

What is Psychology?

Psychology is “the scientific study of behavior and mental processes.”

It includes both observable behaviors (eating, reading, sleeping) and internal processes (thinking, emotions, dreams).

“Psychology comes from the ancient Greek root (Psyche), which means mind or soul.”

Psychologists ask: “Why do people behave the way they do?” (Coon & Mitterer, 2019)

Behavior in the definition of psychology refers to any action or response that can be directly observed such as eating, laughing, sleeping, talking, watching TV, reading, learning and other behaviors

The term "behaviors" includes actions, responses, thoughts, and emotions.

Behavior includes:

- Action (e.g. reacting to a coworker)
- Feeling (e.g. upset, angry, happy)
- Expression (e.g. facial expressions, verbal tone)

Psychology in Healthcare – Why It Matters

Psychology transforms healthcare by improving how we understand, diagnose, and treat patients.

It supports patient-centered care by addressing both mental and physical well-being.

Replaces the biomedical model with the bio-psycho-social model, where health is influenced by:

- Biological factors (genetics, physiology)
- Psychological factors (thoughts, emotions, behaviors)
- Social factors (relationships, environment)

Example: Chronic stress (psychological) worsens diabetes (biological); poor social support delays recovery (Engel, 1977)

Applications of Psychology in Healthcare

Understanding perception, language, and memory in patient care

Supporting child development in therapy sessions

Diagnosing psychosomatic illnesses (e.g. gastrointestinal, cardiovascular)

Pain management: “Cognitive distraction and guided imagery reduce acute pain” (Gatchel, 2020)

Enhancing communication: “Active listening + empathy reduce patient anxiety”

Preventing burnout: “Resilience training + self-care programs reduce symptoms in staff”

Fields of Psychology (½)

1-Brain & Cognitive Psychology

Study how we think, learn, remember, and decide.

2-Climate & Environmental Psychology

Improve how people interact with the world around them.

3-Clinical Psychology

Apply psychology to treat complex human problems.

4-Counseling Psychology

Help with personal & social functioning across life.

5-Developmental Psychology

Study how people grow and adapt across their lifespan.

6-Personality Psychology

Understand how biology, society, and mind shape personality.

7-Forensic & Public Service Psychology

Support justice and public safety using psychology.



Fields of Psychology (2/2)

8-Health Psychology

Promote health, prevent illness, and support healthy choices.

9-Experimental Psychology

Explore human and animal behavior through science.

10-Work Psychology

Study behavior in workplaces and organizations.

11-Teaching & Learning Psychology

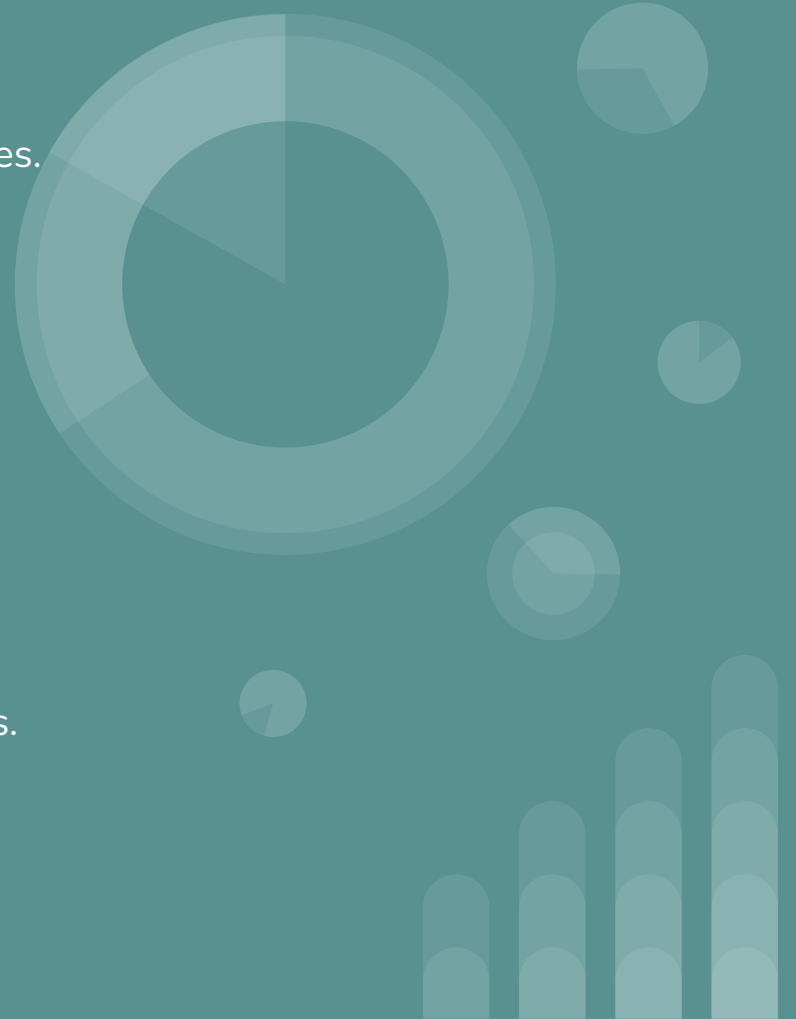
Understand how people learn and improve education.

12-Social Psychology

Study how we relate to others and form beliefs.

13-Sport & Performance Psychology

Help people overcome mental barriers and achieve success.



Key learning point

There are many domains in psychology that may reach more than 52 specialties according to the American Psychological Association (APA). New research fields in psychology includes: Nero clinical psychology, space psychology & Artificial intelligence psychology.

Human diversity

Because human beings are diverse there are many application of psychology in all areas of life. Examples of diversity include visible diversity such as age, ethnicity, gender, intelligence, physical abilities/qualities, race. Invisible diversity examples are educational background, and work experiences. Personal diversity includes religion, and geographical location.



Is human behavior inherited or learned?

The idea that our behavior is influenced by our genes is a common one in evolutionary psychology.

A natural experiment is the study of identical twins raised apart.

Some behavior geneticists came to the conclusion that personality is heavily influenced by genetics.

Genes explain about half of the variations in personality tests and much of the variations in IQ scores.

Identical twins separated from birth exhibit some startling variances.

If one twin has schizophrenia, there is only a 50/50 probability that the other will be diagnosed.

Identical twins are an exception to the rule.

There is a stark contrast between twin and adoption studies.

Significant impacts of genetic inheritance on personality and behavior.

Anyone who tries to explain what a person does in terms of basic physiological distinctions is bound to be disappointed.

Genetic effects are difficult to distinguish from environmental factors.

Children who grow up in the same family have extremely varied experiences.

Differences from their surroundings are roughly as significant as genes.

There is little doubt that genes influence our behavior in pretty general ways.

No satisfactory explanation of the underlying biochemical mechanisms in most cases.

There is an important distinction between personality predispositions and actual behavior.

Personality may be genetically heritable to some degree but human behavior never is.

Key learning point:

Personality and human behavior are affected 50% by genes and 50% by the environment!

Main Theories to Explain Human Behavior

1. Psychoanalytic Theory

Personality and behavior are influenced by subconsciousness and early childhood experiences.

2. Behavioral Theory

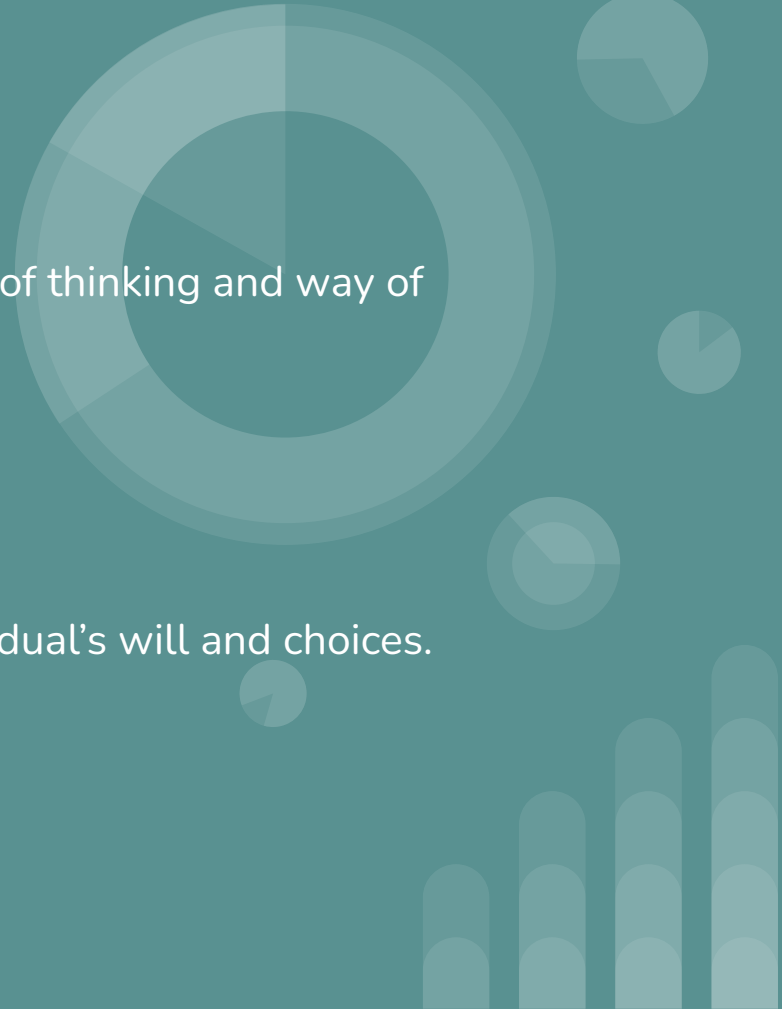
Personality and behavior are influenced by parental nurturing styles and reinforcements.

3. Cognitive Theory

Personality and behavior are influenced by style of thinking and way of perception.

4. Humanistic Theory

Personality and behavior are influenced by individual's will and choices.



Psychoanalytic Theory - Basic Idea

Personality and human behavior are influenced by sub consciousness and early childhood experiences.

The theory is traced back to Sigmund Freud, an Austrian neurologist (1856–1943).

Freud developed psychoanalysis as a method of listening to patients and understanding their minds.

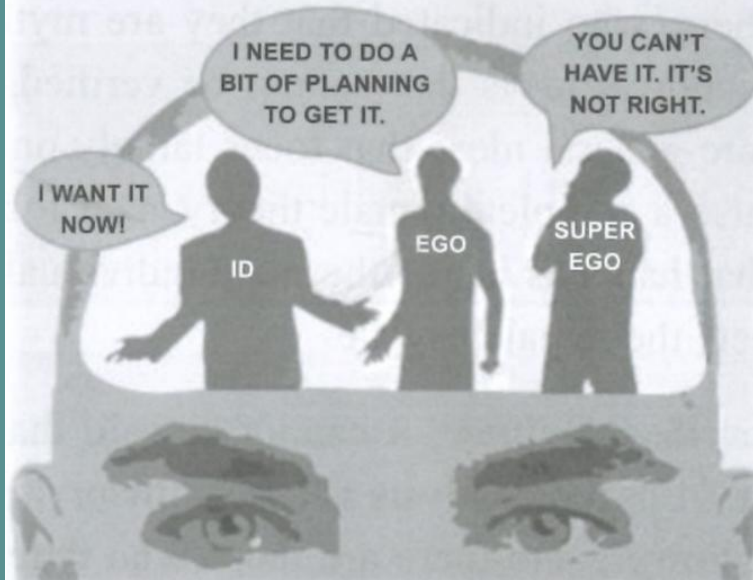
Psychoanalysis had a significant impact on psychology and psychiatry.

Freud's work influenced views of dreams, childhood, personality, memory, sexuality, and therapy.

Freud's Theory – Main Concepts

- 1-Unconscious mind: stores thoughts, memories, and emotions beyond conscious awareness.
- 2-Personality: Freud postulated that personality consists of three elements: the id, ego, and superego. The ego is the conscious state, the id is the unconscious, and the superego is the moral or ethical framework that governs how the ego functions. The conflicts and interactions between these components shape one's personality.
- 3-Life and death instincts: Life (e.g. reproduction, survival), Death (e.g. violence, aggression).
- 4-Psychosexual development: Five stages: oral, anal, phallic, latent, genital.
- 5-Mechanisms of defense: Freud suggested that people use defense mechanisms to avoid anxiety or to cover the conflict between the personality component (Id & Super Ego). These mechanisms include projection, displacement, repression, sublimation, regression, and many more.
- 6-Childhood experiences—especially trauma—affect personality and mental health in adulthood.

Freud's theory of the personality



Key learning point

Psychoanalysis sought to bring unconscious information into conscious awareness in order to induce catharsis. Catharsis is an emotional release that may bring about relief from psychological distress.

Freud's most significant contribution to psychology was the invention of psychoanalysis as a method of treating mental health issues.

Talk therapy is currently used in various psychotherapeutic procedures to overcome psychological and behavioral issues.

Freud wrote that a psychologically healthy person is someone able "to love and work", unlike disturbed individuals.

The only way to treat a person is by uncovering the secrets of the unconscious and repressions.

These repressed experiences often come from early childhood and are shocking situations that are not easy to change or modify.

These thoughts are largely unconscious and appear during dreams or slips of the tongue, where the person expresses real feelings without falsification.

Freud's theory received criticism from many scientists who considered it mythical and unverifiable+ It focuses largely on SEX

It is also criticized as a completely male theory that focuses on the male psyche and neglects the female psyche.

However, it cannot be said that psychoanalysis is a dead theory — it still has followers and defenders.

The theory is popularly accepted and many of its terms are used by non-specialists, e.g., self-defense, projection, ego, etc.

Second: Behavioral Theory

This theory assumes that parental nurturing techniques and reinforcements affect personality and human behavior.

It focuses only on visible behavior, not on internal thoughts or emotions.

Researchers in this field do not care about internal ideas or feelings, but only about observable and measurable behaviors.

A person's personality is simply a collection of learned and repeated behaviors that have become integrated into their personality.

Therefore, there's no need to assume or analyze what we cannot observe or quantify, such as:

- 1-Thoughts
- 2-Subconscious
- 3-Emotions

Skinner's Contribution

Skinner (1904–1990) was the leading theorist in this school.

He believed that a person's behavior is shaped by the environment they grow up in.

All behaviors and personality traits are acquired through upbringing and reinforcement, especially by parents and close people (Skinner, 1971).

Skinner emphasized the role of caregivers in:

Reinforcing behaviors, or

Suppressing them to prevent their appearance

Key concepts introduced by Skinner:

Reinforcement principle

Punishment principle

Shaping behavior

Other principles that explain how human behavior is molded by the surrounding environmental framework

Behavioral Theory

1. Definition of Personality:

Personality = a set of behaviors that have been reinforced by the environment.

If a child is constantly rewarded for polite behavior, that becomes part of their personality.

On the other hand, if undesirable actions are rewarded, they also become permanent traits (Ghoghre, 2023).

2. Role of Environment:

The environment encourages or discourages behaviors.

This reinforcement helps shape an individual's observable traits.

3. Bandura's Contribution (Social Learning Theory):

Albert Bandura expanded the behavioral theory.

People learn not only through direct reinforcement, but also by observing others.

Individuals may imitate behaviors they see in role models.

4. Anticipated Reinforcement:

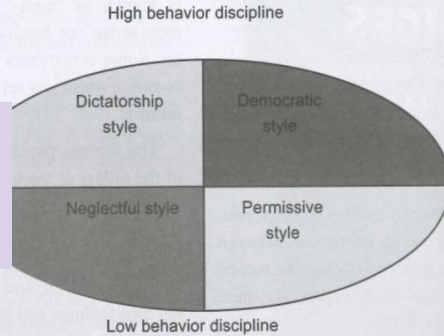
A person may continue a behavior even if the reward is delayed or uncertain.

Example: someone keeps buying lottery tickets hoping for a reward, even without prior success.

Evaluate Yourself

What is your parental style?

The way parents interact with their children and the socialization style they follow influences the formation of children's personalities. Parenting styles can be classified based on two variables: the first is the amount of love and acceptance parents show their children, and the second is the amount of control and discipline parents impose on their children's behavior. The interaction between these two variables results in four parenting styles, as shown in the following figure:



High love
and
acceptance

- Democratic style: Parents who show great affection and love for their children and also set specific behavioral rules for proper behavior.
- Dictatorship style: Parents who demonstrate high behavioral control without showing affection and love for their children.

- Permissive style: Parents who show great affection and love for their children but do not impose rules on their behavior or teach them right from wrong.
- Neglectful style: Parents who do not show affection and love for their children and do not impose rules on their children's behavior.

The parenting style greatly influences the future personality of children. We find children with a democratic parenting style to have high social skills, often excel academically, and are kind and polite. Children with a dictatorial parenting style are fearful, unsure of how to make decisions, and have average academic achievement. Children with a permissive parenting style are dependent, spoiled, impulsive, moody, and socially inept. As for the neglected style, children are mostly negative, have low academic achievement, are aggressive, and their behavior can develop into deviance!

Key learning point

Behaviorism focuses on the apparent behaviors that humans perform and the role of reinforcement and punishment in repeating behavior.

Humanistic Theory(will and choices)

1. Carl Rogers' View:

> The person who seeks “self-realization” must be open to new experiences and explore his own feelings and thoughts.

2. Responsibility for Actions:

> You cannot blame your surroundings or circumstances, but rather yourself and the decisions you made to establish your comfort zone.

3. Phenomenologists Focus On:

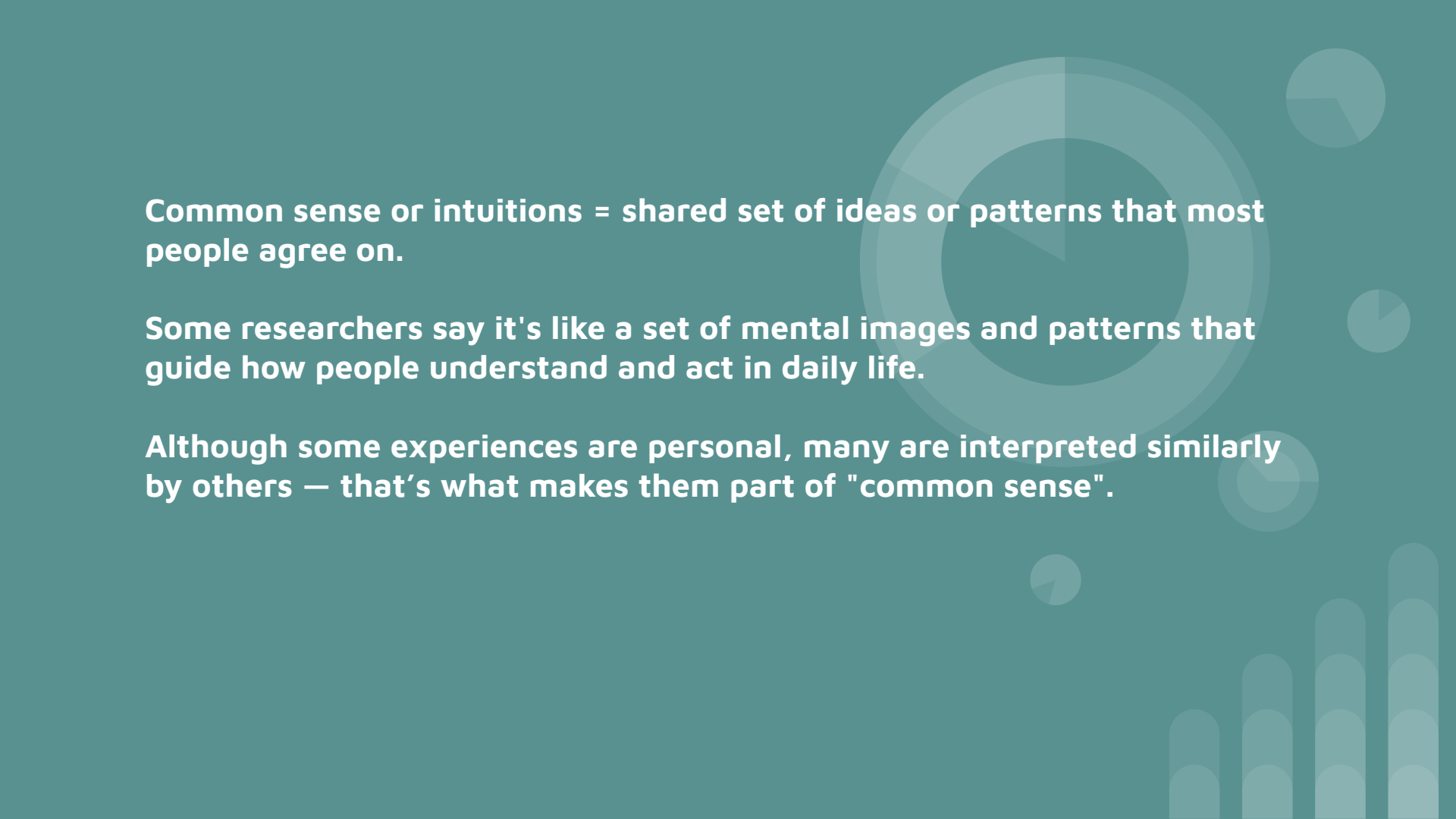
> The interaction between the initial state of our experiences and the mental processes that go through them to perceive those experiences.
— (Spinell, 1989)

4. Example – Music:

> Music is a collection of melodies that interact with the way we interpret them, creating emotions.

5. Interpretation of Life:

> The things we deal with in life are a way of interpreting these things and events.



Common sense or intuitions = shared set of ideas or patterns that most people agree on.

Some researchers say it's like a set of mental images and patterns that guide how people understand and act in daily life.

Although some experiences are personal, many are interpreted similarly by others — that's what makes them part of "common sense".

Humanistic Theory (Carl Rogers)

1. Free Will & Responsibility

Rogers emphasized that people are free-willed and capable of choosing their own paths.

Individuals should not blindly accept what society, teachers, or parents say—not everything told to us is necessarily true, even if it's commonly accepted.

2. Rejecting Limiting Beliefs

Many people don't use their full potential because they've been told (often by parents or society) that they are not good enough, not skilled, or not important.

This is incorrect—people have free will and can change.

3. Criticism and Labels

Parents should not criticize the whole person, but instead give feedback about behavior.

Saying "You are not a good person" is harmful because it attacks the whole self, not just a behavior.

Rogers highlighted the idea of "self-perception" and how criticism affects a person's identity and growth.

4. Social Labels

Using terms like "good person" or "bad person" reduces the individual to a label, which is discouraged in humanistic psychology.

Key Learning Point Box – Definitions

Choice:

- > The option of selecting from the available alternatives.**

Decision:

- > Making up one's mind to act on any choice, need, or problem.**

Consequences:

- > The choices we make and the decisions we take lead to specific results.**

Cognitive Theory: Understanding Human Behavior

The main theme behind this theory is that personality and human behavior are mainly affected by a set of cognitive processes.

Such processes include: attention, perception, memory, information processing, and style of thinking.

How Thoughts Influence Behavior??

Cognitive theory posits that people tend to perceive and interpret situations in characteristic ways.

These ways color their feelings and shape their behavior.

People often have spontaneous "automatic thoughts" about their past, current, or future situations.

The Interplay of Thoughts and Feelings

Cognitive theories are characterized by their focus on the idea that how and what people think leads to the arousal of emotions.

Certain thoughts and beliefs lead to disturbed emotions and behaviors.

Others lead to healthy emotions and adaptive behavior.

Impact of Previous Experiences and Memory

Cognitive scientists emphasize the role of the individual's previous experiences.

They highlight the mechanism of storing/recalling them in memory.

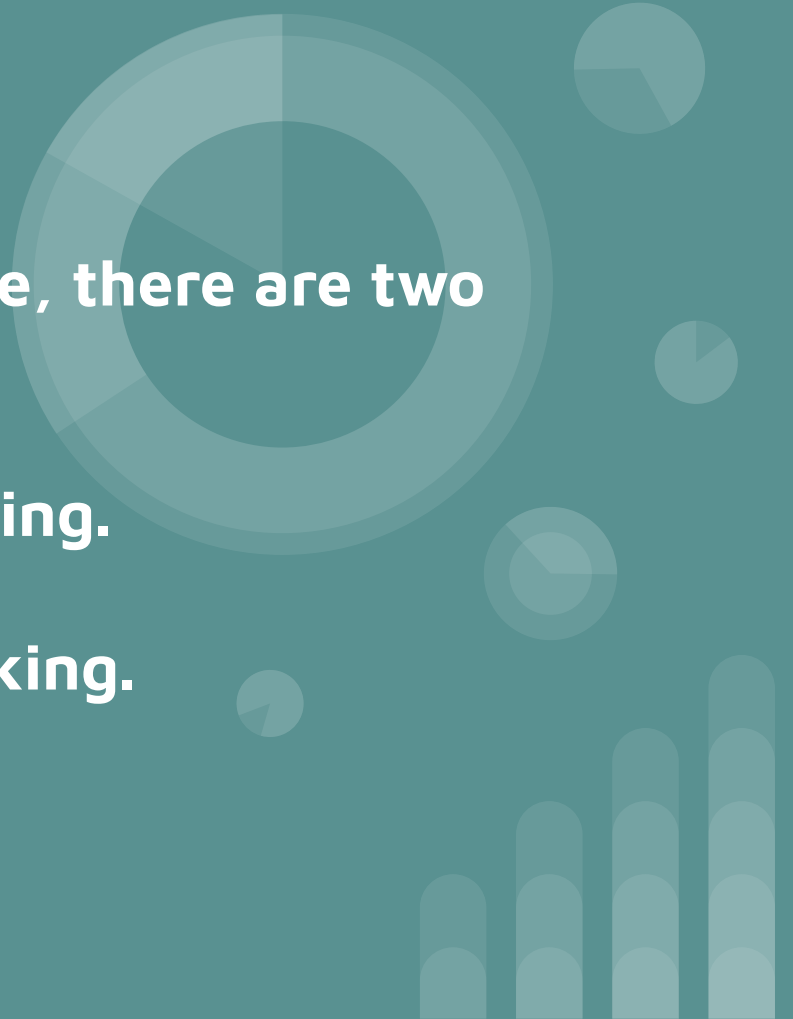
Human memory is affected by the way of thinking (positive vs. negative).

Positive vs. Negative Thinking

As a result of the thinking style, there are two types of individuals:

Individuals with positive thinking.

Individuals with negative thinking.



Traits of Positive Thinking

People with positive thinking tend to focus on opportunities rather than obstacles.

They view failure as temporary setbacks rather than insurmountable obstacles.

For example, if a person sees someone smiling, positive thinkers will interpret this smile as a compliment, and their memory will recall previous experiences that support this interpretation.

Traits of Negative Thinking

People with negative thinking are often pessimistic.

They doubt themselves and their abilities.

For example, negative thinkers will recall all previous experiences in which they were subjected to ridicule or criticism.

Cognitive Behavioral Therapy (CBT)

The combination of cognitive and behavioral ideas resulted in Cognitive Behavioral Therapy (CBT).

CBT is one of the most well-known techniques in psychological therapeutic methods.

Introduction – Applications of Psychology in Healthcare

There are several applications of psychology in the healthcare sector.

They are divided into two main categories:

Applications in the Medical Field

1-For patients

2-For medical professionals

3-For hospitals

Applications in the Dentistry Field

1-For dentistry patients

2-For dentistry professionals

3-For dentistry clinics



Applications in the Medical Field – For Patients

Understanding Human Sickness: Provides knowledge of bio-psycho-social, biological, psychological, and social factors affecting health.

Comprehensive Healthcare Services: Psychologists collaborate with physicians, nurses, and social workers to integrate care and promote well-being.

Enhancing Diagnosis: Due to the internet, patients often self-diagnose and arrive with their own preferred treatment. This may lead to misdiagnosis. Psychology helps doctors understand patient behavior and address psychosocial factors that affect accurate diagnosis.

Enhancing Services: Trains doctors in essential soft skills like empathy, active listening, critical thinking, and problem-solving to tailor interventions.

Supporting Caregivers: Helps caregivers of chronically sick patients manage stress, burnout, and psychological challenges.

Applications in the Medical Field – For Medical Professionals

Valuable Information: Provides insights into sociodemographic and individual differences such as gender, race, and nationality.

Dealing with Difficult Colleagues: Improves understanding and management of complex interpersonal dynamics.

Dealing with Medical Errors: Offers strategies for addressing and coping with mistakes.

Managing Stress and Promoting Self-Care: Offers techniques to reduce stress, anxiety, depression, and PTSD while promoting self-care programs.

Key learning point

Behaviorism focuses on the apparent behaviors that humans perform and the role of reinforcement and punishment in repeating behavior.

Applications in the Medical Field – For Hospitals

Managing Healthcare Facilities: Psychologists provide insights into effective hospital and clinic management.

Human Resources: Contribute to recruitment, performance evaluation, training, and leadership development.

Architectural Design(Light+Color+Places for Seclusion and Social Connection): Advise on creating physical spaces that promote emotional and psychological well-being.

Maintaining Stability and Function: Help ensure optimal patient flow, quality of treatment, patient satisfaction, and reduced physician turnover.

Discreet Rooms/Environment: Recommend private and comforting spaces within medical facilities.

Applications in the Dentistry Field – For Patients

Understanding Dental Experience: Helps understand pain, anxiety, and fear related to dental care.

Motivational Support: Provides emotional support through psychologically trained practitioners.

Creating Active Patients: Encourages a proactive mindset regarding oral health.

Behavioral Skills: Enhances performance with minimal effort.

Clinical Psychology: Offers practical stress-reduction tips to prevent burnout.

Dental Phobia: Addresses psychological causes of dental fears.

Bruxism (Teeth Grinding): Uses stress-reduction, relaxation, and meditation techniques to manage bruxism.

Overall High-Quality Care: Improves patient experience and quality of care.

For Dental Professionals:

Build better patient relationships → Reduces appointment cancellations by increasing commitment.

Encourage proactive patients → Patients take responsibility for their dental health and prefer preventive care.

Improve interpersonal skills → Rephrasing questions helps patients understand treatment options better.

Reduce stress & burnout → Clinical psychology offers practical tools to manage work-related stress

Applications in the Dentistry Field – For Dentistry Clinics

Clinic Design: Focuses on emotional impact through calming colors like blue and green.

Furniture Design: Develops tools and furniture suitable for children.

Child-Friendly Environment: Creates playful, welcoming spaces for children in both waiting and treatment areas.

Psychology on the ground

10 top tips to make pediatric and dental clinics a child-friendly environment

1. Design the clinic to be more friendly

As always, the first impression leads the way to how the child will feel and behave. Take the reception desk, for example. Can you picture how a child might enter your office and see nothing but a large wall? Obviously the choice of colors on your walls/chairs or uniform can make a difference as well.

Pediatric psychologists have defined schemes which make children feel comfortable. The stainless steel and white décor of a standard practice may look pristine to adults, but it is not an environment a child will feel comfortable in. In contrast soft colors such as blue, pink, green or yellow will have a calming effect on the child.



2. The work starts before the child even arrives

The initial contact with the parents on the phone is very important. The receptionist should take the time to collect as much information about the child as possible (previous experiences, pain, anxiety etc.), so that everybody knows beforehand how to approach the child and what to expect when (s)he comes for the initial appointment.

3. take the time to really get to know your new little patient

It is important you get the first appointment right, which is why you need to take the time to really get to know your new little patient. This will make the child feel comfortable and relaxed.



4. It's about the child, not the parent

Always try to keep the child at the center of attention. At the end of the day, this is their visit and not the parent's one. Use open questions in a child appropriate language, which they can answer with 'yes'. Psychology state that if the child answers five questions in a row with 'yes', (s) he will not say 'no' when you ask them if they want to do the check up to their teeth or throat.

5. Give them choice

As any parent can testify to, giving children directives does not always work, especially when they are in an unfamiliar environment. For example give them choice over what cartoon they wish to watch or listen while they are lying on the treatment bench.

6. Positive reinforcement

Positive reinforcement is a key component of success. Everything you say/do can be wrapped into a positive reinforcement.

7. Tell the truth!

Telling the truth is a fundamental principle and the same should apply to parents. Parents should tell their children why they are visiting a dentist, but equally reinforce the positive notions. For example if the child asks if he/she will need an injection don't just say yes but instead emphasize that they will get a special children's injection with magic gel!



8. Be prepared

When it comes to the actual treatment the most important thing is to be fully prepared. Children have, at most, a 20 minute attention span. Therefore it is important to keep treatment times to a minimum while doing as much treatment as possible in one visit. That means everything has to be

ready and the parents need to be aware and informed, so that they don't ask questions or interrupt the treatment.

9. You have one opportunity, so make it count

If you do treatment then make sure it will last. Any treatment should be a long term solution, as there is nothing more traumatizing than having to return to the clinic several times because of the same problem.

10. Improve prevention education

Always talk to the child in a simple language about their healthy habits as children listen to professionals more than their parents about the healthy life styles.

Adapted from

10 top tips for a child-friendly environment.

BDJ Team 2, 15085 (2015).<https://doi.org/10.1038/bdjteam.2015.85>



Do

- Show patients compassion and understanding.
- Show your patients that you care about them by giving them extra attention.
- Develop your social skills because they are essential for a successful career in healthcare.
- Give patients honest, genuine advice, and be prepared for them to disregard it.
- Have conversations with patients, follow up with them, and establish trust



Avoid

- Avoid treating people like objects as this can hinder the success of any medical experts.
- As a dentistry professional treat patients "as people not a teeth"
- Don't get burned out. Take breaks and regular vacations.
- do not force patients to take your options and give them the right to choose!
- do not lose trust with your patient and remember the ancient saying that 'trust arrives on foot but leaves on a horse'

Quick review

- Psychology word comes from the ancient Greek root (Psyche), which means mind or soul, and (logy) which means science or knowledge. Theoretically, the term psychology refers to the science that studies the mind and behavior and why people behave the way they do.
- There are two benefits that we can get from studying psychology, increasing self-awareness and increasing awareness of others.
- There are many domains in psychology that may reach more than 52 specialties according to the American Psychological Association (APA). Some of the most common are: clinical psychology, health psychology, personality psychology, work psychology and social psychology.
- Human behavior may get affected by biology and environment. there is little doubt that genes influence our behavior in pretty general ways. Some people are born with a natural tendency to be extroverted, joyful, emotionally reactive, friendly, creative, or clever. Yet, we do not have a good understanding of any of the relevant biochemical mechanisms.

- In general, there are four different theoretical approaches that have tried to explain the causes and sources of personality and human behavior > these theories as follows:
- Psychoanalytic perspective: Personality and human behavior are influenced by sub consciousness and early childhood experiences.
- Behavioral perspective: Personality and human behavior are influenced by parental nurturing styles and reinforcements.
- Cognitive perspective: Personality and human behavior are influenced by style of thinking and way of perception.
- Humanistic perspective: Personality and human behavior are influenced by individual's will and choices.

There are many applications of psychology in the healthcare sector, so as follows:

- Applications in the medical field
 - o for patients
 - o for medical professionals
 - o for hospitals
- Applications in the dentistry field
 - o for dentistry patients
 - o for dentistry professionals
 - o for dentistry clinics

1. What mainly shapes behavior in cognitive theory?

- A. Instinct**
- B. Reinforcement**
- C. Thinking patterns**
- D. Emotions**
- E. Genetics**

2. Which describes positive thinkers?

- A. Avoid failure**
- B. Deny reality**
- C. Focus on opportunities**
- D. Depend on others**
- E. Ignore challenges**

3. Moral values come from which structure in Freud's theory?

- A. Ego**
- B. Id**
- C. Superego**
- D. Subconscious**
- E. Drive**

4. The ego operates on which level?

- A. Fully unconscious**
- B. Partially conscious**
- C. Fully conscious**
- D. Reflexive**
- E. Preconscious only**

5. Which Freud stage is linked to adult sexuality?

- A. Oral**
- B. Anal**
- C. Phallic**
- D. Latent**
- E. Genital**

6. Turning impulses into acceptable actions is called?

- A. Repression**
- B. Projection**
- C. Displacement**
- D. Sublimation**
- E. Denial**

7. Behaviorists see personality as:

- A. Fixed traits
- B. Learned habits
- C. Unconscious desires
- D. Emotional reactions
- E. Genetic expressions

8. Skinner believed behavior is shaped by:

- A. Emotions
- B. Free will
- C. Instinct
- D. Reinforcement
- E. Self-image

9. Humanistic theory stresses:

- A. Past trauma
- B. Free will
- C. Conditioning
- D. IQ
- E. Denial

10. Carl Rogers emphasizes:

- A. Obedience
- B. Discipline
- C. Self-realization
- D. Self-control
- E. Avoidance