

### Psychology

Psychology Study of Mind and Behavior

### Central Tendency

Mean Average Score

Median Value in the Middle

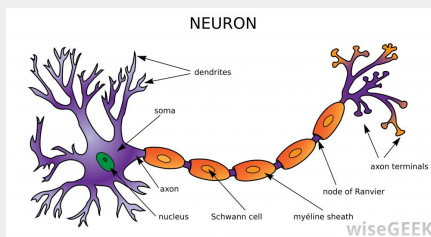
Mode Occurs Most Frequently

### Skew Distribution

Positive (+) - Graph: line goes up same mean, median, mode

Negative (-) - Graph lines goes down different mean, median, mode

### Neuron



### Neuro

Neurotransmitters are chemicals of various kinds that travel across the synaptic gap to the next neuron, allowing the cells to talk

Neuroscience studies the relationship between mental/brain activity

Behavioral Neuroscience approach to psyc links psychological processes activities in nervous systems & other bodily processes

Synapse the junction or region between the axon of one neuron and the dendrites or cell body of another

Three Ways Neurotransmitters

Cleared from a Synapse

1) Via Auto Receptors

2) Reuptake

3) Enzyme Deactivation

### Neuro (cont)

Action Potential electrical signal that travels the length of an axon to a synapse

Resting Potential the diff. in electrical charge between the inside of a neuron's cell membrane

Stimulus sensory input from the environment

Reaction Time amt of time to response to a specific stimulus

Myelin a type of fatty tissue, covers sections of the axons of some neurons, assisting in the rapid transmission of signals through the axon

### Terms

Reliable if an instrument can attain the same measurement repeatedly when measuring the same thing

Validity the degree to which an external even reflects a concept or idea

PNS: Peripheral Nervous System 1) Somatic Nervous System - comm. info. between voluntary muscles&CNS involved in coordinating beh.

2) Autonomic Nervous System - comm. info automatically to blood vessels, organs, and glands

Ions charges particles

Self-Selection problem occurs when anything about a person determines inclusion in a group

Representing Data 1) Graphic Representation - picturing

2) Descriptive Stats - discussing

### Terms (cont)

Measures of Variability 1) Range: largest value - smallest value = range

2) Standard Deviation: how much an avg. the scores differ from the mean

Variables Independent - being manipulated

Dependent - measured

Third Variable Problem 2 variables are correlated only bc each is casually related to a 3rd variable

Groups Experimental - exposed to manipulation

Control - not exposed

Experimental Tools 1) Manipulation - changing a variable to determine its casual power

2) Random Assignment - away of eliminating biases or uneven levels of third variables in the experimental and control groups

Double Blind neither observer nor participate knows the true nature of the study

Demand Characteristics can keep people from behaving naturally in an observational setting

Before we measure something ... we must define it.

To the degree that an instrument can detect minute variation in magnitude that instrument has power

### Visual Cortex



### Subdivisions of the Brain

ForeBrain \* Supports high-order cognition & emotion

2 Main Divisions:

1) Cerebral Cortex - outer area of the brain

2) Subcortical Structures - housed under the cortex at the center of the brain

HindBrain \* Coordinates info entering&exiting the spinal cord

\* Controls basic functions of life: respiration, alertness, motor skills

\* Composed of sections: the medulla, reticular formation, cerebellum, and the pons

MidBrain \* Relatively small in humans

\* Consisting of 2 mains parts - Tectum & Tegmentum: both orient you to stimuli in environment

### Brain

Pituitary Master Hormone Gland

Amygdala Deals with Emotion & Emotional Memories

Motor Cortex Front Lobe

Somatosensory Cortex Parietal Lobe

Corpus Callosum Thick band nerve fibers connects large areas of cerebral cortex

Hypothalamus Regulate body temp., hunger, thirst, and sexual behavior

Hippocampus Help create new memories and sends them to other parts of the cortex

Thalamus Takes in info. from all the major senses - except smell

### Brain Imaging Equipment

Structional Functional

1) Computerized Axial Tomography (CT) 1) Position Emission Tomography (PET)

2) Magnetic Resonance Imaging (MRI) 2) functional Magnetic Resonance Imaging (fMRI)

3) Trans-cranial Magnetic Stimulation (TMS)

### Mind Theories (Psyc)

Mind	the private inner experience of perceptions, thoughts, memories, feelings
Cultural Psyc	the study of how cultures reflect&shape the psyc processes of their members
Social Psyc	the study of the causes&consequences of sociality
Evolutionary Psyc	a psyc approach that explains minds&beh. in terms of adaptive value of abilities that are preserved over time by natural selection
Cognitive Psyc	computer & human mind ---> register, store, retrieve info. ---> parallel/similar
Physiology	the study of biological processes
Behaviorism	observable actions of human beings & animals
Clinical Psyc	came out of medicine
	- Most PhDs in Psyc
Idealism	objects perceived existences dependent upon the activity of a mind
Realism	matter as the objects of perception is basic & exists independent of the perceiver
Hysteria	physical ailments w/out apparent cause

### People

Humanistic Psyc-gist	1) Abraham Maslow	2) Carl Roger
Marie Flourens	1794-1867	removed areas from the brains of various animals & realized that their beh. differed from those of unaltered animals
Rene Decrates	12th century Frenchman	Dualism - mind/brain fundamentally diff. substances
Donald BroadBent		1st to study attention

### People (cont)

Kurt Lewin	early 20th century	recognized the stimulus response model wasn't enough  personal view/experience the response of a stimulus
Karl Lashley	20th century	recorded how rats learned to run mazes and then removed parts of their brain and tested them against to see if they could still run the maze
Wundt	Introspection	subjective observation of one's own experience
	Structuralism	analysis of basic elements that constitute the mind
William James	philosopher	human beh. can teach us about the human mind
	Functionalism	Consciousness - subjective experience of world&mind
Greek Thinkings	Phil. Position	Plato: Nativism - innate traits  Aristotle: Empiricism - knowledge through experience
Thomas Hobbs	17th Century Brit	mind is what brain does
G. Stanley Hall		studied education&human development
Helmholtz	physicist & physiologist	measured stimulus & response time
		studied speed of nerves in frogs



### People (cont)

Gestalt Psyc emphasizes how the mind takes pieces of an experiences&integrates them into a single, or unified form

John Watson 1st to really work out the LIMITS OF BEHAVIOR Animal behaviorist

Humans don't have mind

BF Skinner writer ---> psychologist Skinner Boxes -> Rats -> Food (Reinforcements) -> results (training)

Ebbinghaus nonsense syllabus -> storage device -> no connection to life experience

Sigmund Freud medical Dr. associated w/ Psychoanalysis - a process to uncover unconscious problems that might drive conscious beh.

Noam Chomsky behaviorist model could NOT account for language in children shows the blinding effect of human stubbornness

Ivan Pavlov 19th Century Physiologist noticed in his study of canine digestion, that dogs salivated not only when they saw their food, but eventually at the sight of their master who would feed them.

Paul Broca 19th century French Surgeon Localization of Function - specific functions linked to specific brain areas

### People (cont)

Franz Gall 18th & 19th century Phrenology - defunct theory: memory - happiness, localized areas of the brain

