PSYCHOLOGY

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Preface

Medical students should know what is behind our acts and our behavior, how can we think, how can we learn, what is the memory and many other important topics. So, they must understand clinical psychology equal to any other branch of medicine

If was observed that there was a general complaint among medical students that such a branch is somewhat difficult to understand. Consequently we fried best to make it clear, simple and coherent

Thanks to all The Neuro- Psychiatry staff in Menoufia faculty of medicine for their valuable remarks and encouragement.

Contents

Introduction

Behavioral sciences are a relatively new subject in the medical curriculum. Generations of medical students were trained learning about the biochemistry, physiology, histology and anatomy of man, but not about the behavior of man in the society. Behavioral sciences include Psychology, Sociology, Anthropology and others. Sociology and Anthropology focus their attention on the study of the group as one unit, while Psychology studies activities of the individual as a unit in its interaction with the environment.

Psychology

Definition and Approaches

Definition: - Psychology is a knowledge concerned with behavior, so it describes (=how?) behavior and tries to explain the causes (= why?) of behavior. Actually any aspect of human behavior may be viewed from several approaches whether biological, behavioral, cognitive, psychoanalytic or others.

Biological approach:

The human brain contain approximately 10^{11} nerve cells or neurons which are the basic functional unit of the nervous system and by their infinite number of interconnections and pathways, it may be the most complex structure in the universe. There is an intimate relationship between activity and behavior, thinking, and emotion.

Behavioral approach:

Behaviorism developed by Waston & Skinner who considered the stimulus response approach and learning theories. Waston said that

someone can observe his perceptions and feelings but one else can observe his actions, so these data must observable and measurable.

Cognitive approach:

Cognition refers to those mental processes of perception, information processing and memory. Through calling up and processing relevant information, we can manage knowledge.

Information processing means input, storage, and output of mental operations. So, through cognitive approach, we investigate internal mental processes by an objective and scientific manner.

Psychoanalytic approach:

This approach was developed by Freud in Europe; at the same time that behaviorism was getting stated in America. Freud basic assumption is that much of man's behavior is determined largely by unconscious process which the person is unaware.

Developmental Psychology

It is the study of behavioral changes through *a* life span. It is concerned with how and why certain behaviors develop & what factors produce abnormal behaviors. The following will be discussed:-

- **Physical development.**
- **Cognitive development**
- **Moral development.**
- **Psycho-sexual development.**
- **Psycho-social development**

According to workers like Erikson & Piaget, infant grows through varies stages. Each stage has its own characteristic and need and it must be negotiated successfully before it is possible to go on to the next level or stage. The sequence of the stages is not automatic, but it depends on both central nervous system growth and life experiences. There are many evidences indicating that an unfavorable environment can delay some of the developmental stages and vice-versa.

Physical Development

Physical development or maturation may influence human behavior. It includes both prenatal and postnatal development.

Postnatal development extends from the moment of birth to death. It can be divided into the following:

1- Early childhood: including.

- Infancy period: It extends throughout the first year of life.
- Toddler period: It extends throughout the second year life.

- Preschool period: (from 2 to about 5 years).

2- Middle childhood: (from 5 years to about 11 years).

3- Adolescence (or late childhood): It can be divided into:

- Early adolescent period: from 11 to 14 years.
- Middle adolescent period: from 14 to 17 years.
- Late adolescent period: from 17 to 20 years.
- It is characterized by profound biological, psychological and social development.

The biological onset of adolescence is signaled by:

- The rapid acceleration of skeletal growth
- The beginnings of physical & sexual development.

The psychological onset of adolescence is characterized by:

- An acceleration of cognitive development.
- Consolidation of personality formation socially, adolescence is characterized by a period of intensified preparation for the corning role of young adulthood In many cultures the onset of adolescence is clearly signaled by puberty. Girls enter puberty 12 to 18 months earlier than do boys. The avenge age is 8 to 13 yrs for girls & 10to 14 yrs for boys.

4- **Adulthood Period**: Including

- Early adulthood (from 17 to about 40 yrs).
- Middle adulthood (from 40 to about 60 yrs).
- Late adulthood (more than 60).

Cognitive Development

Stages of cognitive development were described by Jean Piaget. He referred to his theory as "genetic epistemology" which is defined as: The study of acquisition, modification of growth of abstract ideas and abilities on the basis of an inherited or biological substrate.

Stages of cognitive development:

1- ***Sensori-motor stage (from birth to 2 yrs):-*** Infants first begin to learn through sensory observation and they gain control over their motor functions through activity, exploration and manipulation of the environment so as to interact with the external world.

By the end of this stage, infant attain the following:

- **The ability to seek out new stimuli** in the environment with the beginning of intentional behavior.
- **Object permanence** (at about 18 ms-2yrs): It consists of the ability to differentiate himself from the outside world and so to maintain a mental image for object, the existence of it is independent on the child's involvement with them.
- **Symbolization** (at about 18 months): in which a word can signify a real object**.**

2- ***Stage of preoperational thought (form 2 to about 7 yrs)***

During this stage:-

- **Language use is more elaborate**.
- **Characteristic illogical or nor deductive thinking** so events are not connected by logic e.g.

1- **No sense of cause & effect** (the act and consequences) (e.g. when a child drop a glass & break it, he believe that it is ready to break, not that he broke the glass.

2- **Inability to grasp sameness of an object in different situations** (e.g. the same doll in a carriage or in a chair is perceived as two different objects).

3- **Phenomenalistic causality :-** events that occur together are thought to cause one another (e.g. afternoon nap is an indication for another day).

4- **Objects are represented in terms of their functions** (when the child's father is a policeman, then, he thinks that his father represents any other policeman).

5- **Animistic thinking:** there is .tendency to endow physical events & objects a life likes psychological attributes e.g. feelings.

6- **Egocentric:** It is represented by limited view of being the center of the world, i.e. unable to modify his behavior for someone else.

3- ***Stage of Concrete Operations:*** This stage is so named because the child acts on a real world & events of objects so can organize & order a real world.

Characteristics:

- **Thinking become syllogistic** so can do logic conclusions from two premises
- **Conservation** is the ability to recognize that although the shape and form of object may change, the object is still maintaining other characteristics that make it the *same.*

- **Reversibility:** the capacity to understand the relation between things and to understand that one thing can turn into another and back again.

4- ***Formal operations stage*** (from 11yrs to the end of adolescence).
NB: Not all adolescents enter that stage at the same time or the same degree.

This stage is characterized by:

1. **The ability to think logically and systematically** and in a symbolic manner (so as to abstract, reason, to make propositions, hypothesis & to test it against reality).
2. **Egocentric thought** may return again but as an attempt to master new cognitive tasks.

Application in the stage of pre-operational thought:-

- Because of the inability to deal with concepts, so the child get benefit from role playing.
- Because of inability to understand cause and effect, care for the interpretation of physical illnesses of the child.
- Because of inability to understand reversibility, so the child is unable to understand that broken bone will mend again.

Psycho-sexual development

Freud stages of psychosexual development

Freud broadens the definition of sexuality to include forms of pleasure that transcend genital sexuality, to bodily function as feeding and bowel and bladder control.

Psycho Sexual Stages:

1- ***Oral stage (from birth to 18 ins):***

Objectives: To establish a trusting dependence on nursing by appropriate expression and gratification of oral need.

Successful Resolution: Is indicated by the capacity to rely on others and reliance on oneself.

2- ***Anal stage (from 1 to 3 yrs):***

Objectives: To achieve anal control without over control or loss of control

Successful Resolution: Include the achievement of autonomy and capacity for independence.

3- ***Phallic stage (form 3 to 5 yr):***

Objectives:

- It lays the foundation of gender Identity.
- Resolution of oedipal complex.

NB: Gender identity: is a person's sense of maleness or femaleness.

Sexual identity: is a person's biological sexual characteristics: e.g. chromosomes, hormonal composition, primary and secondary sexual characteristics.

Successful resolution:

- The establishment of sense of gender identity.
- establishing a powerful internal resource (by identification with parental figures) for regulations of drive impulses.

4- ***Latency stage (from* 6 to11 years):**

Objectives:

- The consolidation of previous phallic stage objectives
- broadening of contact with others, so as add to the identificatory component of the oedipal ones.

Successful resolution:-Include

- Sublimation of the energy in learning and development of skills.
- Development of appropriate inner control.

Stages of Psychosocial Development

Erikson stage of the life cycle (Epigenetic principle):

Erikson believed that the human personality is determined not only by childhood experience but also by adult experience. He stated. "If everything goes back into childhood, then everything is somebody else's fault and taking responsibilities for oneself is undermined. He emphasized the interplay between biology and society.

Stage I Basic trust vs. basic mistrust:

It corresponds to oral stage of Freud.

Basic Trust:

Is an attitude towards self and the world, in which there is positive expectation that one's need can be taken for and the self and the world can be relied upon.

Positive outcome

- If strong trust is developed, the child will maintain a sense of self-confidence and a hopeful attitude.
- Mother becomes an inner certainty in the infant's mental representation, so mother can be out of sight without undue anxiety or rage.

Factors contributing to positive outcome are:

- The consistency and sameness in experience provided by care take.
- An affectionate loving mother.

Negative outcome (psychopathological outcome):

Basic mistrust develops and results in sense of hopelessness which may lead to:

- Depressive disorders.
- Schizoid personality disorders.
- Schizophrenia.
- Substance related disorders.

Stage II Autonomy vs. shame and doubt:

It corresponds to Freudian anal stage.

Autonomy: Is concerned with the child mastery over themselves and over their impulses.

In this stage, the toddler show muscular maturation, so can feed himself, walk, talk ... The child gain a sense of separateness from others (I, you, mine..), and have the choice of holding on or letting go (e.g. defection) and have the choice of being cooperative or stubborn.

Positive outcome:

The toddler gained self-confidence and enhanced self2- esteem & sense of pride.

Factors contributing to positive outcome:

- If parents permit the toddler to function with some autonomy (being supportive without being overprotective), he will gain self-confidence.
- If parents show approval when the toddler show self-control, this will enhance self-esteem of the child and a sense of pride.

Negative outcome:

- If parents are over controlling, the child will lose his self-confidence.
- If the toddler is exposed to excessive punishment, he will show a sense of shame & doubt. Doubt results in compulsive doubting inflexibility

Shame: Means that he cannot reach his expectations and is looked down by the outside world.

Stage III Initiative vs. guilt:-

It corresponds to Freud phallic oedipal phase.

Initiative: Is defined as the ability to initiate tasks both motor and intellectual for the sake of activity, which is reinforced by physical freedom, and satisfying intellectual curiosity.

Guilt: Is a feeling of being inadequate about self-initiative behavior and interests.

Positive outcome:

- The child gain sense of responsibilities, dependability, self-discipline and a growing sense of ambition
- Conscience is established at the end of this stage, so the child learns that there's limit to his behavior and express his aggressive impulses in a constructive way.

Factors contributing to positive outcome:

Reinforcing physical freedom and intellectual curiosity make the child to feel adequate about his behavior & interest.

Negative outcome:

1. If the child feels inadequate about his behavior or interests, a sense of guilt about self-initiative activity develop. Also, excessive punishment restricts the child's imagination & initiation.
2. If conflicts about initiation prevent the child from experiencing full potential, they can interfere with the sense of ambition.
3. If too strong superego developed with all or nothing quality, he will insists as an adults that others should adhere to his moral cods, so become danger to himself and other.

Stage IV Industry vs. Inferiority:

It corresponds to Freudian latency period.

Industry: Means the ability to work and being able to make things and to make them perfectly, and to acquire adult skills.

Positive Outcome:

The development of the natural desire to work and learning the pleasure of work completion and the pride of doing something well.

Factors contributing to good outcome:

Good parents & teachers encourage children to value diligence, productivity, and to preserve on difficult enterprises which are the barrier against inferiority feeling.

Negative Outcome:

- If too emphasis is on regulation, should, and ought to, a sense of duty will be at the expense of the natural desire and pleasure of work.
- Non supportive parents or discouraging school environment results in diminished self-esteem.
- If parents are overprotective, the children will be excessively dependent on their emotional support.

Stage V Identity vs role confusion (from 11 to about 21 years)

Identity: Is defined as the characteristics that establish who the persons are and where they are going.

Positive outcome:

Healthy gender identity and sexual role and occupational identity.

Factors contributing to the positive outcome:

Healthy identity is built on successful previous stages and is facilitated by identification with healthy parents

Negative outcome:

Failure to negotiate this stage leave person without solid identity, so as with role confusion.

Role confusion: means confusion about one's place in the world.

Stage VI intimacy vs.self-absorption & isolation(from 21 to about 40 yrs.):

A true relation is intense, long-lasting and mutual.

Positive outcome:-

A person transcends the exclusivity of earlier dependencies and establishes mutuality with an extended and diverse social group.

Factors contributing to positive outcome:

Successful intimacy depends on the groundwork of the earlier periods and how the adult interacts with environment.

Negative outcome:

A person become without friends or partners so will be self-absorbed with a sense of isolation.

Stage VII generatively vs. stagnation:

Generatively: Is defined as adult concern and interest in guiding or establishing the oncoming generations.

Positive outcome:

Adults develop a sense of altruism and creativity

Factors contributing to positive outcome:-

Persons need to achieve a successful identity, themselves, need to be truly generative.

Negative outcome:

Person become self-concerned isolated and become preoccupied with himself and is not able to accept the idea that death is inevitable.

Stage VIII Integrity vs despair:

Integrity: Is a sense of satisfactions that life has been productive and worthwhile.

Positive outcome:

Persons are contented enjoy grandchildren contemplate their major efforts; accept their place in life, and known that their lives are their responsibilities.

Negative outcome:

Despair: Is defined as a sense that life has had little purpose or meaning associated with loss of hope and leaves person the person in state of despair and fear of death.

Morality Development

Authors defined morality as those skills, values and abilities that comprise thinking, feeling, and behavior of the person.

Kohlberg's ideas about moral development:

Kohlberg emphasized that moral thoughts become more internalized as the child develop. He hypothesized that moral development consisted of 3 levels.

- ***Level I preconventional reasoning(before age of 9 yrs*)**:-

Most children reason in a preconvention way.

At this level, the child shows no internalization of moral values. Moral reasoning is controlled by external rewards and punishments.

- ***Level II Conventional reasoning (early adolescence):-***

At this level, early adolescents reason in a more conventional manner. The internalization is intermediate. These children use certain standards (internal) but they are the standards of others (external) e.g. parents or the laws of the society.

- ***Level III "post conventional reasoning":***

By Early adulthood, small number of people reason in a post conventional way. At this level, morality is completely internalized and not based on other standards. The person recognizes alternative moral courses, explores the options and then decides on a personal moral code.

Consciousness

As you read this paragraph you are aware of the words on the page. If you stop reading and pay attention to your body you may feel that you are thirsty. If you pay attention to your environment, you may notice the calendar on the wall which reminds you of a meeting next week.

The awareness of our internal and external environments is an ever-changing array of thoughts, feelings, and sensations known as consciousness.

Human consciousness has been described as being **personal, selective, continuous, and changing.** It's personal because it's your perception and your understanding of the world. It's unique for each individual. It's selective as you pay attention to something and ignore others. Your consciousness is never empty; that is, there is never a time that you are not thinking. Thoughts are changing all the time from one topic to another. That's why consciousness is continuous and changing.

Physiology:

Consciousness consists of **two components, awareness and arousal**. **Awareness** refers to higher cerebral cortical level of integration of multiple sensory inputs that permit meaningful understanding of self and environment. **Arousal** refers to more primitive responses that are located entirely in the brainstem ascending reticular activating system (ARAS) which mediate such responses as eye opening to painful stimuli on examination. ARAS projects diffusely to cerebral cortex via thalamic relay nuclei, thus acting as an "on-off switch for the cortical awareness system.

States of consciousness:

As consciousness varies throughout the day, so does the state of consciousness we experience. Your state of consciousness refers to your level of awareness of stimuli, both internal and external. There are no distinct boundaries to indicate where one state of consciousness begins and another ends.

Many psychologists believe that the best way to describe the different states of consciousness is to place them on a continuum from complete lack of awareness (unconsciousness) to total awareness (focused attention). Psychologist use two broad categories; normal waking consciousness and altered states of consciousness.

TOTAL AWARENESS

Focused, selective attention (e.g. during exam) ↓↓

Controlled processes (e.g. learning how to drive a car) ↓↓

Divided attention (e.g. reading while hearing songs) ↓↓

Automatic processes (e.g. a professional driver while driving) ↓↓

Normal waking consciousness

Altered states of consciousness

Daydreaming ↓↓

Meditation ↓↓

Hypnosis ↓↓

Sleep ↓↓

Anesthesia (unconsciousness) ↓↓

Coma (unconsciousness) ↓↓

COMPLETE LACK OF AWARENESS

Figure (1): levels of attention and awareness in a descending way from total awareness to complete lack of awareness

Normal Waking consciousness:

Each state of consciousness brings with it a different level of awareness of our internal and external environments. We spend most of our lives in normal waking consciousness (NWC), which **is a state of clear, organized alertness to internal and external stimuli.** We would experience NWC when reading a book, playing sport or talking with our friends. Not surprisingly, we spend two-thirds of every day in NWC. According to the type of attention NWC can be classified into different states (figure 1).

Although everyone has an individual consciousness that is personal and unique, there are a number of **common characteristics** that are shown when an individual is experiencing normal waking consciousness. These include:

- Moderate to high levels of awareness
- Good memory and cognitive abilities
- focused attention on specific tasks
- An accurate perception of reality
- Appropriate emotions
- A degree of self-control
- An accurate perception of time and sensations.

Altered states of consciousness

If we spend approximately two-thirds of our day in normal waking consciousness, then the other third is spent in an altered state of consciousness (ASC). An altered state of consciousness is any state of consciousness that is distinctly different from normal waking consciousness. An **ASC may differ from NWC** in a variety of ways,

including **the level of awareness and the quality or intensity of sensations, perceptions, thoughts and emotions.**

ASCs can occur naturally, or they can be induced. For example, natural ASCs include sleep, dreaming and daydreaming states. Induced ASCs include being intoxicated by alcohol or drugs, being hypnotized, using meditation and being anaesthetized (such as during surgery). They may occur because of a physical condition, including high fever, hyperventilation, lack of oxygen or dehydration; or because of sleep deprivation, where you may experience hallucinations. Being in a coma is also an ASC because someone who is comatose has a very low awareness of environmental stimuli.

Sleep

There is one altered state of consciousness that we all experience every day. Sleep can be described as **an altered state of consciousness** that features the suspension of awareness of the external environment and is accompanied by a number of physiological changes to the body.

Sleep is broken into two distinct types; rapid eye movement (REM) and non-rapid eye movement (NREM) sleep. When first falling asleep, we experience the first stage of NREM sleep. NREM sleep is broken into 3 distinct stages: Stages 1, 2, and SWS (slow wave sleep) which was previously known as stages 3 and 4 of NREM sleep. In each stage, the sleep experienced becomes progressively deeper. The sleeper initially enters Stage 1, and this is the only time they will enter Stage 1 NREM sleep during that particular period of sleeping. After NREM Stage 1, the sleeper progresses through the subsequent Stages and once they have reached Stage SWS, the sleeper then goes back to stage 2 in reverse order. Instead of entering Stage 1 NREM sleep again, the sleeper moves from Stage 2 into their first period of REM sleep, and the cycle then begins again. Every cycle lasts approximately 90 minutes. As the night progresses, the sleep becomes less deep and the time we spend in NREM sleep becomes shorter while the time we spend in REM sleep lengthens.

The succession of NREM sleep stages followed by an episode of REM sleep is called a sleep cycle and lasts approximately 90–110 min in humans. There are a total of 4–5 cycles every night. Slow-wave sleep is prominent early in the night, especially during the first sleep cycle, and diminishes as the night progresses. As slow-wave

sleep wanes, periods of REM sleep lengthen. The proportion of time spent in each stage and the pattern of stages across the night is fairly consistent in normal adults. A healthy young adult will typically spend about 5 % of the sleep period in stage 1 NREM, about 50 % in stage 2 NREM, 20–25 % in slow-wave sleep, and 20–25 % in REM sleep. Sleep patterns change markedly across the life span. Newborn infants spend 16–18 h/day sleeping, with REM sleep occupying about half of their sleep time. During early childhood, total sleep time decreases and REM sleep proportion drops to adult levels.

Circadian sleep wake regulation:

The sleep-wake cycle is controlled by two basic mechanisms; one is an inborn pacemaker that regulates the sleep-wake cycle but at duration slightly longer than the 24 hours of the day. The second mechanism is responsible for the synchronization of this biological clock to the external 24-hour day, and reacts to behavioral environmental time signals of which the light dark cycle seems to play the crucial role.

The suprachiasmatic nucleus (SCN) of the anterior hypothalamus is the principal neural pacemaker determining the period of the circadian rhythm in mammals. The SCN responds to light signals received through the retina of the eye. External signals of light and darkness set the biological clock that determines when we're sleepy and when we're alert. Sleepiness at any time of the day is determined by the circadian rhythm plus the amount of time since the last bout of sleep. The longer the time spent awake, the greater the drive for sleep

When a person does not follow the natural circadian rhythms that regulate sleeping and waking, perhaps because they work a night

shift or after traveling to a different time zone, the circadian clock has to adjust to the change. If it does not happen easily, problems such as jet lag and some types of sleep disorders can occur.

Studying sleep

Most sleep research takes place in a sleep laboratory (see Figure 2), which is a controlled environment that enables the electronic recording generally relies on three fundamental measures, as the basis for defining stages of sleep. First, gross brain wave activity measured by electroencephalogram (EEG) electrodes. Second, muscle tone is measured with electromyogram (EMG) electrodes. Third, eye movement is recorded via electro-oculogram (EOG) electrodes. EEG reading is the most important measure in differentiating between the stages, while the EMG and EOG are most important in differentiating rapid eye movement (REM) sleep from the other stages.

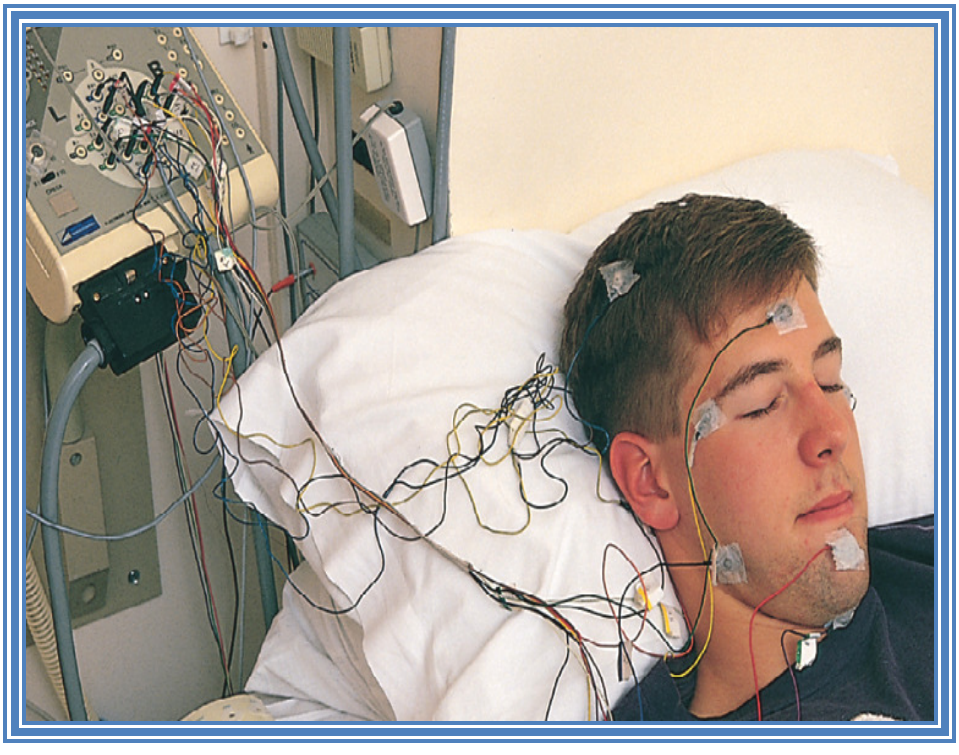


Figure (2): a patient at the sleep lab.

When you are awake and alert, a pattern of **beta waves** indicates that the brain is active. When you close your eyes and start to relax, the beta waves shift to a pattern of larger and slower waves called **alpha waves.**

Stage 1 non-REM sleep is light and a person is easy to wake up at this time. During this light sleep, brain waves and eye activity slow down. The alpha rhythm diminishes to less than 50% and slower theta rhythms (4-7 Hz) start to appear. A stage 1 sleeper may experience the sensation of falling, ending in a sudden muscle jerk.

Stage 2 non-REM sleep is also considered a light sleep period. The EEG is characterized by sleep spindles (14–16 Hz short bursts) and K complexes (a sharp negative wave followed by a slower positive component). EMG activity is low-to-moderate

As one's body moves into **slow wave sleep**, brain waves slow down even more, with the prominence of delta waves (large amplitude waves at a frequency of <4Hz). EMG activity is low and eye movements are rare. Arousal through this stage of sleep is difficult.

During REM sleep, EEG appearance changes from the very synchronized patterns of NREM sleep to desynchronized, mixed-frequency, low-amplitude rhythms (saw-tooth waves), resembling those seen in wakefulness with the eyes open. The EOG displays the bursts of rapid eye movements that give this stage its name. The EMG is reduced to its lowest level for the night.

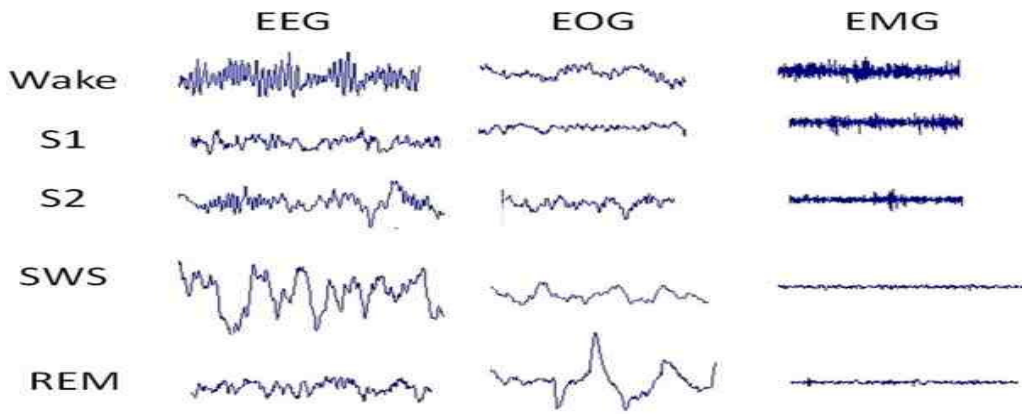


Figure (3): electrophysiology of sleep stages.

Functions of sleep:

Sleep has been considered to be a restorative or a recovery phase, or to prepare the organism physiologically for the next phase of wakefulness.

- **Biochemical functions:** the metabolic rate slows during NREM sleep, in which energy is conserved, the body temperature falls, and protein synthesis and other anabolic processes are accentuated. Replenishment of metabolites such as glucose for brain cells or removal of oxygen free radicals during NREM sleep may also be important
- **Physiological functions:** cell division is most rapid during NREM sleep, at which time protein synthesis is increased. Sleep also has important effects on the immune system.
- **Neurological functions:** REM sleep may have a neuro-developmental role as It is most prolonged and in neonates and young children.
- **Psychological functions:** sleep has an important role in the consolidation or maintenance of memories experienced during the previous day. Probabilistic learning, in which associations are

made according to the likelihood of events being related, improves after sleep on the first night after the experience.

Dreaming

Dreams are a series of images, thoughts and emotions that pass through our mind during sleep. Approximately 80 percent of dreams are experienced during REM sleep. Dreams experienced during this stage tend to be longer, clearer and more detailed than thoughts and images that occur in NREM sleep (***Shafton, 1995***).

As already mentioned, your body becomes quite still when in REM sleep, as if you are paralyzed (atonic) see figure 3. But imagine if this were not the case –what would be the results of acting out some of your dreams?

Sleep hygiene:

- Set regular sleep hours: Go to bed and get up at the same time every day, even on weekends. Sticking to a schedule helps reinforce your body's sleep-wake cycle.
- Too much food and liquid can cause heartburn or wake you up repeatedly in the night for bathroom trips.
- Stimulants can keep you awake. Avoid coffee, tea, and chocolate as many as eight hours before bedtime.
- Regular physical activity can help you fall asleep faster and make your sleep more restful, but don't work out too close to you bedtime.
- Create a cool, dark, quiet bedroom.

- Develop a pre-bedtime routine and stick to it: A warm bath, and some light reading each night prepares your body for a good night's rest.
- Avoid upsetting activities right before sleep.
- Place the television out of the bedroom.
- Don't nap past 3 p.m.: Napping too late in the afternoon can interfere with quality night sleep.

Perception

Perception denotes the process of getting to know the environment by the use of senses. Sensation is the act of receiving a stimulus by any of the sense organs. Perception is the act interpreting and understanding the meaning of this stimulus. The mechanics of physiology for sensation are the same in all individuals. Perception differs as the individual tend to associate or relate any foreign object with unconscious attempts to relate it to a shape or form known before.

The process of perception is dependent on:

- past experiences
- future expectations
- stimulation

No one can receive sensations without projecting into them some element of past experience and future expectations. The philosopher Immanuel Kant stated a psychological fact when he said "we see things not as they are but as we are".

Flow do we perceive??

Ordinarily we are not aware of the processes that determine perception; we rarely stop to analyze the coming sensation if it is sight, hearing or touch. If you are hearing music for example you perceive the whole tune not each component alone. This particular concept of the whole is an important theory of gestalt school of psychology "the psychology of the whole".

Change of sensory stimulation is essential also in perception. We do not react to the stimulation but rather to the change of

stimulation. If the world was perfectly homogenous and nothing changed by passage of time we should experience nothing.

Perception is also dependent on past experience and learning. We perceive the world as we earned to do we never use an innocent unbiased eye. Sense data can be distorted, modified, added to and generally altered in all sorts of perceptual processes, thus similar sensation can give different perception. A given figure or a picture can be seen in more than one way according to how we organize it (figure 2). The spiral illusion is also a famous example of how our eyes can be deceived by quite simple arrangements of lines and patterns 'figure 5 '.

Perception is selective. There is a great deal of sensory stimulation that we ignore and do not notice. For example the cloth rubbing on our bodies we only notice stimuli that are of particular interest for us at the moment. There is some evidence to show that this process of filtering off the unwanted stimulation is mediated by the reticular activating formation of the brain.

Perception and suggestion. Suggestion was found to be another factor causing errors of perception. The familiar 'rope trick' of India is reported to be a case of mass suggestion. Under the influence of the performer's vivid and persuasive description, the members of the audience 'see' a rope uncurl and stand upright unsupported in space. The theory of hypnosis was based somehow on the effect of suggestion.

Factors affecting perception:

I. **Personal factors:** factors related to the individual

- **Previous experience**: habit makes it easier to see familiar figures and to perceive them without difficulty.
- **Present physical condition:** a hungry Person would perceive the smell of food from a long distance in a different way from others.
- **Emotional state:** the intensity of our feelings may disturb our perception as in state of anger, depression or fear...etc
- **Set expectancy:** when you are ready to perceive a certain fact you are liable to accept very inadequate stimuli as signs of .this fact so your expectation alter your perception. For example waiting for a friend you may see all the passengers while waiting as if they are this girl.
- **Aesthetic value:** a symmetrical pleasant figure, well systematized and of form will be seen and appreciated while an irregular one is overlooked.

2. **Social factors:** perception differs according to culture, belief, and tradition. For example an Egyptian tourist may feel sorry for the bull in a bull-fight in Spain while the Spaniard is thrilled and happy

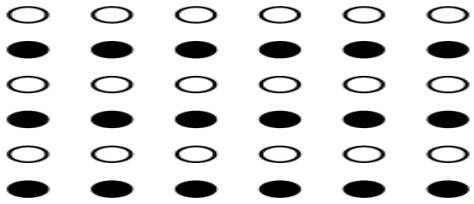
Factors affecting perception:

Table 1: factors affecting perception

Figural factors (objective factors)	**Personal factors (Subjective factors)**	**Social factors**
• Similarity • Symmetry • Closure • Continuity • Proximity • Background	• Mood and emotion • Previous experiences and habits • Mental set and expectancy. • Aesthetic value • Needs • Interests Physical condition	• Culture • Beliefs • Traditions

A) Figural Factors :(objective factors)

1. Similarity: Similar stimuli tend to be grouped together perceived as one stimulus group (see Fig1).

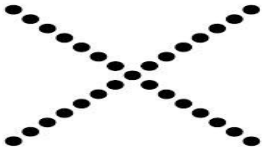


2. Symmetry: asymmetric objects may be perceived as belonging together (see Fig 2).

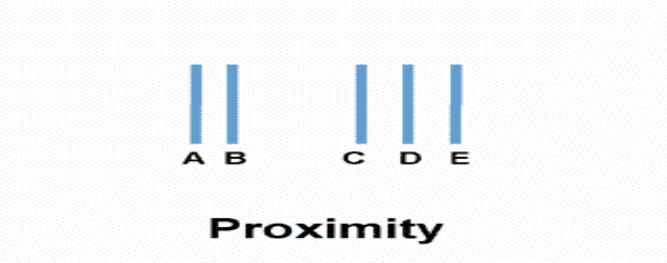
3. Closure: Closed stimuli tend to be grouped together e.g (see Fig 3).

4. Continuity: In the below mentioned pattern, we can see a. the dots are straight lines and not as a separate dots.

b. the dots group themselves as two continuing lines rather than four short lines meeting at the central focus (see Fig. ***4)***



5. Poximity:Proximate objects tend to be perceived as a grouped (see Fig. 5)**.**



6. Background: Relation between figures and its background (see Fig. 6).

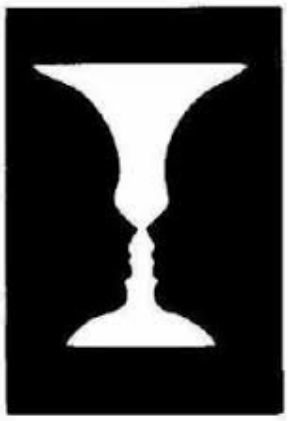


Figure (6) This can be seen as white vase or us two black faces looking at eh other.

3. **<u>Figural factors:</u>**

- <u>Similarity</u> similar stimuli together to be perceived one stimulus'figure 2'
- <u>Symmetry</u> a symmetric triangles may be perceived as a symmetrical one 'figure 3'

- Continuity in figure 5 you can see dots are straight lines and not separate dots
- Proximity proximate object also tend to be seen as grouped "figure 6
- Background figures how background can between figures.
- Closure closed group together 'figure 4

Disorders of perception:

- **Camouflage:** induction of faulty perception. It can be carried out in different ways; addition, prolongation, embedding, avoiding contrast. ..etc
- **Illusion:** false perception of an external stimulus. Illusions may be due to physical causes, habit, familiarity, expectation and psychiatric illnesses like schizophrenia.
- **Déjà vu phenomena:** illusion of familiarity
- **Hallucination:** false sensory perception without an external stimulus. It may be auditory, olfactory, visual or tactile. It may be due to psychiatric illness or normal phenomena like hypnagogic and hypnapompic hallucinations i.e. periods of falling asleep or getting out of sleep.

Attention

It the process whereby we focus on certain aspects of a situation. Two parts of the brain are particularly important in enabling this attention. Firstly, the cerebral cortex and secondly the reticular system of the brain stem.

Factors that stimulate attention:

1- External factors: these are important in the art of advertising:

- **Type of stimulus:** pictures attract attention more than words.
- **Position of stimulus:** e.g. the ordinary reader will observe the upper half
- of the newspaper more than the lower half.
- **Intensity of stimulus:** bright colors, loud sounds, fragrant perfumes will attract more attention.
- **Changeability of stimulus:** e.g. a flickering light will direct our attention more than a steady one.
- **Repetition of stimulus:** a repeated stimulus is more likely to be noticed than a single one.
- **Unfamiliarity:** strange and unfamiliar objects attract attention more than common objects.
- **Contrast:** between the stimulus and its background e.g. a a black spot in a white field will attract the attention more easy.
- **Clarity:** the clearer the stimulus is, the more attractive to attention it is.

- **Combination of sensory stimuli:** stimuli reaching more than one sense organ at the same time attract attention more than a single one e.g. the TV is more attractive than the radio.
- **Combination of factors:** a stimulus characterized by more than one of the above factors is more attractive e.g. an advertisement will be most attractive if you used a bright color flashing signs that changeability and repetition

2. **Internal factors:** these are individual factors which make the person more attentive to certain objects. These may be temporary or permanent.

- **Permanent factors:**

- Sensory fitness: sensory handicap interferes with efficient attention
- Intelligence: people with superior intelligence can attend more readily than others.

- **Temporary factors:**

- Physical state: e.g. Feverish person will be less attentive.
- Mental state: or interest if you wish to buy something it will be the first thing to catch your attention while shopping.
- Emotional depressed attentive.
- Biological needs: e.g. smell of food will attract the attention of the hungry individual more than others.

Types of attention:

1. **Involuntary attention:** our attention is directed towards the stimulus involuntarily, e.g. gun shot or flashes of light.
2. **Voluntary attention:** when we intend to hear or see something such as listening to a difficult or uninteresting lecture.

3. **Spontaneous attention:** no conscious effort is made for attention as the stimulus is interesting and the individual is ready to attend to it.

Factors that stimulate distraction:

Many students complain of that they are unable to concentrate and that they can not sustain their attention. The factors that lead to distraction are:

1. **Physical factors:** fatigue, exhaustion, lack of sleep, inability to relax, irregular meals, malnutrition and endocrinal disturbances, all these may lead to deficient vitality and a weakening of resistance which may result in distraction.
2. **Psychological factors:**

a. lack of interest in a subject

b. indulgence in day dreams

c. obssessional thoughts

3. **Mental factors:**

a. In schizophrenia due to lack of association of patient's thinking or due to hallucinations

b. In manic depressive patients where thinking may be fast or slow respectively.

4. **Social factors:** family problems, whether financial or disturbed marital or parent-child relationship.
5. **External factors:** insufficient lighting or its misdistribution, excessive heat or cold, lack of ventilation or excessive noise.

Thinking

Thinking is the language of the brain. It is a mental activity that does not depend directly upon sensory or motor contact with the present circumstances. Others view thinking as a form of problem solving behavior which involves the correlations and integration of events in time and space.

The tools of thinking are symbols which may be verbal, diagrams, objects or concepts:

- Concepts are ideas which refer to objects, events, qualities,..etc. A person's concept of a certain thing may not agree in all respects with the standard definition, as the concept consists of what the person knows or believe about things and its interaction with the personality.

The Phases of concept formation:

a. Generalization: the mental process of forming a concept of a class of items on the basis of previous familiar experience from a certain number of instances, e.g. a little girl when seeing a rat for the first time she calls it a rabbit or a cat because she is unable to differentiate between them regarding shape, size and color, etc. She is generalizing because of the similarity of familiar and unfamiliar object.

b. **Differentiation:** this process is opposite to generalization when you start making distinctions between the items of a class of items, forming two concepts out of a preliminary one. This is a further stage of development of human thoughts through his maturity. So, the little girl here starts to know that there is a

difference between the rat and rabbit regarding their size, shape and color.

c. **Abstraction:** a further development in the human thinking occurs when he becomes able to select one characteristic that is common in all objects. In abstract thinking then one can understand more the deep meanings of the words. This ability helps in problem solving and logical thinking and more productive performance in life. In schizophrenic patients when this ability is lost they develop an opposite type of thinking called concrete thinking. We test concrete thinking by proverbs, e.g. "people who live in glass houses should not throw stones" when you are able to abstract the deep meanings behind these words you will say "those who have faults should not criticize others" the patient will say "if they threw the stones the glass will break ". Various forms of brain injury and mental retardation also showed impairment of the patient's capacity to think abstractly or to use words.

Thinking is guided and aided not only by a single concept, but by the combination of concepts. However, your own feelings and prejudices also may falsify your ideas and lead you to wrong conclusions, e.g. when Hitler claimed the supremacy of the Arian race, the whole German nation believed this erroneous conclusion.

There is no way of protecting you completely from such errors but it is possible to accomplish a good deal by practicing objective observation and straight thinking.

Conditions that help efficient thinking:

a. Getting adequate information
b. Proper formulation of the problem
c. Controlling emotional factors
d. Intensity of motivation; very intense motives are harmful like weak ones
e. Using clearly defined concepts "objective observation and straight thinking"
f. Transfer of previously learned responses
g. Other factors: self-monitoring and criticism, looking for alternatives and seeking more than one cause

Disorders of thinking:

1. Disorders of the stream of thinking: the stream equals the general flow of thoughts, ideas and talk. This may be :

   - Very slow and hard to elicit as occurs in depression.
   - Very fast with flights of ideas .So, one talks very fast and jumps from an idea to another and you can hardly catch up with his stream of thinking as occurs in mania.
   - The stream of thinking may be blocked as in schizophrenia when the patient is talking and suddenly he stops for a few seconds with vacant eyes and restart again with a different pattern of thinking.

2. Disorders of the control of thinking:

   This usually occurs in schizophrenia: The patient may complain of:

- Thought reading: people being able to read his thoughts
- Thought withdrawal: people are able to withdraw his thoughts.
- Thought broadcasting :people are able to broadcast his thoughts on the radio or produce them in newspapers or television.
- Thought insertion: people or certain agents are able to insert certain thoughts in his mind.

3. Disorders of the content of thinking: here the contents of thoughts of the individual are preoccupied with a certain belief or idea. This occurs in the form of :-

- Delusions, i.e. false fixed beliefs that are illogical and not amenable to any reasoning, e.g. persecutory delusion when the patient believes that people are against him, following him or are trying to poison him.
- Obsessions, i.e. an idea that forces itself on the patient's thoughts and in spite of his awareness of its absurdity he can not resist it, this idea can force the patient into compulsive rituals like excessive washing or checking or counting.

4. disorders of the form of thinking: the patient here is unable to associate his thinking in a logical way so you may feel that there is loose association in his speech, or you may not be able to understand a word as all the speech is disconnected so you find the talk incoherent, or you may find that the patient gives you answers to your questions that is totally off the point.

Memory

Definition: Memory is the ability to code, store and retrieve information. Memory is complex, consisting of not one, but several systems that operate simultaneously and interact in many ways.

DIMENSIONS OF MEMORY

Memory involves many dimensions, among them memory systems, memory processes, the representation of knowledge in memory, mnemonics and memory strategies.

1- Memory Systems

Some information are remembered only for a second, some for half a minute, and some fur minutes, hours, years, or even a lifetime. Psychologists believe these three time frames involve three different memory systems.

The Sensory memory

Sensory memory is the initial part of the memory system in which information from the world is retained in its original sensory form for only an instant while being processed in the sensory system (0.5 second for visual sensory memory, and about 2-3 seconds for auditory sensory memory). If the information is not processed further, it does not reach short-term or long-term memory.

Think about all the sights and sounds you encounter on a typical morning. Thousands of stimuli come into your fields of vision and hearing like sounds of birds, a noisy motorcycle, the blue sky, and faces of hundreds of people. We do not process all of these stimuli, but we do process a number of them. In general, you process many

more stimuli at the sensory level than you consciously notice. The sensory memory retains this information from your senses, including a large portion of what you think you ignore, but not for a long time.

Short-Term Memory

Also called working memory, the mental workspace a person uses to keep in mind tasks being thought about at any given moment. Short-term memory is a limited-capacity memory system in which information is retained for as long as 30 second unless the information is rehearsed, in which case it can be retained longer. Compared to sensory memory, short-term memory is limited in capacity, but is relatively longer in duration.

Individuals are limited in how much information they can keep track of without external aids. Usually the limit is in the range of 5 ± 2 items. Longer lists, however, pose problems because they exceed your short-term memory capacity. If you rely on simple short-term memory to retain longer lists of items you probably will make errors.

Of course, there are many examples where short-term memory seems to hold much more than *5* or 6 units. For instance, consider a simple list of words: hot, city book, time, forget, tomorrow, and smile.

Try to hold these words in memory for a moment then write them down. If you recalled all seven words, you succeeded in holding 34 letters in your short-term memory. Does this make you a genius with outrageous short-term memory skills? Or does it disprove the idea of limited capacity? The answer is neither.

Chunking is the grouping or packing of information into higher-order units that can be remembered as single units. Chunking

expands short-term memory by making large amounts of information more manageable.

Maintenance rehearsal is the conscious repetition of information that increases the length of time it stays in short-term memory.

Working memory is the concept currently used to describe short-term memory as a place for mental work. Working memory is a kind of mental "workbench" that allows us to manipulate and assemble information when making decisions, solving problems, and comprehending written and spoken language. Although the terms working memory and short-term memory are interchangeable, working memory is the term now being used more often by memory researchers.

Long-term memory

Long-term memory is the relatively permanent memory system that holds huge amounts of information for a long period of time. In one study, people remembered the names and faces of their school classmates with considerable accuracy for at least 25 years. The storehouse of long-term memory is indeed staggering. *John von Neumann, a* distinguished computer scientist, put the size at 2.8 x 1020 (280 quintillion) bits, which in practical terms means that our storage capacity is virtually unlimited.

Long-term memory is divided into the subtypes of declarative and non-declarative memory.

Declarative memory is the conscious recollection of information, such as specific facts or events, and, at least in humans, information that can be *verbally* communicated. Because of its

conscious and verbalizable nature, declarative *memory* has been called "explicit memory". Examples of declarative (or explicit) memory include recounting the events of a movie you have seen and describing a basic principle of psychology to someone. However, you do not need to be talking to be using declarative memory. Simply sitting and consciously reflecting on Einstein's theory of relativity, or the date you had last weekend, involves declarative memory.

Non declarative memory refers to a variety of phenomena of memory in which behavior is affected by prior experience without that experience's being consciously recollected. Because non declarative memory cannot be verbalized or consciously recollected, at least not *in* the form of specific events or facts, it is also called "implicit memory".

Examples of non declarative (implicit) memory include the skills of playing tennis, riding a bicycle, and typing. However, more—complex forms of non associative learning, like learning the grammar of one's native language, are also non declarative.

Endel Tulving (1972) distinguished between **two subtypes *of* declarative memory: episodic and semantic.**

Episodic memory is the retention of information about where and when life events were happenings; what it was like when your younger brother or sister was born, what happened to you on your first date, what you were doing when you heard. Desert Storm had begun in the Arabian Gulf, and what you had for breakfast this morning.

Semantic memory is a declarative memory system that holds a person's general knowledge about the world, including a person's fields of expertise (knowledge of chess for a skilled chess player, for example); general academic knowledge of the sort learned in school

(knowledge of geometry, for example); and "everyday" knowledge about meaning of words, famous individuals, important places, and common *things* (who Nelson Mandela and Mahatma Gandhi are, for example). The critical point about semantic memory knowledge is that it appears to be independent of the individual's personal identity with the past. You can access a fact such as "Lima is the capital of Peru" and not have the foggiest notion of when and where you learned it.

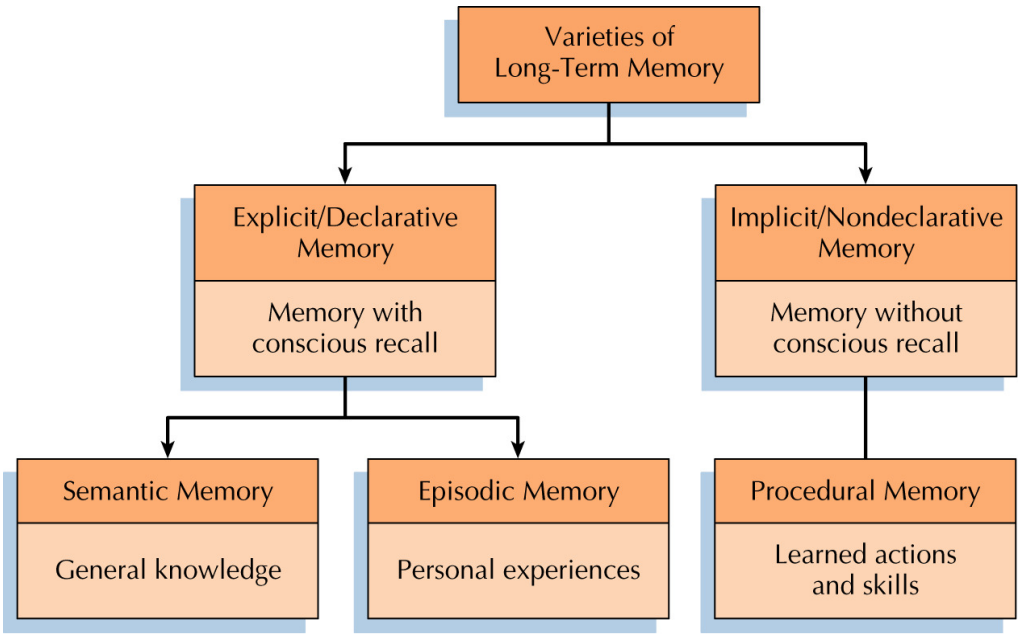


Figure (1): types of long term memory.

Interaction Between Memory Systems

The working memory model is the most widely accepted explanation of how sensory memory, short-term memory and long-term memory interact. In this model, data picked from sensory memory and data retrieved from long-term memory are used together to handle a situation. For example when you try to solve a situation the working memory uses the problem data from sensory memory, and the previously learned theories from long term memory to solve

that problem. Data finally reached after that should now be moved from working memory to long term memory to be stored.

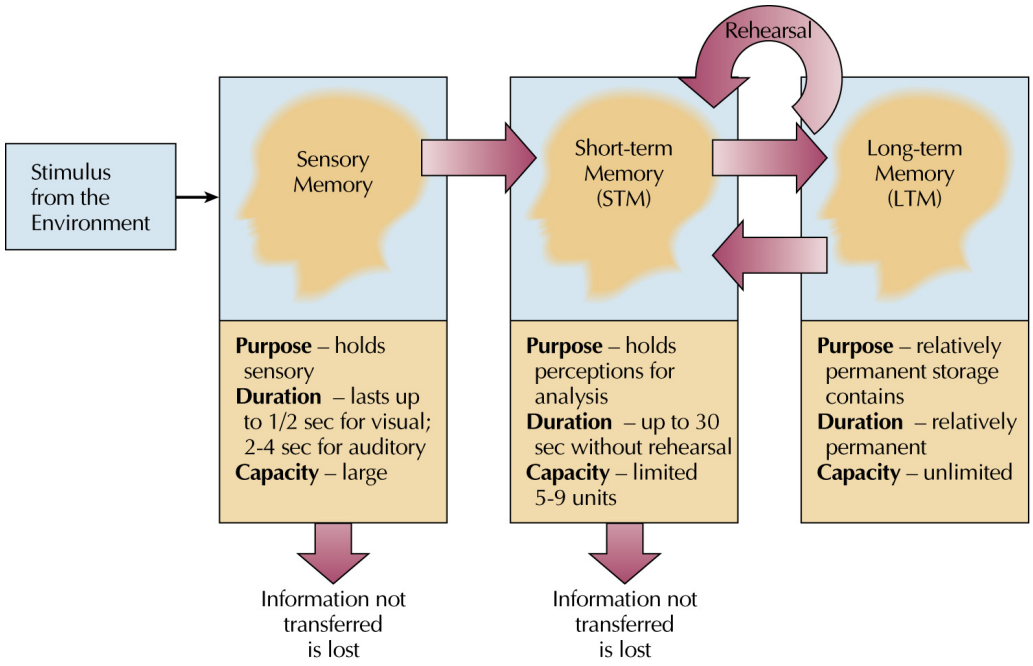


Figure (2): overview of memory model.

Memory Processes

Psychologists who study memory are especially interested in memory processes which refer to the encoding of new information into memory and to the retrieval of what was previously stored.

1- Encoding 'memorizing"

Transformation of information or transfer of information into a memory system.

Methods of encoding:

a- Grouping: group items which similar in parts or as a whole.

b- Looking for relationships between different items.

c- Location: sometimes a student memorizes certain information as he received it a certain paragraph to the right of a page.

d- Rhythm: like in Al Alphia for studying Arabic grammar.

Factors affecting encoding:

a- Attention.

b- Meaning: understanding and finding the subject will help rapid memorizing.

c- Recitation: reciting to oneself also weak points.

d- Physiological *and* psychological excitement etc....

e- Using more than one sense organ

2- Storage "retention"

Retention:

Retention is the persisting aftereffect of any learnt subject. It helps us to recall and recognize learnt subject.

Factors affecting retention:

a- Sleep: good sleep ensures good retention of information. REM sleep is the part of sleep mainly involved in that.

b- **Extremes of age:** may be associated with less ability to retain information.

c- **Selection:** memory retain what is significant and what and needed to be retained.

d- **Interference**.

3- Retrieval 'Remembering"

The process by which information is recovered from memory, It is either:-

Recall (remembering something that is not present).

Or Recognition (remembering something that is present).

Factors affecting retrieval:

1. Proper remembering depends on proper encoding and proper retention.
2. Real desire to bring out retained material.
3. Training for remembering.
4. Physiological and psychological state during remembering.

Depth of Processing and Elaboration

Following the discovery that maintenance rehearsal was not an efficient way to improve long-term memory, Fergus Craik and Robert Lockhart (1972) developed a new model of memory "Levels of processing theory". The theory states that memory is on a continuum from shallow to deep, and deeper processing produces better memory. The sensory or physical features of stimuli are analyzed first at a **shallow level.** This might involve detecting the lines, angles, and contours of a printed word's letters, or a spoken word's frequency, duration, and loudness. At **an intermediate level** of processing, the stimulus is recognized and given a label. For example, a four legged, barking object is identified as a dog. Then, **at the deepest level**, information is processed semantically, in terms of its meaning. For example, if you saw the word boat, at the shallow level you might notice the shapes of the letters, at the intermediate level you might think of characteristics of the word (such as it rhymes with coat), and at the deepest level you might think about the kind of boat you would like to own and the last time you went fishing.

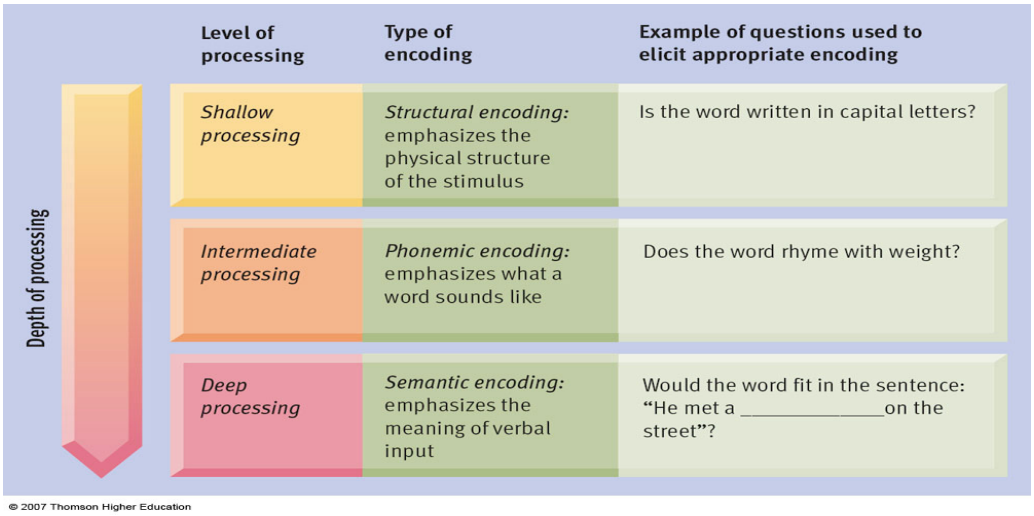


Figure (3): Levels of processing theory.

FORGETTING

Forgetting is the negative aspect of retention. There is gradual loss of retained material but the loss is much more rapid in the first hour after learning. It varies with the individual difference, degree of learning, time spent in learning, and type of material learnt.

Theories explaining forgetting

1- Passage of time (information decays): But is seems that it is not simply the time that passes which is responsible for forgetting, but the processes which go on during that time.

2- Interference theory: We forget because recently learned material interferes with that we are trying to remember.

3- Disuse atrophy theory; It claims that memory traces which are not used or applied can't be recalled. Against this theory, is the fact that certain memories are suddenly recalled after many years.

4- Change of set theory: We learn a certain topic in a certain situation and when we change this situation or set at the time of remembering we hardly recall it. Once we go back to the original situation we remember it.

5- Repression theory: We do not forget all kinds of memory equally and neutrally) but we forcibly and unconsciously put certain memories beyond our conscious awareness. It is sometimes called active forgetting, it is a mean of self defense against painful memories.

How to Improve Your Memory?

Memorizing	**Retention**	**Remembering**
1. Determine the task and concentrate your effort over it 2. Observe the meaning. 3. Study by whole learning. 4. Perfect the parts, 5. Recite repeatedly. 6. Memorize by spaced repetition. 7. Read desire to progress. 8. Using more than one sense organ.	1. Avoid interference 2. Spaced pearling. 3. Relax *after* learning. 4. Study important subjects just before sleep. 5. A general scheme will be better retained than disorganized material.	1. Make a good trial, leave for while and try again. 2. Try to find the start, and the corner of the scheme. 3. Do not test your memory without preparation. 4. Do not test your memory for the all subject, but test it in small does.

DISORDERS OF MEMORY:

Memory disturbance are either quantitative or qualitative.

I. Quantitative:

a- hyper-amnesia: Life events are registered with more than the usual intensity e.g. in hypomania and paranoia.

b- Loss of memory (Amnesia):

1. **Antero-grade amnesia (for recent events**): In senility and cerebral atherosclerosis
2. **Retrograde amnesia (for remote events):** In normal forgetting.
3. **Global amnesia (for both recent and remote events**): In senility.

4. **Circumscribed amnesia (focal):** Failure of recall for a certain time, before, during, and after the event. It occurs in hysteria and concussion.

II. **Qualitative (paramnesia):**

a. **Falsification:** means adding false details to a true memory.

b. **Confabulation:** This is fabrication of memories that never occurred.

c. **DeJa Vu phenomenon:** An illusion of memory. The patient feels that he has previous experience with a recent situation.

LEARMNG

Definition: A relatively permanent change in behavior that occurs through experience.

Psychologists explain our many experiences with a few basic learning processes. We respond to things that happen to us, we act and experience consequences for our behavior, and we observe what others say and do. These three aspects of experience form the three main types of learning we will study in this chapter classical conditioning (responding), operant conditioning (acting), and observational learning (observing).

In recent years, cognitive processes have assumed a more important role in learning.

FORMS OF LEARNING

We learn in different ways through classical conditioning, operant conditiothg, observationaA learning, and cognitively.

Classical conditioning

Classical conditioning, in which a neutral stimulus becomes associated with a meaningful stimulus and acquires the capacity to elicit a similar response.

Pavlovian conditioning (pavlovian experiment and concepts).

Pavlov routinely placed meat powder in a dog's mouth, causing the dog to salivate. *Pavlov* began to notice that the meat powder was not the only stimulus that caused the dog to salivate. The dog would salivate in response to a number of stimuli associated with the food, such as the sight of the food dish, the sight of the individual who brought the food into the room, and the sound of the door closing

when the food arrived. *Pavlov* recognized that the dog's association of these sight and sounds with the food was an important type of learning, which came to be called classical conditioning.

Pavlov observed that the dog's behavior included both learned and unlearned components.

The "unlearned" part of classical conditioning is based on the fact the some stimuli automatically produce certain responses apart from any prior learning; in other words they are inborn or innate.

An unconditioned stimulus (US) is a stimulus that produces a response without prior learning; food was the US in Pavlov's experiments. An unconditioned response (UR) is an unlearned response that is automatically elicited by the Us.

The conditioned stimulus (CS) is a previously neutral stimulus that eventually elicits the conditioned response after being associated with the unconditioned stimulus. The conditioned response (CR) is the learned response to the conditioned stimulus that occurs after CS-US *pairing.*

Pavlov described three basic phenomena:

1- **Conditioning:** Means acquisition of a stimulus- response relationship. High order conditioning: we can establish a second conditioned response based upon a previously established one i.e. bright light just before the bell. The dog will salivate to the bright light.

2- **Generalization:** It the ability of the organism to tranfer the acquisition of stimulus response relationship to other stimuli i.e. the dog responds by conditioning to any sounded bell related to

the original one. The child becomes frightened by all physicians in response to his bad experisuce with the dentist.

3- **Extinction (de conditioning):** Loss of acquisition of stimulus response relationship. It occurs when a conditioned stimulus is repeatedly given but not followed by the unconditioned stimulus, e.g. repetition of sounding the bell with no food given afterwards saliva will not flow in response to the bell. The child loses his conditioned fear from the physician when he encouraged.

Rate of extinction depends on:

A. Strength of the original conditioned response the more stronger the more difficult the extinction.

The type of original conditioned response, e.g. emotional responses with partial reinforcement leads to difficult extinction.

Classical conditioning in Humans

Classical conditioning has a great deal of survival value for the individual. Because of classical conditioning, we jerk our hands away before they are burned by fire.

Classical conditioning also is at work when a tranquil scene such as an empty beach with waves lapping onto the sand is described and the harried executive relaxes as if she were actually lying on that beach.

Phobias are irrational fears. Classical conditioning provides an explanation of these and other fears. The famous behaviorist John Watson conducted an investigation to demonstrate classical conditioning's role in phobias.

A little boy named Albert was shown a white laboratory rat to see if he was afraid of it. He was not. As Albert played with the rat, a

loud noise was sounded behind his head. As you might imagine, the noise caused little Albert to ciy. Alter only seven pairings of the loud noise with the white rat, Albert began to fear the rat even when the noise was not sounded.

Many of our fears—fear of the dentist from a painful experience, fear of driving from being in an automobile accident, and fear of dogs from being bitten, for example can be learned through classical conditioning.

Operant conditioning

Operant conditioning (or instrumental conditioning) is a form of learning in which the consequences of behavior produce changes in the probability of the behavior's occurrence.

Operant conditioning is usually better than classical conditioning at explaining voluntary behavior.

Operant conditioning deals with situations where the response operates on the environment rather than being elicited by an unconditioned stimulus.

In Skinner's experiment , typically a rat or pigeon learns to make a simple response, such as pressing a lever (behavior) to obtain reiforcement. The rate of response is a useful measure of operant strength.

Reinforcement (or reward) is a consequence that increases the probability that a behavior will occur in contrast, punishment is a consequence that decreases the probability a behavior will occur.

For example, if someone you meet smiles at you and the two of you continue talking for some time, the smile has reinforced your talking.

However, if someone you meet frowns at you and you quickly leave the situation, then the frown has punished your behavior of talking with the individual.

Reinforcement can be complex .Reinforcement means to strengthen.

In positive reinforcement the frequency of a response increases because it is followed by a stimulus, as in our example of the smile jncreasiflg talking.

Similarly, 0mplimenting someone you are attracted to might make that person more receptive to your advances and increase the probability that you will get to know the person better.

Positive reinforcement can be pleasant (such as praise from a parent) or unpleasant (such as working at something you don't want to do, in order to get fed).

Conversely**, in negative reinforcement** the frequency of a response increases because the response either removes a stimulus or involves avoiding the stimulus.

For example, your father nags at you to clean out the garage. He keeps nagging. Finally you get tired of the nagging and clean out the garage. Your response (cleaning out the garage) removed the unpleasant stimulus (nagging).

Even responses mediated by the autonomic nervous system, like blood pressure, can be modified through operant conditioning.

Differences between classical and operant conditioning:

Classical conditioning	Operant conditioning
• The organism is just responded involuntarily	• The organism is operant (doing act) voluntarily.
• The response is mediated by the autonomic nervous system.	• The response is mediated by higher nervous system structure.
• The response is elicited by the external stimuli, and does not affect the external environment.	• The response is sent out by the organism and it affects the external environment.
• The reward is given with the stimulus	• The reward is given just after the response.

Observational learning:

Also called imitation or modeling, is learning that occurs when a person observes and imitates someone else's behavior.

The capacity to learn behavior patterns by observation eliminates tedious trial-and-error learning. In many instances observational learning takes less time than operant conditioning.

Observational learning can occur by watching a model who is neither reinforced nor punished. The only requirement for learning is that the individual by connected in time and space with the model.

Psychologists believe that observational learning involves attention, retention, motor reproduction, and reinforcement or incentive conditions.

Insight learning

In one of the very famous experiments *Kohler* put three chimps in a cage & put a cluster of bananas over head & another one out side the cage.

In both situations, the ape discovers that it cannot reach an alluring piece of fruit, either because the fruit is too high or it is outside of the ape's cage and beyond its reach.

To solve the stick problem, the ape has tO insert a small stick inside a larger stick to reich the fruit.

To master the boxprobiem, the ape must stack several boxes to reach the fruit and gets the fruit.

Insight learning is a form of problem solving in which the organism develops a sudden insight or understanding of a d problem's solution.

Cognitive Factors in Learning

When we learn, we often cognitively represent or transform our experiences. In our excursion through learning, we have had little to say about these cognitive processes, except in our description of observational learning. In the operant conditioning view of *Skinner* and the classical conditioning view of *Pavlov,* no room is given to the possibility that cognitive factors such as memory, thinking, planning, or expectations are important in the learning process. Many psychologists, including behavioral revisionists *who* recognize that cognition should not have been ignored in classical and operant conditioning, believe that learning involves muah more than stimulus-response connections.

The S-O-R model is a model of learning that gives some importance to cognitive factors. S stands for stimulus, 0 for organism, and R for response.

The sometimes is referred to as the black box because the mental activities of the organism cannot be seen and, therefore, must be inferred.

Bandura, 1994 described another model of learning that involves behavior, person, and environment.

Behavior, cognitive and other person factors, and environmental influences operate interactively. Behavior influences cognition and vice versa; the person's cognitive activities influence the environment; environmental experiences change the person's thought, and so on.

Expectations and Cognitive Maps

Tolman says that when classical and operant conditioning occur the organism acquires certain expectations.

In classical condItioning the young boy fears the rabbit because he expects it will hurt him.

In operant conditioning a woman works hard *all* week because she expects to be paid on Friday.

Tolman articulated his belief that organisms select information from the environmt and construct a cognitive map of their experiences

***A* cognitive map** is the organism's mental representation of the structure of physical space.

Tolrnan's idea of cognitive maps is alive and well today. When we move around in our environment, we develop a cognitive map of where things are located, both on small and large scales. We have a cognitive map of where rooms are located in our house or apartment, and we have a cognitive map of where we are located.

Combination of methods of learning

Whatever the method of the above mentioned types predominate in the process of learning the other methods share. In insight learning here is always an element of conditioning, while in learning with trial and error method. There is always a sort of hindsight learning.

Learning curves (Rate of learning):

Learning can take one of the following curves

a. Rapid initial phase followed by slower phase.

b. Slow start followed by relative good rapid phase.

b. Irregular start followed by relative good improvement then little or no Improvement until he reaches his actual maximum.

FACTORS AFFECTING LEARNING:

I- Personal factors:

***A-* Permanent factors:**

1. **Intelligence:** Generally there is a direct relation between intelligence quotation (IQ) and rate of learning. Special and general abilities in the individuals affect their capacity of 1eing.
2. **Previous learning:** a basic knowledge of a topic may help in learning of many different other topics, e.g. playing one musical instrument help in playing other instruments.
3. **Acquired habits:** Habits of observation and accurate attention, improve learning process.

4. **Physical factors:** Sensory impairment in all forms e.g. blindness, deafness, and motor handicapped persons will interfere with learning.

B- **Temporary factors:**

1. **General health:** e.g. fever may disturb the capacity of learning
2. **Emotional state: e.g. depression or** anxiety will disturb learning.
3. **Motivation:** When we are motivated, we perform or learn better. The motivation to success in the examination gives us the power to study and to learn.

II- Objective factors:

1. **The learned object:** Interesting, well organized, and well introduced subjects will be easily leaned
2. **Method of learning:** Some methods are more effective than others.
3. **External factors (the surrounding circumstances):** e.g. good lighting, adequate ventilation and absence of distracting stimuli.
4. **Trainer's role:** A good trainer should follow certain principles to improve learning:
    - Improving motivation.
    - Explaining the goals.
    - Arranging competition.
    - Rewarding successful one.

Factors affecting learning

A. Personal factors

1. Permanent

- Intelligence
- Previous learning
- Acquired habits
- Physical factors

2. Temporary

- General health
- Emotional state
- Motivation

B. Objective factors

- The learned object
- Method of learning
- External factors (the Surrounding circumstances)
- Trainer's role.

Intelligence

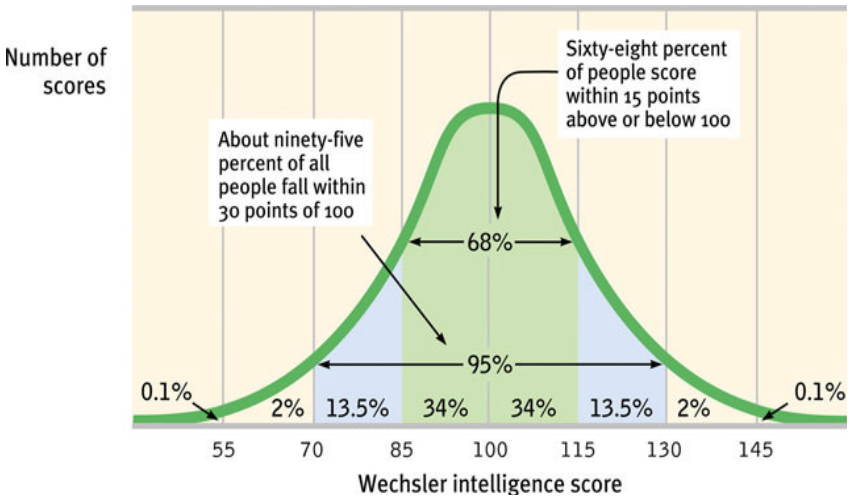
Intelligence tests:

In 1904, Alfred Binet, the originator of intelligence tests, sought to identify children who were performing badly in school and who would benefit from remedial education. He understood intelligence to be a general capacity that described a very wide range of mental tasks. Binet constructed a test that included a broad range of tasks varying in content and difficulty: copying a drawing, repeating a string of digits, understanding a story, arithmetic reasoning, and so on. He realized that someone might do well on one or two of these tasks just by luck or due to some specific experience (perhaps the person had encountered that story before), but he was convinced that only a truly intelligent person would do well on all the tasks in the test.

The test score was computed as a ratio between the child's mental age (the level of development reflected in the test performance) and his chronological age; the ratio was then multiplied by 100 to get the final score (Figure 11.2). This ratio (or *quotient*) was the source of the test's name: The test evaluated the child's "intelligence quotient," or IQ. Other, more recent forms of the test no longer calculate a ratio between mental and chronological age, but they're still called IQ tests.

If you take one of the intelligence tests today, the points you earn for each correct answer are summed. Then the summed score is compared with the scores earned by other people. The average score obtained by people at each age level is the IQ value of 100. Other scores are given IQ values that reflect how far each score deviates from that average of 100. Most people's scores fall in the middle of

the range of possible scores, creating a bell-shaped curve known as the normal distribution. Your intelligence quotient, or IQ score, reflects your relative standing within a population of your age. The Wechsler intelligence Scale is one of the most commonly used tests for assessing intelligence at recent times (figure 1).



Did Binet (and all who came after him) succeed in his aim of creating a test that truly measures intelligence? One way to approach this issue is to find if the tests should allow us to predict how well that person will do in settings that require intelligence. And here the results are promising. This is obviously not a perfect correlation, because we can easily find lower-IQ students who do well in school, and higher-IQ students who do poorly. Still, this correlation is strong enough to indicate that IQ scores do allow us to make predictions about academic success. IQ scores are also good predictors of performance outside the academic world.

Intelligence tests also have a high correlation between measurements of someone's IQ at different ages. So if we know someone's IQ at age 11, we can predict with reasonable accuracy what his IQ will be at age 27. As it turns out, though, there are some exceptions of this apparent stability. For example, a substantial change

in someone's environment can cause a corresponding change in his IQ score.

What is intelligence?

According to Binet, the test measured a singular ability that can apply to virtually any content. In his view, someone's score on the IQ test revealed their general intelligence, a capacity that would provide an advantage on any mental task whether it's solving a puzzle, writing a paper, or learning a new mathematical technique. Many authors have offered an alternative view namely, that there's really no such thing as being intelligent in a general way. Instead, each person's score on the IQ test represents a level of achievement produced by that person's collection of more specific talents, and each talent is relevant to some portions of the test but not others. So person will be strong on the tasks for which he has the relevant talents and somewhat weaker on the tasks that rely on talents he lacks. As a result, each person would have an individualized profile of strengths and weaknesses. If we then represent that profile with a single number—an IQ score—this is actually just a crude summary of the person's abilities because it averages together the things a person is good at and the things they're not.

A statistical method; factor analysis; has been used for studying the interrelations among various subtests of the IQ test. The goal was to discover whether the tests are all influenced by a single, or by distinct factors. Factor analyses confirmed that there's a common element shared by all the components of the IQ test. The various subtests differ in how strongly they rely on this common element, and so some subtests depend heavily on this general factor; other tests depend less on the factor.

But what is this common element? It has been called general intelligence, usually abbreviated with the single letter g. Any individuals with a lot of g have an advantage in every intellectual endeavor; if g is in short supply, the individual will do poorly on a wide range of tasks. However, that g is not the sole determinant of test performance. Instead each subtest depends both on g and on some other abilities that are specific to that particular subtest.

More recent studies have illuminated what the more specialized abilities might be. One specialized ability involves verbal and linguistic skill, and so someone who has a lot of this ability will do well on almost any task that hinges on language skills. A second specialized ability involves quantitative or numerical ability; a third involves spatial or mechanical ability.

On this basis, we can think of intellectual performance as having a hierarchical structure as shown in Figure. Researchers disagree about the details of this hierarchy; but by most accounts, g is at the top of the hierarchy and contributes to virtually all tasks. At the next level down are specialized abilities—language, quantitative, and spatial—and, according to some authors, several more besides. Then at the next level are a large number of even more specific capacities each useful for a narrow and specialized set of tasks.

We now see that both suggestions were correct. Each person has some amount of g, and he draws on that capacity in virtually everything he does. As a result, there is consistency in someone's performance—an overall level of achievement shaped by the person's g. But the consistency isn't perfect, because mental tasks also require more specialized abilities—and each person has each of these to some extent. This is why, in addition to the overall level of consistency,

each person has his own profile of strengths and weaknesses, things he does relatively well and things he does less well.

Alongside of verbal, quantitative, and spatial skills, we can also distinguish two more forms of intelligence: fluid intelligence and crystallized intelligence. These forms of intelligence therefore take their place at the middle level of the hierarchy.

Fluid intelligence refers to the ability to deal with new and unusual problems. Crystallized intelligence, on the other hand, refers to your acquired knowledge. This includes skills useful for dealing with problems similar to those already encountered. Fluid and crystallized intelligence are linked in an obvious way: Someone with a high level of fluid intelligence is likely to be a fast learner and so will easily acquire the skills and knowledge that crystallized intelligence comprises. As a result, someone with a lot of fluid intelligence will end up with a lot of crystallized intelligence.

Crystallized intelligence seems to increase with age. Fluid intelligence, on the other hand, generally reaches its height in early adulthood and then, for most people, declines steadily with age. Similarly, many factors—including alcohol consumption, fatigue, depression, and some forms of brain damage—cause more impairment in tasks requiring fluid intelligence than in those dependent on crystallized intelligence.

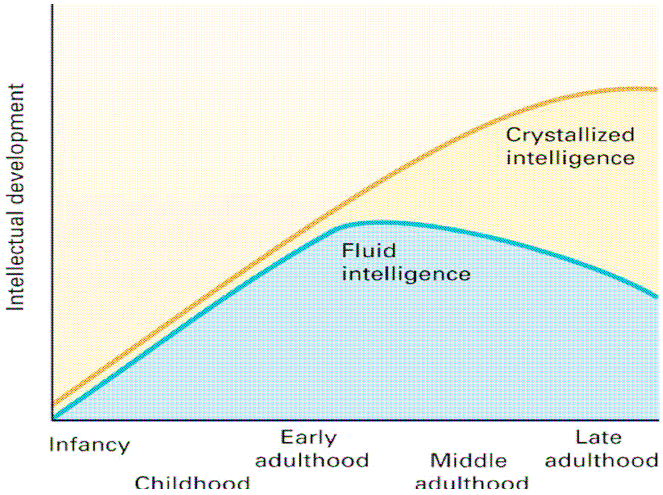


Figure 2: fluid vs. crystallized intelligence.

What are the blocks inside one's brain that gives him a more g, or less?

It seems that intelligence depends on the integrated functioning of many brain sites responsible for cognitive functions including those in the parietal and frontal lobes. One mechanism that contributes to intelligence is simply mental speed. Higher-IQ individuals show faster response times in many tasks. Another contribution to intelligence is working memory capacity—an ability to keep multiple goals in mind, and also an ability to control one's own attention. This capacity may allow the construction of more complex task models.

Intelligence beyond IQ testing:

It seems that there are aspects of intelligence that are not included when we measure intelligence with our conventional intelligence tests. For example, you probably know people who are "street-smart" but not "school-smart. A number of studies have explored these other nonacademic forms of intelligence. The capacities measured by g are surely important, but so are other aspects of intelligence including practical intelligence, and emotional

intelligence. Other authors would make this list even longer formulating the theory of multiple intelligences.

According to Robert Sternberg practical intelligence, is the type of intelligence needed to solve everyday problems through skilled reasoning that relies on tacit knowledge which is the Practical "how-to" knowledge accumulated from everyday experience.

Emotional Intelligence is the ability to understand one's own emotions and others' emotions, and also the ability to control one's emotions when appropriate. Researchers have developed various measures of emotional intelligence, and people who score higher on these measures seem to be more successful in social settings.

Obviously people differ from one another in their intelligence and their talents. But what causes these differences?

Intelligence-test performance is determined by both environmental and genetic factors. Evidence for the role of genetic factors includes the fact that the correlation between the IQs of identical (monozygotic) twins is higher than that for fraternal twins, and also the observation that the correlation between their IQ scores is remarkably high even when identical twins are reared apart. Further evidence for a hereditary contribution comes from adopted children, whose IQs correlate more highly with the IQs of their biological parents than with the IQs of their adoptive parents.

At the same time, however, evidence for environmental effects is provided by increases and decreases in the mean IQ of populations whose cultural or educational level has risen or fallen. Researchers examined the IQ scores of children who were adopted out of horrible environments in which the children had been abused or neglected. After the adoption (when the children were in better environments),

the children's IQ scores were markedly higher especially if the children were adopted into a family with higher socioeconomic status. Environmental effects are also clearly implicated by the worldwide improvement in IQ scores observed over the last few decades.

Group difference in IQ:

In recent years, much interest (and debate) has focused on IQ differences among different groups of individuals including a comparison between men and women, and a comparison between American whites and American blacks. Men and women do not differ in overall IQ, but men on average seem to have a small advantage in some tasks requiring visuospatial reasoning; women on average have a small advantage in some verbal tasks. These differences are certainly fostered by a cultural environment in which boys and girls have different types of experiences and receive types of encouragement.

Several studies have documented a 10 to 15 point difference between average scores of American whites and blacks. This difference does not seem attributable to genetic factors. Part of the difference derives from the poverty and disadvantaged circumstances in which many American blacks live.

Extremes of Intelligence

Giftedness

There have always been people whose abilities and accomplishments outshine others. Giftedness means having above-average intelligence (an IQ of 120 or higher) and/or a superior talent for something. When it comes to programs for the gifted, most school

systems select children who have intellectual superiority and academic aptitude.

Until recently giftedness and emotional distress were thought to go hand in hand. But no relation between giftedness and mental disorders has been found. A number of recent studies support the conclusion *that* gifted people tend to be more mature and have fewer emotional problems than others.

Mental retardation

It is a condition of limited mental ability in which the individual has low IQ, usually below 70 on a traditional intelligence test, and has difficulty adapting to everyday lift figure 3.

DEGREES OF MENTAL RETARDATION

Level	Approximate Intelligence Scores	Percentage of Persons with Retardation	Adaptation to Demands of Life
Mild	50–70	85%	May learn academic skills up to sixth-grade level. Adults may, with assistance, achieve self-supporting social and vocational skills.
Moderate	35–50	10%	May progress to second-grade level academically. Adults may contribute to their own support by laboring in sheltered workshops.
Severe	20–35	3–4%	May learn to talk and to perform simple work tasks under close supervision but are generally unable to profit from vocational training.
Profound	Below 20	1–2%	Require constant aid and supervision.

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Figure 3: degrees of mental retardation.

MOTIVES

Definition: Motivation involves the question of "why" people behave, think, arid feel the way they do. Motivation involves behavior that is energized, directed, and sustained. And motivation determines when a type of behavior will stop. Motivations not only vary in kind but also in intensity.

Researchers have developed a number of different theories to explain motivation. Each individual theory tends to be rather limited in scope. However, by looking at the key ideas behind each theory, you can gain a better understanding of motivation as a whole.

Instinct Theory: Organisms behave as they do because they are following a set of biologically pre-programmed instinctual urges. This theory is too simple to apply to humans. However, inner needs must certainly be part of the equation in understanding our behavior.

Drive Reduction Theory: Organisms prefer the state of homeostasis in which all of their needs are fulfilled. Their "drives," in other words (the need states that propel behavior) must be "reduced." Everyone might have a different definition of homeostasis-perhaps yours is sleeping late on a weekend morning, or just enjoying a relaxing drink. It's great to have your needs met at least some of the time, however, if the theory was true, no one would ever seek out excitement. No one would climb mountain or seek comparable mental challenges.

Arousal Theory: At the opposite pole of drive reduction, arousal theory proposes that we seek to increase, not decrease, our

level of stimulation. We each function according to an optimum level of arousal. Each individual, and each task, has its own peak between arousal that is too low and arousal that is too intense. Once you find your optimum level of arousal, your performance will be both flawless and enjoyable.

Incentive Theory: Our behavior may also be determined by external forces that propel us to do something we otherwise would not. Incentive theory is the basic principle behind marketing. A good marketing strategy will cause you to want something you neither have nor think you need.

Self-Determination Theory: we have two types of motivation: Intrinsic and extrinsic. Intrinsic motivation is what drives us to fulfill our inner potential and interests. Your intrinsic motivation is your desire to express your true self in your behavior, whether it's work or leisure. Extrinsic motivation, by contrast, is your desire to achieve rewards such as money or fame. You can have a combination of intrinsic and extrinsic motivation driving your work-related and other behavior. Being able to express your inner motives and get paid at the same time is a hard combination to beat. The problem for many people is that they feel that their work behavior is controlled by factors outside of their own inner self-determination. It's that feeling of external control that leads to job discontent and stagnation. The remedy to this problem is to find ways to express your autonomy, even if it's only in a few minor ways.

251658240**Self-Actualization Theory:** Maslow proposed that we have a hierarchy of motives in the form of lower-order needs (those instincts and drives) and higher-order needs (total self-expression). After you satisfy your lower-order needs, says the theory, you can self actualize.

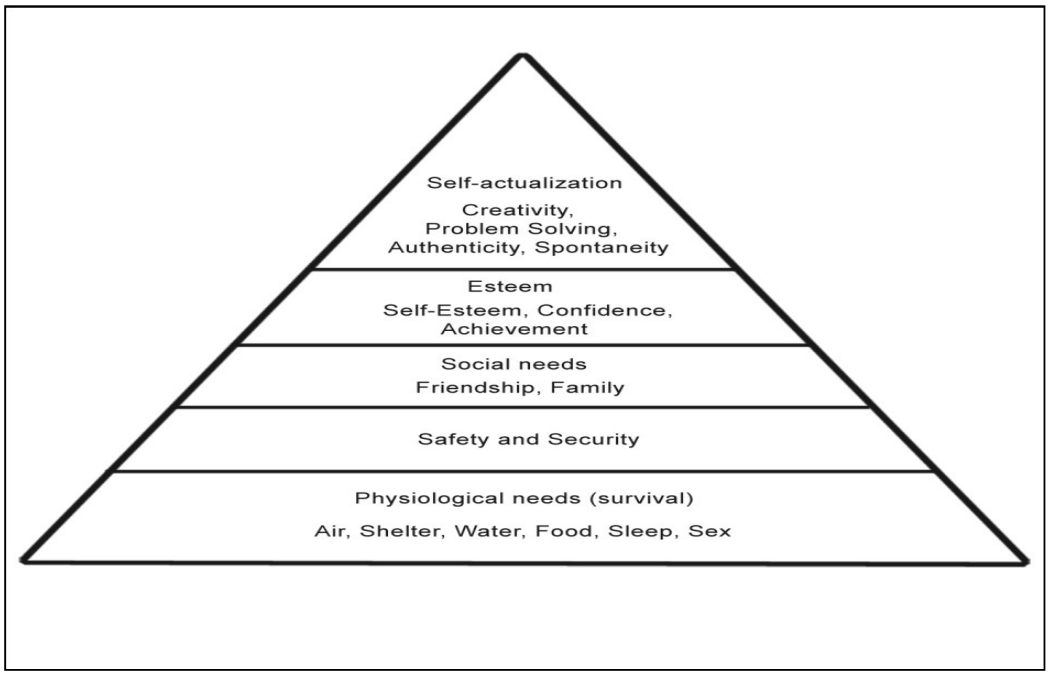

Figure (1) Maslow hierarchy of motives

CLASSIFICATION OF MOTIVES:

Motives can be classified into:-

I- Innate (inherited) or learned (acquired).

II- Conscious or unconscious.

I- Innate or inherited Motives:

To describe a motive as **innate**, it should fulfill these criteria: -

1. **Universality:** for all individuals all over the world of a certain species.

2. **Presence since birth:** This is a good positive criterion but a poor negative one, because absence of a motive at birth (e.g sex) does not mean that it is innate.
3. **Permanency.**

Innate Motives are:

A- Motives serving the internal needs of the organism.

1. ***Organic needs*:** We have hunger, thirst, sex, respiration, and excretion motives. We also have innate motives for work, and for avoiding pain. Each of these motives carried out its job unnoticed, but under certain condition, the manifestation of its function appears e.g. respiration motives in suffocation leads to dyspnea.
2. ***Psychological and social needs:*** Man, being a social animal is equipped by the motive to love and be loved by others. Maternal and paternal motives do not have to be learned. Man needs to participate in social activities and wants to feel that he is a member of a group, that he is needed and accepted by the group. He also strives to attain a distinguished place in his group.

B- Motives for dealing with the environment:

1. Objective needs:

A) Exploration: It includes all forms of motor and sensory activities.

B) Manipulation: Man explores objects by manipulation.

C) Likes and dislikes: Sweets are liked and bitters are disliked innately and just for themselves. The same occur with odors, colors and tones.

2. Emergency needs.

Whenever an emergency occurs in the environment the human being tries to adapt. These emergency arouse certain motives leading to specific activities.

The following emergency motives can be described:

a) Escape motive: When a danger appears, the escape motive is aroused; an emotion of fear is experienced. The motive will come to an end with the disappearance of danger and the appearance of a feeling of security.

b) Combat motive: Prevented from what he wishes a child is likely to burst into some pattern of activity e.g. struggling against those interfering with his liberty.

c) Mastery motive: The individual tries to overcome an obstacle. He engages in trail-and-error behavior seeking for that aim and putting more effort.

Table 1: Illustrating the emergency motives.

Stimulus	**Emotional state**	**Motive**
Danger	Fear	Escape motive
Interference with freedom	Anger	Combat motive
Difficult situation	Detennination	Mastery motive

II- Acquired (learned) motives

These motives include the general or individual socio-cultural attitudes, interests and purpose towards an object, situation or idea.

1. **General social motives:** These are motives shared by the whole society or group of people who would fight for a certain ideology or religion.
2. **Socio-cultural motives:** Here the motives depend on the culture and is education. For example, a butcher's motivation to spend money may be quiet different from that of a professor. The first step a butcher will perform when he gets further more is to obtain a second wife. A professor in the university will buy some books or improve his social living.
3. **Individual social motives:** These are motives which vary in different individuals according to their environment, family, type of job, order of birth, physical constitution.

Conscious and unconscious Motives:

A) Conscious Motives: The individual realize the motives of his behavior.

B) Unconscious Motives: The individual-is unaware of the motives of his behavior which is directed through an unconscious mean& Freud pointed out to several forms of behavior through which unconscious motives are expressed e.g. Slips of the tongue, mistakes in writing, forgetting and losing things. The behavior in such circumstances is determined by the unconscious repressed material (the complex).

Strength of Motives:

A motive may be strong that it overcomes all other similar or opposing motives e.g. biological motives are usually stronger than social or acquired ones. Also the nearer the individual to a goal the stronger is his motivation.

How our motives affect our behavior

Often a motive cannot be fulfilled because of lack of opportunity. In particular, we may never have the opportunity to gratify all our desires for achievement. All of us seem to possess all the human motives, widely varying degree. An individual pattern of from strongest to weakest is a hierarchy of motives. The strength of a motive at any given moment depends on the presence of motive targets, or the people to whom the various motives are directed.

Our perception of our chances of success depends in part on locus of control-or whether we believe success depends on internal factors (our own abilities and efforts) or external factors (such as luck).

Factors that help determine whether we will try to fulfill a motive include:

(a) The strength of the motive (determined by the motive hierarchy and motive targets).

(b) The way we perceive our chances of success.

(c) The incentive value of any action we might take.

(d) The relationship of present to future actions (our judgment of long term consequences).

SELF-ESTEEM

Self-esteem involves the evaluative and affective dimensions of self-concept. Self-esteem is also referred to as self-worth or self-image. What are the consequences of having low self-esteem? Low self-esteem has been implicated in low levels of achievement, depression, and many other adjustment problems. Also, individuals with high self-esteem tend to focus on their strengths, whereas those

with low self-esteem are more likely to dwell on their negative qualities or weaknesses.

There are four ways an Individual's self-esteem can be improved:

1) identifying the causes of low self-esteem.
2) Emotional support and approval.
3) Achievement
4) coping.

Emphasis on achievement fits with *Bandura's* concept of self-efficacy. The straightforward teaching of real skills often results in increased achievement, and thus in enhanced self-esteem. Individuals develop higher self-esteem because they know what tasks are important for achieving goals.

Self-esteem is also increased when individuals face a problem and fry to cope with it rather than avoid it. If coping rather than avoidance prevails, individuals are more likely to face problems realistically, honestly, and non defensively. The converse is true of low self-esteem.

Unfavorable self-evaluations trigger denial, deception, and avoidance in an attempt to disavow that which has already been glimpsed as true. This process leads to self- generated disapproval as a form of feedback to the self about personal adequacy.

Goal Setting and Self-Efficacy:-

The current position in the motivation field is that the self produces thoughts and images but not actions. It is goal setting that produces actions. Goals help us reach our dreams, provide the focus

needed for success, provide the basis for self-discipline, and maintain our interest.

It is often helpful to have both long-term and more immediate goals. *Albert Bandura* (1988) argues that having immediate goals (also called proximal goals or sup goals) can generate self-satisfaction based on personal accomplishment. Such immediate sub goals can provide a continuing source of motivation apart from other super--ordinate goals that often take a long time to accomplish.

For example, an undergraduate student might have a super-ordinate goal of getting into a graduate program. The student can also set more immediate goals such as getting good grades this semester, on the next test, and so on.

Bandura (1994) also stresses that self-efficacy, belief that one has mastery over a situation and the ability to produce positive outcomes, is an important dimension of achievement.

Self-efficacy can help people adhere to behavior change programs, such as quitting smoking, and engage in competent decision making.

As a part of self-efficacy, individuals learn the skills they need to deal with specific situations. For example, people engage in effective public Speaking. Such skills often increase individual's sense of mastery over the situation.

How we provoke motivation:

1- A definite purpose should be provided.

2- The final goal should be vital and near. An intermediate goal should be planned along the way.

3- Confident relations between leaders and subordinators should be established.

4- Equipment and facilities are very essential to maintain provocation of motives and theft continuation with full energy.

5- Elimination of interfering motives.

6- Establishment of fair self competition

Emotion

Emotions are temporary states of the individual; they can be explained in terms of feelings, e.g. joy, anger, or sadness. However, they are actually complex responses produced by the animal or the human being as it reacts with its environment. Some emotional responses are inborn while others are acquired by learning, but in adult human being most are combination of the two. Any emotion has three aspects, sensory, motor and motivational or in another way, emotion can be an experience, a kind of behavior or a motive.

Emotional behavior "expression":

The behaviors of emotion present as some somatic emotional reactions e.g. laughing, smiling, screaming, crying, running and many various facial expressions ….etc. Autonomic responses are also a part of emotion, e.g. the secretion of saliva in the anticipation of food and the secretion of gastric juices in hunger are parasympathetic activities.

Emotional experience "feeling":

People and animal not only 'act' emotional, they 'feel' emotional. People can give verbal reports of such experience e.g. 'afraid', 'mad', 'happy', 'depressed', 'excited'. The patterns and shades of emotional experience make it very difficult to be worked on scientifically or more specifically to understand its physiological basis.

How is emotion experienced?

Emotion has been the subject of different theories, perhaps because it has been so difficult to understand. Five of the most

prominent theories dealing with the physiological mechanisms will be reviewed.

1. **James-Lang theory "visceral":** the point raised here was that first emotional behavior comes and the emotional experience is the result of that response. James said "we are afraid because we run, we don't run because we are afraid". Against this theory the fact that we would have found the same feeling each time we inject adrenaline but experiments show that is not true. Also, emotion remain even when we cut the ascending sensory tracts of the body.
2. **Canon-Brad theory "thalamic":** this theory postulated that the feeling of emotion arises cortically from thalamic processes, at the same time that emotional behavior at the hypothalamic level was released. All what is left now with this theory is the emphasis on hypothalamic expression of emotion.
3. **Lindsey's activation theory "reticular" :**accepted the hypothalamus as the primary source of organizing expression of emotion, but also stressed the fact that the reticular system must be active to have any significant expressive behavior. He regarded the reticular system as the source of general excitement or tension with which particular forms of emotion might be expressed through the hypothalamus. Thus, the activation theory integrates the reticular system and the behavioral arousal and the activation accompanying its activity into the picture of brain mechanisms of emotion.
4. **Papez-Maclean theory "physiological":** Papez proposed a theory of emotion that involved many structures of the brain. They included the hippocampus fornix, the mamillary bodies of

the hypothalamus, and cingulate gyrus; the structures now included in the limbic system. So that the limbic system as a whole is responsible for the mediation of emotional experience and expression.

5. **Cognition and emotion:** postulated that when we experience an event or action, we interpret the situation. The interpretation is known as cognitive appraisal, e.g. 'I won the match I am happy' or 'I failed in the exam and I am depressed'. Thus cognitive appraisal is responsible for differentiating the emotions. Unlike autonomic arousal, the beliefs resulting from appraisal are rich enough to distinguish among different kinds of feelings.

To sum up then:

- physiological arousal contributes to the intensity of emotional experience
- cognitive appraisals differentiate emotional experiences

Physiological changes associated with emotions:

1. **Autonomic nervous system manifestations:**

   a. **Emotions and GIT**: with anger there is congestion of the mucous membrane, increased secretion and increased mobility. With depression there is pallor of the mucous membrane, decrease in secretion and decrease in mobility.

   b. **Emotions and smooth muscles:** according to whether sympathetic or parasympathetic system is stimulated we get either relaxation or contraction.

   c. **Emotions and cardiovascular system:** on exposure to stress there is increase in the cardiac output, blood pressure and heart rate.

d. **Emotions and renal functions:** in state of tension there is decrease in water and salt retention. In state of excitement there is increase diuresis associated with increased sodium and potassium ions. In state of depression there is retention of water and intracellular sodium. These effects are mediated through the hypothalamus or posterior pituitary (antidiuretic hormone) and mineralocorticoids.

e. **Emotions and blood changes:** in response to fear and anger there is increase in blood viscosity, and decrease in clotting and prothrombin time. It is well known that coronary thrombosis of the heart is liable to be precipitated by severe anxiety.

f. **Emotions and endocrine system:** in response to stress there is increase in the secretion of ACTH, which stimulates the hypothalamo-hypophyseal adrenal axis and leads to the secretion of hydrocortisone. This again leads to increase in the secretion of adrenaline via the suprarenal medulla.

g. **Emotions and respiratory functions:** anxiety leads to increase respiratory rate which may lead to hyperventilation "air hunger". Depression leads to decrease in rate of respiration. Bronchospasm can develop as a result of stress.

h. **Others:** stress leads to increase in sweat glands activity, decrease in salivary secretion and dilation of pupils.

Application of the autonomic manifestations of emotions in the field of psychiatry:

- lie detector
- psychophysiological measurements

- biofeedback training

2. **Neuromuscular manifestations:** increased motor tension leads to prolonged isometric contraction phase. This may lead to pain, headache, ..etc
3. **The role of the brain:** these activities of the autonomic system nervous system are triggered by activity in certain brain regions including the hypothalamus and parts of the limbic system. The cerebral cortex "frontal lobe" is responsible for the cognitive integrative part of emotions.

   a. **The hypothalamus:** it is responsible for emotional expression since it controls the autonomic through its connection with the pituitary via the hypothalamic-hypophysial adrenal axis. The hypothalamus is also involved in many motivational states. Strong emotional reactions can be produced by hypothalamic stimulation including reactions that lead to attacking and killing.

      Lesion of the medial part of the hypothalamus leads to shame rage reactions.

      Lesion of the posterior part of the hypothalamus leads to abolition of emotional reaction.

   b. **Limbic system:** removal of the limbic system from higher control leads to exaggerated pleasure seeking emotional behavior. Removal of the amygdala leads to placidity.

   c. **Cerebral cortex "frontal lobe":** its role is inhibitory, that is, the limbic system and hypothalamus seem to act as the sources for extreme and poorly directed emotional reactions. It is responsible for the cognitive aspect of emotional

response i.e. the interpretation and memory of emotional events.

Lesions in the frontal lobe leads to:

- silly behavior
- euphoria and emotional incontinence
- excessive sexual demands
- loss of feelings of fear and anxiety

The emotional reactions tend to be processed more in the right hemisphere.

Disturbances of emotions:

1. **Pleasant emotions:**
   - Euphoria: a subjective feeling of well-being. May occur with mania, hypomania, frontal lobe lesion, multiple sclerosis.
   - Elation: enjoyment and self-confidence that is radiating and infective. This occurs mainly in mania and hypomania.
   - Ecstasy: sense of tranquility and power associated with a sense of internal peace. It occurs in epilepsy, hysteria, schizophrenia, affective disorders; however one can reach also in religious settings.
2. **Unpleasant emotions:**
   - Grief: sadness secondary to loss of a love object
   - Depression: this is a feeling of unhappiness, hopelessness, helplessness associated with guilt feelings, lack of appetite, lack of concentration and insomnia. It occurs in affective

disorders "depression" and other physical and mental disorders.

- Anxiety: a feeling of apprehension and fear associated with increased activity of autonomic nervous system, it occurs in anxiety disorders, thyrotoxicosis, hypoglycemia, and may be associated also with other physical and mental disorders.

3. **Inadequate or flat emotions:**

- emotional dullness
- apathy
- indifference

The patient does not respond to any emotional arousal and will not seem concerned with any sad or happy-event taking place.

4. **Incongruous or inappropriate emotions:** this is disharmony in the emotion like laughing in sad situations or crying with no apparent reason. It occurs in schizophrenia and some physical diseases.
5. **Depersonalisation:** an unpleasant awareness at changes in oneself associated with a sense of change in the environment "derealization". It occurs in anxiety, hysteria, depression, and some physical diseases.
6. **Psychosomatic disorders:** if emotional states are exaggerated or prolonged, they may affect various organs and produce lesions in those organs like gastric ulcer or skin diseases.

Stress

It is not uncommon to hear patients say that they feel that their illness was brought about by stress in their life, what they usually mean by this is that they have been under a certain amount of pressure at home, or at work, and that this has affected them mentally or physically.

The nature of stress:

There are many definitions of stress, a modified one is that stress is an unpleasant, unwelcomed stimulus that challenges the power of adaptability of the individual.

- **Stress as a stimulus:** a simple mechanistic explanation that tend to view stress as the yielding point of the individual that if exceeded damage will result. However, one should view here also that there are large variations in the effects of environmental stressors and there are large individual differences in responding to such stressors i.e. some people are disrupted after quite low levels of stress, while others have much higher yielding point and there are also variations within the same individual.
- **Stress as a response:** described here three stage process referred to as the general adaptation syndrome "GAS". It involves an initial alarm, followed by a resistance stage, which represents functional recovery to a level superior to the pre-stress state. But if the stress continues this will result in the final stage of exhaustion, in which there is a depletion and breakdown of the recovery processes that are activated in the first two stages.

- **Stress as a perceived threat:** here stress shows when the individual perceives a certain situation as threatening.

Physiological responses to stress:

The physiological responses that prepare the individual to deal with a perceived threat "the emergency, fight or flight reaction" are regulated by the autonomic nervous system under the control of the hypothalamus. The hypothalamus also signals the pituitary gland to secrete adrenocorticotrophic hormone "ACTH", which activates the release of numerous other hormones that play a role in the body's adjustment to emergencies.

Psychological responses to stress:

The reactions to stress involve the following stages:

- An initial alarm and shock stage which result in the endocrine and physiological changes. The individual may feel anxious or threatened
- Coping strategies are activated as the individual attempts to find a way of dealing with the subjectively harmful or unpleasant emotion.
- If these strategies are successful the alarm reaction and the anxiety state will disappear.
- If these strategies fall and the stressor continues to affect behavior a range of psychological reactions including depression and withdrawal may occur.

Now how would develop ways to adapt to a stressful situations??

Lazarus 1976 identified two broad categories of coping:

- An actual behavior which attempts to change the individual's unsatisfactory relationship with his environment. Foe example by escaping from stress or prior preparation for it i.e. increasing one's skills, knowledge, or involve thinking through various aspects of stress situation.
- Palliative coping processes: which means softening the impact of stressor once it has occurred. Some mechanisms are like denial or intellectualization and they have an analgesic function. There are also non behavioral palliative responses like relaxation technique.

Factors mediating the response to stress:

- **Prior experience:** infantile stimulation produces various advantages in later adaptation to stressful environments.
- **Information**: will facilitate the adaptive reactions to stress, e.g. a preparatory information prior to a surgical operation will reduce operative pain and aid the recovery process.
- **Individual differences:** there is evidence that individuals who see themselves as having control over their environment are less likely to be emotionally destructed by increasing stress.

- **Social support**: plays an important role in early emotional and social development, which in turn can influence later behavior.

Stress and illness:

It is noted that the body's attempts to adapt to the continued presence of a stress or deplete the body resources and make it vulnerable to illness.

Chronic stress can lead to such physical disorders.

Psychosomatic disorders: are physical disorders in which emotions are believed to play a central role, e.g. GIT: peptic ulcer, CVS: hypertension and coronary heart disease, respiratory system, bronchial sthma…etc.

Defense Mechanisms

Defense mechanisms are described by Freud as psychological tools or processes "often unconscious", through which the person attempts to resolve conflicts between his different parts or state of personality and between oneself and external world.

Goals of the defensive mechanism

1. Adjustment to the environment
2. Self-defense
3. Avoiding psychic pain
4. Reduction of inner tension
5. Overcoming obstacles
6. Achievement of certain goals

Types of defense mechanisms:

1. **conscious defense mechanisms:** when the situation is at conscious level, we usually restore to direct coping. We utilize rational thinking, will, effort, and determination e.g. removal of the interfering object; changing the way to reach or approach the same goal; changing the goal itself and choosing a substitute; making a compromise; compensation.
2. **unconscious defense mechanisms:** if the effort required to face a problem at the conscious level is beyond the capacity of the individual, or one can not face reality or the usage of conscious defense mechanisms, he may resort involuntarily to unconscious defense mechanisms. These mechanisms are not pathological they are balancing devices to preserve our inner harmony and allow us to adapt to threatening experiences with the minimum of disturbance.

The most important of these mechanisms:

1. **Repression:** is the basic operation for all other mechanisms and the most widely used mental mechanism. It is the involuntary and automatic transformation of ideas and impulses from conscious awareness into the unconscious, where they are not ordinarily available to voluntary recall. It is the automatic forgetting for distasteful or intolerable ideas or needs. The thoughts are lost because they are too painful to remember. A very similar mental process is called dissociation and is seen in its most dramatic form in hysterical loss of memory "dissociative amnesia".
2. **Rationalization:** here the real explanation of the motives and behavior that follows is concealed, and a false rational explanation

is given e.g. failure in the exam is explained by prejudice from the examiner.

3. **Reaction formation:** is to show the opposite attitudes and feelings to those of which one disapproved and possesses at unconscious level e.g. a mother may over indulge or become overprotective to a child whom she rejected.
4. **Projection:** here the person disguises his own unacceptable motives by ascribing them to other people. A man who is disgusted by minor expressions of sexual behavior in himself may be constantly seeing sexual meaning in other peoi behavior.
5. **Fantasy:** is an imaginary sequence of events which act to resolve emotional conflict by affording unreal substitute "in imagination or day dreaming". When indulgence in fantasy becomes uncontrollable and marked enough to interfere with productivity of the person the mechanism becomes pathological.
6. **Sublimation:** Freud believed that a frustrated drive such as the sexual drive could be diverted to provide energy for other creative activities such as art, music, and literature. It is regarded as the most healthy outward expression.
7. **Regression:** an attempt to escape from stress by regression to a stage of development that is considered more protective where the patient van feel dependent e.g. a child who is jealous from his younger brother would develop nocturnal enuresis "regression to infancy where no control of urination".
8. **Denial:** when an external reality is too unpleasant to face, an individual may deny that it exists. The parents of a fatally ill child

may refuse to admit that anything is seriously wrong even though they are fully informed of the diagnosis and expected outcome.

9. **Displacement:** the emotional feeling here is transformed from its actual object to another object e.g. the workman who was insulted by his boss goes back home and fight with his wife.

10. **Compensation:** a handicapped person who is well aware of his handicap may compensate by overcoming it and becoming more than usually efficient in that very skill. A man with a slight stutter may strive to overcome this by means of practice and public speaking and may end up as a great debater or orator. If it is impossible to master the handicap, a person may try to be superior in other directions and so compensate for his sense of defect. Thus a cripple may make it his business to surpass at intellectual activities because he can not be an athlete.

11. **Identjfjcatjon:** it is an essential mechanism for our growth because we grow through identification with our parents and significant figures in our life. The young boy may identify himself with his father or even an uncle and by that he learns how to behave in a masculine way.

12. **Introjectjon:** it is the mechanism by which loved or hated external objects is symbolically taken within one self it is the reserve of projection. It plays a major role in early development, and personality development.

13. **idealization:** a person or an object is overvalued and emotionally aggrandized. The unaccepted aspects of the idealized object is eliminated e.g. in love relations and in patient-therapist relationships the patient tend to aggrandize his doctor.

Frustration

Definition: An emotional state that appears whenever an obstacle interferes with the satisfaction of a desire, need, goal, expectation or action.

Causes of frustration in general:

1. Physical environment: as bad weather and floods
2. Social factors: any society has its prohibitions and restrictions on its members. Other people sometimes also may act as social obstacle.
3. Personal factors: within the individual's own deficiencies or limitations.
4. Conflicts: a person may take a decision to solve a conflict by avoidance of positive goal. He will be frustrated regarding unfulfillment of the positive goal.

Reaction to frustration:

1. **Restlessness and tension:** increase in tension and level of excitement, with blushing, clinching fists, nail-biting, smoking, and gum-chewing occurs when adults are blocked and frustrated.
2. **Aggression**: feelings of anger that may lead destructiveness and hostile attacks. Aggression may take direct or displaced form.
    - direct aggression: expressed directly towards the individual or object that is the source of frustration
    - displaced aggression: aggressive action against other person or object rather than against the actual cause of

frustration. A person who is frustrated at work may take out this unexpressed aggression on his family.

3. **Apathy:** withdrawal and escape
4. **Fantasy:** when problems become too much for us we sometimes seek the solution by escaping to a dream world, the solution based on fantasy rather than reality.
5. **Fixation and stereotype:** tendency to exhibit repetitive, fixed behavior.
6. **Regression:** return to more primitive modes of behavior characterizing a younger age. The individual may attempt to return to a period of past security, or seeks the love and affection he used to get when he was younger.
7. **Anxiety:** the unpleasant emotion characterized by the terms worry, tension and apprehension, that we all experience at a time in varying degrees. Freud differentiated between; objective anxiety which is a realistic response to perceived danger in the environment and neurotic anxiety derived from the unconscious within the individual, since the conflict was unconscious the person was not aware of the reason for his anxiety.
8. **Physiological responses**: high blood pressure, asthma, increase pulse and respiratory rate, and others.

What are the factors that explain the different reactions to frustration?

1. **Previous learning:** being exposed to the same frustration before teach you satisfactory ways of responding to factors that would interfere with your goals.

2. **Motive strength:** the higher the drive beyond your goal the more intense the reaction to its blockage will be
3. **The specific situation:** the more you can avoid the exposure to the frustrating situation the less your reaction will be.
4. **Frustration tolerance:** individual differences here are observed. Some show complete disturbance and confusion under stress and others can perform quietly and adequately under stress for long periods of time.

AGGRESSION

Definition: - Aggression is any form of behavior directed toward the goal of harming or injuring another person (which implies the intent to do harm) who is motivated, to avoid such treatment .The Term might be applied to aggressive actions (behavior) or, to aggressive feelings or aggressive thought intentions or motives.

Theories of Aggression: -

1. **Aggression as an instinctive behavior -** Some authors said that human share with other organisms in fighting instincts.

2. **Aggression as a learned social behavior: -**

Studies suggested that aggressive behavior arise from learned past experience and a wide range of external situational factors.

3. **Aggression and neurobiological factors –**

- Certain group of chronic aggressive persons has organic brain damage. Brain neurotransmitters are generally involved in aggression as dopamine, which seems to facilitate aggression, while, norepinephrine and serotonin appear to inhibit it.

4. **Genetic factors:** Researches emphasized the influence of XYY syndrome on aggression.

Determinant of aggression

1. **Social Determinant**

- **Frustration: -** whether frustration increases *or* fail to enhance overt aggression depend on:

- Intense frustration increases aggression while mild or moderate frustration may not enhance it.
- When frustration is perceived as illegitimate it facilitates aggression.
- Directed provocation by others (physical or verbal abuse) often elicits aggressive actions.

- **Exposure to aggressive models: -** e.g. exposure to television violence.

2. <u>Environmental determinant</u>

Air pollution:-

Exposure to noxious odors may increase personal irritability, therefore, aggression but only to a point.

Noise:

Persons exposed to loud irritating noises make stronger assaults against others than do persons who are not exposed such environmental conditions.

3. <u>Situational determinant: -</u>

Heightened physiological arousal: - e.g. participation in competitive activities

Mechanism of violence

Conflict aroused by interpersonal environmental stresses	**Chemical disinhibiting e.g. by large doses of alcohol, barbiturates or commercial solvents**
↓	↓
↑Aggressive impulse	**↓Control**
↓↓	↓
Organic or neurological Impairment	**Intra-psychic fragility (e.g. florid psychosis)**

Any conditions that produce increased aggressive impulses in the context of diminished control may produce violent acts"

Personality

Definition: - It is defined as the totality of the cognitive, affective and behavioral traits that characterize the person in day to day living under ordinary condition. It is relatively stable and predictable.

Integrated personality is one in which the several previous traits and interests and attitudes are combined in an effective harmonious unity that characterize a mature adult.

Factors effecting personality development:-

"Heredity and environmental factors contribute to the formation of personality"

1- **Biological factors: -**They include general health, genetic, biochemical and endocrinal factors.

2- **Geographical factors:** It is assumed that there is different personality traits in different parts of the world e.g. French and Europeans are emotionally inhibited American is impulsive....

3- **Social factors:**

e.g. -overcautious, overprotective parents develop a dependent child.

- Hard punishing parents develop a negativistic or aggressive child.
- Difference in first child than others and in the only child.

4- **Prenatal effects on personality**

e.g. stressful pregnancy leads to a timid child lacking actual assertiveness.

Development in describing personality:

A- Kretschmer four type of body build:

1- Pyknic "short and fat": he said they are related to manic depressive disorders.

2- Asthenic "tall and thin": He said they are prone to schizophrenia

3- Athletic "Intermediate and muscular". He said they are prone to epilepsy.

4- Dysplastic "incongruous mixture of previous type"

B- Carl Jung divided personality into introverted and extroverted types:-

Difference between introverts and extroverts

Object relationship = interpersonal relationship	**Introverts**	**Extroverts**
	-Keep a definite distance from others **(controlled)** -Approach objects cautiously **(careful)** -Tend not to change his attitude for a long time **(rigid)** -Deal with objects in a relatively personal way **(expedient)**	-Readily relates to whatever object **(outgoing)** -Ready to shift from one to another **(easygoing)** -Has less lasting fixed relation
Characterization of thinking	Ideas are deep, stiff, more personal and difficult to change **(thoughtful, rigid)**	Ideas clear, available, negotiable and malleable **(responsive, talkative)**
Temperament (basic mood)	-He tends to experience deep reactions with less profound expression **(Inhibited emotion).** -Even tempered **(reserved, sober).** -**Pessimistic.**	Expresses his emotion and show changes in emotion in an overt frank way **(open emotion)** -Touchy excitable, changeable (**impulsive)** -**Optimistic.**
Globally	Limited relation - shy - sensitive - thinker	Numerous relation ,daring ,doer, easygoing

C- Trait theory of personality (Eysenck and Eysenck,1975)

They assumed that a personality can be described by its position on a number of continuous dimensions or scales e.g.

Introversion- extroversion dimension, unsuitability (Neuroticism) - suitability dimension ,Psychoticism -normality dimension.

****Description of personality is usually given in terms of traits:**

Traits: Is some particular type of behavior, which characterizes the individual in a wide range of his activities and fairly consistent over a period of time. **Trait** refers to any characteristics in which one individual differs from another in a relatively permanent consistent way".

Critics to trait approach have insisted that each personality is totally unique; however it is a sort of generalization and concept formation, which is accepted.

Methods for assessing personality traits:

(1) Personality inventory: The person describes himself by answering questions about his attitudes, feelings and behaviors: E.g. - Eysenck personality inventory:- In introversion - extroversion dimension, it is designed to measure a single dimension of personality

- Minnesota Multiphasic Personality Inventory MMPI. It is used to aid clinicians in the diagnosis of abnormal personality types.

(2) **Projective techniques*:*** They use the psychoanalytic approach to understand the individual personality. A projective test presents an ambiguous stimulus to which an individual may respond as he wishes e.g. Rorschach test, Thematic Apperception Test (TAT).

Personality disorders

Definition: There is evidence that the individual's characteristic and enduring pattern of inner experience and behavior as a whole deviate markedly from the culturally expected and

accepted range (or norms). Such deviation must be in **more than one of the following areas:**

1. **Cognition** (which means the way of perceiving and interpreting the things, people and events; forming an attitude and images of self and others)
2. **Affectivity** (which means the range intensity and appropriateness of emotional arousal and response).
3. **Control over impulses and gratification of needs.**
4. **Manner of relating to others and handling interpersonal situations.**

- These deviations must manifest itself pervasively as inflexible, maladaptive or dysfunctional. Across a broad range of personal or social situations (i.e. not being limited to one specific "triggering" stimulus or situation.
  - These deviation result in personal distress" or adverse impact on the social environment.
  - The deviation is stable and of long duration having its onset in the childhood or adolescence"

N.B. the personality disorder symptoms are:

1) alloplastic: it means it is capable of adapting and altering the external environment
2) Ego-syntonic: it means it is acceptable to the ego. So, those persons with personality disorder do not feel anxiety about maladaptive behavior and they acknowledge pain from what society perceive as their symptoms. So they are unmotivated to treatment.

Classification of personality disorders (PD)

Personality disorders are classified into:-

***Cluster* A:** persons with these disorders are odd and eccentric.

It includes: Paranoid PD, Schizoid PD, and Schizotypal PD

Cluster B*:* persons with those PDs appear dramatic emotional and erratic

It includes antisocial PD, Border line PD, Histrionic PD, Narcissistic PD

Cluster C: persons with those PDs appear o be anxious or fearful. It includes*:*- avoidant PD, dependent PD, Obsessive - compulsive PD

Others:- passive aggressive PD, Depressive PD

1- Paranoid PD: It is characterized by:

1- *Suspiciousness*.
2- *Sensitivity*.
3- *Excessive self importance*.
4- *Externalize emotion* and may appear to be unemotional with restricted affect. It appears as serious and humorless

***2- Schizoid* PD:** It is characterized by:

1- *Cold affect* or flattened affect
2- *Unintentional disregard to social norms*.
3- *No activity provides pleasure*.
4- *Poor object relation* as no desire for any close friends or confiding relationship (or only one).
5- *Self absorbed and excessive day dreaming.*

***3*- Schizo-typal PD (now with schizophrenic Disorder)**

It is cbaracterized by: -

1- *Inappropriate odd affect* which appear as excessive social anxiety not decrease with familiarity

2- *Inappropriate odd eccentric behavior.*

3- *Inappropriate odd eccentric thinking and cognition as* odd belief or magical thinking which influence behavior

***4*- Dissocial (antisocial) PD**

It is characterized by: -

1- *Failure to make sustained loving relationship and irresponsibility*.

2- *Impulsivity and low frustration. Inipulsivity* appears in failure to plan ahead and reckless regard to safety of self or others.

3- *Lack of guilt feeling*.

5- Histrionic PD

It is characterized by: -

1. *Self-dramatization and exaggeration of expression of emotion* which appear in the style of speech which is impressionistic, lack in details.
2. *Shallow and labile affectivity: and appear as* rapid shift of affect.
3. *Attention seeking*.
4. *Suggestibility*

***6-* Emotionally unstable PD**

a. ***impulsive type:***

1- Impulsivity.

2- The *need for immediate gratification.*

3- Sudden unrestrained outpouring of anger.

4- Unstable, capricious mood.

b. ***Borderline PD:*** -

"It is a pervasive pattern of instability of interpersonal relationship, self image identity disturbances) and affect and marked impulsivity by early adulthood and present in a variety of context"

1. Criteria in impulsive PD.
2. Identity disturbances which appear in: - disturbances in and uncertainty about self-image and self-concept and aims
3. Disturbed relationship: and appear as liability to become involved in intense and unstable relationships due to dependency and hostility and characteristic alternating between extreme of idealization and devaluation. These lead to emotional crises.
4. Mood changes

NB: These may be transient stress related paranoid ideation with severe dissociative symptoms.

***7- Anankastic PD*= obsessive-compulsive PD**

"It is a pervasive pattern of preoccupation with orderliness, perfectionism and mental and inter personal control at the expense of flexibility openness and efficiency"

1- Lack of adaptability to new problems.

2- *Overly reliable: - as* inhibiting perfectionism that interferes with task completion and excessive over conscientiousness and inflexible about morality ethics and values not accounted for cultural or religious identifications.

3- *Fear of making mistakes*

4- *Sensitivity to criticism.*

5- *Constricted affect.*

8- Anxious PD (avoidance PD):

1. *Social inhibition and hypersensitivity to negative devaluation.* May appear as restraint within intimate relationships because of fear of being shamed or ridiculed.
2. *Feeling of inadequacy: - may be as* belief that oneself is socially inept, personally unappealing or inferior to other so lack of self-confidence and certainty and excessive preoccupation with being criticized or rejected in social situation

9- Dependent PD:

"Lack of self-confidence associated with pervasive excessive need to be taken care of and to get others his responsibilities". It may manifested by difficulty in initiating or doing things on his or her own (because of lack of self-confidence and in judgment rather than due to lack of motivation).

10- Narcissistic PD:

- Exaggerated self-importance with fragile self- esteem and appear as a grandiose sense of self- importance.
- Arrogant haughty behavior and attitude.

- Lack of empathy.

11- Passive Aggressive PD:

They express aggression by a passive way: - e.g. Avoid obligations by claiming to have forgotten and deliberately slow or poor work on tasks that the individual really does not want to do.

12- Depressive PD:

They are pessimistic, anhedonic, duty-bound self- doubting and chronically unhappy.

Akiskal criteria: -

1. Quite, introverted, critical to others and hard to please.
2. Passive, nonassertive.
3. Gloomy, pessimistic, Serious & incapable of fbn.
4. Self critical, self reproaching, self-derogatory, self-disciplined.
5. Conscientious, responsible, self-disciplined.
6. Preoccupied with *negative events,* feeling of inadequacy and personal shortcomings.