



TOPIC OUTLINE

- I. Introduction to Psychology
- II. Human Development
 - A. Growth and Development
 - B. Theories of Development
 - C. Parenting Styles
- III. Freudian Psychology
 - A. Structure of the Mind
 - B. Development of Personality
 - C. Defense Mechanisms
 - D. Psychoanalytic Techniques and Phenomena
- IV. Biological Psychology
 - A. Brain
 - B. Neurotransmitters
- V. Consciousness
 - A. Processes
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- VI. Sensation and Perception
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- VII. Personality
 - A. Theories of Personality Development
 - B. Personality Types (Myer-Briggs)
 - C. Personality Disorders
- VIII. Affective and Cognitive Processes
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- X. Motivation
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 - B. Intrinsic and Extrinsic Motivation
 - C. Abraham Maslow: Hierarchy of Needs
 - D. Carl Rogers
- XI. Mental Disorders
 - A. Psychotic Disorders
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 - C. Anxiety and Obsessive-Compulsive Disorders
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 - E. Neurodevelopmental Disorders
 - F. Other Disorders
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Introduction

This transcription / reviewer is intended for the exclusive use of Learning Unit II INTARMED students.

Warning: This is pretty long as it's supposed to give you a crash course on psychology to prepare you for the NMAT. However, this does not intend to be a comprehensive resource.

Suggestion: Answer practice sets or reviewers to give you an idea of what questions will be asked. Go through this trans and pick out what you feel is important.

Hopefully this will also get you interested in the neurosciences (neurology and psychiatry) which you'll be encountering in med proper. :) Good luck!

I. INTRODUCTION TO PSYCHOLOGY

- **Psychology**
 - Study of behavior and mental processes
 - Study of how people think act, react and interact
 - "Psyche" (mind / soul) + "logos" (study)
- **Psychiatry**
 - Study of mental disorders and their diagnosis, management and prevention
 - Psychiatrist: an MD who has completed residency training in psychiatry

THEORIES

- **Structuralism**
 - Wilhelm Wundt (1879), the "Father of Psychology"
 - Study of mental processes by specifying the elements of consciousness through introspection
- **Functionalism**
 - William James (1890)
 - Addresses the social structure as a whole and in terms of the necessary function of its constituent elements
- **Psychoanalysis**
 - Sigmund Freud (1900)
 - "Life force" / libido / sex drive influences the unconscious mind of a child's personality
 - Carl Jung
 - Libido: not only sex drive but the desire to excel
- **Gestalt Psychology**
 - "Gestalt": configuration, form, holistic, structure, pattern
 - We experience things as unified beings.
 - Max Wertheimer (1912)
 - "There are wholes, the behavior of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature of the whole."
 - Wolfgang Köhler
 - "The whole is greater than the sum of its parts."
 - Kurt Koffka
- **Behaviorism**
 - All behavior can be explained by environmental causes rather than by internal forces
 - John Watson (1913)
 - "The Little Albert Experiment": Baby Albert was conditioned with loud noise to cry upon seeing a white rat
 - B.F. Skinner
 - Operant conditioning: "Skinner box"
 - Ivan Pavlov
 - Classical conditioning: Pavlov's dog
- **Cognitivism**
 - Study of mental processes including how people think, perceive, remember and learn
 - Jean Piaget
 - Stages of cognitive development
 - Alan David Baddeley
 - Working memory
- **Humanism**
 - Abraham Maslow
 - Fundamental and uniquely human needs and issues
 - Carl Rogers
 - Unconditional positive regard
- **Existentialism**
 - Rollo May
 - Humanistic themes of death, free will and meaning
 - Meaning can be shaped by myths or narrative patterns and can be encouraged by an acceptance of the free will

II. HUMAN DEVELOPMENT

A. GROWTH AND DEVELOPMENT

- **Growth**
 - Increase in the size of the whole or any of its parts
 - Hyperplasia: Increase in the number of cells
 - Hypertrophy: Increase in the size of cells
- **Development**
 - Progressive increase in the individual's capacities in terms of maturation and learning
 - Onset and progression of an individual's capacity to functions

PRINCIPLES OF GROWTH AND DEVELOPMENT

- **Process**
 - Conception to birth
 - Orderly, definite, predictable
- **Sequential**
 - Cephalo-caudal: head-to-toe
 - Proximo-distal: From the center (heart) outwards
 - Gross to fine skill

RATES AND STAGES

- Optimum stage and initiation of skills and learnings
 - Must be timely and developmentally appropriate
- **Neonatal reflexes**
 - Rooting, sucking, palmar grasp, Babinski
- Practice: **imprinting** (in animals), the process by which an offspring follows and imitates as models his / her parents

FACTORS AFFECTING GROWTH AND DEVELOPMENT

- **Nature:** genetics
- **Nurture:** environment, behavior, nutrition

B. THEORIES OF DEVELOPMENT

A. PSYCHOSEXUAL DEVELOPMENT (Sigmund Freud)

- Sigmund Freud: founder of classical psychoanalysis
1. **Oral Stage** (0-1.5 years)
 - Exploration of the world through the mouth (sucking, biting)
 2. **Anal Stage** (1.5-3 years)
 - Control of urination and defecation (expelling or retaining feces)
 3. **Phallic Stage** (3-6 years)
 - Awareness of genital area (sexuality explored)
 4. **Latency** (6-12 years)
 - Personality development prominent, expanding social contacts in school (sexuality refined)
 5. **Genital Stage** (Puberty to adulthood)
 - Development of sexual maturity and establishing mature relationships

B. PSYCHOSOCIAL DEVELOPMENT (Erik Erikson)

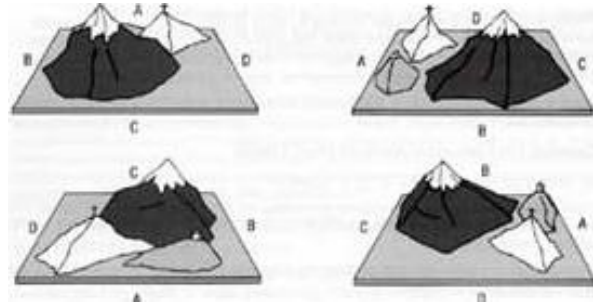
- Erik Erikson: a neo-psychoanalytic theorist (note the corresponding stages with Freud's theory)
- Personality development is a lifelong process through eight stages.
- The outcome of each stage is dependent on the outcome of the previous stage (resolving each stage's ego crisis).

- Stage 1. Trust vs. Mistrust** (0-18 months)
- Virtue: Hope
 - Significant person: mother or primary caretaker
 - Needs should be met and care consistent
- Stage 2. Autonomy vs. Shame and Doubt** (18 months - 3 years)
- Virtue: Will
 - Independence and negativism (learning to say "no" before "yes")
- Stage 3. Initiative vs. Guilt** (3-5 years)
- Virtue: Purpose
 - Learning to plan and carry out actions and to get along with peers as an autonomous and independent person
- Stage 4. Industry vs. Inferiority** (5-13 years)
- Virtue: Competence
 - Learning new skills and takes pride in the things made
 - Pleasure and satisfaction from the completion of tasks
- Stage 5. Identity vs. Role Confusion** (13-21 years)
- Virtue: Fidelity
 - Integrating different images of the self into a whole
 - Identity crisis
- Stage 6. Identity vs. Isolation** (20-40 years)
- Virtue: Love
 - "To love and to work"
 - Relating well with others
- Stage 7. Generativity vs. Stagnation** (40-60 years)
- Virtue: Care
 - Generativity: raising children, guiding the next generation, creativity, altruism
 - Stagnation: self-concern, isolation, absence of intimacy
 - Midlife crisis
- Stage 8. Integrity vs. Despair** (60 years onwards)
- Virtue: Wisdom
 - Ego integrity: wisdom from life experiences, looking back at life with meaning; pleasant reflections and present pursuits
 - Despair: loss of hope, i.e. "I haven't accomplished what I wanted to in life; it's too late."

C. PSYCHOSOCIAL DEVELOPMENT (Jean Piaget)

1. **Sensorimotor Period** (0-2 years)
 - Stage 1: **Neonatal Reflexes** (sucking, grasping, looking)
 - Stage 2: **Primary Circular Reactions**
 - Behavior leads to an interesting result, repeated
 - e.g. thumb-sucking
 - Stage 3: **Secondary Circular Reactions**
 - Repetition of simple actions on external objects
 - e.g. banging a toy to make noise
 - **Intentionality:** ability to act in a goal-directed manner (doing one thing to get something to happen)
 - Stage 4: Coordination of secondary circular reactions
 - Stage 5: **Tertiary Circular Reactions**
 - New means are discovered; plays peak-a-boo
 - Stage 6: Internalization of schemes
 - Shift from purely sensorimotor to symbolic mental functioning
 - **Object permanence:** objects continue to exist when no longer in view
2. **Preoperational Thought** (2-6 years)

- **Egocentrism:** Inability to distinguish between one's own perspective and someone else's
 - Three mountains task: The egocentric child sitting at C thinks that the doll at A "sees" only two mountains even though the child was allowed to go around the model earlier.



- **Animism:** belief that inanimate objects have lifelike qualities and are capable of action
 - **Concentration:** focusing on one characteristic and excluding others
 - **Lack of conservation:** unable to keep in mind what stays the same and what changes in an object after it has changed aesthetically
 - Conservation of liquids task: A child is shown two identical beakers containing the same amount of colored (typically blue) liquid. The child was asked whether the two beakers had the same amount of liquid in both. Then liquid from one of the glasses was poured into a taller, thinner glass. A child who cannot conserve answers that there is more liquid in the tall thin glass.
3. **Concrete Operational Thought** (7-11 years)
 - Conservation
 - Classification
 - Seriation: ordering stimuli along a quantitative dimension
 4. **Formal Operational Thought** (11 years to end of adolescence)
 - **Abstract thinking**, hypothetical-deductive reasoning, general-specific
 - Not all adults develop formal operational thinking (1 in 3 American adolescents)

D. MORAL DEVELOPMENT (Lawrence Kohlberg)

- Level 1: Preconventional**
- Stage 1: **Obedience and Punishment**
 - Obeying to avoid punishment; rules are fixed and absolute
 - Stage 2: **Individualism and Exchange / Instrumental-Purposive Orientation**
 - Reward orientation; acting to serve individual needs
- Level 2: Conventional**
- Stage 3: **Interpersonal Concordance Orientation**
 - "Good boy-good girl" orientation"; emphasis on conformity, being "nice"
 - Stage 4: **Maintaining Social Order**
 - Authority orientation
- Level 3: Postconventional Level**
- Stage 5: **Social Contract and Individual Rights**
 - Individual rights and standards are critically examined and agreed upon by members of society.
 - Stage 6: **Universal Ethical Principles**
 - People follow internalized principles of justice even if they are conflict with laws and rules.

Level 1 Preconventional	Level 2 Conventional	Level 3 Postconventional
Stage 1 Heteronomous morality: child obeys because adults say so	Stage 3 Mutual interpersonal expectations, relationships, and interpersonal conformity	Stage 5 Social contract or utility and individual rights
Stage 2 Individualism, purpose, and exchange: each pursues own interests, lets others do same	Stage 4 Social system morality: moral judgements based on understanding of social order, law, justice, and duty	Stage 6 Universal ethical principles: one's moral judgments based universal human rights

C. PARENTING STYLES

- 1. **Authoritarian**
 - High demands, not responsive to children; obedience- and status-oriented
 - Strict rules obeyed without explanation; failure to obey leads to punishment
- 2. **Authoritative**
 - Highly responsive to children, willing to listen to questions; assertive but not intrusive and restrictive
- 3. **Permissive (indulgent)**
 - Few demands, low expectations; more responsive than demanding
- 4. **Uninvolved**
 - Few demands, low responsiveness, little communication

III. FREUDIAN PSYCHOLOGY

- Determinism – behavior is determined by:
 - Irrational forces
 - Unconscious motivations
 - Biological and instinctual drives
- Two basic drives**
 - Sex (eros)
 - Aggression (thanatos)
 - Pleasure principle:** The goal of life is to gain pleasure and to avoid pain.
- Instincts
 - Something people inherently have under which they act with spontaneity and without effort or premeditation
- Libido
 - Sexual energy
 - Oriented towards growth, development and creativity

A. STRUCTURE OF THE MIND

- Id**
 - Unconscious or subconscious desires
 - Seeks expression without fear of consequences nor regard for control
 - Pleasure principle:** “I want it now.”
- Ego**
 - Operates on all three levels of the mind
 - Manages the conflict between the id and the constraints of the real world; see defense mechanisms below
 - Reality principle:** “You can only have it under certain conditions.”
- Superego**
 - Conscience,** sense of right/wrong
 - Operates on all levels of the mind, mostly subconscious
 - Forces the ego to conform not only to reality but also to its ideals of morality

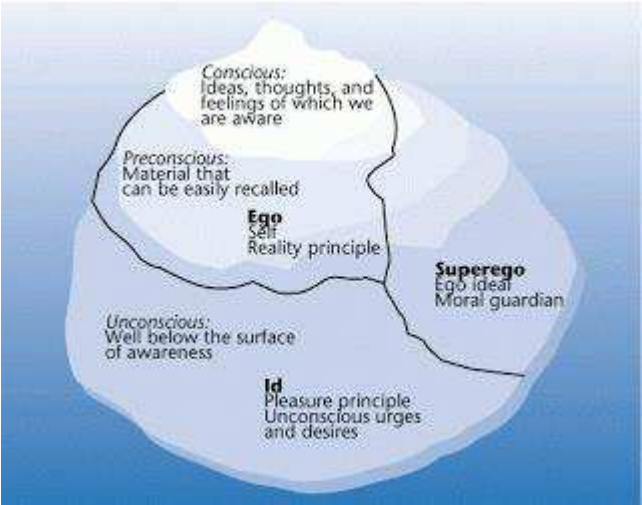


Figure 1. The id, ego and superego in the Freudian structure of the mind (psyche)

B. DEVELOPMENT OF PERSONALITY

- Psychosexual Stages of Development
 - Oral Stage**
 - Mistrust and rejection issues
 - Anal Stage**
 - Personal power issues
 - Anal-retentive personality: orderly
 - Anal-expulsive personality: messy

- Phallic Stage**
 - Oedipus complex:** A boy's sexual desire for his mother and hostility toward his father, whom he considers to be a rival for his mother's love
 - Castration anxiety:** Boy's unconscious fear of losing his penis like a female; child fears that his own father will do the same to him for desiring his mother
 - Resolution of the Oedipus complex leads to the emergence of the superego
 - Elektra complex:** A girl's tender feelings towards his father and feelings of competition with her mother for the father's attention
 - Penis envy:** Girl's sense of discontent and resentment resulting from their wish for a penis; feelings of inferiority and jealousy; although she can't have a penis, she can have a baby
- Latent Stage**
 - Socialization
- Genital Stage**
 - Sexual energies are invested in life pursuits
- Fixation:** inability to progress normally from one stage into another; shows up in adulthood as a tendency to focus on the needs that were over-gratified or over-frustrated

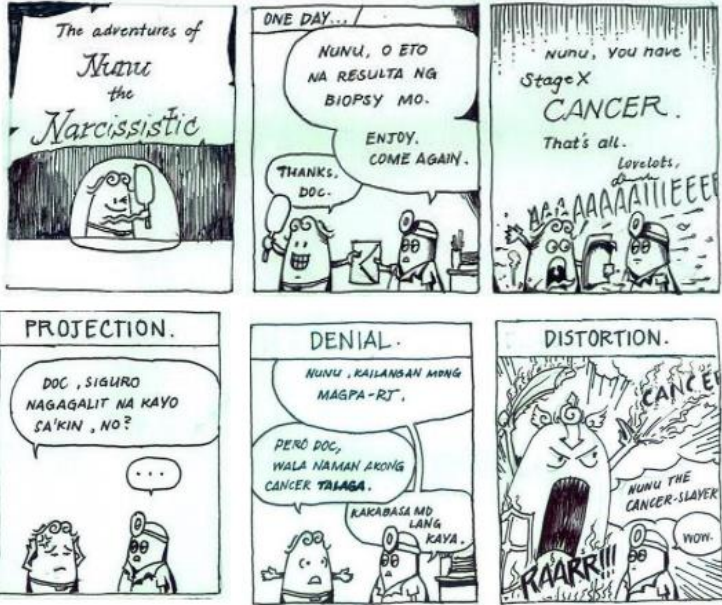
C. DEFENSE MECHANISMS

- Coping mechanism:** dealing with the problem (battling it head on); good or bad coping mechanism
- Defense mechanism:** covering up

1. NARCISSISTIC

- Most primitive; often used by children and psychotic individuals
- Denial**
 - Refusing to admit or face a threatening situation; avoiding awareness of anxiety-provoking stimulus to protect ego
- Distortion**
 - Grossly reshaping external reality to fit one's needs and unrealistically exaggerating one's sense of superiority and entitlement
- Projection**
 - Attributing to others one's unacceptable thoughts, feelings, impulses

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2. IMMATURE

- Deal with internal or external stressors through action, withdrawal or bodily means (symptoms)
- Usually maladaptive; appear in adolescents and some non-psychotic individuals
- Acting out**
 - Unconscious wish or impulse acted upon to avoid the unpleasant feeling accompanied by it
- Introjection**
 - Internalizing the qualities of an object or significant other
- Passive-aggressive**
 - Expressing aggression toward others through passivity, masochism, and turning against self

- Manifestation include failure, procrastination, illnesses that affect others more than oneself
- **Regression**
 - Resorting to earlier ways of acting or feeling, although it is no longer appropriate
- **Fantasy**
 - Escaping from real worries by avoiding interactions with people and imagining that the conflict has been resolved
 - e.g. daydreaming
 - Schizoid fantasy: Indulging in autistic retreat in order to resolve conflict and to obtain gratification
- **Somatization**
 - Converting anxiety to bodily symptoms and reacting with somatic manifestations rather than psychological ones
 - e.g. A student who is about to take an important examination suffers from diarrhea.
- **Blocking**
 - Transiently inhibiting thinking
- **Hypochondriasis**
 - Exaggerating or overemphasizing an illness for the purpose of evasion and regression (unconscious, will perceive that they are ill); can be related to fears and apprehensions
 - **“Medical student’s syndrome”**: Belief that one is developing signs and symptoms that he / she is studying



- ### 3. NEUROTIC
- Keep potentially threatening ideas, feelings, memories or fears out of the awareness
 - In obsessive-compulsive disorder (OCD), hysterical individuals and adults under stress
 - **Controlling**
 - Attempting to manage events or objects in the environment to minimize anxiety and to resolve inner conflicts
 - **Displacement**
 - Redirecting impulses (often anger) from the real target to a safer but innocent person
 - **Inhibition**
 - Consciously limiting or renouncing some ego functions to evade anxiety arising from conflict with instinctual impulses
 - **Isolation of affect**
 - Hiding one's emotional response or problems under a façade of big words and pretending one has no problem (detachment from the emotion)
 - **Intellectualization**
 - Excessively using intellectual processes to avoid affective expression
 - **Rationalization**
 - Giving excuses for shortcomings therefore avoiding self-condemnation, disappointments or criticisms from others

- e.g. “sour graping”
- **Dissociation**
 - Temporarily but drastically modifying one's character or identity to avoid emotional distress
- **Reaction Formation**
 - Denial or reversal of feelings: Love turns to hate, hate to love
- **Repression**
 - Shoving unacceptable and distressing memories, thoughts, emotions and urges to the unconscious (recalling it will be too painful)
 - e.g. dreams, Freudian slips (parapraxis): “slips of the tongue”
- **Sexualization**
 - Endowing an object or function with sexual significance



- ### 4. MATURE
- Promote optimum balance between conflicting motives; maximize gratification and allow awareness of feelings and ideas and their consequences
 - Adaptive process; operates in the conscious (anticipation) level already, but may also be unconscious (e.g. humor)
 - **Altruism**
 - Extending service to others to undergo a vicarious experience
 - **Anticipation**
 - Realistically planning for future inner discomfort
 - **Asceticism**
 - Eliminating the pleasurable effects of experiences
 - **Humor**
 - Using comedy to express feelings and thoughts without personal discomfort and without producing an unpleasant effect on others
 - **Sublimation**
 - Transforming unacceptable needs into acceptable ambitions and actions: allows instincts to be channeled, not blocked or diverted
 - e.g. Conversion of compelling desire to get parents' attention into good academic performance in school
 - **Suppression**
 - Consciously postponing attention to an impulse or conflict that are not usually utterly despicable
 - Repression (unconscious) vs. suppression (consciously postponing)



D. PSYCHOANALYTIC TECHNIQUES AND PHENOMENA

- **Free Association**
 - Client reports immediately without censoring feelings or thoughts
- **Interpretation**
 - Therapist points out, explains and teaches the meanings of whatever is revealed
- **Dream Analysis**
 - Therapist uses the “royal road to the unconscious” to bring unconscious material to light
- **Transference**
 - The client reacts to the therapist as he did to an earlier significant other allowing him to experience feelings that would otherwise be inaccessible
- **Counter-transference**
 - Therapist’s reaction towards the client may interfere with objectivity
- **Resistance**
 - Works against the progress of therapy and prevents the production of unconscious material

IV. BIOLOGICAL PSYCHOLOGY

A. BRAIN

- **Neural plasticity:** the ability of the brain to adapt to environmental input

BRAIN STRUCTURES IMPORTANT IN PSYCHIATRY

1. **Deep Limbic Center**
 - Controls bonding and mood
2. **Basal Ganglia**
 - Integrates feelings and movement
 - Impairment in anxiety
3. **Prefrontal Cortex**
 - Executive function; planning, decision-making, impulse control
4. **Cingulate**
 - Allows shifting of attention from thought to thought and between behaviors
5. **Temporal Lobes**
 - Reading social cues (facial expression, voice intonation), understanding and processing language, memory, mood stability

LIMBIC SYSTEM

- **Regulates emotions and memory**
- **Thalamus**
 - Relay center
- **Amygdala**
 - Aggression center
 - Modulates emotion and associates memory with emotion
- **Hippocampus**
 - Learning and memory
- **Hypothalamus**
 - Emotion, basic drives (thirst and hunger)
 - Regulates endocrine activity, controls autonomic nervous system, organizes homeostatic and social behavioral patterns



“A hippo lost on campus”
The hippocampus is important in spatial memory.

“I love you with all my hypothalamus.”
The hypothalamus is responsible for autonomic, metabolic, mood and behavioral functions.

B. NEUROTRANSMITTERS

- **Acetylcholine (Ach)**
 - Muscle movement, attention, arousal, memory, emotion
 - Alzheimer’s disease associated with deficiency
- **Dopamine**
 - Voluntary movement, learning, memory, emotion
 - Schizophrenia: increased dopamine
 - Parkinsonism: decreased dopamine
- **Serotonin**
 - Sleep, wakefulness, appetite, mood, aggression, impulsivity, sensory perception, temperature regulation, pain suppression
 - Plays a central role in depression: decreased serotonin
- **Endorphins**
 - Pain relief, pleasure
- **Norepinephrine / noradrenaline (NorE)**
 - Learning, memory, dreaming, awakening, emotion, stress-related increase in heart rate and slowing of digestive processes
 - Depression: decreased NorE
- **Gamma-aminobutyric acid (GABA)**
 - Main *inhibitory* neurotransmitter in the brain
- **Glutamate**
 - Main *excitatory* neurotransmitter in the brain
 - Multiple sclerosis: increased glutamate

V. CONSCIOUSNESS

- Individual awareness of thoughts, memories, feelings, sensations and environment
- Ranges from full attention to temporary (sleep) or permanent (comatose) loss of consciousness



A BIT OF MED
In neurology, **consciousness** is reported as:

- **Alert:** awake, attentive
- **Lethargic:** drowsy but awakens to stimulation
- **Obtunded:** difficult to arouse, needs constant stimulation to follow commands
- **Stuporous:** requires pain to arouse
- **Coma:** unresponsive to external stimuli

A. PROCESSES

- **Selective attention**
 - Focusing on one stimulus and screening out others
- **Divided attention**
 - Doing two things simultaneously without effort or awareness
- **Influence without awareness**
 - Subliminal perception

B. SLEEP

- **Zeitgebers**
 - Factors supporting sleep, e.g. light, temperature, body posture

STAGES OF SLEEP

- **Non-Rapid Eye Movement (NREM)**
 - **Stage 1:** between awakening and falling asleep
 - **Stage 2**
 - **Stages 3 (delta / deep / slow wave sleep) and 4:** deepest and most restorative sleep
- **Rapid Eye Movement (REM)**
 - Brain is active and dreams occur

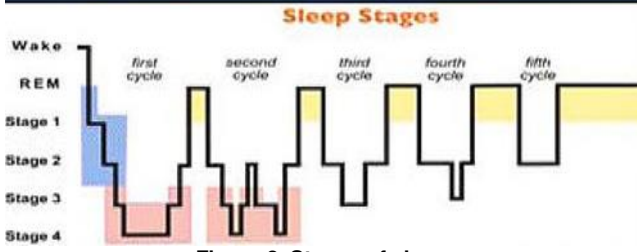
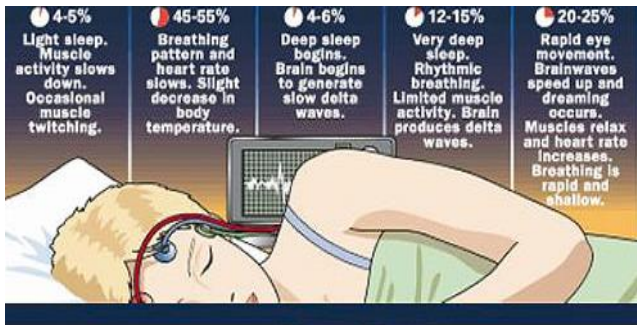


Figure 2. Stages of sleep

B. HYPNOSIS

- Therapeutic technique in which clinicians make suggestions to individuals who have undergone a procedure designed to relax them and focus their minds
- Putting a person into a **trance** (sleep-like state) in which one acquires a heightened state of suggestibility induced by systematic attention-focusing procedures

C. PSYCHOACTIVE DRUGS

- Drugs that cross the blood-brain barrier and affect brain functioning
- **Sedatives**
 - Slow CNS activity
 - e.g. alcohol, barbiturate
- **Stimulants**
 - Stimulate CNS activity, energize behavior
 - e.g. caffeine, nicotine, amphetamine, cocaine
- **Hallucinogens**
 - Produce distinct alterations in perception, sensation of space and time, and emotional states
 - e.g. marijuana, LSD, nitrous oxide
- **Opioids**
 - Depress neural activity, relieve pain, produce euphoria; highly addictive
 - e.g. morphine, codeine, heroine

A BIT OF MED

Pain management in cancer patients follows a stepladder approach. **Non-opioid analgesics** are preferred for mild pain. For mild to moderate pain, **weak opioids** like tramadol are recommended. **Strong opioids** like morphine are reserved for pain with moderate to severe intensity.

VI. SENSATION AND PERCEPTION

A. SENSATION

- Psychophysics: study of how the physical properties of stimuli relate to people's experience of stimuli.
- **Absolute threshold**
 - Minimum amount of stimulation required for a person to detect the stimulus 50 percent of the time
- **Difference threshold** (or **JND: just-noticable difference**)
 - Smallest difference in two levels of stimulation that can be detected 50 percent of the time

SENSATION THEORIES

- **Gate-control theory of pain**
 - The spinal cord contains a neurological "gate" that either blocks pain signals or allows them to continue on to the brain,
 - e.g. When a child falls and gets hurt, the mom blows on the affected part (touch) to ease the pain.
- **Phantom limb**
 - Sensation without receptors as in amputees feeling that the limb is still there
 - Can be frustrating because patients try to reach for the limb to scratch it or fall off the bed when they try to get up and walk

A BIT OF MED

Phantom limb is physiologic but **phantom limb pain** is pathologic.

HOMUNCULUS

- Artificially created human named after one of the seven deadly sins (just kidding, FMA fans :P)
- Refers to how different body parts are represented in different regions of the brain and spinal cord (somatotopic distribution of neurons)
 - Follows a sequence that reflects their order of terminations in the brain stem and spinal cord
- Areas assigned to various body parts on the cortex are proportional not to their size, but rather to the complexity of the movements that they can perform (i.e. hand and face have larger representations)

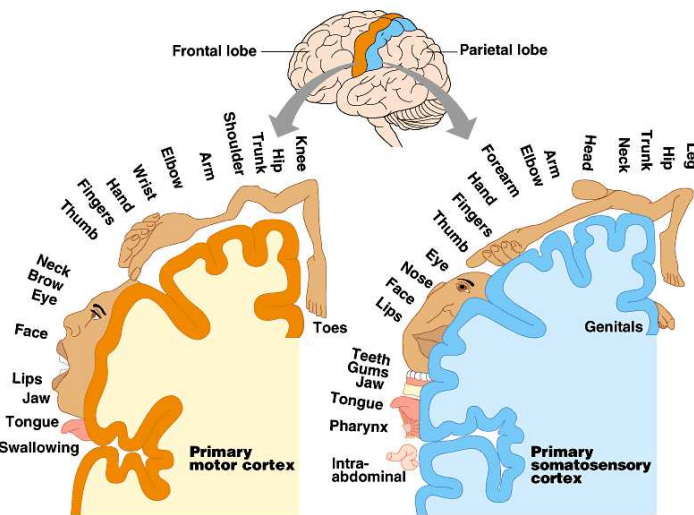


Figure 3. Motor and somatosensory representation in the cortical homunculus

A BIT OF MED

In neurology, **localization of the lesion** is important in evaluating patients with motor or sensory deficits. This is done by understanding how body parts are represented in the brain and in the spinal cord.

Pain and temperature follow the same pathway for sensation. Signals from the peripheral receptors to the spinal cord then ascending the **spinothalamic tract** to the ventral posterior nucleus (VPL) of the thalamus. They are then relayed to the **primary somatosensory complex** in the postcentral gyrus.

B. PERCEPTION

- Involves selecting, organizing and interpreting sensory perception
- **Phi phenomenon**: Rapid sequences of perceptual events, such as rows of flashing lights, create the illusion of motion even when there is none, as in motion pictures

SUBPROCESSES

A. Gestalt Laws (Principles) of Perceptual Organization

- **Prägnanz**
 - German for "good figure", "concise and meaningful"
 - Every stimulus pattern is seen in such a way that the resulting structure is as simple as possible
- **Similarity**
 - Similar things appear to be grouped together
- **Good continuation**
 - Points that, when connected, result in contours which follow the smoothest path.
- **Proximity**
 - Things that are near to each other are grouped together
- **Figure and ground**
 - Separating visual information as figure (stands out) and ground (background)
- **Proximity**
 - Objects that lie close together are perceived as a group
- **Closure**
 - Familiar, incomplete forms are interpreted as complete by filling in gaps
- **Similarity**
 - Similar objects are grouped together

- **Continuity**
 - Interrupted lines and patterns are perceived as being continuous by filling in gaps
- **Simplicity**
 - Forms are perceived as simple, symmetrical figures rather than irregular ones



Figure 4. Law of Prägnanz.

We see a series of circles rather than many complicated shapes.



Figure 5. Law of Proximity.

We see these six figures as two groups of three.



Figure 6. Law of Closure.

The letter "K" is easily recognized despite the gaps.

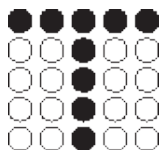


Figure 7. Law of Similarity.

The letter "T" stands out because similar dots are seen as a group.



Figure 8. Law of Continuity.

The figure may be seen as a circle superimposed on a line rather than two lines connected to a circle.



Figure 9. Law of Simplicity.

A triangle superimposed on another is seen rather than a triangle with an attached angular piece.

B. Perceptual Constancies

- An object's size or shape is seen as constant despite changing sensory inputs

C. Perceptual Set

- Mindset; prior experiences and expectations create a perceptual set that leads one to see what he/she expects

EXTRASENSORY PERCEPTION

- **Telepathy**: knowledge of someone else's thoughts or feelings
- **Clairvoyance**: awareness of an unknown object or event
- **Prerecognition**: foreknowledge of future events
- **Telekinesis**: ability to move objects with the power of the mind
- **Déjà vu**: subjectively inappropriate impression of familiarity of a present experience with an undefined past
- **Jamais vu**: the experience of being unfamiliar with a person or situation that is actually very familiar

ILLUSIONS

- The human mind judges the object's size based on its background. (Mario Ponzo)
- Ponzo illusion: converging lines
- Müller-Lyer illusion: stylized arrows

- Moon illusion: moon appears bigger nearer the horizon vs. higher in the sky



Déjà vu. Squidward: Gemini will experience "déjà vu, the feeling that this moment has happened before". (x2)

COGNITIVE STYLES

- **Levelers**: minimization of differences
- **Sharpeners**: exaggeration of differences

VII. PERSONALITY

- **Personality**
 - Distinctive and relatively enduring ways of thinking, feeling and acting
 - Product of biology and environment
- **Temperament**
 - Biologically based characteristic manner of reacting
 - Babies can be easy, difficult, slow-to-warm up
- **Trait**
 - Constant and specific way of behaving
 - "Big 5" personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism
- **Type**
 - **Type A**: impatient, anger-prone; at greater risk for cardiovascular disease
 - **Type B**: easy-going, relaxed
- **Character**
 - Judgment of the person's personality
- **Mood**
 - Extended emotional state that dominates one's outlook, e.g. depressed, euphoric
- **Habit**
 - Learned way of behaving
- **Attitude**
 - Learned tendency to favor or not favor
- **Value**
 - Something one learns to believe is important; something one holds dear or cherishes

A. THEORIES OF PERSONALITY DEVELOPMENT

1. Psychoanalytic Theory: Sigmund Freud
2. Neonalyst Theories
 - Erik Erikson
 - **Alfred Adler**: Individual Psychology
 - Social motives motivate people the most
 - Strivings for superiority drives people's behavior
3. Object Relations Theories
 - **Margaret Mahler**
 - Normal Autistic Phase (Birth to 4 weeks)
 - Normal Symbiotic Phase (4 weeks - 5 months)
 - Separation-Individuation Proper (5-36 months; 4 subphases)
4. Attachment Theories
 - **John Bowlby**
 - Attachments formed during childhood have an important impact
 - on adulthood
 - **Separation anxiety** and its three stages:
 - i. Protest
 - ii. Despair
 - iii. Detachment
5. Cognitive Development: Jean Piaget
6. Sociocultural Cognitive Theory
 - **Lev Vygotsky**
 - Social constructivism
 - *Language* plays a powerful role in shaping thought
 - *Education* is central in helping children learn the tools of culture
7. Moral Development: Lawrence Kohlberg

B. PERSONALITY TYPES (MYER-BRIGGS)

- Based on Carl Jung's theory of psychological types and the personality research of Isabel Briggs Myers and Katharine Cook Briggs
- Dichotomies:
 - Favorite world: Extraversion (E) vs. Introversion (I)

- Information: Sensing (S) or Intuition (N)
- Decisions: Thinking (T) or Feeling (F)
- Structure: Judging (J) or Perceiving (P)
- 16 personality types expressed as a combination of four letters, e.g. INFJ, ESTP

Want to find out your personality type?
Take the test on www.mypersonality.info.

C. PERSONALITY DISORDERS

- Maladaptive behavior patterns or traits that may impair functioning and relationships

CLUSTER I

- **Paranoid**
 - Distrustful, jealous, projecting, suspicious, secretive
- **Schizoid**
 - Engages in solitary activities, reclusive, withdrawn, *unable to form social relationships*, cold and aloof
- **Schizotypal**
 - Peculiar language and thought patterns, isolated, limited peer relationship

CLUSTER II

- **Antisocial**
 - Exploitative (takes advantage of others' vulnerabilities), impulsive and risky behavior, lacks fidelity
 - Tendency to become a criminal
- **Borderline**
 - Manipulative, fear of being left alone, mood swings, hypochondriac, neurotic, impulsive and self-damaging
- **Histrionic**
 - Attractive, flirtatious, flamboyant, childish
 - Likes being the *center of attention*
- **Narcissistic**
 - Self-centered, sense of grandiose, self-importance, excessive self-admiration, has fantasies of unlimited power, beauty and brilliance

CLUSTER III

- **Avoidant**
 - Fears criticism and rejection, escapes intimate relationships, reluctant to engage in new activities
- **Dependent**
 - Passively allows others to assume responsibility, lacks confidence
- **Obsessive-compulsive**
 - Pervasive rigidity, exaggerated fear of losing control, perfectionists, preoccupation with control and power
 - Obsessive-compulsive personality disorder (OCPD) vs. obsessive-compulsive disorder (OCD), an anxiety disorder

VIII. AFFECTIVE AND COGNITIVE PROCESSES

A. EMOTIONS

- Stirred-up state of an organism involving internal and external responses
- Three interacting components: physiological arousal, experience behavior, cognitive appraisal

CLASSIFICATION

- Quality: pleasant or unpleasant
- Intensity: mild or strong

SIX BASIC EMOTIONS

- Fear
- Anger
- Disgust
- Joy
- Surprise
- Sadness

STRESS AND STRESSORS

- **Stress**: state of extreme difficulty, pressure, or strain with negative effects on physical, intellectual and emotional health and well-being
- Stress response occurs when internal or external demands exceed ability to cope or adapt
- **Frustrations**
 - Feelings produced when goals are met with interference which prevents or delays their completion
- **Conflicts**
 - Individual experiences that create emotional tensions
 - Refers to the tension or excitement when one strives to reach a decision between equally attractive (or repelling) situations

- **Pressure**
 - e.g. time (deadlines), emotional pressure

ADJUSTMENT

- Process where internal demands of motivation are brought into harmonious regulation with external demands of reality
- Related to **coping**: the process of adjusting to stress
- **Resiliency**: Resilient people are able to utilize their skills and strengths to cope and recover from problems and challenges.

THE GRIEVING PROCESS (Kubler-Ross)

1. Denial – “This isn’t happening.”
2. Anger – “Why me?”
3. Bargaining – “If I get cured, then, I commit to this devotion.”
4. Depression
5. Acceptance



“DABDA”

Denial, anger, bargaining, depression, acceptance
(Just like when cramming the night before an exam xD)

B. MEMORY

- **Memory**
 - The process of maintaining information over time (Matlin, 2005)

STAGES OF MEMORY

- Encoding
- Storage
- Retrieval

TYPES OF MEMORY

- Sensory memory
 - All stimuli that register through the senses
 - Storage lasts from a fraction of a second to 3 seconds
- Short-term (working) memory
 - Stimuli in sensory memory that we take notice of
 - Lasts about 20 seconds
 - **Chunking**: combining bits of information into bigger, more familiar pieces
- Long-term memory
 - Permanent storage; holds vast amount of information for many years



A BIT OF MED

In neurology and psychiatry, memory is assessed as part of the **mental status examination**. A patient is asked to repeat three words or phrases after the examiner gives them (**immediate memory**) and again after five minutes (**recent memory**). **Remote memory** is assessed by asking for the patient's birthday, grade school, etc.

OTHER CONCEPTS

- **Forgetting**
 - Lack of encoding
 - Physical decay
 - Interference
 - Repression
- **Autobiographical memory**
 - Recollections about own experiences

PHENOMENA OF MEMORY

- **Zeignarik Effect**
 - More likely to remember incomplete tasks and those associated with difficulty
 - Results from tension when one needs to complete an action; depends on one's attitude towards work
- **Serial reproduction**
 - From reconstructive nature of memory
 - A story passed on from one person to another tends to be altered by each person unconsciously
- **Tip-of-the-tongue phenomenon**
- **Flashbulb memories**
 - Vividly remembering a certain event and even insignificant incidents surrounding it for a long time
 - Usually events of high emotional content
- **Slips of the tongue**
 - Linguistic mistakes that are often embarrassing
 - Wrong term due to similarity of sound and meaning to the original word
 - Freud: manifestation of unconscious thoughts and feelings (“Freudian slips”)

- **Hypermnnesia**
 - Excessive memory situation in which a later attempt to remember yields information that could not be retrieved in an earlier attempt
- **Infantile / childhood amnesia**
 - Most adults cannot remember events before age 3 or 4
 - Memories before the age of 3 are usually imaginary, not real (psychiatry)
- **Subliminal perception**
 - Very weak stimuli could be perceived and processed without conscious awareness of the stimulus
 - Not consciously alQware of stimuli that are nevertheless being processed by some parts of the brain
 - Some messages may be subliminal to some but explicit to others

C. INTELLIGENCE

- **Intelligence**
 - Capacity to learn from experience, apply this to future endeavors and adapt successfully to one's environment
 - **Intelligence quotient (IQ):** performance relative to same-aged peers
 - **Emotional intelligence**
 - **Interpersonal intelligence:** ability to understand other people
 - **Intrapersonal intelligence:** ability to understand one's self, recognize and manage emotions

GARDNER'S MULTIPLE INTELLIGENCES (MI) THEORY

- Logical-mathematical
- Visual-spatial
- Linguistic
- Musical
- Natural
- Bodily kinesthetic
- Interpersonal
- Intrapersonal

STERNBERG'S TRIACHIC THEORY

- **Information processing:** traditional knowledge
- **Creativity:** ability to create novel ideas and solutions
- **Practical intelligence:** ability to size up new situations and adapt to real-life demands; "street smart"

IX. LEARNING

- **Habituation**
 - The simplest way of learning; becoming familiar with a subject as a result of repeated exposure

A. CLASSICAL CONDITIONING

- **Ivan Pavlov:** Pavlov's dog
 - **Unconditioned stimulus (US):** food
 - **Unconditioned response (UR):** salivation
 - **Conditioned stimulus (CS):** bell
 - **Conditioned response (CR):** salivation
- **Extinction**
 - Gradual weakening and disappearance of CR due to repeated appearance of CS without US
- **Stimulus generalization**
 - Tendency to respond to a new stimulus similar to the original CS
- **Higher-order conditioning**
 - Neutral stimulus acts as a CS by being paired to another stimulus that already evokes a CR

B. OPERANT CONDITIONING

- **B.F. Skinner:** Skinner Box
 - Cage set up so that an animal can automatically get a food reward if it makes a particular kind of response
- **Reinforcement:** increases the likelihood that a response will occur
 - **Positive reinforcement:** presentation of a (good) stimulus
 - **Negative reinforcement:** removal of a (bad) stimulus
- **Punishment:** decreases the likelihood that a response will occur
 - **Positive punishment:** giving something bad
 - **Negative punishment:** taking away something good
- Reinforcement schedules
 - **Fixed-ratio,** e.g. salesman gets a bonus for every three cars
 - **Variable-ratio**
 - **Fixed-interval,** e.g. employee gets a bonus once a year
 - **Variable-interval**

B. OPERANT CONDITIONING

- **Albert Bandura:** Bobo Dolls
 - Kindergarteners imitate violent behavior after watching a film with an adult sitting, hitting and hammering an inflatable plastic toy, Bobo the Clown

X. MOTIVATION

- **Motive:** an impulse that causes a person to act. Motivation is an internal process that makes a person move toward a goal
- **Motivation:** an internal process that makes a person move toward a goal

A. DRIVE REDUCTION THEORIES

- Actions are done in order to reduce needs or drives and maintain a constant physiological state (homeostasis)
- e.g. Eating reduces the need for food.

B. INTRINSIC AND EXTRINSIC MOTIVATION

- **Intrinsic motivation:** to act for the sake of the activity alone
- **Extrinsic motivation:** to act for external rewards
- **Incentive:** environmental stimulus that pulls people to act in a particular way.

C. ABRAHAM MASLOW: HIERARCHY OF NEEDS

- **Physiological**
 - Air, food, drink, shelter, warmth, sex, sleep
- **Safety**
 - Protection from elements, security, order, law, stability, freedom from fear
- **Belongingness**
 - Friendship, intimacy, affection and love from work group, family, friends and romantic relationships
- **Esteem**
 - Achievement, mastery, independence, status, dominance, prestige, self-respect, respect from others
- **Cognitive***
 - Knowledge and meaning
- **Aesthetics***
 - Appreciation and search for beauty, balance, form, etc.
- **Self-Actualization**
 - Realizing personal potential, self-fulfillment, seeking personal growth and peak experiences
- **Transcendence***
 - Helping others to achieve self-actualization

* These have been later added to the original five needs (1943) to form the Expanded Hierarchy of Needs (1970)

Similar to the



"PS BE CAST"

Physiological, safety, belongingness, esteem, cognitive, aesthetic, self-actualization, transcendence

D. CARL ROGERS

- Rogers and Maslow were both humanist theorists.
- Carl Rogers (1959) believed that humans have one basic motive, the tendency to **self-actualize** (to fulfill one's potential and achieve the highest level of 'human-beingness' we can)

SELF-CONCEPT

- The organized, consistent set of perceptions and beliefs about oneself
- Consists of:
 - **Self-worth** (self-esteem): what we think about ourselves.
 - **Self-image:** How we see ourselves, includes the influence of our body image on inner personality.
 - **Ideal self:** who we would like to be

POSITIVE REGARD

- **Unconditional positive regard**
 - Parents and significant others accept and love the person for what he or she is.
- **Conditional positive regard**
 - Person is not loved for who he or she is but praise and approval depend on the condition that he or she behaves only in ways approved by the parents or significant others.

XI. MENTAL DISORDERS



A BIT OF MED

The **Diagnostic and Statistical Manual of Mental Disorders** (DSM) is used in psychiatry for the diagnosis of mental disorders using defined criteria. Its most recent revision, **DSM-5**, was released in May 2013.

A. PSYCHOTIC DISORDERS

- **Neurosis**
 - Mental disorder involving distress but neither delusions nor hallucinations where behavior is not socially unacceptable; can aggravate to psychosis
 - N.B. The term has been eliminated by DSM editors favoring the favoring descriptions of behavior rather than hidden psychological mechanisms as diagnostic criteria.
- **Psychosis**
 - *Impaired reality testing* (loss of touch with reality)
 - Lack of ability to evaluate the external world objectively and to differentiate adequately between it and the internal world
- **Folie à deux**
 - The sharing of a fantasy by two closely associated friends

SCHIZOPHRENIA

- A syndrome of psychotic features especially hallucinations and delusions that cause impairment of social and occupational functioning for more than 6 months
- Related disorders: Schizophreniform Disorder (1-6 months), Brief Psychotic Disorder (<1 month)

- The Four A's (Eugene Bleuler)
- Primary (fundamental) symptoms:
 - **Associations**: looseness of associations – speech with lack of coherence and thought
 - **Affect**: flat affect – very limited range of reactions, i.e. same facial expression whether talking about something sad or funny
 - **Autism**: loss of contact with reality; “own world”
 - **Ambivalence**: strong feelings for two contradictory situations, e.g. “I want to make friends but they might reject so I don't want to”
 - Secondary (accessory) symptoms:
 - Hallucinations
 - Delusions

- Perceptual Disturbances
- **Hallucination**
 - Perceiving something that is not there (not perceived by others)
 - Usually auditory (hearing voices) or visual
 - **Delusion**
 - Fixed false belief
 - Persecutory, grandiose, nihilistic, erotomantic, somatic
 - **Illusion**
 - Wrongly perceived stimulus (perceived differently by others)

- Agoraphobia
- Fear of being in places or situations in which escape might be difficult or embarrassing, or in which help may not be available should a panic attack occur

B. MOOD DISORDERS

DEPRESSION

- Characterized by overwhelming feeling of sadness, guilt and suffering in an extended period of time
- Most common cause of suicide among the elderly
- Psychiatry (DSM-5): Required **depressed mood** and **anhedonia** (not finding pleasure in activities which were previously pleasurable)
 - Unipolar: **Major Depressive Disorder (MDD)**
 - Bipolar: **Bipolar I and II Disorders**

MANIA

- Uncontrollable impulse
- Elevated, expansive or irritable mood
- Can be a disguise for overwhelming depression



A BIT OF MED
In DSM-5, **Bipolar I Disorder** involves at least one hypomanic episode (shorter duration) with or without a major depressive episode, while **Bipolar II Disorder** needs a major depressive episode and a manic episode (longer duration).

Nice-to-know:

- Phobias**
- Achluphobia or nyctophobia: fear of the dark
 - Acrophobia: fear of high places
 - Algophobia: fear of pain
 - Arachnophobia: fear of spiders
 - Astraphobia: fear of thunder, lightning or storms

- Cheimophobia: fear of cold
- Claustrophobia: fear of closed spaces
- Dipsophobia: fear of drinking
- Ecophobia or oikophobia: fear of home
- Electrophobia: fear of electricity
- Gamophobia: fear of marriage
- Hydrophobia: fear of water
- Monophobia: fear of being alone
- Mysophobia: fear of germs
- Ochlophobia: fear of crowds
- Pathophobia: fear of disease
- Pyrophobia: fear of fire
- Ryophobia: fear of dirt
- Sitophobia: fear of eating
- Taphophobia: fear of being buried alive
- Trypanophobia: fear of needles
- Thermophobia: fear of heat
- Xenophobia: fear of strangers
- Zoophobia: fear of animals

- Manias**
- Arithmomania: impulse to count everything
 - Dipsomania: impulse to drink liquor
 - Kleptomania: impulse to steal
 - Megalomania: impulse for fame and power
 - Pyromania: impulse to set things on fire

C. ANXIETY AND OBSESSIVE-COMPULSIVE DISORDERS

- **Eustress**: “normal” amount of anxiety associated with optimal levels of functioning
- **Distress**: anxiety that interferes with social or occupational functioning

ANXIETY DISORDERS

- Generalized Anxiety Disorder (GAD)
- Panic Disorder: characterized by multiple panic attacks
- **Phobia**: irrational fear of something
 - **Specific Phobia**
 - Causes: genetics, temperament, psychosocial, previous experience
 - Treatment by behavioral modification: systemic desensitization, or flooding and implosion
 - **Social Anxiety Disorder (Social Phobia)**
 - Fear of being in social situations in which one might be humiliated
 - **Agoraphobia**
 - Fear of being in a situation where escape may not be readily possible

OBSESSIVE-COMPULSIVE DISORDER

- Characterized by preoccupation with ritualistic, repetitive actions without which the person thinks something bad will happen
- e.g. Closes the door then goes back to check it three times
- **Body Dysmorphic Disorder**: preoccupied with one or more perceived defects or flaws in their physical appearance

D. NEUROCOGNITIVE DISORDERS

DEMENTIA

- Acquired deterioration in cognitive abilities that impairs the successful performance of activities of daily living (e.g. feeding, grooming)
 - Memory (most commonly lost ability), language, visuospatial ability, calculation, judgment, problem solving
 - **Alzheimer's disease**: most common cause of dementia
 - NOT part of normal aging
 - Starts with memory impairment, spreads to language and visuospatial deficits
- Other causes: stroke (vascular dementia), head injury

ABC's of Alzheimer's Disease and Dementia:

- Activities of daily living impaired
- Behavioral and psychiatric symptoms
- Cognitive impairment

E. NEURODEVELOPMENTAL DISORDERS

AUTISM

- Commonly in children age 0-2 years
- Unable to produced intelligible speech but able to produce sounds and obey simple commands

- ATTENTION-DEFICIT / HYPERACTIVITY DISORDER
- Commonly in children 2-7 years (in school)
 - Impulsiveness, hyperactivity, inattention

F. OTHER DISORDERS

- EATING DISORDERS
- **Anorexia nervosa**
 - “Anorexia”: loss of appetite
 - Syndrome characterized by:
 1. self-induced starvation
 2. morbid fear of fatness
 3. medical signs and symptoms of starvation
 - **Bulimia nervosa**
 - Classically characterized by **binge-eating** and **purging** (induced vomiting)

- PARAPHILIAS
- Disordered expression of sexual urges
 - e.g. pedophilia, zoophilia, fetishism, sado-masochism, exhibitionism, voyeurism

- DISSOCIATIVE IDENTITY DISORDER
- “Split personality”
 - Characterized by amnesia and fugue (inability to recall events)

XII. RESEARCH METHODS

- Descriptive or Correlational Research
- **Causation**: Variable A directly causes variable B; must fulfill certain criteria, e.g. temporality, plausibility
 - **Correlation**: There is an association between A and B but causation cannot be established. Often, a third factor explains the relationship.
 - **Positive correlation** (+): As A increases, B also increases.
 - **Negative correlation** (-): As A increases, B decreases.
 - **No correlation**: no relation exists between the two variables
 - **Survey**
 - Questionnaires or interview
 - Self-report data may be misleading because respondents can lie, give answers based on wishful thinking, misunderstand the questions, forget
 - **Naturalistic Observation**
 - Information collected by observing subjects unobtrusively
 - **Laboratory Observation**
 - Offers researchers some degree of control over the environment; sophisticated equipment may be used to measure or record
 - **Psychological tests**
 - Used to collect information about personality traits, emotional states, aptitudes, interests, abilities, values, or behaviors
 - *Standardized* and compared to norms (established standards of performance)

END OF TRANSCRIPTION

Amiel Villanueva, iMed 2017:
Hello, iMed 2020! (and future generations of iMed kung aabot pa ito sa inyo haha)

Sa mga nag-AJSS and took psych, hope you'll find this a useful refresher. (And hope you enjoyed psych as much as I did. Hehe.)

Special greetings to Abby, Oico, Gianne, Reg, Kirby, Kat, Leander!

Good luck with the NMAT and I hope you'll find this trans useful! :D