- Perception - How we interpret and organize sensory information
- Attention - The process of focusing on specific stimuli while ignoring others.
- Cognition - Mental processes such as thinking, reasoning, and memory.
- Emotion - feelings that influence our behaviour and thoughts.
- Motivation - The internal drive that energizes and directs behaviour.

examples of Psychological factors.

- a person might perceive a shadow as a threat, leading to a fear response.
- A student might focus on a textbook while ignoring distractions in the ~~class~~ classroom.
- A positive memory might motivate someone to work harder towards a goal.

Interaction between Stimulus and Psychological factors.

The interaction between Stimuli and Psychologi factor is complex and multifaceted.

for eg

- a strong Stimulus might override psychological

eg:- Muller layer illusion and the Ames room

~~Ponzo effect~~ :-

Ponzo illusion :- Two horizontal lines of the same length appear to be different sizes because of converging lines, such as those mimicking train tracks.

Muller-Lyer illusion :- where two lines of equal length look different due to arrow like patterns at their ends.

Stroop effect :- This effect highlights how automatic processes like reading, can interfere with more controlled tasks, such as color naming. The brain processes written words quickly and automatically, but naming a colour requires more attention leading to a delay when the two tasks conflict

- Cognitive illusions :- type of mental illusion where the brain misinterprets sensory information, leading to a distorted perception of reality.

=> Ambiguous illusion - can be interpreted in multiple ways. eg:- Necker cube or Rubin's vase. where perception switches between two different images

factors. A sudden loud noise might startle someone even if they are trying to focus on a task.

- Psychological factors can influence how we perceive and respond to stimuli. A person who is anxious might ~~is~~ interpret a neutral stimulus as a threat.
- Repeated exposure to a stimulus can lead to habituation, where the response to the stimuli decreases over time.

Errors in Perception

1. Illusions

An illusion occurs when sensory information is misinterpreted by the brain, leading to a perception that does not match reality. Illusions often happen because the brain uses assumptions and shortcuts to make sense of sensory input.

- Optical illusions :- These are visual distortions that trick the brain into perceiving something that isn't there or perceiving something differently than it actually is.

=> Distoring illusions - They involve size, length or curvature distortions, like Ponzo or Muller lyer illusions where context affects how you perceive the dimensions of objects

=> Paradox illusion - These are logically impossible figures like the penrose triangle or Escher's waterfall, where the brain tries to make sense of conflicting spatial cues.

=> Fictional illusions => these occur when the brain perceives something that isn't actually present such as visual phenomena like pareidolia, where people see faces in inanimate objects

2. Perceptual Constancy

Size Constancy: We perceive objects as having a constant size, even when they appear larger or smaller due to distance

Shape Constancy: We perceive object as having a constant shape, even when they appear distracted due to perspective

Color Constancy: We perceive objects as having a constant color, even their appearance is affected by lighting conditions.

3. Attentional Biases:
   - Change Blindness: We often fail to notice changes in our environment, especially when we are focused on something else.
   - Inattentional Blindness: We may fail to see obvious objects or events even if we are not actively looking for them.

4. Emotional Biases:
   - Mood-Congruent Memory: We are more likely to recall memories that match our current emotional state.
   - Emotional blindness: Our emotions can interfere with our ability to perceive and process information objectively.

5. Cultural Biases
   Cultural relativity: Our perception of the wo is influenced by our cultural backgroun and experience.

1.4 States of Consciousness, sleep, dreams, drugs, meditation and hypnosis

6. Hallucinations

Hallucinations are sensory experiences that appear real but are created by the mind. They can affect all five senses and occur without any external stimuli.

Types of hallucinations

1) Auditory hallucination - hearing sounds, such as voices or music, that aren't actually present.
eg:- hearing someone call your name when no one is around.
Common in Schizophrenia, bipolar disorder, Severe depression.

2) Visual Hallucination - Seeing objects, people, or pattern that aren't real.
eg:- Seeing shapes, lights, or people who aren't there
Common in Substance abuse, delirium, neurological disorders like Parkinson's disease.

3) Olfactory hallucination - ~~Son~~ Smelling odors that have no external source
eg:- Smelling burst toast or rotten food when there is no
Common in Temporal lobe, Seizures brain injuries or migraines

4. Gustatory Hallucinations - tasting Something Strange or unpleasant without any food or drink in the mouth.
eg:- A constant metallic or bitter taste or common in Epilepsy, brain injuries or certain medications.

5. Tactile Hallucinations - feeling Sensations of touch or movement that aren't real.
eg:- Feeling bugs crawling on the skin or the Sensation of being touched.
Common in Substance withdrawal (especially alcohol or Cocaine), Schizophrenia or extreme stress.

@4. Memory

Memory is a foundational Cognitive process that allows us to encode, store, and retrieve information over time. It is essential for learning, decision-making, and personal identity.

Types of Memory.

- Sensory memory - The shortest term memory that briefly holds sensory information like visual or auditory data) for a fraction of a

Second.
for eg:- The brief image we retain after seeing something quickly.

- Short term Memory: This is a limited capacity storage that temporarily holds information for a few seconds to minutes. it is sometimes refered to as working memory. When actively used to manipulate information (like doing mental math).
- long-Term Memory (LTM): This is a more durable memory system with potentially unlimited capacity, which can retain information for extended periods, sometimes a lifetime

@5 learning

learning is a central concept in cognitive psychology. as it measures the ways in which experiences and new information change behaviour, knowledge or skills over time. In cognitive psychology learning is not just about rote memorisation its about understanding, applying and even transforming knowledge.

1.4 States of Consciousness. Sleep, dreams, drugs, meditation and Hypnosis

In Psychology, States of consciousness refer to the different levels of awareness we experience as humans. These states can vary from full alertness to deep sleep and even altered states induced by substances or mediation. The major States are

1) Walking Consciousness. [Conscious level]
this the most alert state, where one is fully aware of their surroundings and able to ~~obs~~ engage in intentional thought and action. it includes everything from problem-Solving to interacting with others in day to day life.

2) Altered states of Consciousness
altered states can arise naturally or be induced. These include.
- day dreaming :- A light trance where attention drifts from the external environment.

- Meditation: A deep focus. Often aimed at enhancing mindfulness or achieving a state of calm.
- Hypnosis: A focused, highly suggestible state. Often used therapeutically to access deep memories or alter perception.
- Drug-induced states: Certain psychoactive drugs can alter perception, mood and cognitive function, causing states like euphoria or hallucination.

3) Sleep

Sleep is a natural, recurring state with distinct stages:

- Non REM sleep: includes lighter stages and deep sleep.
- REM (Rapid Eye Movement) sleep: stages where most dreaming occurs, critical for memory consolidation and emotional processing.

4) Dreaming.

dreams occur primarily during REM sleep; allowing the brain to process emotions, memories and information in ways not typically

possible in walking consciousness.

5) Unconsciousness

This State is marked by a lack of awareness of both internal and external Stimuli. eg include deep anesthesia or Coma, where brain activity is Significantly altered.

Sleep

Sleep is a crucial State for physical and mental health, where the brain cycles through Several stages that support processes like memory consolidation, emotional regulation, and Physical recovery. Sleep is divided into two main types: Non REM. Sleep and REM Sleep.

Each of these has distinct Stages that cycle throughout the night, typically 4 to 5 times, each cycle lasting about 90 minutes.

Stages of sleep

1 Non REM Sleep.

non REM sleep has three stages, each with varying levels of depth and brain activity.

* Stage 1 (N1)

This is the lightest stage of sleep. when one drifts between wakefulness and sleep. it lasts only a few minutes and people can be easily awakened in this stage.

- muscles relax slightly and some muscle twitching may occur.
- Heart rate and breathing begin to slow

* Stage 2 (N2).

This stage represents deeper sleep. where brain waves slow with occasional bursts of rapid activity called "sleep spindles"

- makes up the largest portion of the sleep cycle.
- Helps with the consolidation of memories and information processing.
- Heart rate and body temperature continue to drop.

* Stage 3 (N3): Known as deep Sleep or Slow wave sleep (SWS) this is the most restorative stage.
  - Brain waves are extremely slow, known as delta waves.
  - Physical repair and growth processes are highly active, making it essential for physical recovery.
  - it is difficult to wake someone up from this stage, as if they are woken, they may feel disoriented.

2. REM Sleep (Rapid Eye Movement).

REM sleep is the stage where most vivid dreaming occurs, and it plays a key role in cognitive and emotional processing.

- Brain activity resembles that of wakefulness but the body remains largely immobile with the exception of the eyes, which move rapidly.
- This stage is important for memory consolidation, learning and regulating mood.
- REM sleep typically begins about 90 min after

falling asleep, with each REM period lengthening through the night.

Sleep cycle

Sleep cycle goes through different stages.

1. Wakefull stage - is a state of activity where we are thinking. [The awake stage]
2. Relaxed stage - When we intend to sleep. Slowly our body mechanism slows down. Heart rate, breathing rate will be much slower. At this level, the brain will be in a state of relaxation.
3. Non REM
4. REM stage

Early in the night, more time is spent in deep NREM sleep, while REM stages lengthen in later cycles. Completing multiple cycles is essential for mental and physical health, as each stage supports different biological and psychological functions.

importance Of Sleep Stages
These stages are necessary for
- Physical restoration and immune support [mainly in NREM deep sleep]
- Cognitive functions such as learning and memory consolidation [largely in REM sleep]
- Emotional regulation, especially REM sleep, which aids in processing emotions.

EEG - Electroencephalogram.
- it is a non-invasive test that records electrical activity in the brain.
- it is useful in studying brain functions, diagnosing certain neurological conditions and understanding different states of sleep.
- it records brain activity by attaching small sensors to the scalp.

The ~~Sensors~~ Sensors ~~not~~ pick up electrical signals produced by the brain which are then recorded by a machine.

Disorders of Sleep

1. Insomnia
   difficulty falling asleep, staying asleep, or waking up too early and being unable to return to sleep.
   - acute [short-term] often triggered by stress or environmental changes.
   - Chronic [long-term] lasts for three months or more, often linked to mental health conditions or chronic pain.

   effects: fatigue, mood disturbances, cognitive impairment, and reduced overall functioning.

2. Sleep Apnea.
   breathing repeatedly stops and starts during sleep due to airway obstruction (obstructive Sleep Apnea) or problems in brain signalling (Central Sleep Apnea).
   - Symptoms - loud snoring, gasping or choking during sleep, excessive daytime sleepiness, and headaches.
   - Risks - High blood pressure, cardiovascular disease and diabetes.

effects - fragmented sleep, fatigue and reduced quality of life.

5. Parasomnias
   Unusual behaviours or experiences during sleep including
   - Sleep walking : Performing complex behaviours while asleep.
   - Sleep talking : Speaking during sleep, typically without awareness.
   - Night terrors : Sudden episodes of intense fear, screaming or flailing during deep NREM sleep, often with no recollection upon waking.
   - REM sleep Behaviour Disorder (RBD) : Acting out dreams during REM sleep due to lack of muscle atonia (normal muscle paralysis), often involving vivid or violent movements.

6. Circadian Rhythm disorders.
   Misalignment between a person's sleep wake cycle and their external environment, often due to shift work or jet lag
   - delayed sleep wake phase disorder : Difficulty falling asleep and waking up at desired times

3. Narcolepsy.

A neurological disorder characterized by excessive daytime sleepiness and sudden uncontrollable sleep attacks. Often linked to low levels of hypocretin, a neurotransmitter that regulates wakefulness.

* Symptoms
  - Cataplexy : Sudden loss of muscle control, often triggered by strong emotions.
  - Sleep paralysis :
    Temporary inability to move or speak when falling asleep or waking up.
  - Hypnagogic hallucinations
    Vivid, dream like hallucinations occuring when falling asleep.

* Effects:- difficulties with daily functioning and social or work related challenges.

4 Reseless Legs Syndrome

An uncontrollable urge to move ~~things~~ the legs usually due to uncomfortable sensations. ~~primarily~~ Occuring in the evening or night time.

- Symptoms : Tingling, aching or crawling sensations in the legs, which improve with ~~motor~~ movement.

- Advanced sleep-wake phase disorder : Early sleep onset and early waking
- irregular Sleep wake rhythm : Fragmented sleep across 24 hrs with no consolidated sleep period.
- effects : fatigue ; difficulty concentrating , and impaired Social functioning .

7. Hypersomnia
excessive daytime sleepiness or prolonged nighttime sleep despite adequate or long sleep duration.
- Primary Hypersomnia : Persistent, excessive Sleepiness without other underlying causes.
- Secondary Hypersomnia : Caused by medical conditions , medications or Substance use.

effects : Low energy, cognitive challenges and reduced quality of life.

Treatment
- Behavioral interventions : Cognitive behavioral therapy for insomnia (CBT-I) Sleep hygiene education, and relaxation techniques
- Medical Treatments : CPAP for Sleep apnea,

medications for narcolepsy, and dopamine agonists for RLS.
- Lifestyle Changes: Avoiding caffeine, establishing a consistent sleep schedule, and creating

Theories Of Sleep

1. Restoration theory
   - Sleep serves to restore the body and mind. during sleep, particularly deep NREM sleep, physiological processes repair tissues, muscles and the immune system, while REM sleep supports mental recovery.
   - Research shows increased growth hormone release during deep sleep, aiding tissue repair. Sleep deprivation studies demonstrate cognitive deficits, mood disturbances and reduced immune function, which normalize with adequate sleep.
   - While sleep seems restorative, this theory doesn't fully explain why sleep is required, as rest alone without sleep does not provide the same benefits.

2. Memory Consolidation Theory
- Sleep, especially REM sleep, consolidates and organizes memories. The brain strengthens new information, integrates it with existing knowledge, and transfers short term memories to long term storage
- Studies show that people who sleep after learning perform better on memory tasks. REM sleep, in particular, is associated with procedural and emotional memory processing, while NREM sleep aids in declarative memory consolidation.
- Although sleep is beneficial for memory, people with certain memory disorders still need sleep, indicating other functions beyond memory.

3. Energy Conservation
- Sleep conserves energy by reducing metabolic rate and body temperature during sleep periods, allowing the body to use resources more efficiently.
- Sleep lowers body temperature and metabolism, conserving calories during time

when food acquisition is less efficient or dangerous.

- This theory does not fully explain why complex organisms would have evolved to be in a vulnerable state for hours, rather than using more active forms of energy conservation.

4. Brain Plasticity Theory:

- Sleep, especially REM sleep, plays a role in brain development and neural plasticity the brain's ability to adapt and recognize itself. This theory is particularly relavent to infants and children who experience extensive REM sleep.
- infants spend more time in REM Sleep, supporting brain growth and development. in adults, sleep appears to support neurogenesis and synaptic pruning, which aids learning and adaptability.
- This theory is heavily focused on development, leaving questions about sleep's purpose in fully developed brains.

5. Adaptive / Evolutionary Theory.
- Sleep evolved as an adaptive behavior to enhance survival. By sleeping at night, humans and other animals avoid night time predators and reduce exposure to environmental dangers.
- Different species have sleep patterns that align with their environmental needs, like nocturnal animals that sleep during the day and humans that sleep at night.
- This theory doesn't explain the psych physiological need for set sleep, as complete inactivity without sleep wouldn't have the same restorative effects.

6. Information Processing Theory.
- Sleep helps process and filter information acquired during the day, discarding unnecessary details and retaining valuable knowledge. This theory overlaps with memory consolidation but emphasizes "cleaning up" unnecessary mental clutter.
- during sleep, the brain shows activity in regions involved in sorting and storing

information, suggesting its reprocessing daily experiences.
- Some studies argue that similar processes may happen in states of wakeful rest, challenging the necessity of sleep.

7. Glymphatic System Theory.
- Sleep activates the brain's glymphatic system, which flushes out waste and toxins, including harmful proteins like beta-amyloid associated with Alzheimer's disease.
- Studies have shown that during sleep, cerebrospinal fluid flows through the brain more effectively, removing waste products.
- This is a relatively new discovery and while promising, more research is needed to fully understand the implication and whether the glymphatic system fully explains the need for sleep.

Biological rhythm

Biological rhythms are natural cycles or patterns in physiological and behavioral processes that repeat at regular intervals.

- These rhythms are regulated by internal biological clocks, often in response to external environmental cues like light and temperature
- They are essential for maintaining homeostasis and coordinating various bodily functions such as sleep, hormone production, and body temperature.

Types of Biological rhythm

1. Circardian Rhythms (24 hr cycle)
   - These are 24 hour cycles that regulate daily physiological and behavioral functions like sleep wake cycles, body temperature and hormone release.
   - eg:- Sleep wake cycle is Circardian Rhythm regulated by the hypothalamus, Specifically the Suprachiasmatic Nucleus (SCN) which responds to light and help Sync the body's internal clock with the external day-night cycle

Seasonal breeding cycles in some species.
In humans, circannual rhythms are seen in variations in mood and energy levels, which may be linked to seasonal changes.

Levels of Consciousness.

1. Conscious level.

This is the level of full awareness, where thoughts, perception, and sensations are within our immediate awareness and can be deliberately controlled or manipulated.
eg:- Solving a math problem, feeling excited during a conversation, or being aware of one's surroundings.

2. Non-Conscious level.

This level includes bodily functions and processes that operate automatically with conscious awareness or control. it refers to physiological activities that are not accessible to conscious awareness but are necessary for survival.

2. Ultradian Rhythms (shorter than 24 hrs)
- rhythms with a cycle shorter than 24 hrs, meaning they occur multiple times a day.
- The stages of the sleep cycle, which repeat about every 90 minutes during sleep, and hunger patterns, which typically repeat every few hours.

3. Infradian Rhythms (longer than 24 hrs)
- These rhythms occur less frequently than once per day, with cycles longer than 24 hrs.
- The menstrual cycle, which typically occurs on a 28-day cycle and seasonal affective disorder (SAD), a form of depression that tends to occur during specific seasons, often influenced by changes in daylight.

4. Circannual Rhythms (Yearly cycles).
- Rhythms that follow a yearly cycle, often influenced by seasonal changes in light and temperature
- Eg:- Migration patterns in animals, hibernation in certain mammals, and

eg:- Breathing, heart rate, digestion and reflexes, all of which continue without conscious thought

3. Pre-Conscious level.

The preconscious level includes memories and information that are not currently in consciousness but can be easily be brought into awareness when needed.

eg:- remembering a friends birthday when asked, or thinking of a recent conversation. This information is readily accessible but not in immediate focus.

4. Sub-Conscious level.

The Subconscious level involves information and mental processes that influence thought and behaviour without full conscious awareness it stores beliefs, emotions and experiences that affect our reactions and habits. Often in a automatic way.

eg:- Unconsciously feeling anxious in situations similar to past negative experiences or responding instinctively to familiar social cues.

Habits, intuition and learned behaviors often operate at the subconscious level.

5. Unconscious level

. According to psychoanalytic theory, the unconscious level houses repressed memories, desires and feelings that are too distressing or socially unacceptable for conscious awareness. These unconscious elements strongly influence thoughts, emotions and behaviors.

eg:- Childhood traumas, deeply ingrained fears, or repressed desires that shape personality and decisions, often without one's awareness.

Extra Sensory Perception (ESP)

ESP refers to the ability to acquire information without the use of the known physical senses or conventional processes of reasoning.

Types of ESP

- Telepathy
- Clairvoyance
- Precognition
- Retrocognition
- Psychokeniesis

* Telepathy
The ~~ability~~ ability to communicate thoughts, feelings or information directly from one person's mind to another's without using spoken or written language
Eg:- A person senses what someone else is thinking or feels someone's emotions from a distance.

* Clairvoyance.
The ability to perceive events or information about an object person, or location without and direct interaction or Sensory input.
eg:- knowing the contents of a sealed envelope or having an awareness of events occuring in another place (also reffred to as "remote viewing").

* Precognition
The ability to foresee future events or gain information about an event that has not yet happened.
eg:- Having a dream about a future event that

later occurs, or sensing that something specific will happen soon.

* Retrocognition
The ability to perceive or sense events that have happened in the past without prior knowledge.
eg:- Having a clear impression of an event from the past without any way of having learned about it through normal channels. Such as details of historical events or people from a specific time period.

* Psychokinesis (or Telekinesis).
The ability to influence or move objects with the mind alone.
eg:- causing objects to move or change shape without any physical contact or known physical interaction.

Nature Vs Nurture

The nature Vs nurture debate is a central issue in psychology, exploring the extent to which our behaviour, personality, and abilities are shaped by genetics (nature) or by our environment and experiences (nurture). This debate examines the relative contributions of inherited traits and environmental factors in determining who we are.

1- Nature (Genetics).

nature refers to the biological and genetic predispositions that influence traits, behaviour and abilities. it includes everything that we inherit from our parents through our genes, from physical characteristics to personality tendencies.

eg:- Physical traits : eye color, height and genetic diseases.

Personality traits : Traits like temperament, intelligence or predispositions towards certain behaviours, such as aggression or anxiety, they may have a genetic basis.

Mental Health : Some mental health conditions like Schizophrenia or bipolar disorder have been linked to genetic factors, showing a higher risk of occurance in individuals with a family history of these conditions.

2. Nurture

Nurture refers to the influence of external factors after conception, such as our environment, upbringing, social interactions and experiences. These factors shape our behaviour, beliefs and personality

eg :- Family and Parenting : Parenting style, family dynamics, and socio-economic status can shape values, behaviors and mental health.

Educational and Social influence : The quality of education, peer groups and societal norms can impact a persons development skills and worldview.

life experiences : Traumatic experiences, cultural influences and significant life events can leave lasting impacts on personality and coping mechanisms.

Dreams

Dreams are sequences of images, thoughts, emotions and sensations that usually occur involuntarily during sleep, especially during Rapid Eye Movement [REM] stage

Theories of Dreams.

1. Psychoanalytic Theory (Freud)

Sigmund freud believed that dreams reveal unconscious desires and conflicts. He proposed that dreams contain two levels of content.

- Manifest Content - The manifest content of a dream is actually storyline images and events that a person remembers after waking up, it is the surface level, literal content of the dream.
- This includes specific people, places, objects and actions within the dream. its what the dream appears to be about at first glance.
- Eg:- dreaming of walking through a forest. or flying in the sky.

- Latent Content - The latent content is the

hidden, Symbolic meaning behind the manifest content. According to Freud, the latent content reveals unconscious desires, thoughts and feelings that are repressed in waking life

Eg:- Dreaming of walking through a forest might Symbolize feeling lost or seeking direction in life.

2. Activation - Synthesis Theory.

HOBSON AND McCARLEY

dreams are the result of random neural activity in the brain. During REM Sleep, the brain generates random electrical impulses, which the cortex then attempts to interpret, resulting in a "story".

Eg:- dreaming of running from a monster might just be the brain's way of making sense of increased neural activity linked to a physical movement.

3. Information - Processing Theory.

dreams serve to process, sort and Solidify memories from the day. They help organize

important information and discard irrelevant details.

Eg:- Dreaming about a work project after a long day could be a way for the brain to reinforce learning and skills relevant to that project.

4. Cognitive Development Theory.

Dreams are a reflection of one's cognitive development and problem solving abilities. As we mature. Our dreams become more complex and thematically rich.

5. Threat Stimulation Theory.

Dreams evolved as a mechanism to stimulate threats and practical survival responses. In dreams we rehearse reactions to dangerous situations without real world risks.

• Eg:- Repeatedly dreaming of being chased. might prepare someone to handle fear and react quickly to real life threats.

Types of dream.

1) Lucid dreams: Dreams where the dreamer is aware of dreaming and may even control the dream.

2) Nightmares: Disturbing dreams often associated with fear or anxiety, which may be triggered by stress or trauma

3) Recurring Dreams: Dreams that repeat over time, often reflecting unresolved issues or persistent anxiety.

4) Daydreams: Short, wakeful dreams or fantasies where attention drifts and the mind engages in visualised thoughts.

Brain Wave	State
Beta	- Awake, normal alert, consciousness.
Alpha	- relax, calm, lucid, not thinking
Theta	- deep relax, meditation, mental imagery
delta	- deep, dreamless sleep.

a drug at normal doses. it differs from an allergy in that it does not involve an immune response.

Addiction :- it is a chronic relapsing disorder characterised by compulsive drug seeking behavior, continued use despite harmful consequences and long lasting changes in brain function. it is considered as a disease that effect brain circuitry related to reward, motivation and memory..

Dependence - dependence refers to the state in which the body or brain adapts to a drug, leading to tolerance and withdrawal symptoms if the drug is abruptly stopped. Dependence can be physical, psychological or both

- Physical dependence - characterised by body's adaptation to the drug, leading to withdrawal Symptoms when use is reduced or stopped.
- Psychological dependence - involves emotional or mental cravings for a drug, leading to compulsive use to achieve a desired psychological state

Drugs

Drugs refer to chemical substances that affect the body and mind, often altering mood, perception, consciousness, or behaviour.

- Drugs are used for therapeutic purposes, but some are also used recreationally and can lead to dependence and addiction
- Drugs impact the brains neurotransmitters which are chemical messengers that influence mood, arousal and behaviour

Brain Barrier System:- It is a protective layer of tightly packed cells lining the blood vessels in the brain. This barrier selectively allows certain substances to enter the brain while blocking potentially harmful ones. caffeine, alcohol and many psychiatric medications can cross the BBB, while others cannot

Intolerance - drug intolerance occurs when a person has a heightened sensitivity or adverse

Types of drugs

1) Stimulants: These drugs, such as amphetamines boost energy, focus and alertness by increasing dopamine and norepinephrine in the brain. They commonly prescribed for narcolepsy but can have side effects like insomnia, increased heart rate and potential dependancy
Eg:- Tea & Coffee.

2) Depressants: These slow down brain function and are used to reduce anxiety, induce relaxation and help with sleep. They are also known as Sedatives or tranquilizers. work by reducing the activity of central Nervous System.

3) Hallucinogens: Hallucinogens are a class of drugs known for their ability to alter perception, mood and cognitive processes. and starts hallucinating
Eg:- Magic mushrooms.
Hallucinogens are often reffered to as. Psychedelic Drugs.

4) Opioids : Opioids are a class of drugs used primarily for pain relief. They include both natural and synthetic substances. They work by binding to specific receptors in the brain, spinal cord, and other areas of the body. This interaction blocks pain signals and can produce feelings of euphoria.

Meditation

Meditation is a practise training your mind to focus, relax, and become more aware.

- it reduces stress / anxiety
- improves sleep
- Boosts focus / concentration
- Enhance self awareness.
- Supports physical / mental well being.

Hypnosis

Hypnosis is a state of focused attention, deep relaxation and heightened Suggestibility.

- Widely used therapeutic technique
- it is used in highly studying consciousness
- it can only be done by certified academic baground person and also have hypnosis therapy. it is a matter of suggestibility
- In this, they are making an individual open to suggestion by manipulating consciousness.
- There is a factor that is hypnotic Suggestibility People who are more suggestive, day dreams and fantasies can be hypnotised. Some hypnotics can be induced chemically by drugs.
- In a hypnotic stage the patient is not consciously guarded. They won't show ego, they are not having social desirability under hypnosis.
- taking a person to restless and making them to open to suggestibility

Theory and Hypothetical theory

A theory is a broad explanation for a phenomenon, while a ~~hypothetical~~ hypothesis is a specific prediction about a study's outcome

Theory.

A theory is a well tested and proven explanation for a phenomenon that's based on facts and data. ~~it~~ it is a principle that's accepted by the Scientific Community. Theories are used to explain and interpret phenomenon and to make predictions about future behaviours.

Hypothesis

A hypothesis is an educated guess that's based on data and used to guide further investigation. it is a predictions about what should be observed. if a theory is correct. Hypothesis are often ~~experienced~~ expressed as statement but can also rephrased as questions

Psychologists use the hypothetico-deductive method to develop theories and hypothesis.

(1) Construct theories: Psychologists use theories to explain or interpret phenomena or work with existing theories.

(2) Derive hypothesis : They derive hypothesis from their theories

(3) Test hypothesis : They test the hypothesis

(4) Re-evaluate theories : They re-evaluate their theories in light of the new results.