Theories in mental health nursing:

A. Neurobiological theories.

B. Psychosocial theories

LEARNING OBJECTIVES

After reading this lecture, the learners should be able to:

1. Explain the basic beliefs and approaches of the main psychosocial theories.
2. Identify the psychosocial theory on which each treatment strategy is based.
3. Identify how several of the theoretical perspectives have influenced current nursing practice.

A.

Neurobiologic Theories

1. THE NERVOUS SYSTEM
2. Neurotransmitters and Receptor:
3. Genetics and Heredity:
4. Stress and the Immune System (Psychoimmunology):
5. Infection as a Possible Cause:

1. The Nervous System and How It Works

- The CNS comprises the brain, the spinal cord, and associated nerves that control voluntary acts.
- Structurally, the brain consists of the cerebrum, cerebellum, brain stem, and limbic system.

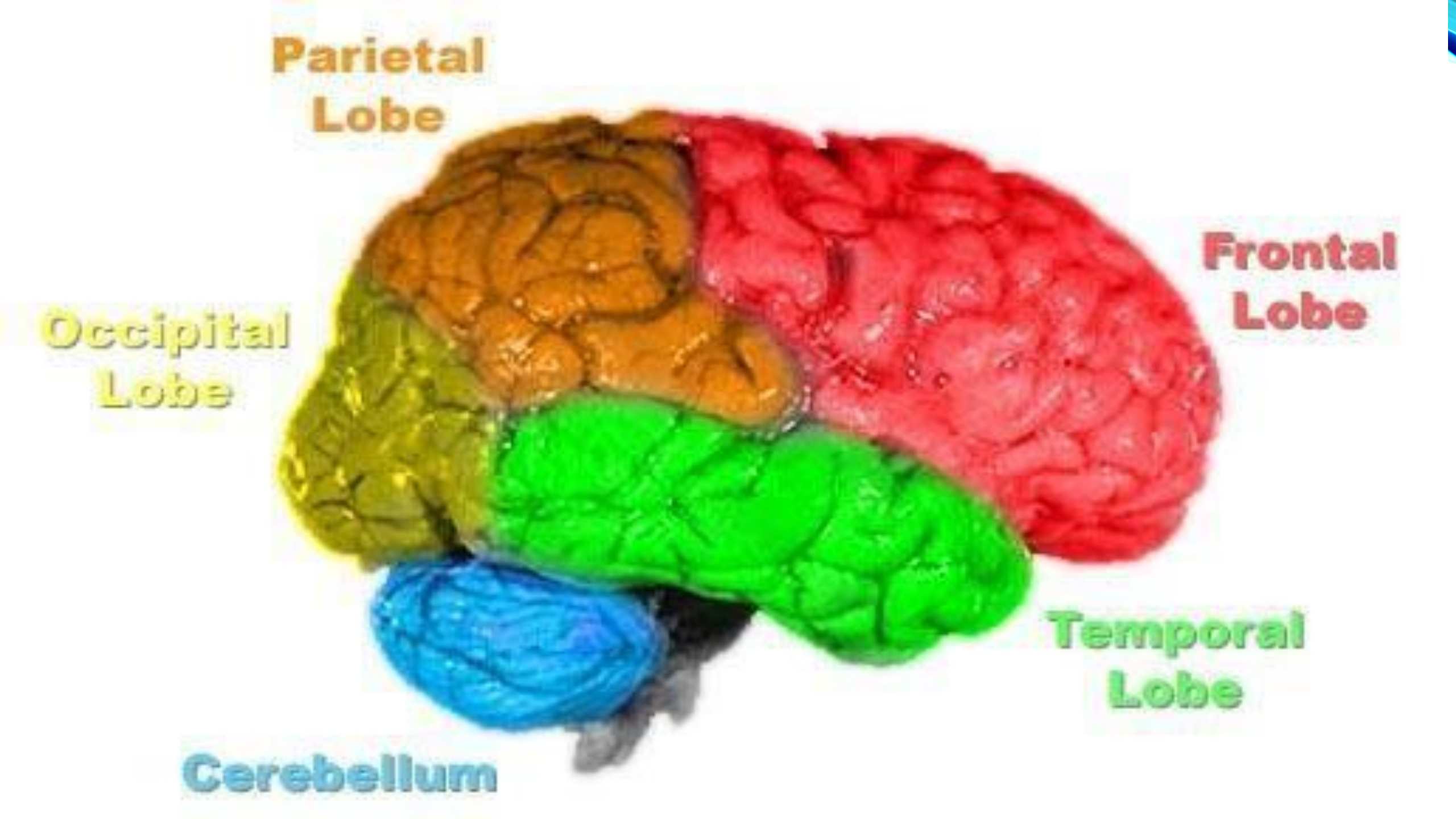
1. Cerebrum

- The cerebrum is divided into two hemispheres; all lobes and structures are found in both halves, which is located between the hemispheres.
- The left hemisphere controls the right side of the body and is the center for logical reasoning and analytic functions such as reading, writing, and mathematical tasks.
- The right hemisphere controls the left side of the body and is the center for creative thinking, intuition, and artistic abilities.

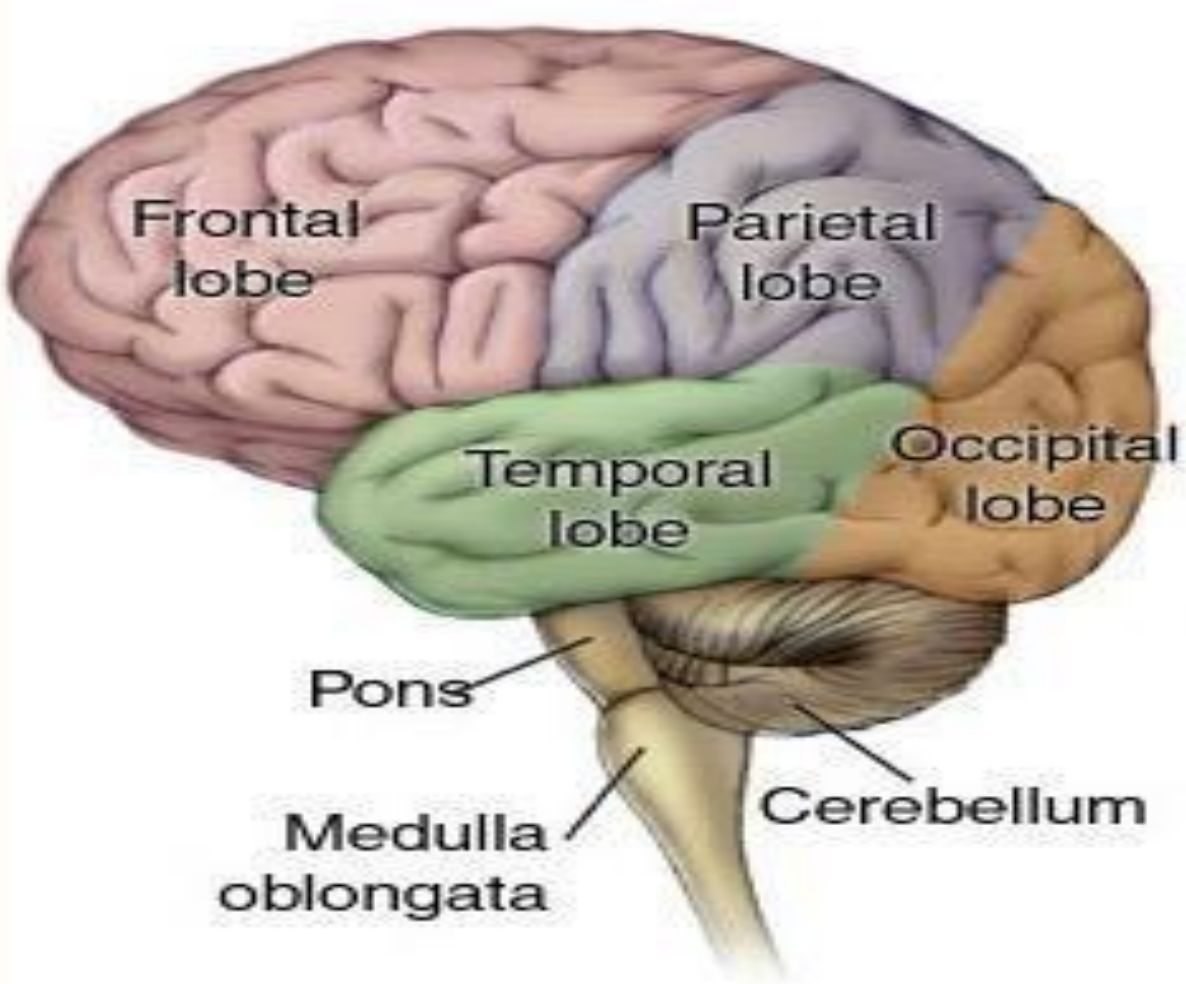
1. Cerebrum

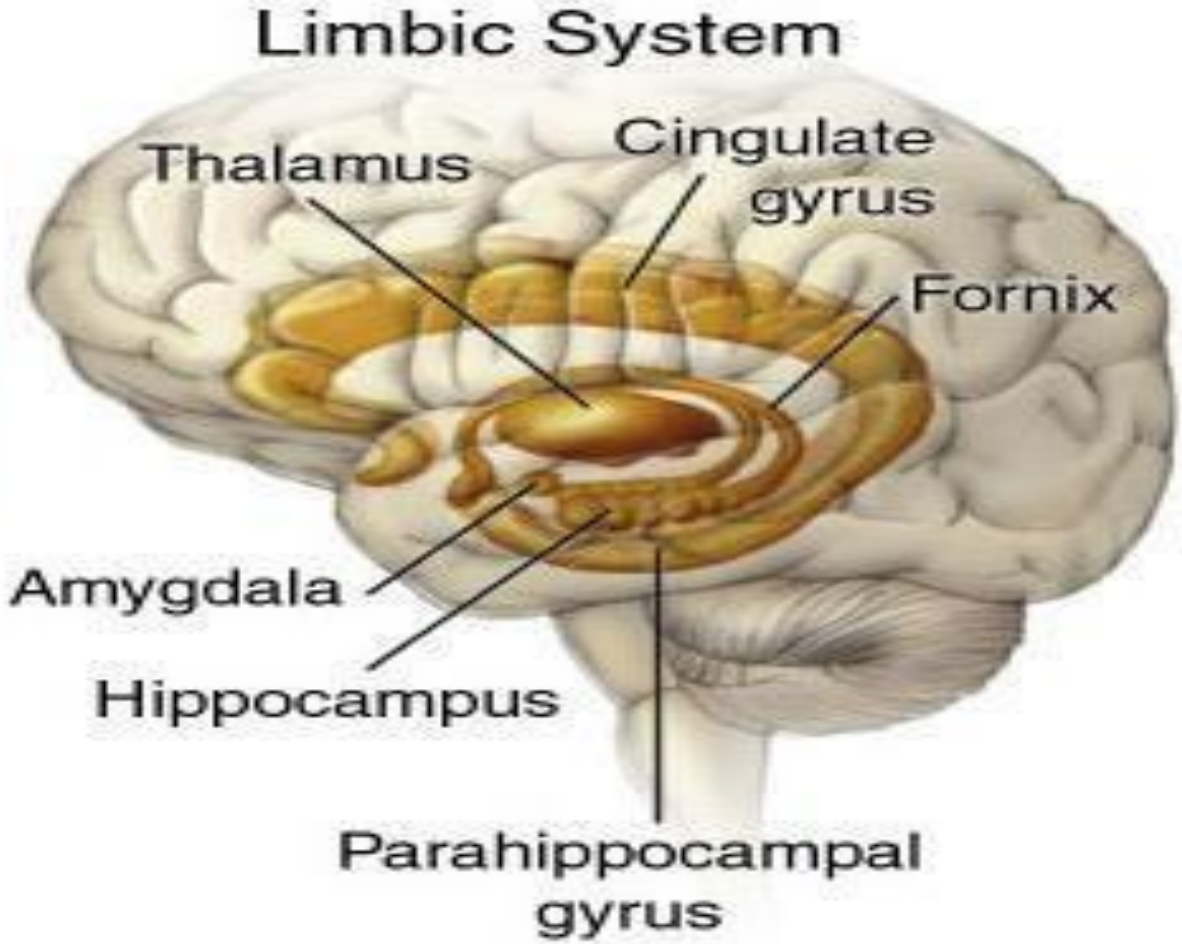
- **A-The cerebrum:** composed 2 cerebral hemispheres, each hemisphere contains four lobes.

1. Frontal lobe.
2. Temporal lobe.
3. Parietal lobe.
4. Occipital lobe


Parietal Lobe
Occipital Lobe
Frontal Lobe
Temporal Lobe
Cerebellum

Anatomy of the Brain





1-Frontal lobe: The frontal lobes control the organization of thought, body movement, memories, emotions, and moral behavior. The integration of all this information regulates arousal, focuses attention, and enables problem-solving and decision-making.

Abnormalities in the frontal lobes are associated with schizophrenia, attention-deficit/hyperactivity disorder (ADHD), and dementia.

3-Parietal lobe: responsible The parietal lobes interpret sensations of taste and touch and assist in spatial orientation.

- Dysfunction leads to impaired sensory functions.

E.g. an individual would not be able to feel sensations of touch.

3-Temporal lobe: The temporal lobes are centers for the senses of smell and hearing and for memory and emotional expression.

4-Occipital lobe: The occipital lobes assist in coordinating language generation and visual interpretation, such as depth perception.

2. Cerebellum

- The cerebellum is located below the cerebrum and is the center for the coordination of movements and postural adjustments. It receives and integrates information from all areas of the body, such as the muscles, joints, organs, and other components of the CNS.

3. Brain stem

- The brain stem includes the midbrain, pons, and medulla oblongata. The medulla, located at the top of the spinal cord, contains vital centers for respiration and cardiovascular functions.
- The reticular activating system influences motor activity, sleep, and consciousness.

4. Limbic system

- The limbic system is an area of the brain located above the brain stem that includes the thalamus, hypothalamus, hippocampus, and amygdala.
- The thalamus regulates activity, sensation, and emotion.
- The hypothalamus is involved in temperature regulation, appetite control, endocrine function, sexual drive, and impulsive behavior associated with feelings of anger, rage, or excitement.
- The hippocampus and amygdala are involved in emotional arousal and memory.
- Disturbances in the limbic system have been implicated in a variety of mental illnesses, such as the memory loss that accompanies dementia and the poorly controlled emotions and impulses seen with psychotic or manic behavior.

2. Neurotransmitters and Receptor:

- Neurotransmitters, also known as chemical messengers, are endogenous chemicals that enable neurotransmission.
- They transmit signals across a chemical synapse, such as a neuromuscular junction, from one neuron (nerve cell) to another "target" neuron, muscle cell, or gland cell.
- Neurotransmitters are released from synaptic vesicles in synapses into the synaptic cleft, where they are received by receptors on the target cells.

- Neurotransmitters are the chemical substances manufactured in the neuron that aid in the transmission of information throughout the body. They either excite or stimulate an action in the cells (excitatory) or inhibit or stop an action (inhibitory).
- Many neurotransmitters are synthesized from simple and plentiful precursors such as amino acids, which are readily available from the diet and only require a small number of biosynthetic steps for conversion.
- Neurotransmitters play a major role in shaping everyday life and functions.
- Their exact numbers are unknown, but more than 100 chemical messengers have been identified

❖ Mechanism of Action

- Neurotransmitters are stored in synaptic vesicles, in the axon terminal located at the presynaptic side of the synapse.
- Neurotransmitters are released into and diffused across the synaptic cleft, where they bind to specific receptors in the membrane on the postsynaptic side of the synapse.

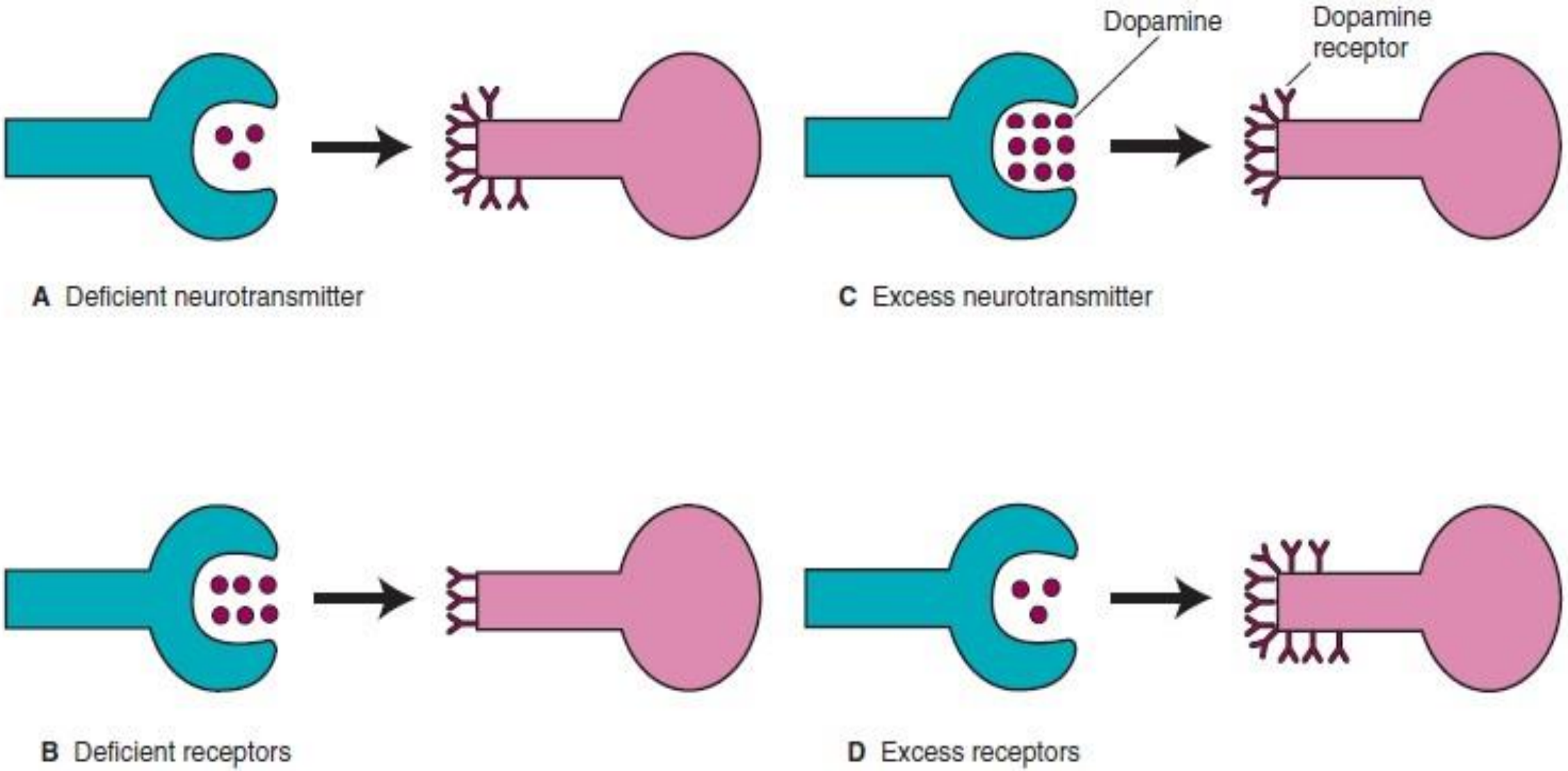


FIGURE 2.4. Abnormal neurotransmission causing some mental disorders because of excess transmission or excess responsiveness of receptors.

❖ Examples of Important Neurotransmitter Actions

1. Gamma Aminobutyric Acid (GABA)

- GABA is used at the great majority of fast inhibitory synapses in virtually every part of the brain.
- Many sedative/tranquilizing drugs act by enhancing the effects of GABA.
- Lower concentrations of GABA plays a role in anxiety disorder.

2. Acetylcholine

- Is a neurotransmitter found in the brain, spinal cord, and peripheral nervous system, particularly at the neuromuscular junction of skeletal muscle.
- It can be excitatory or inhibitory. It is affect the sleep–wake cycle and to signal muscles to become active. Studies have shown that people with Alzheimer disease have decreased acetylcholine secreting neurons, and people with myasthenia gravis الوهن العضلي have reduced acetylcholine receptors.

3. Dopamine

- Functions of dopamine in the brain include regulation of motor behavior, pleasures related to motivation, and also emotional arousal, Thought process.
- People with Parkinson's disease have been linked to low levels of dopamine
- People with schizophrenia have been linked to high levels of dopamine.

4. Serotonin

- Approximately 90% of serotonin is produced by and found in the intestine and the remainder in central nervous system neurons.
- It functions to regulate appetite, sleep, memory and learning, temperature, mood, behavior, muscle contraction, and function of the cardiovascular system and endocrine system.
- lower concentration of serotonin plays a role in depression.

5. Norepinephrine

- It has an effect on the central nervous system, e.g. patients' sleep patterns and focus and alertness.
- lower concentrations of norepinephrine plays a role in depression.

6. Epinephrine

- Epinephrine is synthesized from tyrosine.
- It plays a role in sleep, ability to stay alert, and the fight-or-flight response.

7. Histamine

- The role of histamine in mental illness is under investigation. It is involved in peripheral allergic responses, control of gastric secretions, cardiac stimulation, and alertness. Some psychotropic drugs block histamine, resulting in weight gain, sedation, and hypotension.

8. Glutamate

- Glutamate is an excitatory amino acid that can have major neurotoxic effects at high levels. It has been implicated in the brain damage caused by stroke, hypoglycemia, sustained hypoxia or ischemia, and some degenerative diseases such as Huntington or Alzheimer..

Summary of Neurotransmitters Action:

1. Serotonin : ↓ Depression.
2. Dopamine : ↑ Schizophrenia & ↓ Parkinson's disease.
3. Norepinephrine : ↓ Depression.
4. GABA: ↓ Anxiety disorder.
5. Acetylcholine: ↓ Memory deficit in Alzheimer's disease.

3. Genetics and Heredity:

- Current theories and studies indicate that several mental disorders may be linked to a specific gene or combination of genes but that the source is not solely genetic; nongenetic factors also play important roles.

❑ Monozygotic Three types of studies are commonly conducted to investigate the genetic basis of mental illness:

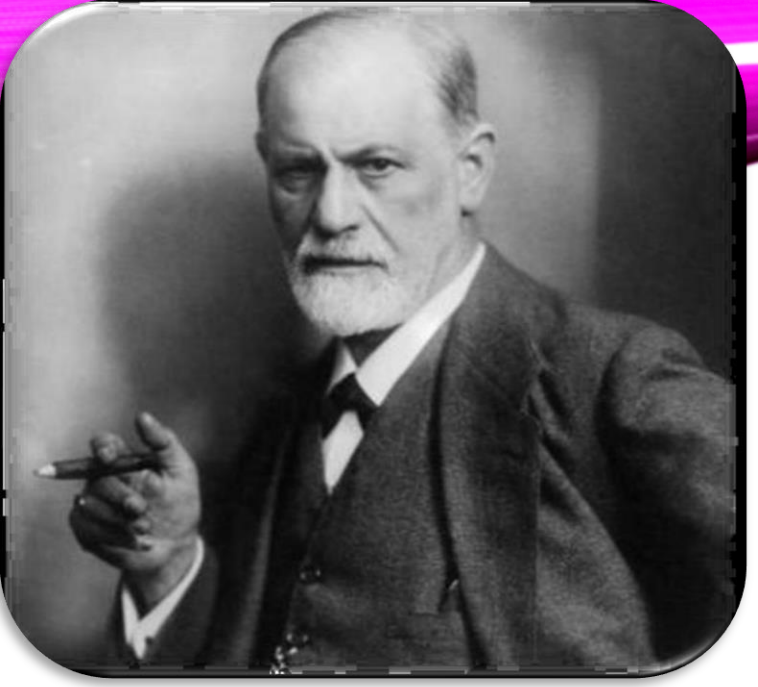
- **1.** Twin studies are used to compare the rates of certain mental illnesses or traits in monozygotic (identical) twins, who have an identical genetic makeup, and dizygotic (fraternal) twins, who have a different genetic makeup. Fraternal twins have the same genetic similarities and differences as nontwin siblings.
- **2.** Adoption studies are used to determine a trait among biologic versus adoptive family members.
- **3.** Family studies are used to compare whether a trait is more common among first-degree relatives (parents, siblings, and children) than among more distant relatives or the general population.

3. Stress and the Immune System (Psychoimmunology):

- Monozygotic A compromised immune system could contribute to the development of a variety of illnesses, particularly in populations already genetically at risk. the immune system and the brain can influence neurotransmitters. When the inflammatory response is critically involved in illnesses such as multiple sclerosis or lupus erythematosus, mood dysregulation and even depression are common .

5. Infection as a Possible Cause:

- Theories that are being developed and tested include the existence of a virus that has an affinity for tissues of the CNS, the possibility that a virus may actually alter human genes, and maternal exposure to a virus during critical fetal development of the nervous system. Prenatal infections may impact the developing brain of the fetus, giving rise to a proposed theory that inflammation may causally contribute to the pathology of schizophrenia.

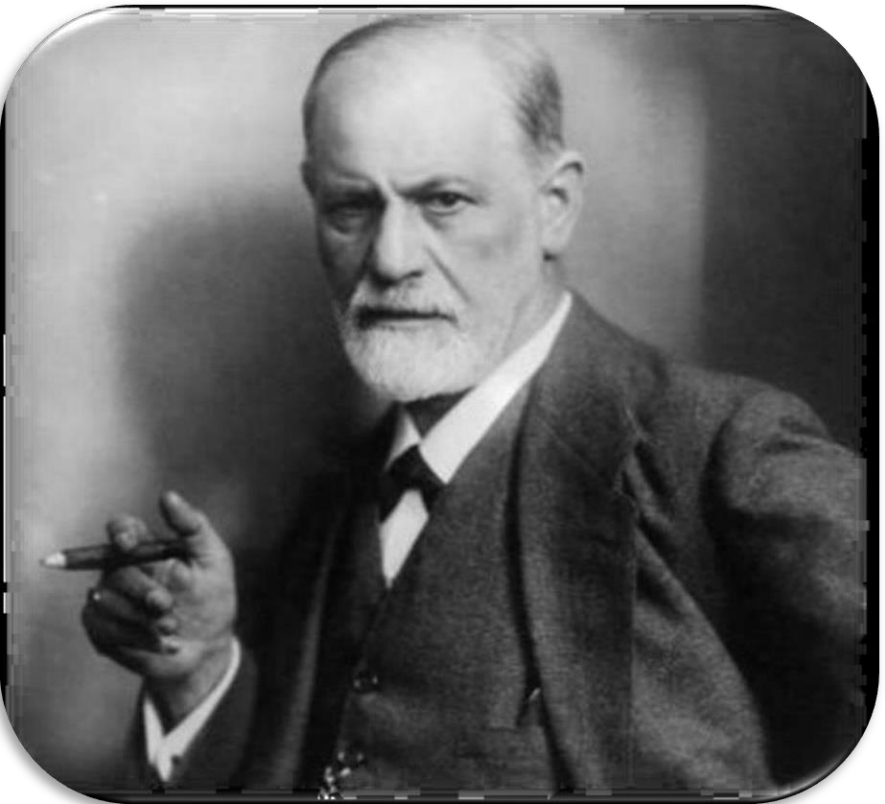


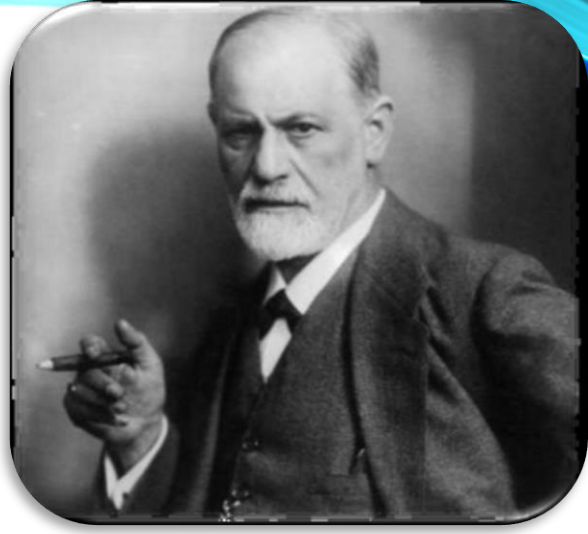
B.

Psychosocial theories

❑Psychoanalytic Theory

- Freudian theory (Psychodynamic/Psychoanalytic theory(





1. Psychoanalytic Theory

- ***Sigmund Freud:*** The first to link childhood experiences with adult problems.
- He believes that the internal emotional life of the individual is the most significant factor in development of personality (intra-psychic).
- Illness is defined in terms of behavior disorders & originates in conflicts among the id, ego, superego and or environment .

- Much of our behavior is caused by parts of personality which are found in the unconscious and of which we are unaware.

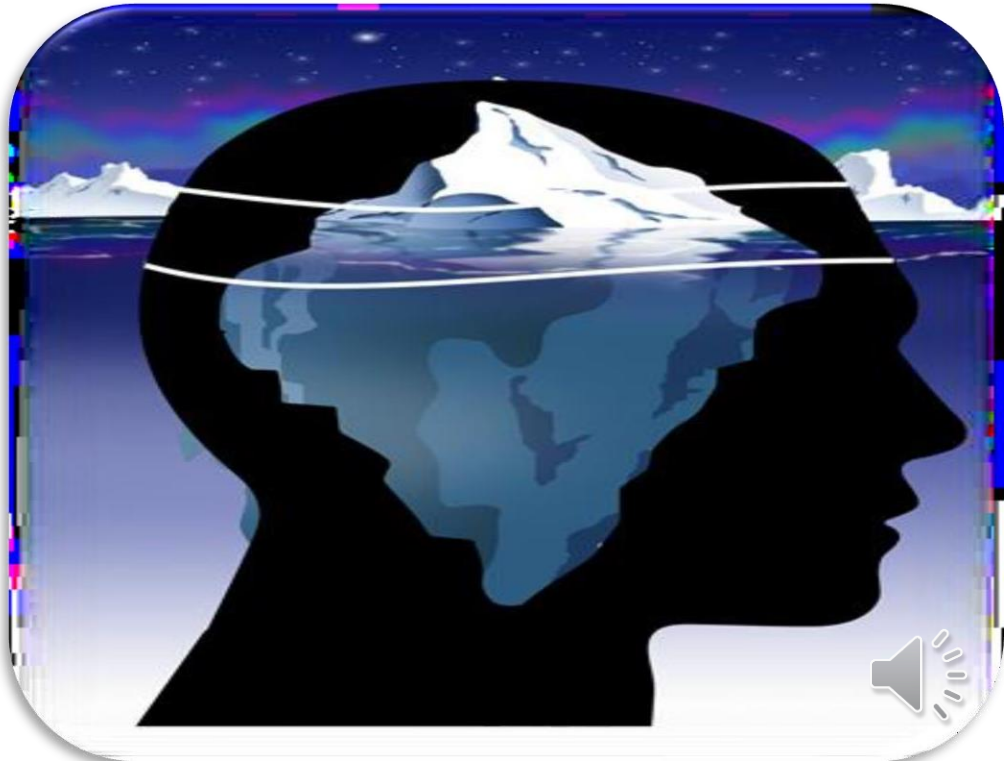
Freud’s Levels of Consciousness

❑ Conscious Mind:

- ➢ Functions only when person is awake.
- ➢ Concerned with thoughts, feelings, sensations, memory, & wishes (easily remembered).
- ➢ Directs person to behave in a rational, thoughtful way.

❑Preconscious/ Subconscious Mind:

- ➢ Reactions and ideas are stored and partially forgotten .
- ➢ These ideas can be recalled easily with concentration .



❑ Unconscious Mind:

- ➢ It constitute largest part of our mind
- ➢ Storehouse for all memories, feelings, wishes, and responses experienced in entire life.
- ➢ Cannot be recalled at will.
- ➢ Demonstrated through dreams, slips of tongue, unexplained behavior, & jokes.

❑ *Unconscious Mind:*

- **Free association Technique**: Bring the unconscious feelings into awareness: Ask patients to relax and say whatever came to mind without any consideration.

❖ Freud's Personality Structure

❑**Id:** (1 day –1 year)

➢**Id** is the unorganized, inborn part of personality

➢The **id** seeks immediate gratification of primitive pleasure (food, drink, play, & other primitives)

➢The purpose is to immediately reduce tensions.

➢Has no sense of worth or wrong; avoid pain and maintain pleasure at all costs.

❑Ego:

- ➢It is the rational, conscious, reasonable part of the personality.
- ➢Takes the real world into consideration when there is a need to be gratified.
- ➢Promotes satisfactory adjustment to environment.
- ➢Ego balancing between Id and superego).

❑*Superego*

- It is the internal representation of the values and morals of society.
- The values and morals of society usually taught to the child by the parents.
- An individual judges whether an action is right or wrong according to the standards of society.

- **Superego** (after the age of 5 years)
  - The superego strives for perfection .
  - Superego develops in response to parental rewards and punishment.
  - The child no longer needs any one to tell him it is wrong to steal, his superego tells him .

- **Superego** has 2 parts :

a) Conscience: punishes by guilt and anxiety .

b) Ego ideal: Rewards with euphoria, well -being

Freud's Stages of Personality Development

Stage	Age	Focus	Adult fixation
Oral Stage	0-18 months	centered on the mouth	Smoking, overeating
Anal Stage	18-36 months	focus on bowel/bladder elimination	Orderliness and messiness
Phallic Stage	3-6 years	focus on genitals/ Gender Identity	Deviation, sexual dysfunction
Latency Stage	(6 years - puberty)	sexuality is dormant or inactive	None
Genital	puberty	sexual feelings toward others	Sexual maturation

2. Developmental theory

- Erik Erikson's: (Developmental theory)
  - Erikson extended Freud’s work on personality development while focusing on social and psychological development in the life stages
  - He believed the psychosocial relationship important in individual development.

- Erikson described that people pass through eight psychosocial stages of development.
- In each stage, the person must complete a life task that is essential to his/her mental health.
- These tasks allow the person to achieve life's qualities: hope, purpose, fidelity, love, caring, and wisdom.

Erikson's Stages of Developmental

Approximate Age	Psychosocial crisis	Significant relationship	Existential question	Examples
Infancy 0 -23 months	Basic trust vs. mistrust	Mother	Can I trust the world?	Feeding, abandonment
Early childhood 2–4 years	Autonomy vs. shame	Parents	Is it okay to be me?	Toilet training, clothing themselves
Preschool age 4–5 years	Initiative vs. guilt	Family	Is it okay for me to do, move, and act?	Exploring, using tools or making art
School age 5–12 years	Industry vs. inferiority	Neighbors, school	Can I make it in the world of people and things?	School, sports

Erikson's Stages of Developmental

Approximate Age	Psychosocial crisis	Significant relationship	Existential question	Examples
Adolescence 13–19 years	Identity vs. role confusion	Peers, role model	Who am I? Who can I be?	Social relationships
Early adulthood 20–39 years	Intimacy vs. isolation	Friends, partners	Can I love?	Romantic relationships
Adulthood 40–64 years	Generativity vs. stagnation	Household, workmates	Can I make my life count?	Work, parenthood
Maturity 65-death	Ego integrity vs. despair	Mankind, my kind	Is it okay to have been me?	Reflection on life

3-Harry Sullivan (Interpersonal theory)

- Focuses on interaction between an individual and his environment.
- He believed that inadequate or no satisfying relationships produce anxiety and emotional problems
- Sullivan focusing on interpersonal relationship by discover (therapeutic community or therapeutic milieu)

❖ Concept of Milieu Therapy

- Milieu therapy is developed by Sullivan

1. The therapist provides a corrective interpersonal relationship for the client.
2. Giving one another feedback about behavior .
3. Working cooperatively with other as a group to solve day to day problems

Sullivan's Life Stages

Stage	Age	Focus	If needs are met
Infancy	Birth to onset of language	Oral & anal	Sense of well-being
Childhood	Language to 5 years	Anal	Gratification leads to positive self-esteem.
Juvenile	5–8 years	Thinking about self and others	▪ Opportunities for approval and acceptance of others ▪ Learn to negotiate own needs.
Preadolescence	8–12 years	Intimacy with friend of the same sex	Capacity for attachment, love, and collaboration
Adolescence	Puberty to adulthood	Relationship shifts to the opposite sex	Lead to the consolidation of self-esteem

4-Hildegard Peplau(interpersonal theory).

❖ (Nurse Patient relationship)

- Is a nursing theorist who developed the concept of the therapeutic nurse –patient relationship ,which include 4 phases:

1. Orientation phase
2. Identification phase
3. Exploration phase
4. Resolution phase

5-Jean Piaget (cognitive theory).

- Piaget focused on the ability to develop thinking from child to adult hood .
- He believed that Individuals born tendency to adapt with environment .

E.g. The nurse can use dolls or toy and medical equipment to explain a surgical process to a preschool age about to undergo surgery.

Piaget's Stages of Developmental

Stage	Age Range	Description
Sensorimotor	birth to 2 years	Coordination of senses with motor response, sensory curiosity about the world. Language used for demands and cataloguing. Object permanence developed
Preoperational	2 to 6 years	Symbolic thinking, use of proper syntax and grammar to express full concepts. Imagination and intuition are strong, but complex abstract thought still difficult. Conservation developed.
Concrete Operational	6 to 12 years	Concepts attached to concrete situations. Time, space, and quantity are understood and can be applied, but not as independent concepts
Formal Operations	12 to 15 years	Theoretical, hypothetical, and counterfactual thinking. Abstract logic and reasoning. Strategy and planning become possible. Concepts learned in one context can be applied to another.

Humanistic Theories.

- Humanism focuses on a person's positive qualities, his or her capacity to change (human potential), and the promotion of self-esteem.
- Humanists do consider the person's past experiences, but they direct more attention toward the present and future.

Abraham Maslow: Hierarchy of Needs

- Abraham Maslow (1921–1970) was an American psychologist who studied the needs or motivations of the individual.
- Maslow (1954) formulated the hierarchy of needs, in which he used a pyramid to arrange and illustrate the basic drives or needs that motivate people.
- Maslow hypothesized that the basic needs at the bottom of the pyramid would dominate the person's behavior until those needs were met, at which time the next level of needs would become dominant. For example, if the needs for food and shelter are not met, they become the overriding concern in life; the hungry person risks danger and social ostracism to find food.


Self-actualization
desire to become the most that one can be
Esteem
respect, self-esteem, status, recognition, strength, freedom
Love and belonging
friendship, intimacy, family, sense of connection
Safety needs
personal security, employment, resources, health, property
Physiological needs
air, water, food, shelter, sleep, clothing, reproduction

Carl Rogers: Client-Centered Therapy

- Carl Rogers (1902–1987) was a humanistic American psychologist who focusedon the therapeutic relationship and developed a new method of client-centered therapy.
- Rogers was one of the first to use the term client rather than patient.
- The therapist must promote the client's self-esteem as much as possible throughthree central concepts:
- Unconditional positive regard—a nonjudgmental caring for the client that is not dependent on the client's behavior
- Genuineness—realness or congruence between what the therapist feels and whathe or she says to the client
- Empathetic understanding—in which the therapist senses the feelings and personal meaning from the client and communicates this understanding to the client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