

# **Al-Mustaqbal University**

## **College of Nursing**

**Lecture Psychiatric Nursing /2**

Neurobiological and Psychosocial Theories

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# Neurobiological Theories

- 1. The Nervous System and How IT Works**
- 2. Neurotransmitters and Receptor:**
- 3. Genetics and Heredity:**
- 4. Stress and the Immune System (Psychoimmunology):**
- 5. Infection as a Possible Cause:**

# 1. Neurobiological theories

The psychiatric mental health nurse must have a basic understanding of how the brain functions and of the current theories regarding mental illness, approximately **100 billion** brain cells form groups of **neurons**, or nerve cells, that are arranged in networks.

- a **synapse** is a structure that permits a neuron to **pass** an electrical or chemical signal to another neuron.
- These neurons communicate information with one another cell
- Neurotransmitters: are the chemical substances manufactured in the neuron that aid in the transmission of information throughout the body.
- Major neurotransmitters have been found to play a role in psychiatric illnesses as well as actions and side effects of psychotropic drugs

# 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.

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

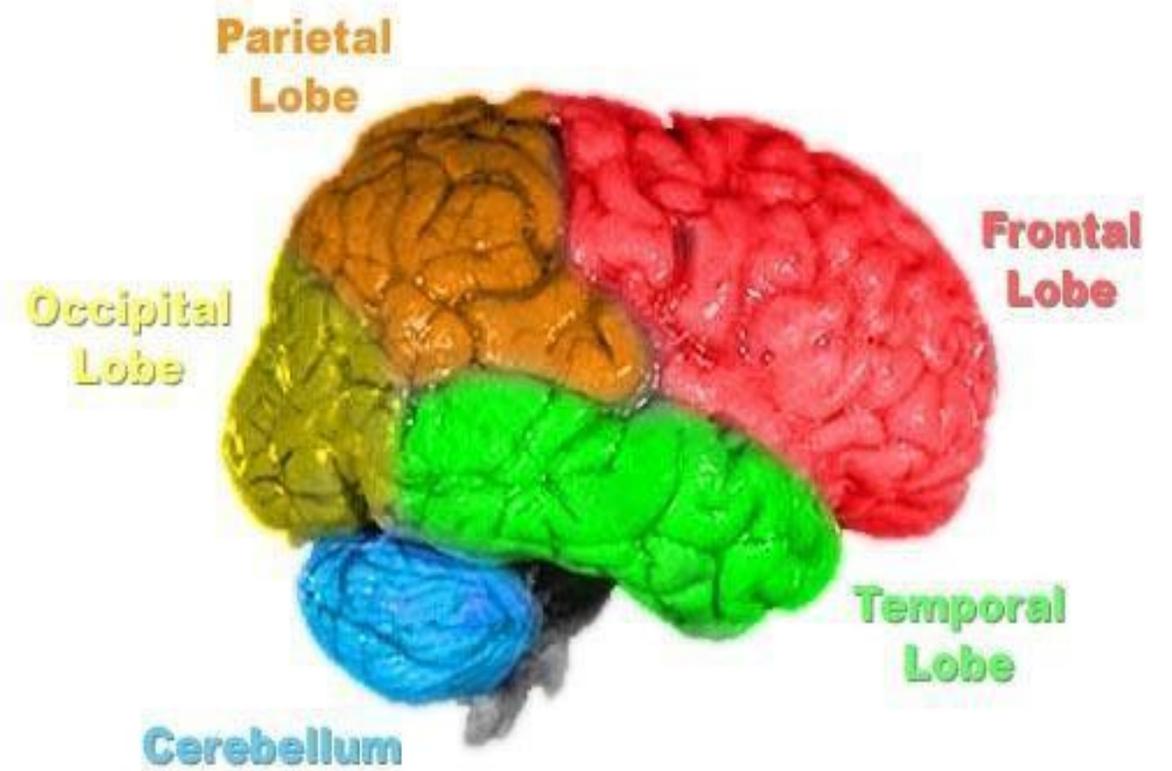
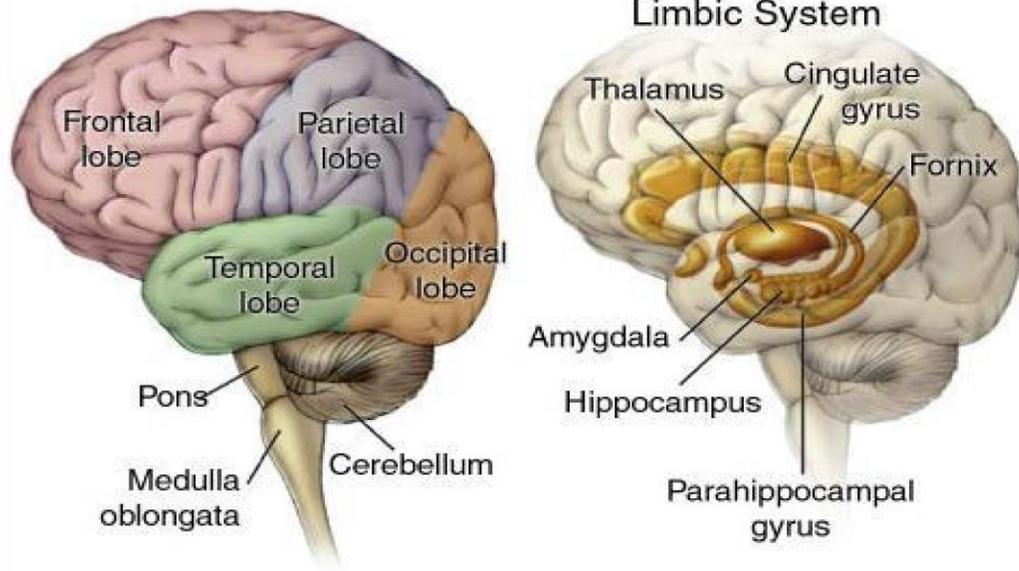
**1. Frontal lobe.**

**2. Temporal lobe.**

**3. Parietal lobe.**

**4. Occipital lobe**

## 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.**

**2-Parietal lobe:**

The parietal lobes responsible **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** and the **nuclei for cranial nerves III through XII**. 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**.
- The **extrapyramidal system** relays information about movement and coordination from the brain to the spinal nerves. The **locus coeruleus**, a small group of **norepinephrine producing neurons in the brain stem**, is associated with stress, anxiety, and impulsive behavior

## 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**.

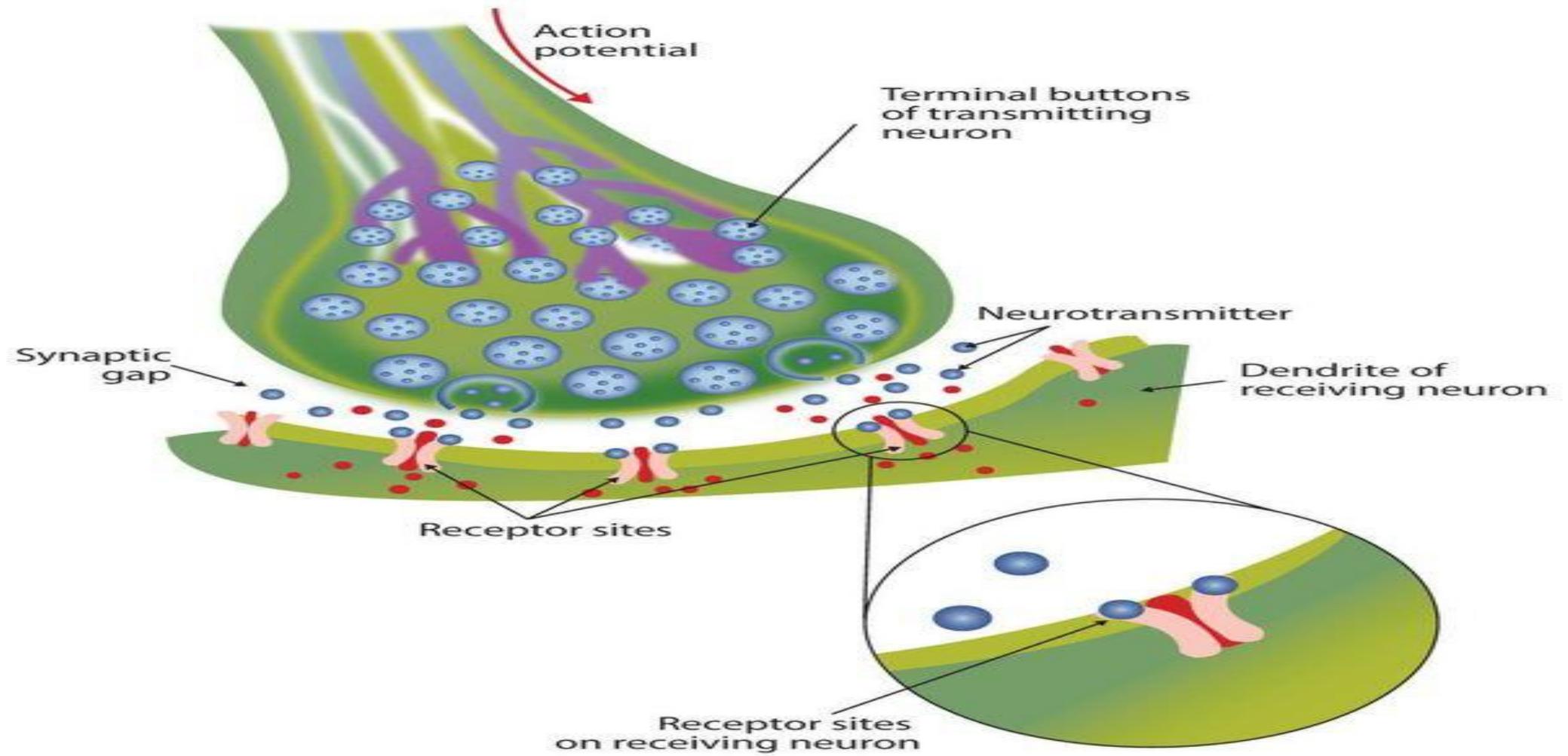
## 2. Neurotransmitters and Receptor:

- 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

# 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**.
- A released neurotransmitter is typically available in the synaptic cleft for a short time before it is metabolized by enzymes, pulled back into the presynaptic neuron through.



- **Dopamine**

Dopamine, a neurotransmitter **located primarily in the brain stem**, has been found to be involved in the **control of complex movements, motivation, cognition, and regulation of emotional responses**. It is generally **excitatory** and is synthesized from **tyrosine**, a dietary **amino acid**. Dopamine is **implicated** in schizophrenia and other psychoses as well as in movement disorders such as Parkinson's disease. Antipsychotic medications work by **blocking dopamine receptors** and reducing dopamine activity.

- **Norepinephrine and Epinephrine**

Norepinephrine, the **most prevalent** neurotransmitter in the nervous system, is located primarily in the **brain stem and plays a role in changes in attention, learning and memory, sleep and wakefulness, and mood regulation**. Norepinephrine and its derivative, **epinephrine**, are also known as **noradrenaline and adrenaline**, respectively. **Excess norepinephrine has been implicated in several anxiety disorders; deficits may contribute to memory loss, social withdrawal, and depression**. Some antidepressants block the reuptake of norepinephrine, whereas others inhibit MAO from metabolizing it. **Epinephrine has limited distribution in the brain but controls the fight-or-flight response in the peripheral nervous system**

- **Serotonin**

Serotonin, a neurotransmitter **found only in the brain**, is **derived from tryptophan**, a dietary **amino acid**. The function of serotonin is mostly **inhibitory**, and it is involved in the **control of food intake, sleep and wakefulness, temperature regulation, pain control, sexual behavior, and regulation of emotions**. Serotonin plays an important role in **anxiety and mood disorders and schizophrenia**. It has been **found to contribute to the delusions, hallucinations, and withdrawn behavior seen in schizophrenia**. Some antidepressants block serotonin reuptake, thus leaving it available longer in the synapse, which results in improved mood

- **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.

- **Acetylcholine**

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 synthesized from dietary **choline** found in **red meat and vegetables** and has been found to affect the **sleep–wake cycle and to signal muscles to become active**. Studies have shown that people with **Alzheimer’s disease have decreased acetylcholine-secreting neurons**, and people with **myasthenia gravis (a muscular disorder in which impulses fail to pass the myoneural junction, which causes muscle weakness)** have **reduced acetylcholine receptors**

- **Glutamate**

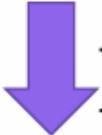
Glutamate is an **excitatory amino acid** that at high levels can have **major neurotoxic effects**. It has been implicated in the **brain damage** caused by stroke, hypoglycemia, sustained hypoxia or ischemia, and some degenerative diseases such as **Huntington's or Alzheimer's**.

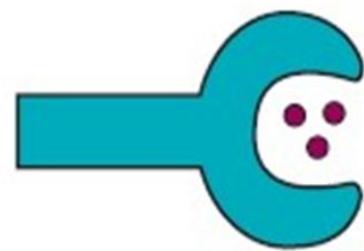
- **Gamma-Aminobutyric Acid**

Gamma-aminobutyric acid ( $\gamma$ -aminobutyric acid, or GABA), an amino acid, is the major **inhibitory neurotransmitter** in the brain and has been found to modulate other neurotransmitter systems rather than to provide a direct stimulus. Drugs that increase GABA function, such as benzodiazepines, are used to treat anxiety and to induce sleep.

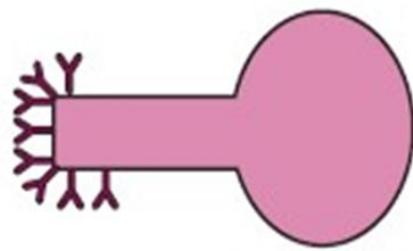
| Type                              | Mechanism of Action      | Physiologic Effects   |
|-----------------------------------|--------------------------|---|
| Dopamine                          | Excitatory               | Controls complex movements, motivation, cognition; regulates emotional response   |
| Norepinephrine (noradrenaline)    | Excitatory               | Causes changes in attention, learning and memory, sleep and wakefulness, mood   |
| Epinephrine (adrenaline)          | Excitatory               | Controls fight-or-flight response   |
| Serotonin                         | Inhibitory               | Controls food intake, sleep and wakefulness, temperature regulation, pain control, sexual behaviors, regulation of emotions |
| Histamine                         | Neuromodulator           | Controls alertness, gastric secretions, cardiac stimulation, peripheral allergic responses                                  |
| Acetylcholine                     | Excitatory or inhibitory | Controls sleep and wakefulness cycle; signals muscles to become alert   |
| Neuropeptides                     | Neuromodulators          | Enhance, prolong, inhibit, or limit the effects of principal neurotransmitters  |
| Glutamate                         | Excitatory               | Results in neurotoxicity if levels are too high   |
| Gamma-aminobutyric acid<br>(GABA) | Inhibitory               | Modulates other neurotransmitters   |

## Summary of Neurotransmitters Action:

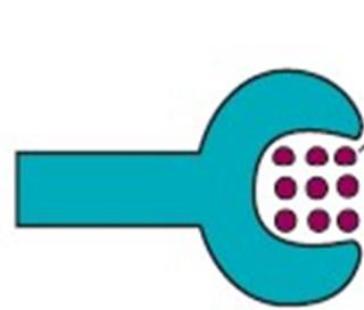
1. Serotonin :  Depression.
2. Dopamine :  Schizophrenia &  Parkinson's disease.
3. Norepinephrine :  Depression.
4. GABA:  Anxiety disorder.
5. Acetylcholine:  Memory deficit in Alzheimer's disease.



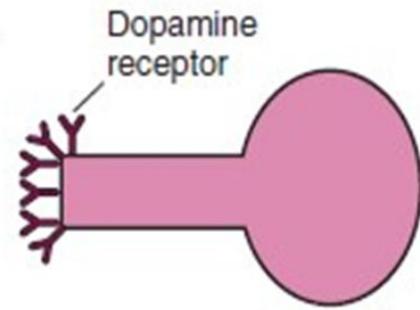
**A** Deficient neurotransmitter



**B** Deficient receptors



**C** Excess neurotransmitter



**D** Excess receptors

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

# (Some) Neurotransmitters

| <b>Neurotransmitter</b> | <b>Function</b>                                     | <b>Examples of malfunctions</b>   |
|-------------------------|---|---|
| Acetylcholine (ACh)     | Enables muscle action, learning & memory            | Alzheimer's disease <input checked="" type="checkbox"/><br>less ACh production  |
| Dopamine                | Influences movement, learning, attention, & emotion | Excess <input checked="" type="checkbox"/><br>schizophrenia<br>Undersupply <input checked="" type="checkbox"/><br>Parkinson's disease |
| Serotonin               | Affects mood, hunger, sleep, and arousal            | Undersupply <input checked="" type="checkbox"/><br>depression   |
| Norepinephrine          | Helps control alertness & arousal                   | Undersupply <input checked="" type="checkbox"/><br>depressed mood   |
| Glutamate               | Excitatory neurotransmitter involved in memory      | Excess <input checked="" type="checkbox"/><br>overstimulation of brain, seizures  |

# 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.**

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 specific mental illnesses or traits in monozygotic (identical) twins, who share nearly 100% of their genetic makeup, and dizygotic (fraternal) twins, who share approximately 50% of their genes. Dizygotic twins have the same degree of genetic similarity as non-twin siblings, making them a useful comparison group for assessing the relative contributions of genetic and environmental factors.
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.

#### **4. Stress and the Immune System (Psychoimmunology):**

- 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.

# Psychosocial Theories

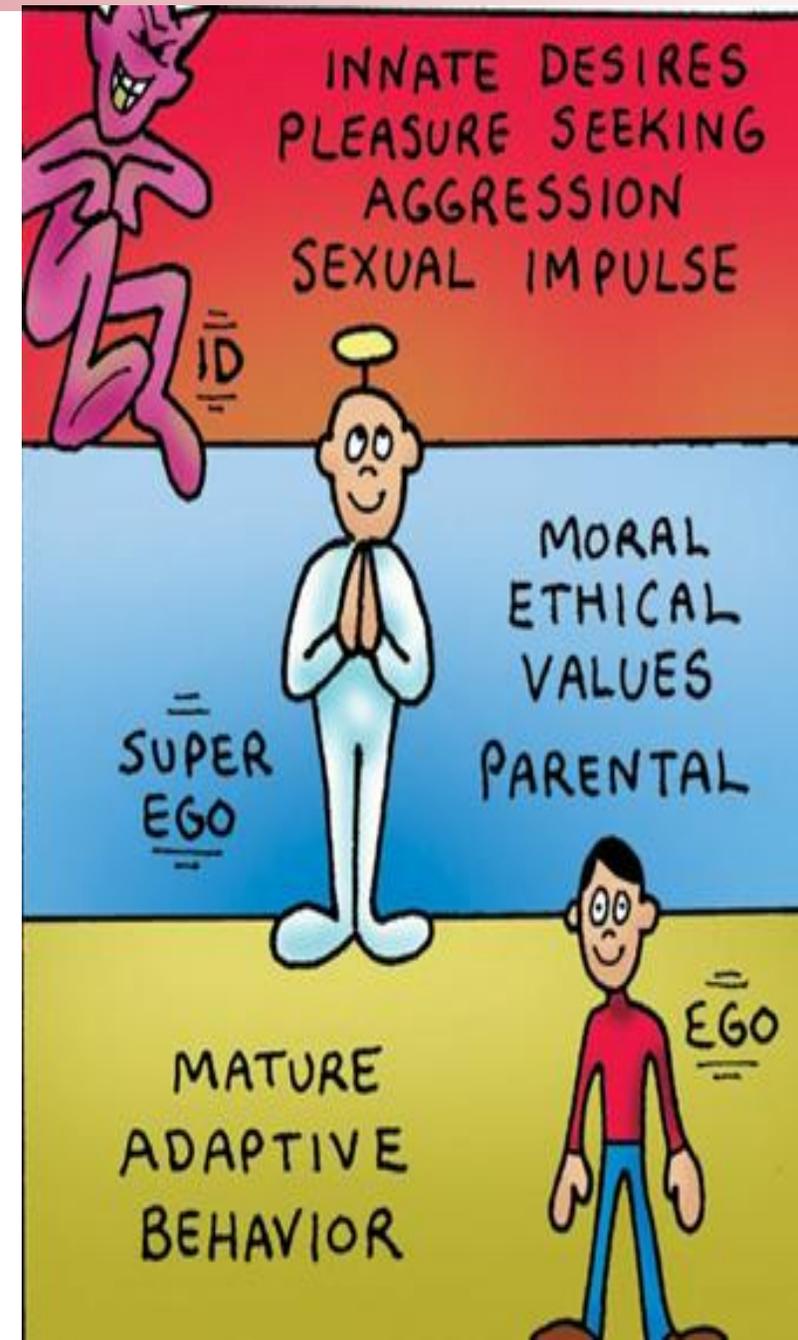
## A. Psychoanalytic Theories

**Sigmund Freud** Sigmund Freud (1856–1939) developed psychoanalytic theory in the late 19th and early 20th centuries in Vienna,

- This theory supports the idea that **EVERY human behavior** is **caused and can be explained**
- Freud believes that “**repressed**” sexual urges, desires, impulses or drives motivated much **human behavior**.

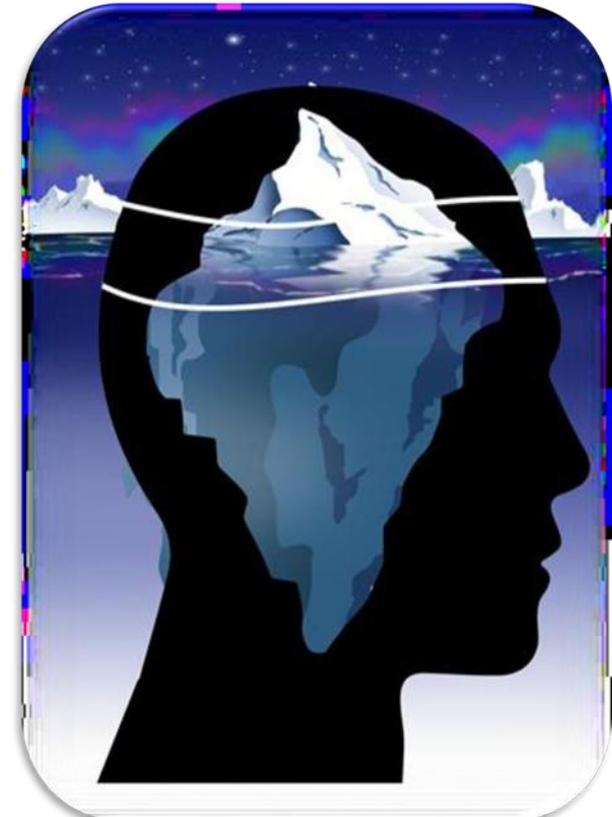
### Components of Personality

1. ID- part of a person that reflects basic or innate desires such as pleasure-seeking behavior, aggression, and sexual impulses
2. EGO- is the balancing or mediating force between the id and the superego. The ego represents mature and adaptive behavior that allows a person to function successfully in the world.
3. SUPER-EGO- is the part of a person’s nature that reflects moral and ethical concepts, values, and parental and social expectations; therefore, it is in **direct opposition** to the id



# Personality Stages and Functional Awareness

1. Conscious refers to the **perceptions, thoughts, and emotions** that exist in the person's awareness, such as being aware of happy feelings or thinking about a loved one.
2. Preconscious **thoughts and emotions** are **not currently** in the person's awareness, but he or she can **recall them with some effort**—for example, an adult remembering what he or she did, thought, or felt as a child.
3. The unconscious is the **realm of thoughts and feelings that motivates** a person even though he or she is totally unaware of them. This **realm includes most defense mechanisms.**



**Freudian slip** is a term we commonly use to **describe slips of the tongue**—for example, saying “You look portly today” to an overweight friend instead of “You look pretty today.” Freud believed that these slips are not accidents or coincidences, but rather are **indications of subconscious feelings or thoughts that accidentally emerge in casual day-to-day conversation.**

**Freud’s Dream Analysis.** Freud believed that a person’s dreams **reflect his or her subconscious** and have significant meaning, although sometimes the meaning is hidden or symbolic. **Dream analysis**, a primary technique used in psychoanalysis, involves discussing a client’s dreams to discover their true meaning and significance.

**Free association** is method used to gain access to **subconscious thoughts and feelings**, in which the therapist tries to uncover the client’s true thoughts and feelings by saying a word and **asking the client to respond quickly with the first thing that comes to mind.** Freud believed that such quick responses would be likely to **uncover** subconscious or repressed thoughts or feelings.

**Ego Defense Mechanisms** Freud believed that the self, or ego, which are methods of attempting to protect the self and cope with basic drives or emotionally painful thoughts, feelings, or events.

**Transference** occurs when the client displaces onto the therapist attitudes and feelings that the client originally experienced in other relationships . Transference patterns are automatic and unconscious in the therapeutic relationship. For example, an adolescent female client working with a nurse who is about the same age as the teen's parents might react to the nurse like she reacts to her parents. She might experience intense feelings of rebellion or make sarcastic remarks; these reactions are actually based on her experiences with her parents, not the nurse.

**Countertransference** occurs when the therapist displaces onto the client attitudes or feelings from his or her past. For example, a female nurse who has teenage children and who is experiencing extreme frustration with an adolescent client may respond by adopting a parental or chastising tone. The nurse is countertransferring her own attitudes and feelings toward her children onto the client. Nurses can deal with countertransference by examining their own feelings and responses, using self-awareness, and talking with colleagues.

# Five Stages of psychosexual development

| Phase                  | Age               | Focus  | Nursing implications   |
|------------------------|-------------------|--|--|
| <b>Oral</b>            | Birth to 18months | Oral gratification   |  |
| <b>Anal</b>            | 18–36 months      | Toilet training  | Help children achieve bowel and bladder control.   |
| <b>Phallic/oedipal</b> | 3–5 years         | Genital is focus of interest<br>Penis envy (wish to possess penis) is seen in girls.<br>oedipal complex (wish to marry opposite-sex parent and be rid of same-sex parent) is seen in boys and girls. | <ul style="list-style-type: none"> <li>•Accept child's sexual interest</li> <li>•Help the parents answer child's questions about birth or sexual differences.</li> </ul> |
| <b>Latency</b>         | 5–11 or 13 years  | Psychosexual development<br>Formation of the superego.<br>Resolution of oedipal complex  |  |
| <b>Genital</b>         | 11–13 years       | capacity for true intimacy   |  |

## **B. Developmental Theory**

**1. Erik Erikson** (1902–1994) was a German-born psychoanalyst, who extended Freud's work on personality development across the life span while focusing on social and psychological development in the life stages. In 1950, Erikson published **Childhood and Society**, in which he described eight psychosocial stages of development.

## **1. Trust vs. Mistrust (0 – 18 months of age) 3. Initiative vs Guilt (3 – 5 y/o)**

1. Child develops sense of trust or mistrust of others.

2. Shares openly and relates to others.

3. Interpersonal skills start to develop.

## **2. Autonomy vs. Shame and Doubt (18 months – 3 y/o)**

1. Child learns self-control or becomes very conscious and full of doubt;

2. Negativistic attitude;

3. Exhibits motor self-control and independence thru negativism;

4. Parallel play is the social skill.

1. Child initiates spontaneous activities or develops **fear** of wrongdoing.

2. Shows appropriate social behaviors;

3. Curiosity and exploration;

4. Social Skill: Cooperative Play

## **4. Industry vs Inferiority (6 – 12 y/o)**

1. Child develops the social and physical skills necessary to compete in life.

2. Acquisition of competence.

3. Ability to cooperate.

4. Identification with admired for others (teachers, parents)

## **5. Identity vs Role Diffusion (12 – 20 y/o)**

1. Personal identity.
2. May develop self-doubts about sexual or occupational roles.
3. Establish relationship with the opposite sex.
4. Fidelity with friends.
5. Also value importance of beauty or self-image.

## **6. Intimacy vs Isolation (18 – 25 or 30 y/o)**

1. The person develops commitment to work and to other people.
2. Ability to give and receive love.
3. Responsible sexual behaviors.

## **7. Generativity vs Stagnation (30 – 65 y/o)**

1. Productive, constructive, and creative activities.
2. Personal and professional growth.
3. Parental and societal responsibilities.
4. Ability to care.

## **8. Integrity vs Despair (65 years old to death)**

1. The person reviews life for meaning and fulfillment.
2. Sense of dignity and worth.
3. Explores the philosophy of life.
4. May result to regression and withdrawn.

## 2. Jean Piaget and Cognitive Stages of Development

He explored how **intelligence and cognitive functioning develop in children**. He believed that human **intelligence progresses through a series of stages based on age**, with the child at each successive stage demonstrating a higher level of functioning than at previous stages. Piaget strongly **believed that biologic changes and maturation were responsible for cognitive development**.

**Piaget's four stages** of cognitive development are as follows:

- 1. Sensorimotor—birth to 2 years: The child develops a sense of self as separate from the environment and the concept of object permanence; that is, tangible objects do not cease to exist just because they are out of sight. He or she begins to form mental images.**
- 2. Preoperational—2 to 6 years: The child develops the ability to express self with language, understands the meaning of symbolic gestures, and begins to classify objects.**
- 3. Concrete operations—6 to 12 years: The child begins to apply logic to thinking, understands spatiality and reversibility, and is increasingly social and able to apply rules; however, thinking is still concrete.**
- 4. Formal operations—12 to 15 years and beyond: The child learns to think and reason in abstract terms, further develops logical thinking and reasoning, and achieves cognitive maturity**

# C. Interpersonal theory:

## 1. Harry Stack Sullivan (1892–1949)

- Sullivan theory (1892–1949): was an American psychiatrist who extended the theory of personality development to include the significance of **interpersonal relationships**.
- Sullivan believed that **one's personality involves more than individual characteristics, particularly how one interacts with others**.
- He thought that **inadequate or no satisfying relationships produce anxiety**.
- **Application** Sullivan's interpersonal theory provides the theoretical basis for interpersonal psychotherapy (IPT) for depression and schizophrenia.

## Developmental Cognitive Modes

1. Prototaxic mode, characteristic of infancy and childhood, involves **brief, unconnected experiences that have no relationship to one another**. Adults with schizophrenia exhibit persistent prototaxic experiences.
2. Parataxic mode **begins in early childhood as the child begins to connect experiences in sequence**. The child may not make logical sense of the experiences and may see them as coincidence or chance events.
3. Syntactic mode, which **begins to appear in school aged children and becomes more predominant in preadolescence, the person begins to perceive himself or herself and the world within the context of the environment and can analyze experiences in a variety of settings**.

# Sullivan's Life Stages

| Sullivan's Life Stages | Ages                       | Focus   |
|------------------------|----------------------------|---|
| <b>Infancy</b>         | Birth to onset of language | Gratification of needs, unmet needs lead to anxiety             |
| <b>Childhood</b>       | Language to 5 years        | Gratification of needs lead to positive self-esteem             |
| <b>Juvenile</b>        | 5–8 years                  | Formation of peer group   |
| <b>Preadolescence</b>  | 8–12 years                 | Developing relationship with same sex                           |
| <b>Adolescence</b>     | Puberty to adulthood       | Need for special sharing relationship shift to the opposite sex |

## 2. Hildegard Peplau (**Therapeutic Nurse Patient relationship**)

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

1. **The orientation phase** is directed by the nurse and involves engaging the client in treatment, providing explanations and information, and answering questions.
2. **The identification phase** begins when the client works interdependently with the nurse, expresses feelings, and begins to feel stronger.
3. **The exploitation phase**, the client makes full use of the services offered.
4. **The resolution phase**, the client no longer needs professional services and gives up dependent behavior. The relationship ends

### **The primary roles**

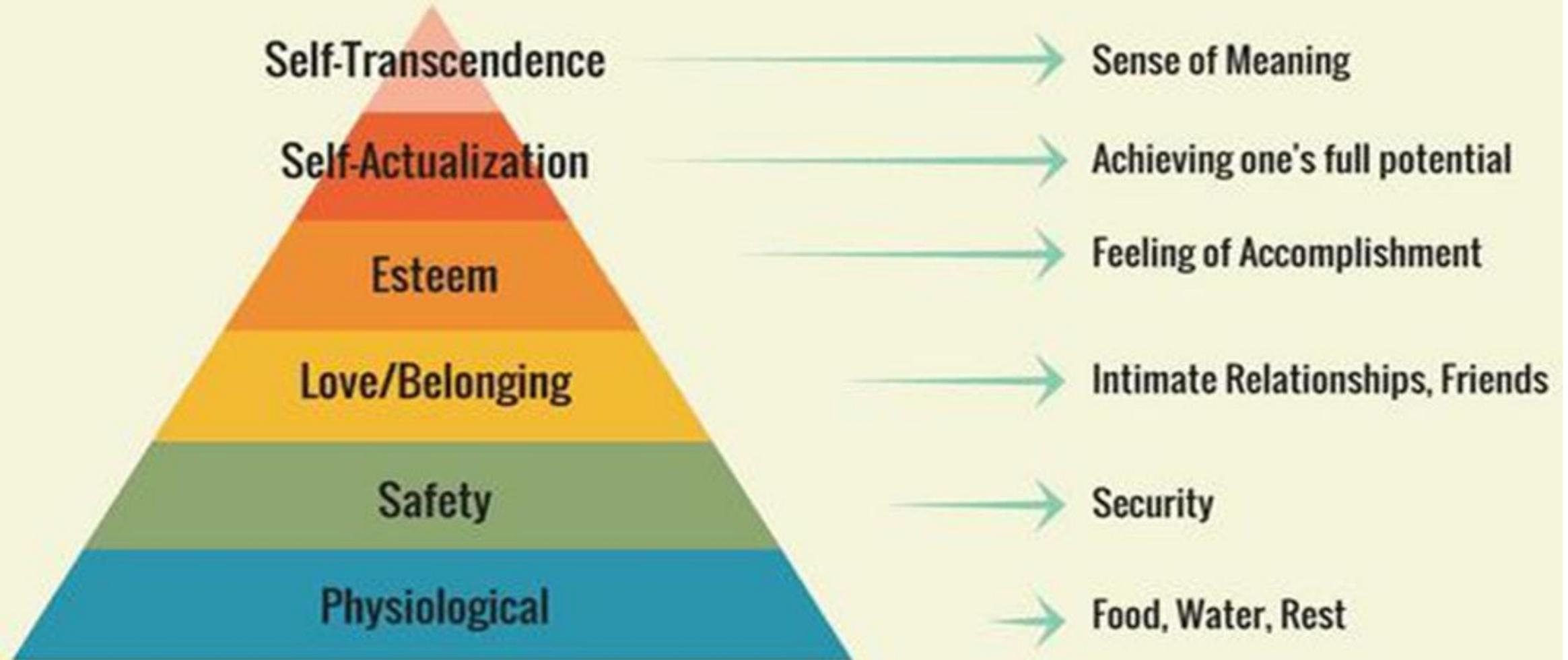
1. Leader—offering direction to the client or group,
2. Stranger—offering the client the same acceptance and courtesy that the nurse would to any stranger,
3. Resource person—providing specific answers to questions within a larger context,
4. Teacher—helping the client to learn formally or informally,
5. surrogate—serving as a substitute for another such as a parent or sibling,
6. Counselor—promoting experiences leading to health for the client such as expression of feelings

## d. Humanistic Theories

**1. Hierarchy of Needs Abraham Maslow** (1921–1970) was an American psychologist who studied the needs or motivations of the individual. He differed from previous theorists in that he focused on the total person, not just on one facet of the person, and emphasized health instead of simply illness and problems. 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.

1. The most basic needs—the physiological needs of food, water, sleep, shelter, sexual desire , and freedom from pain—must be met first.
2. The second level involves safety and security needs, which include protection, security, and freedom from harm or threatened deprivation.
3. The third level is love and belonging needs, which include enduring intimacy, friendship, and acceptance.
4. The fourth level involves esteem needs, which include the need for self-respect and esteem from others.
5. The highest level is self-actualization, the need for beauty, truth, and justice.

# MASLOW'S NEW HIERARCHY OF NEEDS



## 2. Carl Rogers: Client-Centered Therapy

- Carl Rogers (1902–1987) was a humanistic American psychologist who focused on 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 through three 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 what he 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

# E. Behavioral Theories

- Behaviorism grew out of a reaction to introspection models that focused on the contents and operations of the mind. Behaviorism is a school of psychology that focuses on observable behaviors and what one can do externally to bring about behavior changes. It does not attempt to explain how the mind works. Behaviorists believe that behavior can be changed through a system of rewards and punishments.

**1. Ivan Pavlov: Classical Conditioning** Laboratory experiments with dogs provided the basis for the development of Ivan Pavlov's theory of classical conditioning: **Behavior can be changed through conditioning with external or environmental conditions or stimuli.** Pavlov's experiment with dogs involved his observation that **dogs** naturally began to salivate (response) when they saw or smelled food (stimulus). Pavlov (1849–1936) set out to change this salivating response or behavior through conditioning. He would ring a bell (new stimulus), then produce the food, and the dogs would salivate (the desired response). Pavlov repeated this ringing of the bell along with the presentation of food many times. Eventually, he could ring the bell and the dogs would salivate without seeing or smelling food. The dogs had been “conditioned,” or had learned a new response—to salivate when they heard the bell. Their behavior had been modified through classical conditioning, or a conditioned response.

**2. B. F. Skinner: Operant Conditioning** One of the most influential behaviorists was B. F. Skinner (1904–1990), an American psychologist.

He developed the theory of operant conditioning, which says people learn their behavior from their history or past experiences, particularly those experiences that were repeatedly reinforced. Changing the behavior was what was important.

The following **principles of operant conditioning described by Skinner** (1974) form the basis for behavior techniques in use today:

- All behavior is **learned**.
- **Consequences result from behavior**—broadly speaking, reward and punishment.
- Behavior that is **rewarded** with reinforcers **tends to recur**.
- Positive reinforcers that follow a behavior increase the likelihood that the behavior will **recur**.
- Negative reinforcers that are removed after a behavior increase the likelihood that the behavior will **recur**.
- **Continuous reinforcement** (a reward every time the behavior occurs) is the fastest way to increase that behavior, **but the behavior will not last long after the reward ceases**.
- **Random intermittent reinforcement** (an occasional reward for the desired behavior) is slower to **produce an increase in behavior**, but the behavior **continues** after the reward ceases.

# G .Existential Theories

Existential theorists believe that **behavioral deviations** result when a person is **out of touch** with himself or herself or the environment.

The person who is **self-alienated** is lonely and sad and feels helpless.

**Lack of self awareness, coupled with harsh self-criticism, prevents the person from participating in satisfying relationships.**

The person is **not free to choose from all possible alternatives** because of **self-imposed restrictions.**

Existential theorists believe that the person is **avoiding personal responsibility** and is giving in to the **wishes or demands of others.**

| Therapy                  | Therapist          | Therapeutic Process  |
|--------------------------|--------------------|--|
| Rational emotive therapy | Albert Ellis       | A cognitive therapy using confrontation of “irrational beliefs” that prevent the individual from accepting responsibility for self and behavior                                      |
| Logotherapy              | Viktor E. Frankl   | A therapy designed to help individuals assume personal responsibility (the search for meaning (logos) in life is a central theme   |
| Gestalt therapy          | Frederick S. Perls | A therapy focusing on the identification of feelings in the here and now, which leads to self-acceptance   |
| Reality therapy          | William Glasser    | Therapeutic focus is need for identity through responsible behavior; individuals are challenged to examine ways in which their behavior thwarts their attempts to achieve life goals |

**Thanks for all**