired behavior must be displayed before reinforcing.

Unconscious: One of Freud's three levels of consciousness; thoughts and desires that are completely outside of our conscious awareness.

Section 2.3 Key Takeaways

- According to Freud, consciousness had three levels (consciousness, preconscious, and the unconscious), personality had three parts (the id, ego, and superego), personality developed over five stages (oral, anal, phallic, latency, and genital), there are ten defense mechanisms to protect the ego such as repression and sublimation, and finally three assessment techniques (free association, transference, and dream analysis) could be used to understand the personalities of his patients and expose repressed material.
- The behavioral model concerns the cognitive process of learning, which is any relatively permanent change in behavior due to experience and practice, and has two main forms – associative learning to include classical and operant conditioning and observational learning. Respondent conditioning (also called classical or Pavlovian conditioning) occurs when we link a previously neutral stimulus with a stimulus that is unlearned or inborn, called an unconditioned stimulus.
- Operant conditioning is a type of associate learning which focuses on consequences that follow a response or behavior that we make (anything we do, say, or think/feel) and whether it makes a behavior more or less likely to occur.
- Observational learning is learning by watching others and modeling techniques change behavior by having subjects observe a model in a situation that usually causes them some anxiety.
- The cognitive model focuses on schemas, cognitive errors, attributions, and maladaptive cognitions and offers strategies such as CBT, cognitive restructuring, cognitive coping skills training, and acceptance.
- The humanistic perspective focuses on positive regard, conditions of worth, and the fully functioning person while the existential perspective stresses the need for people to re-create

themselves continually and be self-aware, acknowledges that anxiety is a normal part of life, focuses on free will and self-determination, emphasizes that each person has a unique identity known only through relationships and the search for meaning, and finally, that we develop to our maximum potential.

Section 2.3 Review Questions

1. What are the three parts of personality according to Freud?
2. What are the five psychosexual stages according to Freud?
3. List and define the ten defense mechanisms proposed by Freud.
4. What are the three assessment techniques used by Freud?
5. What is learning and what forms does it take?
6. Describe respondent conditioning.
7. Describe operant conditioning.
8. Describe observational learning and modeling.
9. How does the cognitive model approach psychopathology?
10. How does the humanistic perspective approach psychopathology?
11. How does the existential perspective approach psychopathology?

2.4 The Sociocultural Model

Section 2.4 Learning Objectives

- Describe the sociocultural model.
- Clarify how socioeconomic factors affect mental illness.
- Clarify how gender factors affect mental illness.
- Clarify how environmental factors affect mental illness.
- Clarify how multicultural factors affect mental illness.
- Evaluate the sociocultural model.

Section 2.5 Key Terms

Culture-sensitive therapies: Include increasing the therapist's awareness of cultural values, hardships, stressors, and/or prejudices faced by their client; the identification of suppressed anger and pain; and raising the client's self-worth.

Sociocultural model: Incorporates social and cultural factors, including race, ethnicity, gender, religious orientation, socioeconomic status, and sexual orientation, into explaining the causes of mental disorders.

Section 2.4 Key Takeaway

- The sociocultural model asserts that race, ethnicity, gender, religious orientation, socioeconomic status, sexual orientation all play a role in the development and treatment of mental illness.

Section 2.4 Review Questions

1. How do socioeconomic, gender, environmental, and multicultural factors affect mental illness and its treatment?
2. How effective is the sociocultural model at explaining psychopathology and its treatment?