

Psychology notes

MODULE: 01

Definition of psychology :

The scientific study of relationship between brain and behaviour.

● Wilhelm Wundt is considered as the "father of psychology" for establishing the first psychology laboratory in Leipzig, Austria.

Mind body dualism : mind control body, body control mind.

RESEARCH METHODS IN PSYCHOLOGY

1. Observation method :

➡ It is a fundamental method of research used to gather data and gain insights into various phenomena.

➡ It is two types,

- **Naturalistic:** It involves observing subjects in their natural environment without interfering with their behavior.

- **Systematic:** it involves observing and recording behaviors or events in a structured way.

2. Interview method :

➡ Interview method is a technique used to gather data in a psychological study.

➡ It is two types; guided and non-guided.

- **Guided interview:**

it is also known as a guideline interview, is a semi-structured, open-ended interview technique in psychology that uses a guideline to help the interviewer (like predetermined questions are used.)

▪ **Non guided interview:**

non-guided interview method in psychology is an unstructured interview, which is a flexible, open-ended conversation that allows the participant to guide the interview (donot use any predetermined questions.)

➡ **clinical interview** is a conversation between psychologist and client that is intended to help the psychologist diagnose and treat the patient.

➡ **Stress Interview** is a type of job interview in which the interviewer intentionally creates a stressful or uncomfortable situation for the candidate.

3. Experimental method :

➡ it is a scientific approach to research or scientific form of collecting evidence, that involves manipulating variables to determine their effect on other **variables** (elements that we put under study.)

➡ Variables are 3 type ;

- **Independent variable** ; it's not influenced by any other variables in the study. Independent variables are also called: Explanatory variables

- **Depended variable** ; dependent variable is a variable that depends on the values of other variables, and is expected to change when the independent variable is manipulated.

- **Confounding variable** ; variable that may influence the relationship between the independent and dependent variables.

4. Correlation method :

➡ is a non-experimental research method that measures and assesses the relationship between two or more variables.

★ +ve and -ve correlations are there.

SCIENTIFIC STUDY

1. Accuracy ;

It refers to the closeness of a measured value to the true value

2. Objectivity;

the idea that multiple people who independently study an event should reach similar conclusions.(Something that free from biase.)

3. skepticism;

is a critical thinking attitude that involves questioning the validity of research studies and their conclusions.

4. Open-mindedness;

the willingness to consider a variety of perspectives, ideas, and information, even if they conflict with your own beliefs.

SCHOOLS OF PSYCHOLOGY

1. Structuralism ;

→ structuralism focused on breaking down mental processes into their most basic components.

→ Wilhelm Wundt and Edward Titchener were major thinkers associated with structuralism.

→ Structuralists used introspection to analyze the inner processes of the human mind, but the subjectivity of this method led to unreliable results.

2. Functionalism ;

→ Functionalism focused on how mental activities helped an organism fit into its environment.

→ William James was a key figure in functionalism.

→ James believed that introspection could be used to study mental activities, but he also used more objective measures.

3. Behaviorism ;

→ Behaviorism focused on studying behavior or responses in a measurable and objective form.

➡ Behaviorists believed that all behaviors are the result of experience and that people can be trained to act in a particular manner.

➡ Behaviorism became the dominant school of thought in psychology from about 1920 through the mid-1950s.

4. Gestalt psychology ;

➡ Gestalt psychology emerged as a reaction to structuralism and focused on the organization of perceptual experiences.

➡ Gestalt theory emphasizes that the whole of anything is greater than its parts.

★ *Psychological Theory of Sigmund Freud*

Psychoanalytic theory

➡ Freud's theory of personality and human behavior, which includes the idea that the mind is made up of three parts: the id, ego, and superego.

➡ Freud believed that the mind's unconscious struggles develop these parts, and that the interplay between them creates anxiety.

Psychosexual theory of development

➡ Human development progress through 5 stages.

1. Oral stage ;

The first stage, from 0–1 years old, where the mouth is the primary erogenous zone

2. Anal stage ;

The second stage, from 1–3 years old, where the bowel and bladder are the primary erogenous zones

3. Phallic stage ;

The third stage, from 3–6 years old, where the genitalia are the primary erogenous zone

4. Latency stage ;

The fourth stage, from 6–12 years old, where sexual feelings are dormant

5. Genital stage ;

The fifth stage, from 13–18 years old, where mature sexual feelings develop

1. Behaviorism ;

➡ This perspective focuses on how a person's environment and learned behaviors influence their actions.

➡ Behaviorism is a theory that states that all behaviors are learned through interaction with the environment.

Eg; ★ **stimulus response theory by Ivan Pavlov** ; Stimulus-response theory is a **psychological model that explains how organisms react to external stimuli.**

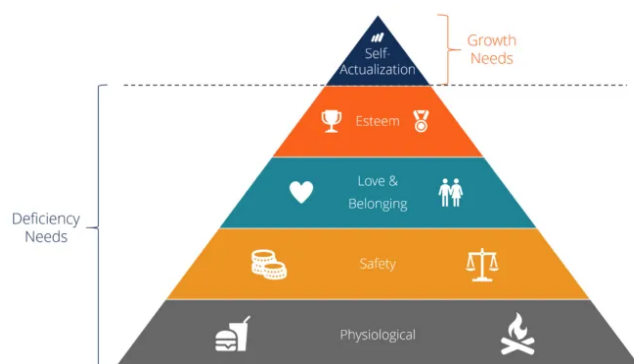
It's based on the idea that a stimulus triggers a response in an organism, often without conscious thought.

2. Humanism ;

➡ a psychological theory that emphasizes an individual's inherent drive towards self-actualization and contends that people have a natural capacity to make decisions about their lives and control their own behavior.

➡ Petrarch is traditionally called the "**Father of Humanism**".

➡ **Abraham Maslow's theory** of motivation, also known as the hierarchy of needs, is a **psychological theory that suggests that human behavior is driven by five categories of needs:**



- **Physiological needs:** The most basic needs that must be met first

- **Safety needs:** The second level in the hierarchy, which is about freedom from fear
- **Love and belonging needs:** The third level, which is about understanding and accepting love and belonging to a group
- **Esteem needs:** The second level, which is about being valued, respected, and appreciated by others
- **Self-actualization needs:** The highest level, which is about realizing one's true potential

2. Cognitive ;

➡ This perspective focuses on mental processes like thinking, remembering, and problem-solving.

➡ It views humans as information processors.

➡ it includes;

▼ 1.Attention

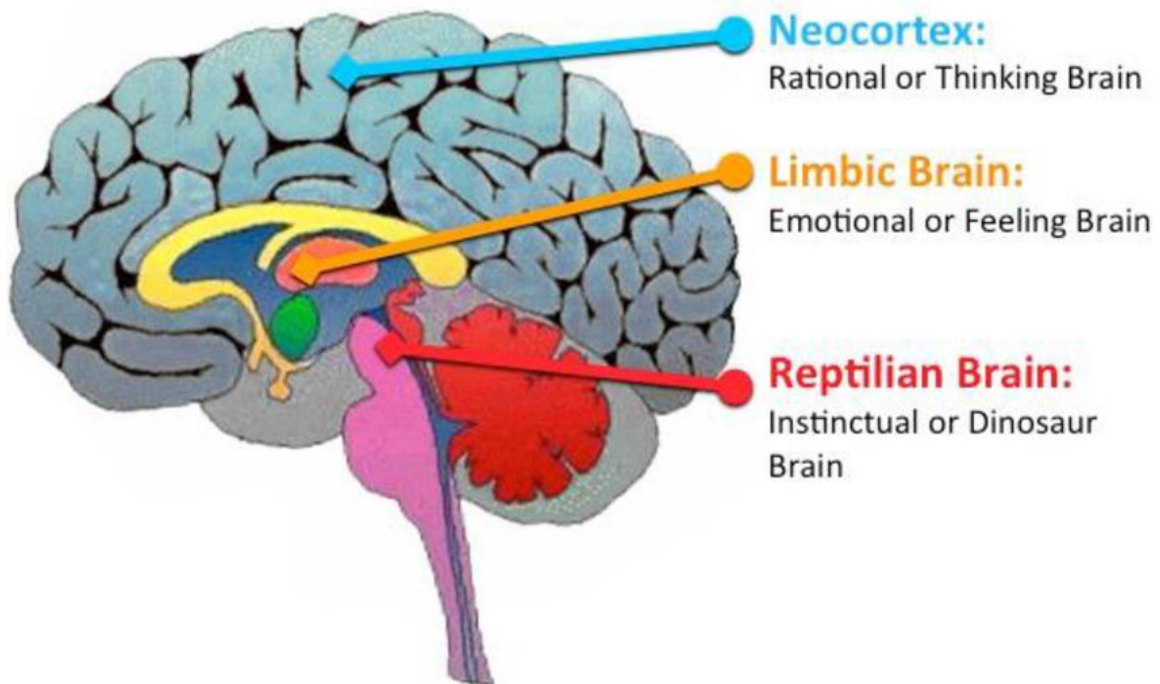
- Definition ; attention is the process of focusing and processing information from the environment.
- There are five types of attention:
 1. **Selective attention:** Focusing on one thing at a time
 2. **Divided attention:** Focusing on two events at once
 3. **Sustained attention:** Focusing for a long period of time
 4. **Executive attention:** Focusing on completing steps to achieve a goal
 5. **Spatial attention:** Focusing on one part of the environment and moving attention to other locations

▼ 2.Sensation

- Definition ; sensation is the process of sensory organs responding to environmental stimuli and sending that information to the brain.

Evolution of brain 🧠

1. Reptilian brain development.
2. Limbic system brain development.
3. Neocortex development.



▼ Lobs of brain

1. Frontal lobe

Located in the front of the head, this lobe is the largest and controls personality, decision-making, movement, and short-term memory. It also contains Broca's area, which is associated with speech.

2. Parietal lobe

Located in the middle of the brain, this lobe helps with spatial relationships, identifying objects, and interpreting touch and pain. It also contains Wernicke's area, which helps the brain understand spoken language.

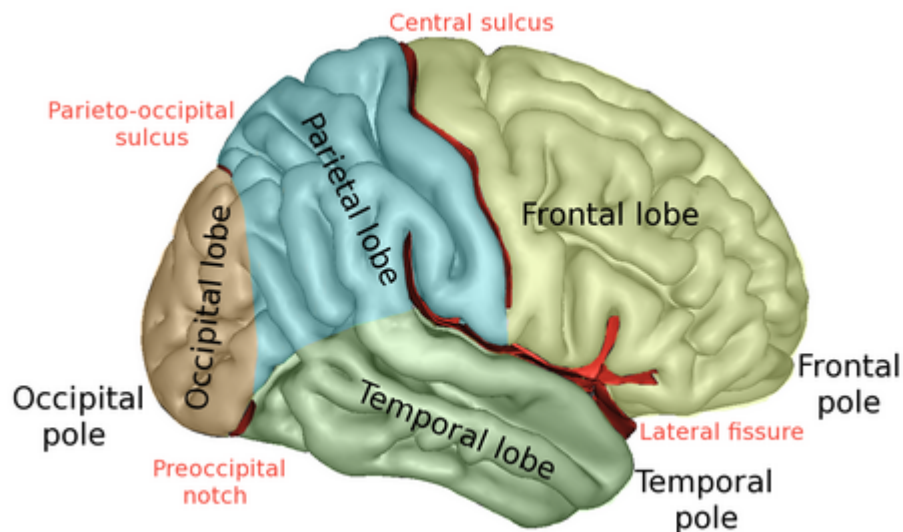
3. Occipital lobe

Located in the back of the brain, this lobe is responsible for vision. It contains the primary and association visual cortex.

4. Temporal lobe

Located on the sides of the brain, this lobe controls

short-term memory, speech, musical rhythm, and some smell recognition. It also processes information from the senses of smell, taste, and sound.



▼ 3.Perseption

- **Definition:**

The process of how people interpret and make sense of their surroundings through their senses

- 🌸 Top down and bottom-up processing are two different ways of perceiving information, and both are involved in perception:
- **Bottom-up Processing :**

starts with sensory information from the environment and works its way up to the brain for analysis. This process is based on what is being sensed at the moment, without preconceived ideas. For example, if you meet someone and assume their joke is funny based on how they present it, you're using bottom-up processing.

- **Top-down processing :**

Uses background knowledge, expectations, and past experiences to interpret what is being seen. This process is holistic and starts with the brain, flowing down to lower-level functions like the senses. For example, if you know someone who is usually mean and they make a joke, you might assume they said it to be mean rather than funny.

➡ **Different brain networks control each process:**

Bottom-up processing: Uses the ventral frontoparietal network

Top-down processing: Uses the dorsal frontoparietal network

ERRORS IN PERCEPTION

Definition; The inability to judge humans, things or situations fairly and accurately.

1. **Illusion** ; *a false or wrong perception that occurs when the brain processes information from the eye differently than it actually is.*

➡ Some examples of illusions include:

- Ebbinghaus illusion :

A circle surrounded by larger or smaller circles appears smaller or larger than it actually is.

- Müller-Lyer illusion :

The perceived relative length of a line is influenced by the spatial arrangement of arrowheads.

2. **Hallucination** :

hallucinations are sensory experiences that seem real but are not:

Definition :

A hallucination is a sensory experience that occurs without external stimulation of the relevant sensory organ. It has a sense of reality that resembles a veridical perception, and the subject does not feel they have direct and voluntary control over it.

Types

There are different types of hallucinations, including auditory, visual, and other types:

1. Auditory:

Hearing voices, music, animal calls, or the telephone ringing when there is no one there

2. Visual:

Seeing patterns, lights, beings, or objects that are not there

3.Other:

Smelling or tasting things that cannot be explained, or feelings on the skin

▼ Memory

Definition : Memory is the ability to store and retrieve information.

→ Memory can be divided into three types.

1. Sensory memory :

The brief storage of information from sensory experiences, like things that can be seen or heard.

1. Short-term memory :

Stores information for a few seconds to a minute.

1. Long-term memory :

Stores information for days, months, years, or even decades.

State of consciousness

⇒> refers to the different mental states a person can experience, such as being awake, dreaming, or experiencing an altered state

Levelsofconsciousness

1. Conscious level :

The thoughts, feelings, and sensations that you are aware of at the present moment

2. Non conscious level :

Automatically bodily functions that occur without awareness and sensation

3. Pre conscious level :

Information that you are not currently aware of but can easily access

4. Sub conscious level :

Information that is out of consciousness and not immediately available to consciousness

5. Unconscious level :

Memories that are outside of awareness and inaccessible

Biological Rhythm

1. Circadian rhythm :

the natural 24-hour cycles of physical, mental, and behavioral changes that occur in the body. They are controlled by a biological clock in the brain, and are primarily affected by light and darkness.

2. Ultradian rhythm :

biological cycles that occur within a 24-hour period, but are less than 24 hours in length. They are characterized by a variety of periods, from milliseconds to hours, and can be found in many physiological and behavioral functions.

3. Infradian rhythm :

biological rhythms that are longer than 24 hours but shorter than a year. Examples include menstrual cycles in humans and estrous cycles in nonhuman animals.

SLEEP 🤪

⇒ The stages of sleep in psychology are rapid eye movement (REM) sleep and non-REM (NREM) sleep :

NREM sleep

This stage of sleep is made up of four stages:

N1:

This is the lightest stage of sleep, where breathing is regular and muscle tone is present. It lasts about 1–5 minutes.

N2:

This stage is characterized by a drop in temperature, slowed breathing and heart rate, and relaxed muscles. Brain waves show a new pattern and eye movement stops. This stage lasts about 25 minutes in the first cycle, and lengthens with each successive cycle.

N3 and N4:

These are the deepest stages of sleep, also known as slow wave or delta sleep. During this time, heart rate and respiration slow dramatically.

REM sleep

This stage is characterized by rapid eye movement behind closed lids, increased breath rate, and temporary body paralysis while dreaming.

>>>

A typical night's sleep consists of 4-5 sleep cycles, with each cycle taking roughly 90-120 minutes. As the night progresses, REM sleep increases and time spent in deep sleep decreases.

★ EEG⇒Electroencephalogram

Dreams

- **Definition:** A series of thoughts, feelings, or visions that occur during sleep
- **Characteristics:** Dreams can include visual imagery, motor experiences, emotional experiences, and a sense of motion in space
- **Length:** Dreams can last from a few seconds to 30 minutes

⇒The manifest content of a dream is the elements of a dream that a person remembers after waking up, including the images, thoughts, and emotions.

⇒The latent content of a dream is the underlying, hidden meaning of a dream, which is made up of unconscious thoughts, desires, fears, or needs.

>>There are many theories about what dreams mean, including:

- **Activation-synthesis:** Dreams are a side effect of the brain's normal activity
- **Processing and managing emotions:** Dreams help process and manage emotions

Hypnosis

Definition ; a state of consciousness where a person is more relaxed and aware, and can focus and concentrate better.

⇒Some potential benefits of hypnosis include:

- **Pain control:** There is strong evidence that hypnosis can help control pain.

- **Sleep improvement:** Hypnosis may be a promising treatment for sleep problems.
- **Stress management:** Hypnosis may help manage stress.
- **Smoking cessation:** Hypnosis may be useful for helping people quit smoking.

≈> drugs are used for altering the consciousness in hypnosis.

- How drug effect consciousness ?

Drugs are capable to break 💔 blood brain barrier system. So drug can alter consciousness.

≈> Blood Brain Barrier System : which blocks harmful chemical from entering the brain.

DRUGS

★ Intolerance to drugs increases then the individual will be addicted to that. Such dependents are two type.

1. Physical or physiological dependents :

A condition in which a person takes a drug over time, and unpleasant physical symptoms occur if the drug is suddenly stopped or taken in smaller doses.

2. Psychological dependents :

involves feelings of satisfaction and a desire to repeat the use of the drug in order to produce pleasure or avoid pain.

Types of drugs

1. Stimulants:

a class of drugs that speed up messages travelling between the brain and body. They can make a person feel more awake, alert, confident or energetic.

2. Depressants:

reduce arousal and stimulation. They affect the central nervous system, slowing down the messages between the brain and body. 1. They can affect concentration and coordination and slow down a person's ability to respond to unexpected situations.

3. Hallucinogens:

they make a person see, feel and hear things that aren't real, or distort their interpretation of what's going on around them.

4. Opiates(opium group of drugs):

A substance used to treat pain or cause sleep. Opiates are made from opium or have opium in them. Opiates bind to opioid receptors in the central nervous system. Examples of opiates are codeine, heroin, and morphine.

1/40

Forgetting

According to Munn (1967) "forgetting is the loss, temporary or permanent of the ability to recall or recognize something learnt earlier".

According to Drever (1952) "forgetting means failure at any time to recall an experience when attempting to do or to perform an action previously learnt.

Causes of Forgetting There are two kinds of forgetting
1) Normal forgetting 2) abnormal forgetting

- **Entropy through disease:** older experience the weaker its memory
- **Interference:** forgetting by interference is a case of retention amnesia, here stability and existence of memory traces are disturbed. Ex. Crowded learning, unspaced learning.

✓

2/40

- If the learning is not meaningful forgetting the course as it does not give scope for the development of relationship.
- **Inadequate impressions** at the time of learning leads to forgetting.
- **Lack Of interest** in the learning material leads to forgetting.
- Mental or physical ill health sets in physical and mental fatigue and affects learning.
- **Motivated forgetting:** unpleasant events are to be forgotten soon to participate in the present

✓

Methods to improve memory- Mnemonics

A mnemonic device is a learning technique that uses different strategies to encode and retrieve new information. It is based on the idea that your mind can recall reliable details.

1. Key word
2. Chunking
3. Musical Mnemonics
4. Acronyms and Acrostics
5. Rehearsal- maintenance & Elaborative
6. Method of Loci
7. Peg method
8. Mnemonic linking- story or sequence