LECTURE NOTES

For Health Science Students

General Psychology

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FOREWORD

Psychology is increasingly getting importance in human lives. Major problems of our time such as poverty, environmental and ecological crisis and many other social and economic problems have important psychological implications. Today, no walk of human life can be out of the practical contributions of psychology. Its contribution is particularly recognized in the area of health. Psychologists focus on the prevention of physical and psychological problems rather than just on their treatment. To achieve this, the study of human behavior and how human beings interact with their environment and how they develop physically, socially, emotionally and mentally is important.

This teaching material is prepared as part of The Ethiopian Public Health Initiative: Curriculum and Staff Strengthening Program sponsored by The Carter Center.

It was recognized that there is a need to write simplified lecture notes to health science students enrolled in the university colleges. The specific need for writing this lecture note arose from mitigating shortages of teaching materials in these higher institutions.

This teaching material provides students with basic understanding of human behavior in general and shows the

contribution of psychology in alleviating the health problems of our society in particular. It has incorporated essential and selected topics arranged in a logical manner so as to serve the prospective practitioners in carrying out their duties and responsibilities effectively.

Each chapter begins with a list of behavioral objectives and an introductory remark about the contents, followed by brief concepts structured in a didactic approach. The topics under each chapter are enriched with varieties of health related examples and activities aimed at promoting active learning. What is more, all chapters end with self-assessment questions measuring higher-order learning outcomes in line with the objectives stated under each chapter.

Long years of teaching experience in the field coupled with constructive comments and suggestions solicited from the intra and inter review workshops largely helped the writer to elaborate basic concepts of the subject in a simple and understandable way.

Though the teaching material is intended primarily to serve instructors and students in the health colleges, it is equally relevant to universities and colleges running non-health related programs.

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ACRONYMS

WHO: world health organization

ACH: acetylcholine

DA: dopamine

ATP: adenosine tri-phosphate

EEG: electro encephalogram

CAT: computerized axial tomopgraphy

HIV: human immuno-deficiency virus

PET: position emission tomography

MRT: magnetic resonance imaging

S-R: stimulus-response

UCS: unconditioned stimulus

UCR: unconditioned response

NS: neutral stimulus

CS: conditioned stimulus

CR: conditioned response

VIS: visual information store

DRT: drive reduction theory

MMPI: Minnesota-multi phase inventory

ABC: antecedent behavioral consequences

AIDS: acquired immuno deficiency syndrome

PTSD: post traumatic stress disorder

GAs: general adaptive syndrome

DSM: diagnostic statistical manual

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CHAPTER ONE
INTRODUCTORY CONCEPTS IN PSYCHOLOGY

Objectives: at the end of the chapter the student is expected to:

- Define basic terms in the course;
- Explain the role of psychology as a means of promoting human welfare;
- Differentiate the sub fields of psychology;
- Relate major perspective of psychology with issues it is concerned about;
- Describe and evaluate major theoretical approaches to psychology;
- Identify the main areas of research interest and professional activities in psychology.

1.1.The subject matter of psychology and its definition

Brainstorming: Students will exchange their experience on the following questions as a means to assess their pre-conception about the subject psychology.

What comes to your mind when you hear the word psychology?

Have you read or listened to anything related to psychology?

What was its content about?

Did you appreciate it? Why?

What do you expect from the course in psychology?

The introductory part of psychology emphasizes on two aspects:

1. Psychology as a science

A Science is defined not by **what** it studies but by **how** it studies. Psychologists like any other scientists systematically observe facts about human beings and organize these facts to arrive at generalizations. Psychology shares with other sciences certain aims, assumptions, ways of carrying out research and ways of building and modifying theories.

2. Psychology is a body of knowledge that can be applied to help solve a variety of human problems. In addition to the contribution in the area of research (developmental, social, experimental, physiological psychology), there are many other areas of professional applications. Clinical psychologists work with psychiatrists in a hospital context or with other health professionals in the community. Educational psychologists work with children and adolescents in schools, colleges, and nurseries

and in the home. They collaborate with parents and teachers to assess a child's progress at school and provide help and advice. Counseling psychologists work with individuals, families, couples or groups to improve people's well being, alleviate distress and help them solve their own problems and take their own decisions.

Definition and general remark

The word psychology is derived from two Greek words "psyche" and "logos."

Psyche means soul and logos means the study. Thus, originally psychology was defined as the study of "soul" or "spirit." But later on philosophers defined psyche as mind. Because of this, psychology began to be regarded as the study of an individual's mind or mental process. Through time, this later definition of psychology was given up because the mind as an object does not exist: and cannot be observed and measured objectively. The most widely and accepted definition of psychology is: **the science of behavior and mental processes of both humans and animals.**

There are some concepts in this definition which need further explanations: The terms are "science" and "behavior."

What is science?

Science is a group of related facts and principles of a particular subject. In science we collect related facts by the use of objective methods to develop a theory to explain those facts. From a given set of conditions, science helps us to predict future happenings.

Example-Biology explains how living things grow and develop. Anatomy describes the structure of human body. Physiology deals with the function of various parts and systems of the body. Nursing and the rest of the health sciences are also founded on science.

Similarly, Psychology as a science deals systematically with human behavior, motives, feelings, emotions, thoughts and actions of men and women. Like other sciences, Psychology discovers and explains the underlying laws and principles of behavior. Its goals are describing, explaining, predicting and finally modifying human behavior.

What is behavior?

Behavior In its broader sense includes all types of human activities.

Example- Motor activities (Walking, speaking)

- Cognitive activities (perceiving, remembering, thinking, reasoning)
- Emotional activities (feeling happy, sad, angry, afraid)

Behavior is both mental and bodily.

- Mental behaviors are thinking, reasoning, imagination and other mental experiences or processes.
- Bodily behavior refers to the movements and actions of the body in response to a situation.

Behavior is the reaction of an individual to a particular environment. The environment exerts influence on individuals. That influence is called stimulus. The stimulus in turn arouses an activity from the individual and this is called the response.

Example-A man may be admitted to a hospital for a surgical operation (stimulus)

The man feels frightened and worries because he is uncertain what may happen next (response)

This stimulus response combination constitutes the behavior of an individual.

The human behavior consists of physical responses, feelings, emotions and tensions, and all intellectual responses, perceiving, thinking, recalling, and reasoning.

Behavior shows growth and development from the early years of infancy to maturity and old age. Psychology as a science studies how behavior grows and develops from infancy to old age and also studies behavioral differences between people.

In general there are four major facts proposed in relation to the nature of behavior. These are:

- Behavior has a bodily basis
- Behavior is dynamic
- Behavior varies from person to person
- Behavior is social

Psychologists collect facts of behavior by means of objective methods such as observation and experiment and predict human behavior.

Example- a patient may react with anger if his movements are restricted in the ward. If the health professional has knowledge of scientific psychology, it is possible to predict and control the patient's behavior.

At times psychologists study animal behavior. The reasons are:

- The study of animal behavior helps to develop general laws of behavior that apply to all organisms.
- The study of animal behavior provides important clues to answering questions about human behavior.

- For ethical reasons it is sometimes difficult to conduct psychological experiments on human beings.

Psychology has a contribution to the health professional. Some of the contributions are:

1. **It helps to understand oneself.**
   - Helps to make rational decisions on becoming a health professional;
   - To fulfill the need for economic self-sufficiency;
   - Helps to assess ones own abilities and limitations;
   - Enables to control situations in the college and attain goal through self-discipline.
2. **It assists in understanding other people.**
   - The health professional works with patients, families, other nurses, doctors and administrative staffs.
   - Equipped with the knowledge of psychology, the health professional will achieve greater success in interpersonal relationships.
   - Psychology helps the health professional to learn why others differ from him/her in their

preferences, customs and beliefs or cultural patterns.

3. **It enlightens to appreciate the necessity of changing the environment and how to bring it about.**
   - By changing the environment, the health professional can bring about change in the patient's life.

Example: introducing eyeglasses and hearing devices into the environment can help people with visual or auditory impairments.

Scope- Psychology studies different subject matters and its scope is diverse. It is related with other disciplines.

1. Psychology and politics

Many political problems consist psychological problem. The political battle can be effectively carried on at all, in so far as it can be supported by a scientific psychology.

2. Psychology and Economics

The solution and clarification of an economic problem such as poverty, for example, requires the full understanding of the psychological needs of the human being: which is an essential concept in the theory of personality.

3. Psychology and Health

The relationship is well articulated in so many health related books. It is also clearly stated in the **WHO's** preamble as follows:

> ***"Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity."***

The scope of psychology changed through time. Its expansion has brought changes both in subject matter and methodology. Among the most important issues and questions that are addressed by psychology at different historical periods are:

- Nature (heredity) **versus** Nurture (environment);
- Conscious **versus** unconscious determination of behavior;
- Observable behavior **versus** internal mental processes;
- Freedom of choice **versus** determination;
- Individual difference **versus** universal principles.

Though there is a problem in clearly defining the scope and elaborating the methodology, psychology is attractive, important and tantalizing.

a. Attractive -Psychology gives you certain skills and understanding that books and theory don't always supply.

b. Important -Human advancement is the activity of human brain. The human brain is the focus of psychological studies. It is the human brain that has brought material security and cultural improvement.

c. Tantalizing - No branch of science is actually too easy to understand. Psychology is also the least 'easy'; because we are trying to study the brain with the help of the brain. However, it still creates the desire to know and understand.

1.2. Major perspectives in the historical development of psychology

Psychology broke away from philosophy and physiology and emerged as a separate discipline over 100 years ago. In the last century, this young and fertile discipline went through a series of changes and expansions in both subject matter and research methods.

1.2.1. Early perspectives of psychology

1.2.1.1. Structuralism

- Formal research in psychology began at the university of Leipzig Germany where Wilhelm Wundt founded the first psychological laboratory in 1879.
- Wundt is considered as the first psychologist and father of experimental psychology.
- He limited the subject matter of psychology to the study of conscious experience. The elements of conscious experience were considered to be of two kinds. These are:

  Sensations: sights, sounds, tastes, smells and touch, which arise from stimulation of the sense organs;

  Feelings: love, fear, joy, and so on
- He believed that all conscious experiences are merely intricate combinations of elemental sensations i.e. sensory knowledge is the building block of our intellect. Sensations combine to become conscious experiences as basic elements are composed to form complex substances in chemistry. For example, an experience such as meeting and recognizing an old friend in the street was thought to be composed of many independent sensations, feelings and images,

which were drawn together and synthesized by the mind.

Its method of study was introspection.

- In introspection people are taught, trained to observe and report the 'content' or 'elements' of awareness in a particular situation. For example; people are presented with stimulus such as a sentence on a card and asked to describe in their own words their own experiences.
- Introspection is detailed description and how people perceive things in the world.

Comments: Introspection is not a true examination of the contents of consciousness, but a retrospective glance at that which has passed through consciousness. The problem is that people will have difficulty in describing and explaining some kinds of inner experiences.

- Nowadays introspection as a method is rarely used in some problem-solving and psycholinguistic experiments. Otherwise as an approach it is outdated.

1.2.1.2. Functionalism

- The American psychologist William James pioneered functionalism.

- It focused on what the mind does on the functions of mental activity and the role of behavior in allowing people to adapt to their environment.
- Functionalism was strongly influenced by biology. The work and ideas of Charles Darwin had a great impact on the emergence of functional psychology. According to Darwin's theory of evolution, living organisms change and develop over time through a process of natural selection. Organisms whose characteristics were best suited to their environment survived and reproduced. While organisms whose characteristics were less adaptable died out. Survivors would transmit to the next generation those characteristics that enabled them to survive.
- William James was greatly influenced by Darwin. James held that the function of consciousness was to enable humans to behave in ways that would act survival through adaptation to the environment.

Where these adaptive behaviors were repeated frequently they became habits. Habits provide stability and predictability in society.

1.2.1.3. Gestalt psychology

- The leading proponents of the Gestalt view were the German psychologists Max Wertheimer, Kurt Kafka and Wolfgang Kohler.
- Instead of considering separate parts that make up thinking, Gestalt psychologists concentrated on the **'whole'.** Their slogan is 'the whole is greater than the sum of its parts'. Gestalt means shape, form or configuration.
- Their belief was that the whole is different from the sum of its parts. In order to understand our environment we have to perceive it in its totality not in its individuality. Max werthiemer said that '***it is a mistake to analyze psychological events into pieces, or elements, as the strtucturalists did***.'
- Further research by the Gestalt psychologists led to the development of a set of principles of perceptual organization. Such organizations arose through the brains innate ability to structure and organize the

perceptual field into meaningful patterns rather than perceiving the separate elements. For some of the main Gestalt principles of organization, see the chapter 'sensation and perception.'

1.2.1.4. Psychoanalysis

- The Viennese neurologist and psychologist Sigmund Freud (1856-1939) pioneered the psychoanalytic perspective.
- Freud said that conscious experiences are only the tip of the Iceberg. Beneath the conscious experience is Primitive biological urges that seek expression but which are in conflict with the norms and morality of the society.
- These unconscious motivations and conflicts have powerful influences on our conscious thoughts and actions. Therefore they are responsible for much of human behavior including physiological problems. According to Freud, all behavior whether normal or abnormal is influenced by the unconscious mind. This belief is called psychic determinism.

- They cannot be directly studied through introspection.

According to Freud the methods of studying the unconscious mind are:

a. Free association

- In this method the psychoanalyst gives the client a word and asks to reply with the first word that comes to mind be it nonsense or irrelevant. The psychoanalyst makes associations and meanings between ideas, words, and thought.
- It is a projective technique to explore the client's unconscious thoughts.

b. Dream analysis based on case studies

- The contents of dreams are analyzed for underlying or hidden motivations.
- Dreams are viewed as indication of what a person is truly feeling within the conscious mind. Freud said dreams are **'the royal road to the understanding of the unconscious**.'

Remember the old proverb, which says. " Pigs dream about corn and geese dream about maize."

Comments: Most wishes are repressed in the human mind. So it is difficult to understand and interpret the contents of dreams.

Conclusion -The concept of unconscious experience strongly initiated psychological research in modern times. Freud's work attracted many followers, but his theory also generated much debate and controversy. Even among his original followers such as Carl Jung and Alfred Adler, eventually broke away from him and developed their own modified thoughts of **psychoanalytic theory**. For further explanations see Adler's individual psychology and Roger's humanistic theory under personality psychology chapter seven.

1.2.1.5. Behaviorism

- John Watson (1878-1958) revolutionized psychology by changing the subject matter of psychology from the study of conscious experience to the study of behavior.
- Watson believed that the study of psychology should be about observable behavior and its aim should be to describe, predict, understand and control behavior.
- He contended that psychologists should never use the terms consciousness, mental states, introspection, imagery and the like.

- Followers of behaviorism did not reject the existence of mind and consciousness. Rather, they viewed these concepts as impossible to observe and contributing little to a scientific approach to psychology.
- Watson's focus on the study of observable behavior enabled to formulate clear hypotheses, which could be tested by experimentation.
- Watson's view of learning relied to a great extent on Pavlov's account of classical conditioning. Accordingly, it is possible to break down and analyze a certain behavior into stimulus-response units.
- Much of the behaviorists' research into learning was carried out on animals, rather than humans; partly because animals were easy to obtain and greater control could be exercised over their environment, and partly because they accepted the idea that humans and animals are related both physiologically and behaviorally.
- The work of John Watson contributed much to the use of more objective and systematic methods to the study of human behavior.

1.2.2. Recent perspectives

1.2.2.1. The biological perspective

It states that behavior has a biological basis. The behavior of both people and animals should be considered in terms of biological functioning. Topics that are discussed in this perspective include:

- How the individual nerve cells are joined together?
- How heredity influences behavior?
- What are the physiological responses when a baby confronts a stranger?

1.2.2.2. The cognitive perspective

- It focuses on the process that helps people to know, understand, and think about the world.
- This perspective explains how information in the memory is processed at different stages and how our thinking about the world influences our behavior.

Example: Can a medical student watch television and study at the same time?

1.2.2.3. The behavioral perspective

- The 1904 Nobel Prize winner, the Russian physiologist and psychologist, Ivan Pavlov opened

a new way of thinking for psychological investigations.

- His experiment on dogs enabled psychologists to explain certain behavior and certain differences among individuals as the result of learning.
- Following the works of Pavlov, Thorn dike and Watson behaviorism got strength. Through time, its principles and methods of study became an integral part of psychology. By the middle of the twentieth century, it was widely accepted that psychology was about the study of behavior rather than conscious experience.
- The American psychologist B.F.Skinner refined and popularized behaviorism. He showed that the consequences of behavior provide the basic mechanism for predicting and shaping future behavior.

Contribution: Skinner's theory inspired certain techniques of toilet training how to loose weight, quit smoking and learn new skills. His theory helped to develop techniques for the treatment of various psychological disorders, the resolution of sexual problems and even the halting of drug addiction.

Comment: Some psychologists argue that Skinnerian conditioning using reinforcement technique is manipulative; because it limits personal freedom.

1.2.2.4. The humanistic perspective

- It is a psychological approach that suggests that people are in control of their lives
- This perspective assumes that people are naturally endowed with the capacity to make decisions about their lives and to control their behavior.
- Humanistic psychologists claim that everyone has the capacity to develop to higher levels of maturity and realize his/her full potential if given the opportunity.
- The human being has free will to make decisions about his/her own life, rather than depending on societal standards. For example, if a person chooses to lead an average life, it cannot be considered as worse compared to a person who has higher aspirations.

General conclusion: The above brief summary on the definition and the subject matter of Psychology is far from being comprehensive. It explores only a few of the most important contributions of psychologists. You may enrich it by further readings

1.3. Some branches of Psychology (fields of specialization)

Activity: Read each of the following cases that describe works carried out by psychologists in the different sub fields, and match them with the branches of psychology discussed below.

Case 1. The middle aged psychologist at the college of health sciences welcomed identical twins learning in the health officers program. The point of the interview is to examine similarities in the behavioral and personality traits of the twins. The interest of the psychologist is to compare twins who have had lived together almost all their lives with those who have been separated from birth. In line with this, the psychologist is seeking to determine the relative importance of heredity and experience on the behavior of the twins.

Case 2. Describing his/her childhood events, a health officer student disclosed his secretes which he did not tell previously to anyone. The psychologist listened attentively to the student

and suggested him that his concern is one that is shared by many students in the college.

Case 3. A researcher on the laboratory table removed the adrenal glands from a brown Australian marsupial mouse. Male members of the species show a sort of matching dance. After five to twelve hours of continuous sex they die. However, this behavior only occurs during a twelve-week period. The researcher believed that the adrenal glands trigger this furious sexual behavior in response to seasonal varieties in the length of day and change in temperature.

Psychology can be likened to a large extended family. Each of the branches of psychology can be considered as nephews, aunts, uncles, and cousins who may not interact on- day- to- day basis, but have blood relationship. Some of the branches are:

1. **Experimental psychology**
   - Generally they use controlled laboratory experiments to pursue their study
   - Basic topics studied include:
     - Sensation
     - Perception
     - Learning
     - Memory
     - Problem solving

- Communication
- Emotion
- Motivation

Experimental psychologists attempt to answer the following questions.

- What is the basis for love between a mother and her baby?
- Can animals think?
- What is the role of the brain in memory?

Experiments are made not only on human beings; but also on animals. This is because that animal research leads to human research that can give us insight into the behavior of our own species.

2. Physiological psychology

This branch of psychology looks for explanations of behavior in the physiological structures of humans and animals. Some of the questions raised by physiological psychologists include:

- What physiological changes occur in people during sleep and dreaming?
- What is the relationship between the incidence of motorway accidents and changes in the

physiological functions of the body at different times of the day?

3. Developmental Psychology

- Its concern is about behavioral development over the entire life span. It is also concerned with psychological concepts, such as: learning, memory, motivation and thinking.
- The following are questions raised by developmental psychologists

  How soon can babies perceive depth?

  How do children develop the concept of the self?

  Is language acquisition only a question of biological maturation, learning or it has any relation to social interaction?

4. Personality Psychology

- Some people are highly competitive and hostile (Type-A behavior)
- Some people tend to be relaxed and don't feel the pressure of time (Type-B Behavior)

- The study of the relation between personality and behavior is an example of research in personality psychology.
- It studies individual differences in behavior and why people not react in a similar way to the same situation.
-

5. Social Psychology

Social psychology is a wide-ranging field of study. Among the topics that can be studied are:

- Friendship formation
- Conflict
- Perception of other people
- Aggressiveness

Example: Research findings in social psychology showed that delinquent boys who watched aggressive or violent movies are engaged in more acts of physical aggression after seeing these movies than delinquent boys who watched neutral movies.

The Particular interest of social psychologists is on the relevance of their research to human society i.e. human problems in the group, the community, the nation and the world.

6. Clinical Psychology

- It is the study, diagnosis and treatment of abnormal behavior.
- It looks for possible biological, educational and environmental causes of disorders.
- The aim is to change the environment that leads to disorder.
- Clinical psychologists give advice to community workers on how to handle psychological problems.

7. Other branches of psychology are:

- Educational psychology
- Industrial and organizational psychology
- Work psychology
- Military psychology
- Health psychology etc.,

8. Emerging fields

- Psychology of women
- Environmental psychology
- Forensic psychology
- Program evaluation psychology

Conclusion: Given the diversity of roles that psychologists play, many psychologists in our country are employed by institutions of higher education and secondary schools. Very few psychologists work in human service organizations like hospitals, social affairs and non-governmental organizations as consultants. However, nowadays the importance of psychology is getting better attention in our society

1.4. Research methods in psychology

Definition and general remark

Theodoson and Teodoson in their modern dictionary of sociology (N.Y, 1969) defined research as 'any honest attempt to study a problem systematically or to add to man's knowledge of a problem.'

The methods used by psychologists in their investigations are similar to the methods used in other scientific fields. A feature of scientific method is that data are collected in an unbiased, objective way. There are three main ways in which objectivity can be maximized: this can be through, **operational definition**, **replication and control**. Operational definition is defining exactly what particular terms mean in that particular investigation. This enables to measure and quantify the variables under study and

avoid ambiguity. One way to check the objectivity of findings is to see if they can be replicated. If similar results are yielded with the same or different participants and in different contexts objectivity of findings is maintained. This helps to construct a body of knowledge or theory. Psychologists use theories to organize different observations and relate them in a coherent manner. In laboratory experiment, the experimenter manipulates an independent variable and measures its effect on a dependent variable and holds the influence of all other unwanted variables. For example, a test of the effect of alcohol on driving ability would need to control other extraneous variables like previous experience or drinking history.

No one best method is available for studying all aspects of human behavior and thought. Each has advantages and limitations. In general psychological investigations attempts to:

- Describe mental and physical behavior;
- Explain the reasons for that behavior;
- Predict the circumstances under which it might occur again.

Regardless of the problem type the general methods employed in psychological research are:

- Identifying and clearly stating the problem;
- Generating hypothesis;
- Deciding the research procedure;
- Decide the type of data;
- Gather the Data;
- Analyze the data by means of statistical techniques.
- Conclusion and recommendations.

Data gathering is influenced by factors involved in the research and the nature of the population to be studied. When gathering data psychologists focus on variables, factors or events.

A variable is something that undergoes changes. If the variable in the research is, for example, intensity of a tone, intensity is the variable; if difficulty of a test is the variable in a study, the study variable is difficulty. There are two major types of variables. These are:

1. **Independent variable**: any factor whose change is expected to affect the event that is being studied.
2. **Dependent variable**: the event that is expected to change when the independent variable is altered.

Suppose an epidemiologist wants to investigate the effect on tooth decay of the addition of fluoride to drinking water. The independent variable in this research design is addition of fluoride. Tooth decay is the dependent variable.

Collecting all possible data is not practical. Hence, there is a need to sample from the target population. But the sample must be:

a. Large enough to reflect the universe (population)
b. Randomly selected i.e., every member of the population has an equal chance of being included in the sample. In a random sampling, some members are not favored over others. It is called representative- ness.

Representative ness goes beyond the choice of subjects. The specific items in which people in a study respond should be an adequate sample of possible items.

Once the problem is identified, we can use any of the following five methods.

1. The experimental method

It is regarded as the method of choice. This enables to infer cause - effect relationship with reasonable confidence. Extraneous variables that can affect the result of the experiment can be controlled. In experimental research method there are two groups. These are the experimental group and the control group. A group in an experiment that is exposed to the independent variable(s) under investigation is the experimental group. The group that receives similar treatment except for the critical independent variable(s) is called the control group.

Advantages: the experimental method enables to rule out all influences on the subject's behavior except the factors being considered and to make influences based on objective findings.

Limitations: ruling out extraneous influences sometimes makes the situation so unnatural that behaviors shown during the experiment may not resemble its counterpart in daily life.

Not all experiments take place in a lab setting. Some are conducted on street corners, subways hospitals, schools, airports, offices etc., These field experiments

are, however, difficult to conduct for the very reason that control of extraneous variables is unlikely.

2. Correlational research

It is a research method, which studies the relationship between two or more variables. All problems cannot be studied using experimental method.

See the following research problem;

'The relationship between parental discipline and juvenile delinquency.'

Hypothesis.

a. Permissive parental discipline leads to juvenile delinquency;
b. Strict parental discipline leads to juvenile delinquency;

To investigate this problem using the experimental method we select those parents who are permissive and strict toward their children and count the number of delinquencies when they reach adolescence.

But not only it is difficult to get such willing parents but also it is unethical for the children to be treated in the ways mentioned above. Therefore we resort to the use of correlational study.

Correlation: It is the degree of relationship between two variables.

If a high rank on one measure is paired with a high rank on the other measure it is positive correlation. If a high rank on one measure is paired with a low rank on the other then it is negative correlation.

The correlation coefficient is a numerical index showing the extent of relationship between the two variables under examinations. The values range from –1 to +1.

Examples: socioeconomic status **versus** years of schooling (the direction is positive)

- Musical ability **versus** tone deafness (the direction is negative)
- Eye color **versus** education (usually no correlation)

Interpretation of correlation coefficients: coefficients indicate merely that two things tend to occur together. They do not show cause and effect relationship. But correlational studies help at least to predict human behavior.

Example: a young girl from an upper middle class home is likely to join college.

Advantages: It corresponds to daily life. When practical or ethical questions do not permit the use of experimental method we can use correlational studies.

Limitations: Since variables are manipulated by life not in the lab, it is impossible to control other factors that might affect the outcome.

3. The survey method

It is a method of getting information regarding peoples' characteristics attitudes, opinions or behavior by asking them all the same question.

Example: the central statistical office (CSO) conducts a large-scale survey. It enables to establish the size, distribution and characteristics of the population.

Advantages: Survey research tells us a great deal about people. Questioning every household produces accurate information. But completeness is beyond the budget, staff and time of the psychologist. Hence, sample of individuals are queried.

Survey methods are often used alone. But sometimes they are used in connection with experiments.

Survey can be Oral (interview) or written (questionnaire).

- Interview: allows the investigator to see the subjects.
- Questionnaire: it takes less time to administer. Its advantage is to gather information from a large number of people.

Limitation: People sometimes give misleading answers either deliberately or accidentally; particularly if the concern is a touching area, such as sex, money or race relations. One-way to control this problem is by including several differently worded questions on the same topic.

4. The case study (clinical method)

It is an intensive investigation of one or a few individuals usually with reference to single psychological phenomena. The unit of study can be a family, a group of delinquents, dropouts and teenagers.

Case studies allow for a considerable depth of analysis. It is useful when it becomes unethical to use experimental method.

Some questions about human behavior cannot be studied by the already discussed methods. Suppose

we want to prove the hypothesis" ***Experience with language in the first few years of life is necessary if a person is ever to acquire a language"***

Experimental method is not suitable to study this problem. Because it is unethical to deprive a child from social interaction to test our hypotheses.

Correlational method is not suitable. Because almost every child continued experiencing with language from birth.

Survey method is not suitable. Because of scarcity of children without early language experience. If we discover a child of that sort who has lived shut away from human contact, it is a golden opportunity. Then we can use case study.

Originally case study is used in medicine to examine the patients past, present and future conditions.

Example: Freud used it to extract detailed account of his patients' life and his interpretation of their thoughts, dreams and actions.

5. Naturalistic observation

It is a method used to collect data by observing the overt behavior of an individual.

Suppose we want to study whether men and women smile at each other more in a supermarket or at a car wash. The above methods all tell us nothing. To answer this question we have to visit a number of supermarkets and car washes and observe men and women.

In naturalistic observation the observer is:

- Passive;
- Unobserved;
- Does not intrude the situation being studied.

Different kinds of behavior that might be observed:

- Physical signs;
- Expressive movements;
- Physical location: where people sit or stand in relation to one another;
- Conversation;
- Length of time children play with toys.

Advantage: It is directly applicable to daily life and people are more likely to behave normally in such settings than in a laboratory.

Limitation: the observer has no control over any of the variables.

Solution: observing children from behind a one-way mirror without being recognizes can solve the problem of the effect of the observer.

Sometimes participant observation can be used. Members of a research team actually join an existing group to record events and impressions that are accessible only to group of members.

To make observational research valid:

- Develop ways of recording data that avoid the problems of subjective interpretation.
- Develop explicit rules for categorizing and recording what thew observer sees, so that two observers can come up with comparable results.

General conclusion: problem is identified. Hypotheses are generated. Method is selected. Data is collected. The next step is to organize, analyze and systematically put the data using statistical techniques.

Self- assessment questions

1. What is the general importance of psychology? Why should a health student study it?

2. Explain the term behavior by giving examples of your friend's behavior in the classroom, at the dinning hall and at the student lounge.
3. Why is psychology regarded as a science?
4. According to the behaviorists, what is the most important influence on the development of behavior?
5. List down the main school of thoughts in psychology in their chronological order.
6. Mention at least three branches of psychology and explain their interest

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CHAPTER TWO
BIOLOGICAL BASIS OF BEHAVIOR

At the end of this chapter the student is expected to:

- Relate the physiological mechanisms of the body to mental processes;
- Discuss the relationship between physiology, mental processes and behavior;

This chapter attempts to answer the following questions.

1. Why do psychologists study the brain and nervous system?
2. What are the basic elements of the nervous system?
3. How does the nervous system communicate electrical and chemical messages from one part to another?

2.1. Definition and general remark

Sometimes Biological psychology is referred to as physiological psychology or psychobiology. It studies the relationship between the mind and the body and how one influences the other. Bio psychologists are professionals who study the ways biological structures and body functions affect behavior.

In order to understand how the brain exerts control over the different body movements involved in simple and complex tasks,

it is essential to examine the neurons and the ways in which nerve impulses are transmitted throughout the brain and body.

2.2. Neurons: Neurons are specialized cells that are the basic elements of the nervous system that carry massages.

The most important feature of neurons is their ability to communicate with other cells. It is estimated that about two billion neurons exist in the brain alone and the number of neural connections within the brain to be one quadrillion.

The structure of the neurons

In playing the piano, driving a car, or throwing a ball to the basket, different muscles are involved. The body system sends messages to the muscles and coordinates these messages to produce successful results. Such messages are passed through specialized cells called neurons.

a. Dendrites: They are cluster of fibers at one end of a neuron that receives messages from other neurons.

b. Axon: It is a tube like long extension from the end of a neuron that carries messages to other cells through the neuron. The length of axons range from several millimeters to three feet.

c. Terminal buttons: They are small branches at the end of an axon that relay massages to other cells. Electrical messages travel through neuron beginning with detection of messages by

dendrites, continue into the cell body(nucleus) and pass down the axon.

d. Myelin sheath: It is the axons protective coating, made of fat and protein. Its function is to prevent messages from short circulating by insulating the axons.

In certain diseases like multiple sclerosis, the myelin sheath loses its function, exposing parts of the axon. In this case, there will be a message disturbance between the brain and muscles and results in the inability to walk, vision disabilities, and general muscle impairment.

Chemical substances needed for the nourishment of the cell nucleus move also in a reverse direction i.e. axons-to-cell body. When vital material is not transported to the neuron in this reverse direction, the neuron dies from starvation and the disease amyotrphic lateral sclerosis develops. Similarly, rabies is caused by the transmission of the rabies virus by reverse flow along the axon from the terminal buttons.

The firing of electrical charges in a neuron follows an **all –or-none law**. They are either on firing or resting state. When neurons are off or at resting state, there is one thousandth of a volt (70 milli volts). When a message arrives, the cell wall in the neuron allows positively charged ions to rush in at rates as high as 100 million ions per second. The sudden arrival of positive ions causes the charge to change from negative to positive in the

cell. When the charge reaches a critical level, an electrical impulse known as an **action potential** travels down the axon of the neuron.

The speed at which an action potential travels along axon is determined by the axons size and the thickness of the myelin sheath. Axons with small dendrites carry impulses at about two miles per hour; longer and thicker ones can have average speeds of more than 225 miles per hour.

Neurons also differ in their potential capacity to fire impulses. Some neurons have the potential to fire as many as 1000 times per second. This potential depends on the intensity of a stimulus.

Example: a strong stimulus such as a bright light or a loud sound leads to a higher rate of firing than a less intense stimulus does.

Conclusion: our understanding of several primary psychological processes like sensation, perception, and learning is based on fundamental knowledge of the structure, operation and function of the neurons.

Synapse: It is the gap between two neurons through which chemical messages are communicated.

2.3. Neurotransmitters: They are chemicals that carry messages across the synapse to the dendrites of a receiver neuron. They can be produced in the form of chemical liquids or gases like nitric oxide.

If a receiving neuron fires and an action potential travels down the axon, it is excitory message.

If the neuro-transmitters chemical information prevents or decreases the likelihood of the neuron fire, it is inhibitory message.

The integration of simultaneous messages by the dendrites depends on the number of messages. If the number of excitory message outweighs the number of inhibitory ones, the neuron will fire. On the other hand, if the number of inhibitory messages outweighs the excitory ones, nothing will happen. The neuron will remain in its resting state. Effective communication across synapse becomes impossible when receptor neurons are constantly stimulated by neurotransmitter. In this case the terminal button reabsorbs the neuro transmitter. It is called **reuptake.**

The major neurotransmitters are:

1. **Acetylcholine (Ach)**
    - It is found throughout the nervous system, and involved in our every move.
    - The drug curare used by South American Indians on the tips of poisoned darts keeps Ach from reaching receptor cells, thereby paralyzing the

skeletal muscles and ultimately producing death by suffocation.

- Ach is closely related to memory capabilities.

Example: Alzheimer disease is associated with a deficiency in the production of Ach.

2. Gamma- amino butyric acid (GABA)

- It is found in the brain and spinal cord
- It is primarily an inhibitory neuro transmitter.
- It moderates activities, such as, eating and aggression.
- The poison Strychnine prevents GABA from carrying out its inhibitory role, permitting neurons to fire wildly, thereby producing convulsions.
- Tranquilizers (e.g. Valium) and alcohol are effective because they permit GABA to operate more effectively.

3. Dopamine (DA)

- Muscular rigidity and shaking (Parkinson's syndrome) seems to be caused by a deficiency of dopamine in the brain.
- Researchers have hypothesized that schizophrenia and some other severe mental disturbances are

caused by the presence of unusually high levels of dopamine.

4. Adenosine tri-phosphate (ATP)

- It is the fuel used by the body to produce energy within cells.
- Because it works very quickly, some investigators hypothesized that ATP is essential in the formation of synapses vital to memory.

5. Endorphins

- They are a family of chemicals similar in structure to painkillers.
- They are found in large concentration in the brains of people afflicted with diseases that produce long term severe pain.
- In addition to pain reduction, endorphins also produce euphoric feelings that joggers experience.
- The belief that patients can be relieved from pain due to acupuncture and placebos can be partly explained by the release of endorphins.

2.4. Major parts of the brain and their relationship to behavior

2.4.1. Major parts of the brain and their function

a. The central core

- It is similar to that found in all vertebrates
- Its function is to control eating, sleeping and breathing.

b. The reticular formation

- It is made up of groups of nerve cells that can immediately activate other parts of the brain to produce general bodily arousal.

Example: If we are startled by a loud noise the reticular formation prompts us to respond. The reticular formation as well allows sleeping by guarding us from disturbing background noises.

c. The cerebellum

- Its function is to enable us to walk straight and control body balance It constantly monitors feedback from the muscles to coordinate their placement, movement and

coordination. Drinking too much alcohol affects the activity of the cerebellum, leading the person to stagger.

a. The thalamus
   - It is a station for messages coming from the eyes, ears, and skin and communicated upward to higher parts of the brain.
   - It integrates and sorts out information from higher parts of the brain and sends to the cerebellum and medulla.

b. The hypothalamus
   - It is located just below the thalamus
   - It helps to maintain a balanced internal environment
   - It regulates such behaviors as eating, drinking, sexual behaviors, aggression and nurturance of off springs.

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c. The cerebral cortex

- It is part of the brain that distinguishes human kind from all other animals.
- Unique function of the brain, that allows human beings to think evaluate and make complex judgments are principally located in the cerebral cortex.
- The three major areas of the cortex are:

1. The motor area

- This area is responsible for the voluntary movement of particular parts of the body
- Every portion of the motor area corresponds to a specific locale within the body.

Example: If mild electrical stimulation were applied to a particular portion of the motor area, there would be involuntary movement in the corresponding part of the body.

2. The sensory area
   - This area includes three regions corresponding to the senses.
   - The somatic sensory area corresponds to touch and pressure
   - The auditory corresponds to sight
   - The visual area corresponds to sound. Raw sensory inputs from the eyes are transformed into meaningful stimuli.
3. The association areas
   - The association areas are generally considered to be the site for higher mental processes such as thinking, language, memory and speech.

Damage to the association areas can result in:

- Personality changes that affect the ability to make moral judgments
- Apraxia: a condition in which an individual is unable to integrate activities in a rational or logical manner

Example: a person with apraxia when asked to open a lock with a key may be unable to do so in response to the request.

- Aphasia: problem of verbal expression

Example: speech becomes halting, laborious and often ungrammatical

- Difficulty in understanding others

2.4.2. Major brain scanning techniques

Important advances have been made in the study of the brain. This has been possible by using the brain scanning technique. This helped to understand about the internal workings of the brain without surgical operations. The technique also offers possibilities for the diagnosis and treatment of brain disease and injuries.

The most commonly used techniques are:

d. The Electroencephalogram (EEG) technique:

- This records the electrical signals being transmitted inside the brain through electrodes placed on the outside of the skull.

- The brain's electrical activity is transformed into a pictorial representation of the brain.
- The use of this technique enabled the diagnosis of epilepsy and some learning difficulties.

e. The Computerized Axial Tomography (CAT) scan:
   - The scan uses a computer to construct an image of the brain by combining thousands of separate x-rays.
   - Its use is to show abnormalities in the structure of the brain such as swelling and enlargement.

f. The Magnetic Resonance Imaging (MRI) scan:
   - It provides detailed and vivid image of brain structure and individual bundles of nerves in other parts of the body.

g. The Position Emission Tomography(PET) scan:

- It shows bio-chemical activity within the brain at a given moment.
- The computerized devise helps to determine the more active regions of the brain at work.

2.5. Major components and functions of endocrine systems

Definition: Endocrine system is a chemical communication network that sends messages through the nervous system via the blood stream and secretes hormones that affect body growth and functioning.

Major components of the endocrine system are:

- Pituitary glands;
- Thyroid glands;
- Adrenal glands.

Major functions of the endocrine glands are:

- Regulate metabolism and growth;
- Regulate absorption of nutrients;
- Regulate fluid balance and ion concentration;
- Regulates the body's response to stress;
- Regulates sexual characteristics, reproduction, birth and lactation.

Self assessment questions

1. What are neurons?
2. What are neurotransmitters?
3. How does exchange of information take place within the neuron?
4. How do researchers identify the major parts and functioning of the brain?
5. What are the major parts of the brain and what are the behaviors for which each part is responsible?
6. List down major functions of the endocrine system.
7. Sketch the different parts of the neuron and the brain and label its parts.

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CHAPTER THREE

SENSATION AND PERCEPTION

By the end of this chapter the student is expected to:

- Distinguish between sensation and perception;
- Outline some factors which determine perception;
- Explain the gestalt laws of perception;
- Explain the different theories of perception.

3.1. General remark

In this chapter we focus on the field of psychology concerned with the nature of information obtained through the senses and the way in which we interpret such information. Information from the three-dimensional real world is received through our senses in two dimensions and processed to provide a basis for our interaction with the environment. The interpretation of this information within the brain results in three-dimensional perception. This perception of depth depends on the brain's use of a number of clues.

Sensation and perception are fundamental topics. Because our behavior is so much a reflection of how we react to and interpret stimuli from the world around us.

Simple and complex questions related with our day to day experiences such as:

- What processes enable us to see and hear?
- How we know whether sugar or lemon is sweeter?
- How we distinguish one person from another? We can get answers to the above questins from our knowledge of sensation and perception.

Sensation and perception are the starting points for all other psychological processes. They supply the data we use for learning and remembering for thinking and problem solving, for communicating with others, for experiencing emotions, and for being aware of ourselves. Without sensation and perception we would not form thoughts or feelings.

Brain storming activity: read the following case and brainstorm the questions below it.

Bezawit is at her parent's home for the Easter vacation. It is a semester break. She is exhausted from campus life, intensive academic work and especially from the tasteless lunches at the campus cafeteria. But these thoughts were soon interrupted when she saw her mother carrying ***dorowat with injera*** (one of

Ethiopian favorite dishes), on a tray and placed it at the center of the table. All family members were sitting and they were talking and laughing.. The smell of the ***dorowat*** reached Bezawit and soon she felt her stomach growl from hunger. The sight and voice of her family members around the table along with the smell and taste of the ***dorowa***t made Bezawit feel more comfortable and forget the tiresome college life.

Brainstorming questions

- How different her feeling be if any one of Bezawit's senses were not functioning.
- What would happen to Bezawit had she not listened to the conversion of her family members?
- What would happen to Bezawit had she not feel her stomach growl or smell the dinner, or taste the food?

3.2. Basic terms and concepts related to sensation and perception

To have a better understanding of the subject matter of sensation and perception, we need to define related basic terms.

1. Stimulus: It is a source of physical energy that produces a response in the sense organs. The energy could be sound waves, light waves, and heat pressure to which an organism is capable of responding. A sensation is a response to that energy by a sensory system. Stimulus and sensation have cause and effect relationship.

The quality of a stimulus refers to the kind of sensation it produces.

Example: Color----- visual stimulation

Musical pitch------auditory stimulation

The quantity of a stimulus refers to the amount of stimulus present.

Example: brightness, loudness

Stimuli vary in both type and intensity. Different types of stimuli activate different sense organs.

Example: A light stimulus that activates our sense of sight and allows us to see the color of a tree is called type. A sound stimulus that permits us to hear the sound of a musical instrument is called type.

How high a light stimulus needs to be before it is capable of being detected is intensity. How much perfume a person must put on before others notice it is termed as intensity.

2. Response: It is any reaction of an organism to or in the presence of a stimulus. The reaction could be muscular or glandular.

3. Sensation

It is the process by which an organism's sense organs respond to a stimulus. It is the process whereby stimulation of receptor cells (in the eyes, ears, nose, mouth, and surface of the skin) sends nerve impulses to the brain. After reaching the brain they are registered as a touch, a sound, a taste, and a splash of color. Hence, sensation can be thought as an organism's first encounter with sensory stimuli.

4.Transduction: It is the sequence of operation by which physical energy (example, sound waves, light) is transformed into patterns of neural impulse that give rise to sensory experience.

5. Perception: It is the process whereby the brain interprets sensations, giving information order and meaning. It takes into account experiences stored in our memory, the context in which the sensation occurs and our internal state (our emotions and motivations). It is the process of forming hypotheses about what the senses tell us.

Example: Hearing sounds and seeing colors are sensory processes; whereas, listening sweet music and detecting depth in a two dimensional picture are perceptual processes. Without sensation of some kind perception could not occur.

A branch of psychology called **psychophysics** studies the relationship between the intensity of a stimulus and its sensory response. In other words it studies the relationship between the physical nature of stimuli and people's sensory responses to them.

There are several factors that affect our perception. Some of these are:

a. Context and expectation

In an experiment by Bruner and Minturn (1955, cited by Baron), participants were shown sequences either of letters or of numbers, for example:

- C D E F G H or
- 8 9 10 11 12

When perceived with a figure/number **I3** that could be either **B** or **13**, those who had seen the sequence or letters tended to perceive it as **B**, while those who had seen the numbers perceived it as **13**. The context in which it was seen produced expectation and induced a particular set.

b. Motivation

Studies have shown the effects of motivation upon the way in which things are perceived. Solley and Haigh(1956, cited in Baron), for instance, asked children aged four to eight to draw

pictures of Santa Claus during the month running up to Christmas. As Christmas approached, Santa Claus became larger, nearer, more elaborate, a more decorated costume and a bigger bag of presents. After Christmas, Santa shrank and his present bag all but disappeared.

c. Emotion and perception

In a study by McGinnis (1949, cited in Baron), participants were presented with either neutral stimulus such as table apple chair or 'taboo' words. Each of these words was presented very briefly, then for increasing length of time. At the same time a measure of emotional response (Galvanic Skin Response) was taken. It was found that the taboo words had a higher recognition threshold and were also accompanied by greater GSR.

d. Values, culture and personality

There is evidence that suggests that an individual's value system may induce a set. Post man (1948,cited in Baron), rated participants on the Allport-Vernnon scale of values. The scale divides values into six categories. These are theoretical, social, economic, aesthetic, political and religious. The result showed that, words, which are relatd to highly rated value categories, were found to be more easily perceived than lower-rated values. Cultural prejudices have an effect upon perception. In

Pettigrew(1958, cited in Baron) study, different racial groups of south Africans pictures were shown to Afrikaners. The pictures were shown to each of their eyes simultaneously. Afrikaners tended to exhibit a cultural set in that they saw all the pictures as either Europeans or African without differentiating Indians and those of mixed race from the Africans.

6. Absolute threshold: It is the smallest intensity of a stimulus that must be present for it to be detected.

For a stimulus to be detected by our sense organs it must become strong enough.

The following research findings on absolute threshold are taken from the works of Galanter (1962) as cited in (Feldman, 1996)

- **Sight**: a candle flame can be seen 30 miles away on a dark, clear night.
- **Hearing**: the ticking of a watch can be heard 20 feet away under quiet conditions.
- **Taste**: A teaspoon of sugar can be detected in nine liters of water
- **Smell**: A drop of perfume can be detected when one drop is present in a three-room apartment.
- **Touch:** The falling of a bee's wing from a distance of one centimeter can be felt on a cheek.

7. Difference threshold: it is the smallest detectable difference between two stimuli.

A noticeable difference depends on the value of the initial intensity of the stimulus.

Example: When the moon is seen in the late afternoon, it appears relatively dim. When it is seen in the dark, it seems quite bright.

Weber's law: The law states that 'the just noticeable difference is in constant proportion to the intensity of an initial stimulus." Weber's law in psychophysics explains the relationship between changes in the original value of a stimulus and the degree to which the change will be noticed.

Example: If a one-pound increase in a ten-pound weight produces a just noticeable difference, it would take a ten-pound increase to produce a noticeable difference in a hundred pounds.

The noticeable difference in the case of loudness becomes larger for sounds that are initially loud than for sounds that are initially soft.

Example: A person in a quiet room is more sensitive to the ringing of a telephone than a person in a noisy room. In order to produce the same amount of sensitivity in a noisy room, the ring has to be very loud.

8. Sensory adaptation: It is an adjustment in sensory capacity following long period of exposure to stimuli. It is the tendency of receptor cells in the sense organs to respond less and less to a constant stimulus. Adaptation occurs as a result of prolonged exposure to stimuli, a change in the attitude and expectation of the individual.

Example: Repeated hearing of a musical sound in a bar makes a person to adjust as if it were softer. When you enter into the dormitory with a distinct odor, the smell is very noticeable at first, but soon it seems to fade.

One explanation for decline in sensitivity to sensory stimuli is the inability of the sensory nerve receptors to constantly carry messages to the brain. They stop reacting to constant stimulation.

The sense of smell and touch adapt quickly. Pain adaptation is slower. However, sensory adaptation occurs with all the senses.

9. Attention: Attention is a general term referring to the selective aspects of perception which function so that any instant an organism focuses on certain features of the environment to the exclusion of other features.

A factor of importance in the study of perception is attention. Human beings are constantly encountered with stimuli from the environment in which they live; but they use only a very

small portion of this information. Selective attention enables them to sort out and process this information.

In this operation we can distinguish between controlled and automatic processing. Controlled processing is serial; one thing is processed after another. Automatic processing is parallel. More than one processing operation can occur at a time. Difficult and unfamiliar tasks require controlled processing. Simple and familiar tasks can be processed automatically.

Factors which determine whether or not we pay attention to a stimulus are:

1. Intensity: a bright color will attract us more than a dull one.
2. Size: a large thing is more likely to catch our attention than something small.
3. Duration of repetition: a quickly running stimulus will not catch our attention as easily as one, which persists or is repeated.
4. Emotional content: a stimulus, which creates emotional feeling, attracts our attention more than a neutral one.
5. Suddenness or novelty: sudden stimulus is likely to catch our attention more easily than one we have been expecting.

6. Contrast: contrasting stimulus will attract attention more easily than those, which are similar to each other.
7. Movement: a stimulus, which moves, is more likely to attract attention than something stationary.

Activity: Observe advertisements on the Ethiopian television. List the occasions and describe how the above factors are evident. Assess the effectiveness of these advertisements in attracting the attention of the public.

Reading assignment

1. What are the basic processes that underline the senses of vision and hearing?
2. What role does the ear play in the senses of sound, motion, and balance?
3. How do the senses of smell and taste function?
4. What are the skin senses, and how do they relate to the experience of pain?

3.3. Theories related to sensation and perception

3.3.1. Signal detection theory: this theory addresses the role of psychological factors in detecting stimuli.

Activity: Pose the following questions to your students so that they may identify psychological factors, which will enable them to answer the questions below.

- Is this person HIV-positive?
- Is the person lying?
- Is this athlete using drugs?
- Will this college applicant succeed?

Several factors influence us how we answer such questions. For instance, physicians who are seeking to identify the presence of a tumor in an x-ray are influenced by their expectations, knowledge, and experience with patients. From this we can understand that the ability to detect a stimulus depends not only on the type and intensity of the stimulus but also on psychological factors.

People can make mistakes in their attempt to detect a stimulus. According to signal detection theory there are two kinds of errors made by people in their attempt to detect a stimulus. These are:

- Reporting a stimulus as existing when it is non-existent;
- Reporting a stimulus as non-existent when it actually exists;

In such conditions, using signal detection theory, psychologists are able to obtain an understanding of how observer's expectations, motivations, and judgment affect individual's ability to detect a stimulus.

The findings in signal detection theory have great practical importance in our life.

Example: If a radar operator, who is responsible for distinguishing incoming enemy missiles from the images of passing birds, makes a mistake, the consequence will be dangerous.

A witness who is asked to detect a criminal from people in a line, and if he/she mis-identifies the criminal as innocent person it is dangerous. Similarly if the criminal is not detected correctly that might be also dangerous for the society.

Psychologists have developed a procedure that enhances people's chances of identifying suspects. These are:

- Telling witnesses that the suspect might not be in the line up at all.
- Trying to make people in the line up to appear equally dissimilar.

3.3.2. The Gestalt laws of organization

In the perceptual process, the senses work together to provide us with an integrated view and understanding of the world.

Perception is a constructive process by which we go beyond the stimuli that are presented to us. From what we sense in our environment, the brain constructs a meaningful situation.

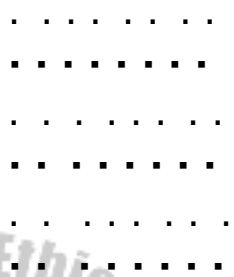
The gestalt laws of organization are principles that describe how we organize and construct pieces of information into meaningful wholes. They include: closure, proximity, similarity, and simplicity.

Activity: encourage your students to reflect their knowledge of Gestalt psychology discussed in chapter one.

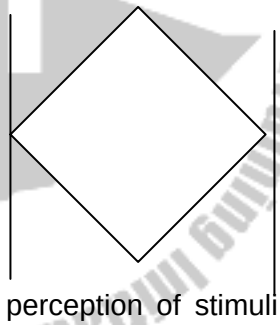
1. **Closure:** We perceive things by grouping them as complete figure rather than open and breaks. We tend to ignore the breaks in the figure below and concentrate on the overall form as a triangle.

2. **Proximity:** Things that are closer together are grouped together. As a result we tend to see pairs of dots rather than a row of single dots in the following patterns.

3. **Similarity**: Elements that are similar in appearance are grouped together. We see horizontal rows of dots and squares instead of vertical mixed columns below.



5. **Simplicity:** When we observe a pattern, we perceive it in the most common straightforward manner. For example, most of us see the figure below as a square with lines on two sides, rather than as the block letter **"W"** on the top of the letter **"M".** We generally tend to choose and interpret the simple one.



According to Gestalt psychologists, perception of stimuli in our environment is not simply putting together individual elements. It requires an active, constructive process of the brain. It is when we put together bits and pieces of information into a whole that we can better understand and solve problems in our environment.

Example: To introduce a new health package into a community, it is important to see the culture, economic and consciousness of the people in that community. It requires an integrated approach.

6. **Figure-Ground perception**

It is the perceptual relationship between the object of focus (the figure) and the field (the ground). The figure has form or structure and appears to be in front of the ground. The ground is seen as extending behind the figure. The relationship can be reversed by focusing on or attending to the ground rather than the figure (for further explanation see the Gestalt perspective of learning under the heading theories of learning)

3.3.3. Feature analysis theory

The theory is a more recent approach to the study of perception. According to feature analysis theory, to perceive an object in our environment, we first react to individual aspects such as, shape, pattern, object or scene. We start from these individual components and move to comprehend the overall nature of what we perceived.

Evidences suggest that sensitivity of individual neurons in the brain to specific configuration such as angles, curves, shapes,

and edges is responsible to breakdown an object into different component parts.

Example: To perceive a letter in the English alphabet, we perceive vertical line, a diagonal line, and a half circle. In this process, the brain matches specific parts of the letter with what is already stored in our memory. It is after this match that we can identify the letter (object).

Some psychologists don't agree with the above explanation. Accordingly, perceptual process moves through two stages. These are:

- **Pre attentive stage:** At this stage we focus on the physical feature of a stimulus such as its size, shape, color, orientation, or direction of movements. At this stage little or no conscious effort is made to understand the stimulus.
- **Focused-attention stage:** At this stage we pay attention to particular features of an object, choosing and emphasizing features that were initially considered separately. At this stage we carefully consider the actual nature of the stimulus.

Activity: At this juncture, brainstorm the students to evaluate these two approaches. Let the students specify or cite practical examples of their own experience in weighing these two approaches

3.3.4. Directions in perception

The processing of Perception proceeds along two directions. These are top-down processing and bottom-up processing.

1. Top- down processing

The top- down processing of perception is guided by a higher-level of knowledge, experience, expectations, and motivations. Patterns can be recognized easily and rapidly, because we expect certain shapes to be found in certain locations.

Example: When we read a sentence, we perceive that sentence with the missing letters in it. This is because we had past experiences. Therefore, it is not important to decode the meaning of each word. If an additional word is inserted, we may not notice that it is there:

STUDENTS ARE EXPECTED TO
PUTOFF THEIR MOBILES
BEFOR THEY ENTER THE
THE LIBRARY. In this example 'the' is often not noticed at all.

Our expectation also plays a role in what we are reading. If a student**,** for example, is reading a text in psychology material, he expects sentences from psychology not lines from a poem.

In the top- down processing, the context in which we perceive objects is important. The figure "**I3",** for example, is perceived as the letter **B** in a row that consists of the letters **A** through **F.** The same figure can be perceived as the number **13** in a row that contains the numbers **10** through **14.** Therefore, our perception of the figure is affected by our expectations about the two sequences.

2. Bottom-up processing

The bottom-up of perception consists of recognizing and processing information about the individual components of the stimuli.

In the above mentioned example it may be difficult to recognize the sentence without being able to perceive the individual shapes that make up the letters.

Therefore, partly perception requires the recognition of each separate letters.

Conclusion: top-down and bottom- up processing occur simultaneously and interact with each other, in our perception of the world around us.

Self assessment questions

1. Briefly describe the differences between 'sensation' and 'perception'

2. What is gestalt law of organization?
3. List two theories that explain pattern recognition. Which theory seems most satisfactory to you? Give reasons for your choice.
4. List the gestalt principles of perceptual organization.
5. Suppose you are at a dinner party with your friend. The fork, the spoon, knife and glasses all produce noisy sounds. What psychological factors influence the discussion between you and your friend?

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CHAPTER FOUR
PSYCHOLOGY OF LEARNING

By the end of this chapter the student is expected to:

- Explain what is meant by learning;
- Describe some of the questions that have been explored by learning theorists;
- Describe different forms of learning;
- Evaluate some of the clinical and educational applications of learning theories to humans;
- Outline the most important ways in which the humanistic approach differs from other learning approaches.

4.1. General remark and definition

One of the most important, universal and distinctive characteristics of human beings is their capacity to learn. Our habits, skills, knowledge, attitudes, interests and characteristics are largely the result of learning. The capacity to learn progresses throughout the life span until death. It is through the process of learning that human behavior changes or undergoes modification. The knowledge, understanding and skills obtained from the process of learning help mankinds to control and change their environment for their own benefit.

Definition- Learning is a relatively permanent change in behavior as a result of practice and experience.

The above definition contains the following components

- One has to distinguish between performance due to maturation and changes brought about by experience;
- One has to distinguish between short-term changes in behavior due to fatigue,; tension, stimulants and changes that are due to actual learning.
- The changes in behavior could be for worse or better;
- Learning is not directly observed but manifested in the changed activities f the individual.

Habituation is thought to be the simplest form of learning necessary for survival. It involves learning not to respond to a particular stimulus. For example; humans habituate to the ticking of a clock or the sound of traffic noise. The phenomena of habituation shows that animals and humans can learn to ignore a stimulus that continues to be experienced.

Example- A health student has learned a new procedure in his/her area of specialization. Thus the trainee has become rich in his/her experience and thereby, modified his/her behavior. Because the trainee improved his/her efficiency, the trainee has easy adjustments to situations, which required knowledge and procedure. The trainee was able to learn that procedure by observations, through drill and practice and by imitations.

Issues related to learning

- Some Psychologists claim that learning can only be inferred indirectly by observing changes in performance.
- Others argue that learning and performance are the same. According to them, the emphasis is should be on observable performance than the mental component of learning.

4.2. Modes of learning

In learning a new thing, we follow different ways. There are three main ways of learning.

1. **Learning by trial and error**
   - It is a random attempt to learn a new problem.
   - Some of these attempts may result in success but others may not.
   - The right response to a situation is arrived at by chance, by constant trial and by making repeated errors.
   - It is very common mode of learning in animals.
   - Trial and error learning is slow, wasteful and unintelligent.

2. **Learning by conditioning**
   - It is the simplest form of learning.
   - It is a process in which a response or action due to some original stimulus becomes transferred to another stimulus which occurs at the same time or shortly after the original stimulus.
3. **Learning by observation and insight**
   - It involves mental exploration and understanding of what is being learned.
   - It requires the ability to find out relationships.
   - The learner uses his past experiences and his ability to generate new ideas.

4.3. Factors for effective learning

1. **Motivation**
   - The stronger and clearer the motives in learning a course in health sciences, the greater are the effort and interest shown by the learner in learning the course.
   - When the motives of learning are high, the learner becomes enthusiastic.
2. **Intelligence**
   - It enables us to understand things

- It enables us to see the relationships between things
- It enables us to reason and judge correctly and critically.

3. **Maturation**
   - Neuro-muscular coordination is important for learning a given task. **Example-** The child has to be physically mature before he is able to walk or run.
4. **Physical condition of the learner**

   The learner should be in a good health status.

   Example- Sensory defects, malnutrition, toxic conditions of the body, loss of sleep and fatigue hinder effective learning.
5. **Good working conditions**

   Example- Fresh air, light, comfortable surrounding, moderate temperature, absence of distractions like noise, aid in learning efficiently.
6. **Mental health of the learner**

   Example- Worries, fears, feelings of loneliness and inferiority hinders learning.

   Self-respect, self-reliance, and self-confidence are necessary for effective learning.

7. **Associating things**

   Example- All related facts and understandings from a previously learned course should be brought to new learning. While learning a nursing procedure a student nurse could see its connection with anatomy, chemistry, and psychology.

8. **Length of the working period**
   - Learning periods should neither be too short nor too long.
   - Long learning time sets fatigue and reduce effectiveness in learning.

Implications of the above definition of learning

New developments in neuroscience and educational research stress the importance of helping people take control of their own learning. Active learning strategies increase the involvement of the learner in the learning process.

Major characteristics of active learning

- Students are engaged in activities
- Students are involved not just listening in the learning process.
- Less emphasis on information and greater emphasis on skill development
- Increased motivation
- Receiving immediate feedback

- Students are Involved in higher forms of thinking

4.4. Theories of learning

4.4.1. General remark

Why learning theories are important for health practitioners?

Health practioners are required to demonstrate that they regularly employ sound methods and clear rationales in educating patients and interacting with them, in staff management and training, as well as in teaching the community.

Health practioniners are often responsible for designing and implementing plans and procedures for improving health education.

Knowledge of the learning process also relates to nearly all aspect of daily life. Learning theories can be applied at the individual, group, and program levels to change unhealthy habits, build constructive relationships, develop effective behavior, and become more adept at comprehending and teaching new things.

There are four major theories of learning. These are:

1. Behaviorist learning theory;
2. Cognitive learning theory;
3. Social cognitive learning theory;
4. Psychodynamic learning theory;
5. Humanistic learning theory.

Questions to consider while reading theories of learning

1. Is the stimulus for learning and change largely derive from environmental experience or from the internal dynamics of the learner?
2. Is the learner viewed as relatively passive or more active?
3. What is the educator's task in the learning process?
4. What motivates individuals to learn?
5. Which influences more strongly the transfer of learning: the structure of the situation or the learners understanding and emotional feelings?

4.4.2. Behaviorist learning theories

- Behaviorists view learning as the product of the association between stimulus conditions **(S)** and the responses **(R).**
- It is sometimes referred as the **S-R** model of learning.
- The behaviorist closely observes responses and then manipulates the environment to bring about the intended change.
- The behaviorist, to modify people's attitudes and responses, recommends either to alter the stimulus conditions in the environment or to change what happens after a response occurs.

- For behaviorists, transfer of learning from one situation to the other is largely a matter of practice (strengthening habits); and similarity between two situations
- The two basic models of learning in behaviorism are classical conditioning model and operant (instrumental) conditioning models.
- Both models of learning take place when a stimulus becomes associated with another stimulus or with particular consequences. For example: a baby learns to associate the sight of a feeding bottle with a milk.

4.4.2.1. Classical conditioning model of learning

The theory of classical conditioning aims to account for the way in which reflex behavior may become associated with a new stimulus that does not naturally activate that behavior.

- It emphasizes the importance of stimulus conditions and the associations formed in the learning process.
- According to this model of learning, a neutral stimulus (**NS),** a stimulus that has no particular value or meaning to the learner is paired with a naturally occurring unconditioned or unlearned stimulus (**UCS)** and unconditioned response **(UCR**).

- After a few such pairings, the neutral stimulus alone, elicits the same response.
- Pavlov (1927), the Russian physiologist, was studying the salivary reflex in dogs. When he observed that the dogs salivated not only at the sight and smell of food, a natural response, but also at the sight of the food container alone.
- Through a series of experiments, he demonstrated that dogs could be conditioned to salivate to other unnatural stimuli such as a buzzer being sounded slightly before the presentation of food. Such a pairing caused an association to be formed between the buzzer and the food subsequently between the buzzer and the salivation response. Figure one illustrates the process of classical conditioning and the terminology associated with it.

Figure 1: The process of classical conditioning model of learning.

UCS (Food) ⟶ UCR (before conditioning) (Salivation)

NS+UCS (Buzzer + Food) ⟶ UCR (during conditioning) (Salivation)

(Several pairings)

NS ⟶ UCR

Or

CS ⟶ CR (after conditioning)

(Buzzer) (Salivation)

Where:	NS	=	Neutral stimulus
	UCS	=	Unconditioned stimulus
	UCR	=	Unconditioned response
	CS	=	Conditioned stimulus
	CR	=	Conditioned response

EXAMPLE

Offensive odor in the hospital ⟶ unwanted feeling by a visitor

UCS UCR

Hospital + Offensive odors ⟶ unwanted feeling

NS + UCS UCR

Several pairings of hospitals

+

Offensive odors in hospitals ⟶ unwanted feeling

Hospital ⟶ unwanted feeling

CS CR

Basic features of the classical conditioning model of learning

a. Extinction

Principles of the classical conditioning model of learning are used not only to acquire new responses to environmental stimuli, but also to extinguish a previously learned response.

Responses are decreased if the presentation of the conditioned stimulus is not accompanied by the unconditioned stimulus over time.

Example: Visitors who feel discomfort in one hospital subsequently go to other hospitals to see relatives or friends without smelling offensive odors, and then their discomfort and anxiety about hospitals may be lessened after several such pairings.

b. Systematic desensitization

It is a technique based on principles of classical conditioning that is used by psychologists to reduce fear and anxiety in their clients.

Fear can be learned and unlearned or extinguished.

The procedure in systematic desensitization is as follows.

1. Individuals in a state of fear are first taught relaxation technique.
2. In due course, the fear-producing stimulus is gradually introduced at a non- threatening level so that anxiety and emotions are not aroused.
3. After repeated pairings of the stimulus under relaxed conditions, the individual begins to learn that no harm will come to him from the fearful stimulus.

Taking time to help patients relax and reduce their stress when applying some medical intervention lessens the likelihood of developing negative and anxious associations about medicine and health by patients.

c. Spontaneous recovery

It occurs when a response reappears at any time (even years later) especially when stimulus conditions are similar to the initial learning experience.

Example: It is so difficult to give up unhealthy habits, and addictive behaviors such as smoking, alcoholism or drug abuse. A cured addict of khat or alcohol may suddenly relapse to chewing or consuming if he/she is continuously exposed to khat or alcohol.

d. Stimulus generalization

It is the tendency of initial learning experience to be easily applied to other similar stimuli.

Example: When listening to friends and relatives tell about a hospital experience, it becomes apparent that highly positive or negative personal encounters may color patients evaluations of their hospital stay as well as their subsequent feelings about being hospitalized in the future.

e. Stimulus discrimination

The opposite process to generalization is discrimination. With more varied experiences individuals learn to differentiate among similar stimuli. If two different tones were sounded but food was presented with only one of them, the dog would learn to salivate discriminately.

f. Higher order conditioning

It is a feature of classical conditioning in which a conditioned stimulus **(cs)** from an original conditioning series is used as the unconditioned stimulus **(ucs)** in a new experimental setting.

The unpleasant emotional reactions the patient experiences on hearing the word hospital represent an example of higher order conditioning. When the sight of a hospital, which originally was a neutral stimulus, is paired with the sound ‘hospital’ (now a

conditioned stimulus), the patient becomes conditioned to experience unwanted feeling to the sound.

g. Temporal relationship between cs and ucs

Conditioning depends upon the **cs** preceding the **ucs** slightly or occurring simultaneously with it. If the **cs** follows the **ucs** it is called backward pairing. In this case no excitory conditioning results. When the **cs** precede the **ucs** by several seconds, it may terminate before the **ucs.** This usually results in poorer learning. The optimal interval for quick, skeletal responses such as the eye blink or foot flexion, is typically about half a second. For automatic responses like salivation, the interval causing optimal conditioning is longer between five and thirty seconds depending on conditions.

What implications do principles of classical conditioning have in our daily life?

1. How do some people develop fear of small animals (Example- Gynophobia, fear of dogs)

Dog	No reaction of fear
UCS	
Loud noise (UCS)	
+	
Dog (CS)	UCR (fear)
Dog	CR (fear)

2. Dentist No reaction

Tooth treatment
+
Dentist Pain

After conditioning (Dentist alone) Pain

3. Job supervisor Friendly reaction

Job supervisor
+
Tone of voice changes
When seeing the supervisor alone Negative reaction

After conditioning when tone of the
Supervisor voice changes Associate it with criticism

Activity- Let your students identify aspects of everyday human behavior linked to association of stimulus and response.

Comments on the classical conditioning model of learning

The mechanistic way of linking stimuli and responses to bring behavioral change was criticized by cognitive psychologists.

According to cognitive psychologists, learning is not simply relating **S** and **R.** Rather; the learner is engaged in active form of learning, forms ideas or images by linking a lot of stimuli.

In the classical conditioning ways of thinking, the **UCS** must immediately follow the **CS.** However, research by other theorists on learning found out that conditioning could occur even when there is even an interval of as long as eight hours between the **CS** and **UCS.**

4.4.2.2. Operant conditioning model of learning

Definition-It describes learning as strengthening or weakening voluntary response, depending on its positive or negative consequences.

It is a deliberate form of learning in which the organism actively attempts to change its environment to produce a desirable outcome.

The model focuses on the behavior of the organism and the reinforcement that occurs after the response.

B.F. Skinner has largely developed and popularized the model.

Example-1. Working industriously can bring about a raise in salary or bonus.

Example-2. Studying hard in college results in good academic grades.

Example-3. A patient moans and groans as he attempts to get up and walk for the first time after an operation. Praise and encouragement for his efforts will improve the chances that he will continue struggling toward independence.

Basic steps followed by Skinner in operant conditioning

1. A hungry animal (a cat, a rat, a pigeon) is placed in a laboratory setting (example- Skinner box)
2. The animal will wander in the box, exploring its environment in a random way.
3. The animal will press a lever by chance, which enables it to receive food from the food container.
4. The first time the response occurred, the animal will not learn the connection between lever pressing and the stimulus (food)
5. As the frequency of lever pressing increases, the animal learns that the receipt of food is dependent on lever pressing behavior.

Basic features in operant conditioning

a. Shaping: It is the process of teaching behavior by rewarding closer and closer approximation of the desired behavior. In shaping, the behavior that is similar to the expected behavior is reinforced first. Therefore, we use reinforcement selectively to

convert simple behaviors into more complex patterns of responding. The process is sometimes called successive approximation.

b. Chaining: It refers to the linking together of a behavior. The initial response in the chain provides a set of cues which becomes associated with and thus elicits the next succeeding response and so forth so that the full sequence is chained off.

c. Stimulus discrimination: A behavior is reinforced in the presence of a specific stimulus but not in its absence. A discriminative stimulus signals the likelihood that reinforcement will follow a response.

Example: we borrow a certain material from our friend after we recognize that our friend is in a good mood.

d. Stimulus generalizations: It is a condition in which an organism learns a response to one stimulus and then applies it to other stimuli.

Example: if a nurse has learned that being polite to the physician produces recognition, it is likely to show similar behavioral pattern to other medical staffs in the ward.

e, Extinction: If reinforcement is discontinued, extinction of the operant response will occur. Compared to classical conditioning, in operant conditioning extinction takes place after longer period of time

f. Reinforcement: It is the process whereby a reinforcer increases the likely hood of a response. The whole process that led the experimental animal to press the lever is called reinforcement. The food that increases the probability of lever pressing is called reinforcer**.**

Skinner identified two kinds of rein forcers

1. **A primary rein forcer** satisfies some biological need. It is not based on past experience or learning.

   Example- Food, Water, Cessation of pain
2. **A secondary rein forcer** is a stimulus that becomes a reinforcer because of its association with a primary rein forcer.

Example- Money; money enables us to buy basic necessities and luxuries which have survival importance.

Rein forcers can also be labeled in terms of reward.

1. **Positive reinforcer:** it is a stimulus when added to the environment brings about an increase to the preceding response.

   It is an application of a pleasant stimulus following an organism's response.
2. **Negative reinforcer:** it is a stimulus that removes something unpleasant from the environment, leading to an

increase in the probability that a preceding response will occur again in the future.

Example- lowering the volume of the radio when you study prevents attention distraction.

Negative reinforcers work in two forms

1. **Escape conditioning:** the learner makes a response to bring about an end to an aversive situation.

Example-1. A college student takes a day to escape from a workload.

Example-2. Suppose an instructor chastises a young student nurse. She says something humorous, and her instructor stops criticizing and laughs. Because the use of humor has allowed the student to escape an unpleasant situation, she will employ humor again to alleviate a stressful encounter.

2. **Avoidance conditioning:** when the learner responds to a signal that marks the coming (onset) of unpleasant event with the aim of avoiding the evasion.

   Example:. The pretension of some people to look ill in order to escape from doing something that they do not want to do.

   - If a person becomes truly ill when fearful events are anticipated, sickness is the behavior that has been increased through negative reinforcement.

- Escape conditioning and avoidance conditioning are not same with punishment.
- To decrease or extinguish the probability of a response we apply non- reinforcement technique and punishment.
- In non-reinforcement technique an organism's conditioned response is not followed by any kind of reinforcement (positive, negative, or punishment)
- Skinner believed that the simplest way to extinguish a response is not to provide any kind of reinforcement for some action.

Example- Offensive jokes in hospital wards may be handled by giving no attention. The joke teller, who wants attention, may decrease the use of abrasive humor.

g. Punishment: Punishment refers to unpleasant stimulus that decreases the probability of the occurrence of a preceding behavior. It weakens the response and makes it less likely to recur. Skinner believed that just as reinforcement (positive and negative) can be used to strengthen a response and makes it less likely to happen again. However, he suggested that punishment is not a suitable technique for controlling behavior. Studies with rats showed that punishment appeared only to diminish lever-pressing behavior for a short time, but did not weaken it in the long term.

The pros of punishment

- It often is the quickest way to change behavior.
- Special instances like the behavior of autistic children can be suppressed temporarily until to buy time to use positive reinforcement techniques.

The cons of punishment

- It is ineffective if the punishment is not delivered shortly after the individual exhibits the unwanted behavior.
- It is ineffective if the punishment is delivered out of the setting in which the unwanted behavior is exhibited. One of the important rules of operant conditioning is to punish the behavior, not the person.
- Punishment should not be prolonged.

Example- Bringing up old grievances or complaining about misbehavior at every opportunity is not acceptable. It may convey to the recipient the idea that physical aggression is desirable.

Conclusion- According to different research findings reinforcing a desirable behavior is a more appropriate technique for modifying behavior than using punishment.

How to use reinforcement

a. Identifying the type of reinforcement to increase or decrease behavior for each individual

Example: all patients do not want lots of attention from nurses

b. The timing or scheduling of reinforcement

Skinner showed that the kind of patterns or schedules of reinforcement given would differentially affect the kind of learning, which occurred. The two main schedules are **continuous reinforcement** and **partial reinforcement**. When a reward is given to every instance of the desired behavior it is called continuous reinforcement.

- Initial learning requires a continuous scheduling, reinforcing the behavior quickly every time it occurs.
- If appropriate behavior is not shown, responses that resemble the desired behavior can be reinforced, and then gradually changing the behavior in the direction of the desired goal.

Example- For Geriatric patients who appear lethargic and unresponsive,

- Start by small gestures like eye contact or a hand that reaches out.
- Then proceed to greater human contact
- Finally connect it with reality

NB. It is not effective and useful to reinforce continually, once a response is well established.

When the learner is reinforced only some of the time it is called partial reinforcement. The reason for using partial reinforcement schedule are:

- Reinforcing every correct response would be time consuming and practically impossible;
- Helps the organism not to expect reinforcement every time it demonstrates a given behavior;
- Strengthens the occurrence of a desired behavior by counteracting extinction.

The four partial reinforcement schedules that are commonly used are:

Fixed-interval: the learner is reinforced after regular time intervals, say every 50 seconds, provided at least it shows one desired response.

Variable-interval: reinforcement is given on average not precisely every, say, 50 seconds.

Fixed-ratio: the learner is reinforced after a regular number of desired responses say after every four responses.

Variable ratio: reinforcement is given on average every, say, four responses, though not exactly after each fourth responses.

In general continuous reinforcement produces the quickest learning, while partial reinforcement produces learning, which lasts longer in the absence of reinforcement.

c. Careful planning of behavior modification techniques

Example- The families of a patient with chronic back pain have been taught to minimize their attention to the patient whenever he/ she complains and show dependency, helplessness. When the patient attempts to function independently, express a positive attitude.

Comment on operant conditioning

Operant conditioning emphasizes on extrinsic rewards and external incentives and promotes materialism rather than self-initiative, a love of learning, and intrinsic satisfaction.

Activity: Divide the class into groups and see if students can work out a procedure based on the principles of operant conditioning that a teacher could use to encourage children to improve their handwriting. What reinforcers might be used? How might the undesirable behavior (poor hand writing) be extinguished? Which would be the more effective; continuous or partial reinforcement?

4.4.3. Cognitive learning theories

4.4.3.1. General remark

The theory stresses on the importance of what goes on inside the learner.

Accordingly, the key to learning and changing in behavior is the individual's cognition (perception, thought, memory, and ways of processing and structuring information).

According to this theory, in order to learn, individuals must change their cognitions. Learning involves:

- Perceiving information;
- Interpreting the information based on what is already known;
- Reorganizing information into new insights or understanding.

According to cognitive theorists, source of motivation or the desire to act is the individual's goals and expectations.

The tasks of the educator, and those trying to influence the learning process are to:

- Organize the variety of perceptions and experiences;
- Organize ways of thinking about information;
- Set diverse goals and expectations.

To facilitate and promote transfer of learning:

- The learner must act on the learning situation in some way;

- Setting similar but different situations and finding relationship between initial learning situation and subsequent situation;
- Instead of drill and rote memory, the key factor is understanding, consideration of learner readiness, knowledge of ones learning style, and ability to recognize information. Cognitive learning theories include:

4.4.3.2. The Gestalt perspective of cognitive learning

The theory emphasizes the importance of perception in learning. For the Gestalt psychologists, what is important is configuration or organization of a pattern of cognitive elements not discrete stimuli.

Example: when patients are listening to a detailed ambiguous explanation about the disease they have, they become doubtful. They desire simple and clear explanation that matches their surrounding and relates directly to them and their familiar experiences.

Human beings perceive their environment selectively. Our surrounding is full of information. We orient ourselves to certain features of an experience while screening out. What individuals choose to attend to or ignore is influenced by their past

experiences, needs, personal motives and attitudes, reference groups, and the structure of the situation.

Example: Patients who are seriously sick may not attend to some well-intentioned patient education information. Assessing the internal and external learning situation is essential for the health professional before dealing with any learning situation.

The psychological tendencies used to organize the perceptual world are:

1. **Figure Ground perception**
   - In the treatment procedure, the central requirement is taking all the medication prescribed (figure)
   - The patient may level this basic requirement as secondary and may say that "as long as I feel somewhat better, why take medication?"
2. **The principle of closure**
   - It is the psychological desire to complete, end, or conclude a gestalt situation that is unfinished.
   - The more unclear or uncertain a perceived situation is, the more people tend to use alternative patterning

- The more they be influenced by external suggestions the more they are affected by their internal needs.

Example: Patients left unclear and uncertain while awaiting laboratory test results and a physician's diagnosis are likely to be in a state of imbalance and tension. Some patients may construct their own diagnosis. Few individuals may resort to extreme behavior to reduce anxiety (example: denying medical treatment, attempting suicide).

NB. Perception is individual. Individuals perceive and respond to the same situation in different ways. This may entail communication problem between the patient and the health professionals. Therefore, there is a need to provide complete information about the patient's condition. If diagnosis is unclear, it may leave the patient bewildered or confused about his status. Counseling and therapy will help them accept what they view as a very difficult, anxiety-producing situation.

4.4.3.3. Information processing perspective

This perspective emphasizes on thought process, reasoning, the way information is encountered and on the function of the memory. Unlike the behaviorists, reward is not as such necessary for learning. Most important are the learner's goals, expectations, and experiences. Experience includes exploration

and discovering of the environment to formulate ones own cognition map and understand how the world operates. Knowing how information is processed, stored and refined is useful for nurses and other health Professionals. It is very useful in developing health teaching materials such as brochures, in one-to-one patient education, giving a staff development training, preparing community health lectures, or studying for ones course and examination.

- The stage model of memory consists of separate stages. These are sensory memory, short-term memory and long-term memory storage stages. Information flows through the system with recoding operating at each stage.
- The model below shows how information is acquired, stored and retrieved.

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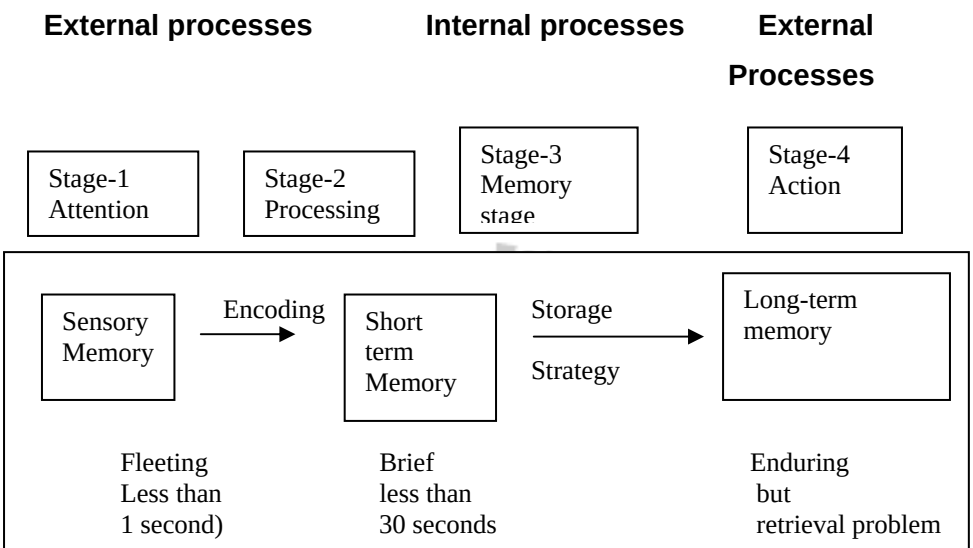

Figure 2: information processing model of memory

Sensory memory stage

- It is immediate memory. Some psychologists call it the visual information store (VIS). Others call it iconic memory. For the auditory, it has been called an echoic store. Once the material has been selected by means of the immediate memory process (the iconic or echoic memories), it passes into short-term memory.

Short term memory (STM)

- The second stage is sensory processing that involves the patient's preferred mode of sensory processing (visual, auditory, or motor manipulation) and sensory depicts.
- It is related to the ability to retain information just long enough to use it.
- It is the memory involved in retaining a telephone number just long enough to dial it after looking it in a directory.
- Short term memory contained material which needed to be kept in store for not longer than 30 seconds
- The capacity of this store is limited to seven, plus or minus two items, letters or even longer units of information like words or chunks.
- Research findings show that correct recall was high after short intervals such as 3 or 6 seconds, but by 18 seconds interval it was possible to recall only about 10 percent correctly.
- Findings suggest that the duration of STM was only about 6 to 12 seconds if unrehearsed. Gradually the information is decayed and forgetting takes place. This is called the trace decay theory of forgetting.
- Forgetting also occurred when other material interfered with memorization. This was an interference theory of forgetting.

Long term memory (LTM)

- This relates to the ability to retain information over almost indefinite period of time.
- There seems to be no known limits to the duration or to the capacity of long-term memory storage.
- Understanding of meanings are involved in the process of coding for long-term memory. All kinds of knowledge and beliefs, objects and events, people and places, plans and skills are stored in LTM.
- Long-term memory involves organizing the information by using a preferred strategy. For example, imagery, association, rehearsal, and breaking the information into units are commonly used strategies to organize information in the long-term memory. Long-term memories are enduring though there is a problem of remembering and retrieving the stored information at a later time. By expanding the already existing information and by the use of meaningful repetition we can easily recall and use information from the long-term memory.

Example: Community members learn better about health extension packages when learning experiences are related to life. If a patient were not paying attention to what a nurse is saying, perhaps because he is weary or distracted, it would be

more useful to repeat the explanation at another time when the patient is more receptive and attentive.

4.4.3.4. Observational learning theory

The founder of the theory was Albert Bandura.

The theory claims that a major part of human learning takes place through observing the behavior of another person called a model. Models have been classified into two categories. These are:

1. **Real life models:** These are really existing models such as parents, teachers, friends, heroes of films, sport stars and other most successful persons in life.
2. **Symbolic models:** These are representatives of real life models. They include materials and other works of individuals.

In an experiment conducted by Bandura and his colleagues, children who saw a film in which an adult is acting wildly displayed the same kind of aggressive behavior imitating the aggressive behavior of the actor.

Not only negative behaviors are learned through observational learning. We learn positive behaviors too.

Example: Children who are afraid of dogs watched a film in which the actor (model) playing with a dog. It was found out that

children who observed the film are more likely to approach a strange dog than children who had not viewed the film.

Another experiment showed that subjects who watched a lot of aggressive television programs, as third grader became more aggressive adults than those who did not watch as much.

Bandura and others went to investigate what characteristics of a model were most likely to encourage imitation in children. Studies showed that children are more likely to perform behavior that is imitated from models are:

- Similar in some respect to themselves;
- Exhibit power and control over some desirable commodity;
- Are warm and nurturing.

In addition to making viewers to be more aggressive, watching violent films may result in insensitivity to the suffering of victims of violence in actual life.

Important skills are learned by means of observational learning when success is reinforced and failure is punished. But observing the punishment of a model doesnot necessarily stops observers from imitating undesirable behavior.

Example: A college student imitates the behavior of his friend if his friend gets higher grades. If his friend puts more time into his study and shows no improvement in his achievement, the behavior is unlikely to be modeled.

Psychologists have devised ways to reduce aggressive behavior in children who view television frequently. These are:

- Teaching children that televised violence does not represent the real world;
- Teaching children that viewing violence is objectionable;
- Teaching children to refrain from imitating behavior seen on television.

Observational learning takes place in four steps. These are:

1. Paying attention and perceiving the most important aspect of another person's behavior.
   - Models attract our attention because of distinctiveness, prestige, power and other winsome qualities.
2. Remembering the behavior. Some of the ways to remember the action of a model are:
   - Associations among the stimuli that occur together;
   - Giving verbal description of a models behavior;
   - Rehearsing the behavior again and again.
3. Reproducing the action
   - To reproduce a behavior accurately the person must have the necessary motor skills

4. Being motivated to learn and carry out the behavior. To be motivated and carry out the imitated behavior the person must:
    - Be rewarded;
    - See the consequences the model obtains;
    - Evaluate ones own behavior.

Comment on observational learning theory

Viewing of an aggressive behavior is not the only factor for imitation. Some additional factors such as personality characteristics also play important role in modeling.

Activity: Brainstorm the following question. Do video houses open at every corner of the city led teenagers to be delinquent in our society?

Some applications of learning theories to humans

There are three important applications of conditioning theory. These are programmed learning, behavioral therapies and bio-feed back techniques.

Programmed learning is a method of instruction based on the principles of operant conditioning. It has been used in formal educational setting such as schools, colleges and universities, in the armed forces and in industrial settings. Its main advantage is that it allows individual learners to work through organized learning material at their own pace and to receive feedback on

their achievement at regular intervals. Teaching materials, computers and textbooks and self-study materials are used in programmed instruction. According to skinner traditional classroom teaching was inefficient because it failed to take account of the different abilities and previous knowledge of a group of students. Lessons could not move according to the needs and pace of individual learners.

Principles of operant conditioning applied to programmed learning.

- Motivated learners actions, which are followed by reward, are likely to be repeated and learned. The reward should follow as swiftly as possible after the response;
- Actions which are not reinforced are likely to disappear;
- Behavioral patterns may therefore be shaped by the use of controlled stimuli. Learning can take place as a result of a series of small steps leading to a desired outcome.

NB. Behavioral therapies and biofeedback techniques are fully discussed in chapter ten

Self assessment questions

1. List and briefly describe three practical applications of conditioning theory
2. List at least two basic differences between classical and operant conditioning learning theories
3. Explain the basic features of classical conditioning form of learning and cite their application in education.
4. Evaluate the behaviorist and cognitive learning theories with respect to the questions at the beginning of this chapter.

NB. Psychodynamic learning theory and Humanistic learning theory are more of personality theories than being learning theories. They are discussed under chapter seven.

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CHAPTER FIVE

MOTIVATION AND EMOTION

At the end of the chapter, the student is expected to:

- Distinguish between the different theoretical approaches to the understanding of motivation;
- Explain the physiological basis of emotion;
- Explain the functions of emotions;
- List down emotion types and give comments;
- Differentiate emotional theories.

5.1. Motivation: definition and general remark

Motivation: It is the factor that directs and energizes the behavior of humans and other organisms.

The study of motivation answers the following questions.

1. Why do people behave as they do?
2. Why does behavior take one form and not another?
3. What makes people behave differently or similarly?
4. How can we motivate people to behave in particular ways, such as eating certain foods, quitting smoking, or engaging in safer sex practices?

5.2. Theories of motivation

There are different conceptual approaches to the study of motivation. They differ in their focus on:

- Biological factors
- Cognitive factors
- Social factors

5.2.1. The instinct approaches to motivation

This theory states that motivation is the result of an inborn, biologically determined pattern of behavior. According to this approach, people and animals are born with programmed sets of behavior essential to their survival.

Example: Sex---------- instinct for reproduction

Comments on instinct approach

- There is a problem of clearly identifying the primary instincts because of their variety and complexities.
- Much of human behavior is learned not instinctual.

5.2.2. Drive reduction approach to motivation (DRT)

- This theory suggests that when people lack some basic biological requirements such as water and food, a drive to obtain these requirements is produced.
- A drive is tension, arousal that pushes behavior in order to fulfill some need.

- Primary drives are related to biological needs of the body.

Example: hunger, thirst, sleepiness, and sex.

Secondary drives are related to prior experience and learning without the fulfillment of any biological needs.

Example: Motivation for academic achievement

An organism tries to maintain an internal biological balance, which is called homeostasis.

Example: except sexual behavior, most of the basic needs of life are to maintain balance.

Comment on drive reduction approach

We show some kind of behavior simply for curiosity. The behavior may not be related to biological balance.

Example: Many of us spend the whole day in solving puzzles, which are not directly related to the satisfaction of biological drives.

5.2.3. Arousal approaches to motivation

According to this approach, each of us tries to maintain a certain level of stimulation and anxiety.

- In DRT---if the arousal is too high, we try to reduce them
- In arousal approaches ---if the level of stimulation and activity are too low, we will try to increase them by seeking stimulation

People differ in their optimal level of arousal.

Activity: Ask your students how much stimulation they need to do an activity in their everyday life.

5.2.4. Incentive approaches to motivation

This approach attempts to explain motivation in terms of the nature of the external stimuli; incentives that direct and energize behavior.

According to this view, properties of external stimuli are major causes for a person's motivation.

Example: after eating our meal, we choose to eat a sweet cake. Such behavior is motivated by the desert itself but not to satisfy internal drives.

Comment on incentive approach:

- Drives (push factor) and incentives (pull factor) work together in motivating behavior.

5.2.5. Cognitive approaches to motivation

This approach focuses on the role of our thought, expectations, and understanding of the world.

Example: The degree to which we are motivated to study hard depends upon our expectations for good grades and the value we place on getting good grades.

If both expectations and value are high, we will be motivated to study hard; but if either one is low, our motivation to study will be relatively lower.

In line with this approach, there are two forms of motivations.

a. **Intrinsic motivation:** It is motivation by which people participate in an activity for their own enjoyment, not for the reward it will bring.

   It enables to work hard, produce higher quality work and be perseverant.

   Some psychologists argue that providing rewards for desirable behavior may cause intrinsic motivation to decline.

b. **Extrinsic motivation:** It causes us to do something for a tangible reward.

Activity: Brainstorm the class on the following problem (which strategy is better?)

- Offering children monetary rewards for scoring good results at school, or
- Reminding children on the importance of learning would bring desirable behavioral change.

5.2.6. Maslow's motivational theory

Basic assumptions of the theory

- Different motivational needs are arranged in a hierarchy in a pyramidal shape.
- The more basic needs are at the bottom and the higher level needs are at the top.
- Before higher ordered needs are satisfied in the hierarchy, the primary needs must be satisfied.

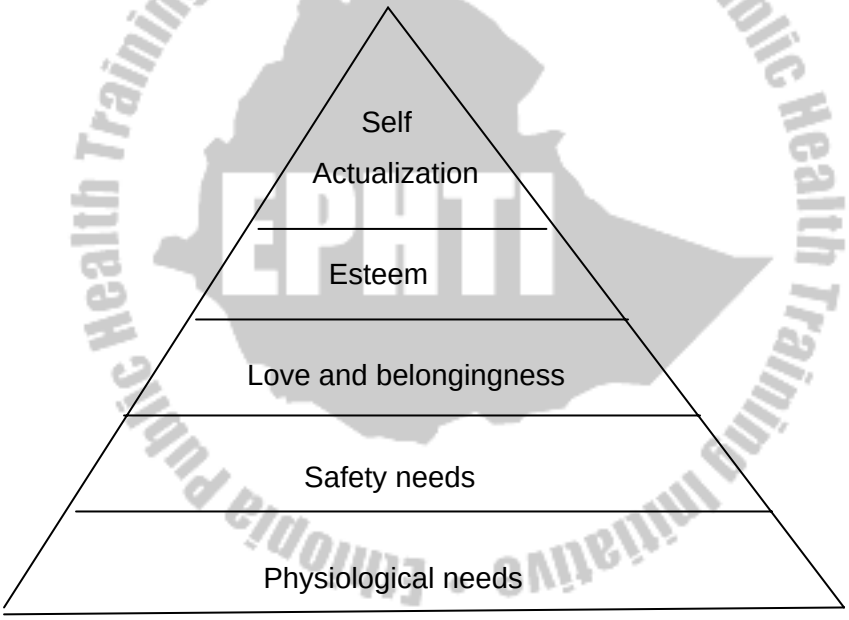

Figure 3: Abraham Maslow's hierarchy of needs

Physiological needs are based on body needs or tissue needs (e.g., food, water, avoidance of noxious stimulation)

Security need is a need for sense of confidence, safety, and freedom from fear or anxiety, particularly with respect to fulfilling ones present and future needs.

Love and belongingness needs include the need to obtain and give affection and contributing to members of some group or society.

Esteem need relates to the development of a sense of worth by knowing that others are aware of one's competence and value.

Self- actualization is a state of self- fulfillment in which people realize their highest potential. The concept of self- actualization is applicable not only to few well-known individuals. In its broader sense it can happen to:

- A parent with excellent nurturing skills;
- A teacher that maximizes students' opportunities for success;
- A health professional who works hard to alleviate health problems of the country.

Activity: Discuss the following points with your students

- If people are hungry, their first interest will be obtaining food, not love and self-esteem.

- Describe characteristics and contributions of well-known individuals in our society. According to your view, are they self-actualized personalities?
- Do you think that you have reached the level of self-actualization at this stage?

5.2.7. Achievement motivation theory

- It is a stable, learned characteristic in which satisfaction is obtained by striving for and attaining a level of excellence.
- People with high achievement motivation tend to compete against some standards and prove themselves successful.
- They tend to choose tasks that are of intermediate difficulty.
- People with low achievement motivation tend to be motivated primarily by a desire to avoid failure. As a result they choose easy tasks.
- The outcome of high achievement motivation is generally positive. Research shows that high achievement motivation is associated with future economic and occupational success.

Activity: Brainstorm the class by posing the following questions.

- Do different cultures bear differences in achievement motivation?
- Is there a gender difference in achievement motivation?
- How can we foster achievement motivation in the minds of children?

Conclusion on the different approaches to motivation

- The different approaches are complementary rather than contradictory.
- It is useful to employ different approaches simultaneously in order to understand and explain the motivational aspects of behavior.

5.3. Emotions

5.3.1. Definition and general remark

- Emotions are feelings such as happiness, despair, and sorrow that generally have both physiological and cognitive elements influencing behavior. While motives are internally caused, emotions are responses to an external stimulus.

Example: **physiological**

- Heart rate increases
- Jumping for joy

Cognitive

- Understanding and evaluating of the meaning of the act we do when we are happy

There are a number of components of emotion. Some of these are:

1. The perception of the emotion-arousing stimuli (an armed robber entering a bank)
2. Subjective feeling or experience of emotion (pleasant/unpleasant)
3. Involuntary physiological changes of the body's internal balance (arousal/ depression)
4. External bodily changes (facial/posture)
5. Cognitive factors; awareness of situation, previous experience, memory(seen people killed)
6. Voluntary behavioral consequences; response to the stimulus (do as the robbery says, because he has the gun)

Controversies regarding emotions

- Emotional responses come first and then we try to understand them.
- People first develop cognition about situations and then react emotionally

According to Darwin, human beings are not the only species that has emotions. Animals too, show fear, rage, and possibly love.

Darwin suggested that there are specific, fundamental emotions that find expressions in the species.

Example: Swans mourn hopelessly at the death of a male.

Some research findings suggest that there is gender difference with respect to emotions. Women tend to experience emotions more intensely and expressing more readily than men. This difference is attributed to:

- Innate biological factors
- Societal expectations for men and women

5.3.2. The functions of emotions

1. **Preparing us for action**

   Example: If we see an angry dog running toward us, the sympathetic division of the autonomic nervous system prepares us for emergency action.

2. **Shaping our future behavior**

   Example: When we encounter a threatening dog some other time, the previous experience teaches us to avoid an incoming danger.

3. **Shaping us to regulate social interaction**

   Example: Verbal and non-verbal ways of communicating emotions help us to understand the behavior of another person. Then we modify our actions.

5.3.3. Types of emotions

- Plutchik (1984) after combining a large set of emotions came up with eight different fundamental emotions. These are Joy, acceptance, fear, surprise, sadness, disgust, anger, and anticipation

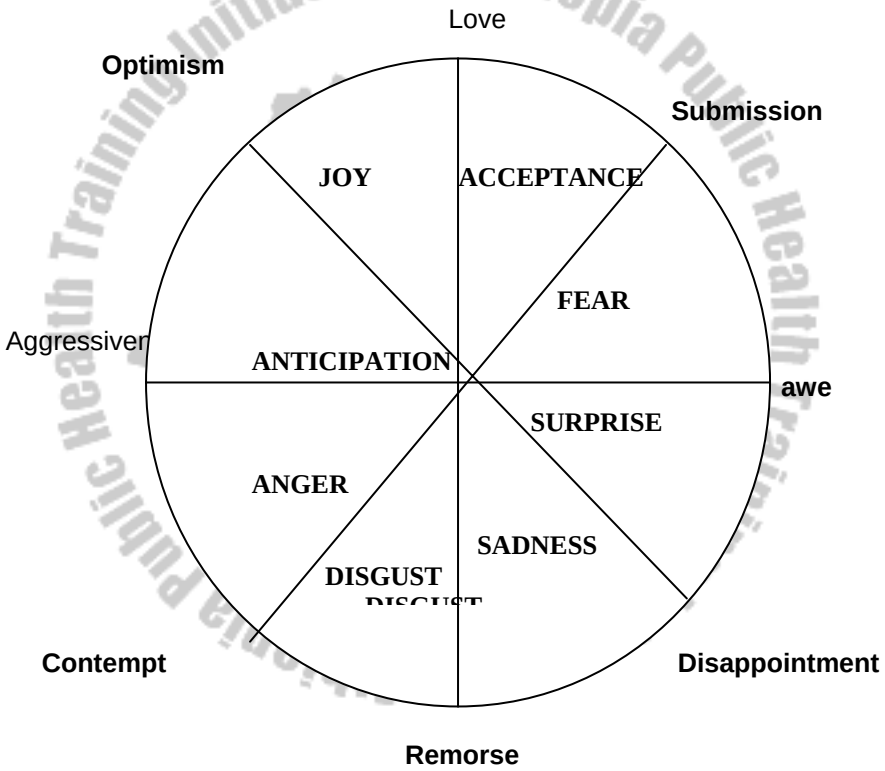

Figure4: Fundamental emotion types and their combinations

From the figure above the following inferences can be made.

- Two emotion combinations are formed from primary emotions.
- Emotions nearer one another in the circle are more closely related.
- Emotions opposite to each other are conceptually opposite.

Comment on Pluthik's emotion theory

- Human emotions are much more than eight types.
- These eight types of emotions are not equally important across all cultures.

5.3.4. Theories of Emotion

5.3.4.1. The James-Lange theory

Lang was a Danish physiologist who proposed a theory of emotion.

- His theory states that emotional experience is a reaction to instinctive bodily events that occur as a response to some situation or event in the environment. We feel sorry because we cry. We feel angry because we strike. We feel afraid because we tremble.

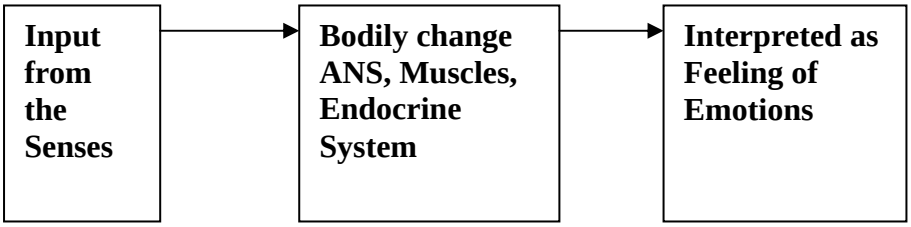

Figure5: The James-Lang theory of emotion

James and Lang proposed that human beings experience emotions as a result of

Physiological changes that produce specific sensations. The brain interprets the sensations as particular kinds of emotional experiences.

Comment: For emotional feelings to occur physiological changes have to be perceived instantaneously. But emotional experiences frequently occur even before there is time for certain physiological changes to be manifested outwardly.

5.3.4.2. The Cannon-Bard theory

The theory states that both physiological and emotional arousals are produced simultaneously by the same nerve impulse.

According to this theory:

- Emotion-inducing stimulus is perceived.
- The thalamus is the initial site of the emotional response.

- Then the thalamus sends a signal to the autonomic nervous system and communicates a message to the cerebral cortex regarding the nature of the emotion being experienced.

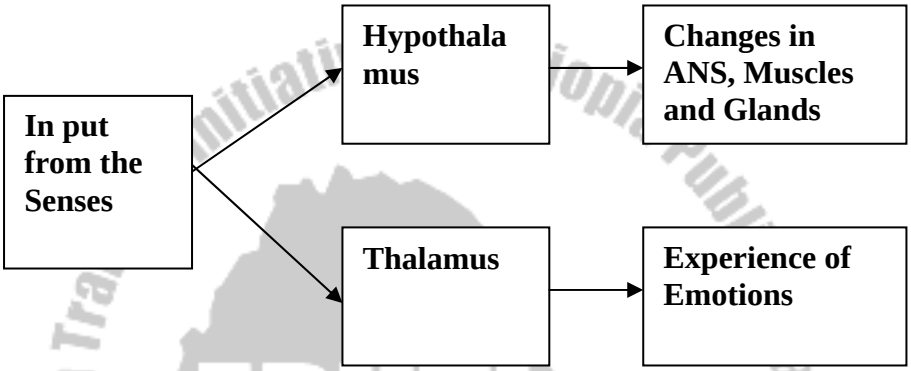

Figure6: The Cannon-Bard theory of emotion

In this case different emotions do not have unique physiological patterns associated with them.

Comment: Recent research evidences suggest that it is the hypothalamus and the limbic system and not the thalamus that play a major role in emotional experiences.

5.3.4.3. The Schachter-single theory

The theory proposes that a non-specific kind of physiological arousal and the meaning we attach to environmental cues determine emotions jointly.

The theory emphasizes that we identify the type of emotion we are experiencing by observing our environment and comparing ourselves with others.

Comment: Some research findings suggest that physiological arousal may or may not always account for an individual's emotional state. For example, some drugs invariably produce depression as a side effect no matter what the nature of the situation is. However, the theory indicated the necessity of appraising our surroundings in case the source for physiological arousal is not clearly understood.

General conclusion on theories of emotion.

Emotions are complex phenomena. No single theory has been able to fully explain all facets of emotional experiences.

5.3.5. Expression of emotions

- Non- verbal behavior is a major means of communicating and revealing people's emotions.
- The Non- verbal behavior communicates using several channels or paths. These are:
    - Facial expressions;
    - Eye contact;
    - Bodily movements;
    - Tone voice;
    - Positioning of the eyebrows.

- From all these ways, facial expressions represent the primary means of communicating emotional states
- Facial expression communicates the following six most distinctively identified basic emotions.
    - Happiness
    - Anger
    - Sadness
    - Surprise
    - Disgust
    - Fear

Members of the human race regardless of the situation express these six emotions universally.

The facial-affect program hypothesis assumes that each primary emotion is universally present at birth.

Self assessment questions

1. Can traits such as the need for achievement; need for power, and need for affiliation be used to select workers for jobs?
2. What is meant by the term homeostatic motivation?
3. Give your comments on the different theoretical approaches to the understanding of motivation?
4. What purpose do emotions serve in our life?
5. Compare and contrast the three theories of emotion.
6. What does the facial –affect program hypothesis state?

CHAPTER SIX
DEVELOPMENTAL PSYCHOLOGY

By the end of this chapter, the student is expected to:

- Explain the concept of socialization;
- Assess the importance of early experience for later social and emotional development;
- Explain the impact of social and biological factors on the stages of human development.
- Describe and evaluate Piaget's theory of cognitive development;
- Consider the educational implications of theories of cognitive development;
- Identify and discuss physical and psychological changes that take place during adolescence;
- Discuss the impact of particular life events on adulthood; for example marriage, parenting, divorce, unemployment, retirement, bereavement and death;
- Explain Erickson's psych-social development stages.

6.1. Definition and general remark

In the dictionary of psychology (Reber, 1985), developmental psychology is defined as:

- The field of psychology concerned with the lifelong process of change.
- Change here means any qualitative and/or quantitative modification in structure and function.

Example: Crawling to walking

- Babbling to speaking
- Illogical reasoning to logical reasoning
- Infancy to adolescence
- Maturity to old age
- Birth to death

- It was first articulated as a sub-discipline in psychology by G.S.Hall around the turn of the century.
- Most of the scientists in developmental psychology are interested in childhood; hence the branch developmental psychology is equated to child psychology. Some specialists also call it life-span psychology.

Development: It is the sequence of changes over the full life span of an organism.

It is an irreversible sequence of stages that regularly follow one upon the other.

Example: The motor development during infancy. Raise head (2m), hand-eye coordination (4--7m), sitting erect (7m), crawling (10m), walking (1yr)

- Development is a progressive change leading to higher levels of differentiation and organization.
- It is an increase in effectiveness of function, maturity, sophistication, richness and complexity.

Growth : It is a gradual and progressive increase in size such as height and weiht of an individual or its parts.

- It is an increase in effectiveness or competence of a function.
- Growth is differentiation and refinement of parts and/or functions.

Maturation -It is the developmental process leading toward the goal of maturity. It refers to innately determined sequence of growth or bodily changes that are relatively independent of environmental events. Maturation is genetically programmed, naturally occurring changes over time. Natural capacities common to human races such as sitting, crawling, walking, etc are the results of maturation. The origin of the word is from the Latin word meaning ripeness. It is mostly used with prefix

Example: sexual maturity, intellectual maturity, emotional maturity.

6.2. Heredity (nature) Vs environment (nurture) issue in developmental psychology.

The transition from infancy to adulthood is an orderly sequence common to all normal members of the human species. It is governed by the combined action of heredity and environment. The nature-nurture issue in developmental psychology is a fundamental issue. It has philosophical roots. The English philosopher John Locke said that the newborn baby is a Tabular Rasa (blank slate). The French philosopher Jean Jacques Roseau considered genetic factors as most influential.

The question nowadays has changed from **which** influences behavior to **how** and **to what** extent environment and heredity affect development. Because no one grows up without being influenced by heredity and environment. Developmental psychologists take an interactionist position. They consider the combined influence of heredity and environment.

Two key questions in human development.

1. How do people change physically, mentally and socially, as they grow older?
2. Why do these patterns of change occur as they do?
    - During conception, the twenty three chromosomes from the mother's germ cell pair with the twenty-three chromosomes from the father's germ cell to

make a complete set of genetic instructions for a new human being.

- Genes affect development throughout life, and every organism has, to some extent a genetically programmed timetable (not identical) for its physical maturation.

Example: puberty is a genetically timed event.

Heredity has a three-fold influence on human development.

- It influences physical form
- It influences behavioral capacities
- It influences the rate of physical maturation

Table 1: Characteristics with strong genetic composition

Physical characteristics	**Intellectual characteristics**	**Emotional characteristics**
Height	Memory	Shyness
Weight	Ability as measured by IQ test	Extraversion
Obesity	Age of language acquisition	Neurotic
Tone of voice	Reading disability	Anxiety
Blood pressure	Mental retardation	Alcoholism
Tooth decay	____	Schizophrenia
Athletic ability	____	____

Firmness of hand shake	____	____
Age of death	____	____

Source: Feldman (1996), understanding psychology

Conclusion: It is important to keep in mind that these characteristics are not totally determined by heredity. Environmental conditions play important role in enabling people to realize their potential capabilities. The great athlete Haile Gebreselasie would have been unable to show his talent had he not been trained in an environment that nurtured his natural abilities. Research with identical twins has generally supported the idea that genes affect many aspects of development.

Example 1. Case studies of identical twins who were adopted into very different environments found that their rates of maturation their hobbies, food preferences, choice of friends and academic achievement were quite similar (Bouchard, 1981)

Example 2. Intelligence test scores showed no correlation at all for adopted siblings and a coefficient of 0.35 for biological siblings. Therefore, genes have some influence on the development of cognitive process.

Environmental factors

Heredity is not the only influential factor on development. Environment is necessarily an important factor in any developmental process, including that of the prenatal period. In the case of motor skills, for example, development can be accelerated or retarded by the presence or absence of environmental stimulation.

Example 3. In a foundling home in Lebanon, where children spent most of their first year lying on their backs in cribs, totally ignored by adults, motor skills were so retarded that some infants over a year old could not sit up, let alone walk (Dennis and Sayegh, 1965).

While a poor environment retards development, additional experience and stimulation can encourage some motor skills provided the stimulation is appropriate to the baby's age.

Example 4. One study has shown that when babies are trained to use their walking reflex regularly, they begin to walk about one to two months earlier than most other infants (Zelazoetal, 1972).

Note: No matter how much exercise young infants are given, they will not walk at six months.

Example 5. Experiment on premature babies (generally accepted criteria is being less than 2.5kg)

Nurses and parents tend to regard premature babies as especially fragile and so they avoid fondling them but they

do it for normal babies (research by rice, 1975; Rose etal, 1980)

Experimental group: A group of mothers do stroke and gently massage their premature babies for 15 minutes four times a day.

Control group: In the control group no stroke and no massages were introduced

Result: At the end of four months, the stimulated babies had shown significant gain in weight, motor reflexes and mental functioning over a control group of premature babies.

Conclusion: Stimulation from the environment not only enhances muscle strength but also facilitates the development of the nervous system. Provision of rich environment alone is not adequate. A child must participate in the environment for better result. Furthermore, providing young infants with a large amount of toys and constant attention doesn't guarantee development. An overload of stimuli before the baby is ready for them to use may be irritating or confusing.

6.3. Sensitive periods in development

During sensitive periods of development, an organism is especially susceptible to certain kinds of environmental influences. The same experience before or after this period may have little or no impact.

Early separation of babies from parents, caregivers can have severe effects on later development. The optimal period for language development, for example, seems to be between two and three years, and after that time it is extremely difficult to learn a first language (John Bowlby, 1958)

Many psychologists don't accept the idea of sensitive periods in human beings. They say children who are neglected and shut away in attics and basements often recover and become normal adults when they are given adequate environments. The effect of critical period appears to disappear with time. They assume the human child like a “piece of magic plastic with a memory. ”

General conclusion for the heredity and environment argument is that Individual differences in development can depend upon genes, upon environment or upon the combined action of both.

6.4. Stages of Human Development

6.4.1. Pre-natal development

Development begins as soon as a sperm and egg unite. In approximately 38 weeks this single cell is transformed into a newborn baby. This developmental stage from fertilization up to birth is called prenatal stage of development. Development during the nine months of pregnancy is more rapid than during any postnatal period. The stage of development before birth is initiated and guided by both genetic and environmental factors.

During this phase behavioral potential and structural complexity increase. Postnatal development is divided into the following basic periods.

1. The germinal period

- After fertilization, the egg begins the process of cell division.
- At first the multiplying cells are all identical. Nerve, muscle, bone, and blood cells can't be distinguished from one another.
- By the end of the first two weeks, the cells have begun to differentiate into three layers that will form the various tissues and organs. Each layer produces different body systems.
- What triggers this development is still not clearly known for developmental psychologists.

2. The embryonic period

- Four weeks after conception, the embryo is one-fifth of an inch and 10,000 times larger than the original fertilized egg.
- It has developed a spinal cord and a two-lobe.
- Many of the major organs have formed, as well as indentation in the head region that will eventually become jaws, eyes and ears.

- Six weeks, the embryo responds reflexively, moving its upper trunk and neck when the mouth area is stroked with a fine hair.
- About the eighth week, the embryo is almost an inch.

3. The fetal period

- Until birth, the developing organism is known as a fetus.
- Nine weeks, it bends its fingers and curls or straightens its toes in response to touches on the palm of the hand or the sole of the foot.
- Diffuse responses narrow, so that when the mouth is touched only reflexes above the mouth moves instead of the entire upper body.
- Sixteen weeks is 6 inches long, hair may appear on the head and facial features approximate their finished appearance.
- Major internal organs have attained their typical shape, although they couldn't keep the fetus alive outside the uterus.
- Cortex has grown back over the lower parts of the brain.
- 16-20 weeks, all 100 billion neurons have developed.
- The mother can feel movement during this time.
- By twenty-three weeks, the fetus has become quite active, sleeping and waking.

- Studies of prematurely delivered fetuses have shown that by twenty-four weeks a fetus can cry, open and close eyes, and look up, down and sideways. It also developed a grasping reflex and it may even hiccup.
- During the final weeks in the uterus, fat forms over the entire body. Its function is smoothing out the wrinkled skin.
- Usually the fetus gains about half pound weight every week during the last eight or nine weeks, so that at birth the average baby is about twenty inches long and weighs a little more than seven pounds.

Environmental influences on the unborn baby

- Even within the uterus the fetus is not free from external influences.
- Diet deficiencies in calcium, phosphorus, iodine, and vitamin B, C, and D are associated with high frequencies of malformed features.
- Maternal protein deficiency may cause an irreversible reduction in brain weight, number of brain cells, and learning ability.
- Drugs adversely affect fetal development. During pregnancy, it is advised to take as little medication as possible.

Example: As a result of the thalidomide (a sedative) tragedy of the early 1960s in Europe, it was found that some of the pregnant mothers gave birth to babies with deformed or missing limbs.

- More recently, cancer has been found in many young women, whose mothers had taken some kind of drug early in pregnancy to prevent miscarriage.
- Babies born to alcoholic mothers may have low weights, and be mentally retarded and may face heart murmurs, kidney damage, and eye or skeletal defects.
- Cigarette smoking is known to affect the fetus.

Example: Women who smoke during pregnancy tend to miscarry more often than non-smoking and to produce babies who are, on the average, lighter and smaller than normal babies.

The first trimester, or third, of pregnancy appears to be an especially sensitive period i.e. most of the basic organ systems are formed during the second and third month.

Example: - Women contracted by rubella or German measles:

- 47% of the babies during the first month of pregnancy are affected.
- 22% of the babies during the second month are affected
- 7% of the babies during the third month are affected.

6.4.2. Post-natal Development (after birth)

6.4.2.1. The new born

Human babies are born with good motor coordination and highly acute sensory capabilities. They are born completely helpless, totally dependent on their parents. Though human infants are the most helpless and immature when they come to this world, their sensory development is mature and well integrated even before birth. Human infants may not be able to direct their course of movement in their environment at birth. But they can perceive and be influenced by that environment from the moment of birth. Different kinds of reflexes and motor activities help newborn babies to survive after birth.

Motor skills and reflexes

1. **Motor skills**

   Example: Feeding requires the coordination of three separate activities i.e. sucking, swallowing and breathing.

2. **Reflexes**

   2.1 **Grasping reflex**-the meaning is not clear. But it could be a remnant of our pre-human past.

   Its adaptive significance is that it keeps an infant from falling and increases the chance of survival.

   2.2 **Rooting reflex**- it is the most familiar form of reflex. It is the tendency to turn the head in the

direction of any object that gently stimulates the cheek or the corner of the mouth. Its adaptive significance is that it enables the infant to suck its mother's breast.

2.3. **Reaching reflex**- in the first few weeks of life, babies reach out for objects they see. At times they successfully grasp them. This eye-hand coordination is lost at about four weeks. It reappears after four months.

2.4. **Swimming reflex**-a baby only a few weeks old moves both arms and legs in a coordinated pattern when placed in a pool of water. It soon disappears and reappears at the beginning of the second year. This again disappears and children are taught the skill of swimming at age six. Why do the reflexes appear and disappear in a different form?

Possible explanation for the appearing and disappearing of the reflex: - The initial reflexes are controlled by sub-cortical brain structures and that when control shifts to the developing cortex; the behavior becomes voluntary and must be learned.

6.4.2.2. Early Childhood

In line with biological development, children progress from immature stages of mental development to complex stages of

mental development. This developmental aspect is called cognitive development.

Definition: Cognitive development is the process by which a child's understanding of the environment changes as a function of age and experience.

The Swiss psychologist Jean Piaget (1970) suggested that children throughout the world pass through a series of four stages in their cognitive development.

During the initial stage of childhood is the **sensory motor stage** (birth to two years). This stage is characterized by:

- The child has little capacity in representing objects that are not directly in front of him using images, language or symbols.
- For the child at this stage, objects and people do not exist when they are out of sight. It means children lack what Piaget called **object permanence.**

Example: Hide a play object under the blanket when the child is playing and observe his reaction.

- Children discover that symbols can stand for objects and words. They rapidly acquire language. As a result the ability to communicate expands.
- They begin to acquire many cognitive skills.

Example: They classify objects into general categories.

- Mashed potatoes- food
- Parrot - bird

Note that their intelligence is not based on reason and logic.

Accomplishments

- Children show insight for learning first. They confront a problem, think about it for a moment and then solve it.
- The concept of number appears as early as the third year of life. Two-year-olds can count up to ten. They can add and subtract, can compare groups of objects. However, objects must be small in number.

According to Piaget the period from 2 to 7 years of age is the **preoperational stage.** It is characterized by:

- The use of language.
- By the use of language children at this stage are able to represent objects, people, events and feelings that are not directly in front of them.
- They pretend in plays like, for example, they push a chair across the floor symbolizing it for a car.
- The concept of a number appears as early as the third year of life. They can count a group of small number of objects in many ways, starting with a different object each time.

Immature features of the young child's thinking

Their thought is egocentric. It doesn't mean that they are selfish. Rather, they believe that other people see things as they see them. They think that every one shares their own perspectives and knowledge. For example, 3 year olds play the hide and seek (***Dibebikosh***) game. They hide their face against a wall covering their eyes, although they are still in plain view. It seems to them that if they cannot see, no one else will be able to see them.

Another immature feature of the preoperational children thinking is their inability to understand **the principle of conservation**. They cannot understand that quantity does not change when arrangement and physical appearance of objects are changed.

The child's thought jumps from one idea to the next instead of concentrating ideas around a single theme.

They are unable to carry out tasks that require self-directed thinking. They need external cues or hints to guide their thinking.

Social development during early childhood begins as a result of a positive emotional bond between a child and a particular caregiver. It is called **attachment.**

Strong attachment is due to the responsiveness of the caregivers to the signal babies provide such as cries, smiles, reaching and clinging.

In trying to understand social development, it is important to consider how society and culture present challenges to the

child's development. In line with this idea, the psychologist Eric Erickson developed the theory of **psycho- social development**.

The first stage of psychosocial development is **trust versus mistrust stage** (birth to 11/2 years). At this stage Infants develop feelings of trust if their physical requirements and psychological needs for attachment are consistently satisfied. Inconsistent care and unpleasant interactions with others can lead to the development of mistrust.

The second stage in social development is the **autonomy versus shame and doubt stage** (11/2 to 3 years). In this stage:

- Independence and autonomy develop when there is freedom of environmental exploration
- Overly restriction and protection by adults may enhance shame, self-doubt and unhappiness.

6.4.2.3. Late Childhood

At about the time children begin school, they enter the stage of **concrete operational stage** (7 to 12 years)

This stage of cognitive development is marked by mastery of the principle of conservation. They can think logically though their thought process is limited to the concrete.

They can understand simple transformation, like for example, reversing a ball of clay into a sausage shape and back to a ball shape.

Piaget conducted a series of experiments to know how mastery of conservation progresses in relation to age and experience. The sequence is conservation of number (6-7 years), mass and length (7-8 years), area (8-9 years), weight (9-10 years), and volume of an object in terms of water displacement.

Piaget's conservation experiments

Experiment 1: conservation of quantity

Container 1	**Container 2**	**Container 3**
½ liter water	½ liter water	----------

Container 1 and 2 are equal in size.

Container 3 is longer and narrower.

The same amount of water is poured from container 1 to container 2. The child understands that equal amount of water is conserved.

The same amount of water is poured from container 1 to container 3. The level of water increases. In this case the child claims that the water in container 3 is more than in container 1.

Conclusion: A child who understands the conservation of quantity will say that the amount of water in container one and three remains same.

Experiment 2: conservation of length.

A. ←————————————→

B. ————————————————

The child is asked to identify the longer piece of yarn.

Experiment 3: conservation of number.

O O O O O

O O O O O

Equal number of marbles is replaced differently.

Question: which row has more marbles

In Piaget's view, what is important is not the answer but the reason the child gives for each of the above mental exercises.

Roughly during the middle childhood period, children enter into **the initiative versus guilt stage** of psychosocial development (ages 3 to 6 years). At this stage:

- The challenge is between the child's desire to initiate activities independently and the guilt that may result from unexpected consequences from such activities.
- Parents are expected to react positively to the Child's attempts so that the child could solve the contradiction at this stage.
- Helping children to plan activities within their limits and encouraging them not to give up their plans is essential for positive psychosocial development.

Late childhood is the stage of **industry versus inferiority stage** (ages 6 to 12 years). During this stage:

- There is an increase in competence in academic, social and psychomotor skills.

- Children enter into the wider culture and learn basic social skills and start to appreciate societal values.
- Peer influence is dominant at this stage.
- To avoid feelings of failure and inadequacy, parents and school administration need to create a supportive environment.

Although peer influence contributes a lot, child-rearing practices also shape social competence. Despite cultural differences, in general parental style can be categorized into three broad categories. These are authoritarian leadership style, permissive leadership style and authoritative leadership style. Children whose parents are authoritarian are likely to be unsociable. Children whose parents are permissive are likely to be immature and moody. Children whose parents are authoritative are likely to have good social skills.

Activity: Form small groups and encourage each group to discuss the relationship between children's level of development and curriculum.

6.4.2.4. Adolescence

Activity: Read the following case and interpret it in terms of physical, mental and social changes associated during adolescence.

Case

Year 13 was an important time in my life. It was the time that I started to grow physically. It was also the time when more girls started to see me. It was during this year that my personality changed a lot from a fearless boy to an energetic funny and athletic person. My life as a child had changed a lot. I am now a teenager. I am changed into a new person.

Definition: Adolescence is the development stage between childhood and adult hood during which many physical, cognitive, and social changes take place.

Most dramatic biological changes occur during this stage. Major physical and sexual changes and their corresponding average range of ages for both sexes are shown below.

Table 2: Major physical and biological changes during adolescence

Males		Females	
Male-sexual changes	Average range of age	Major-sexual changes	Average range of age
High spurt	12-16	Height spurt	11-14
Penis growth	13-15	Onset of menarche	11.5-13.5
First ejaculation	12-16	Breast development	11.5-13.5
Pubic hair	12-18	Pubic hair	11-14

Source: Feldman (1996), understanding psychology

Puberty: It is the period during which maturation of the sexual organs occur.

For girls	11 or 12 years
For boys	13 or 14 years

However, there are wide cultural variations depending on quality of nutrition and access to health services.

Early maturation has an advantage and disadvantage for both sexes. Early maturing boys may do better in athletics and are generally more popular with peers. This enhances self-concept. Early maturation in girls may expose them to untimely sexual practices and sexually transmitted diseases. In general the

impact of early and late maturation is related to the specific reactions and attitudes of the society.

Activity: Form small groups and let your students discuss the pros and cons of early and late maturation in light of different ethnic cultures in the Ethiopian context.

A new set of cognitive capabilities, which Piaget called **formal-operational thought** starts to emerge during adolescence. At this stage adolescents:

- Use scientific reasoning;
- Test possible explanations in an attempt to prove or disprove hypothesis (example, adolescents sexual practice)
- Use abstract thinking.

The difference between concrete operational and formal operational thinking can be seen from the following abstract example.

- If a man can climb a ladder at 2 miles per hour, how long will it take him to reach the moon, which is 240,000 miles away?

The Young Child Being excited by the above question disregards the question and declares 'you can't climb to the moon using ladder.'

The Adolescent accepts the abstract hypothesis and reasons out the answer.

Difference: The Cognitive process in adolescents is not necessarily limited to the physical reality.

This abstract thinking is extremely important for the adolescent. Because it allows the study of mathematics, science, economics and language. Adolescence is the first phase of life in which individuals begin to think carefully about themselves, their role in life, and their plans. Unlike the younger children, adolescents are often concerned with the meaning of their past and the direction of their future.

The psycho- social development stage during adolescence is named as **the identity versus confusion stage**. During this stage:

- The adolescence raises the identity question (who am I?)
- External pressures are due to:

  * Physical change

  * Societal expectation changes (they consider themselves as adults, yet they are economically dependent on their parents)

There is decline in reliance on adults for information with a shift toward using the peer group as source of social judgment.

To avoid role confusion appropriate role model formation is important.

Activity: Explain the multifaceted problems of adolescents in our country and suggest possible strategies and measures to be taken by the society to alleviate the problems.

6.4.2.5. Adulthood

- It includes the years from 20-60 but usually 20-40.
- Physical changes during this period are less apparent and occur more gradually than the preceding stages.
- Although physical strength and status of health are great at early adulthood period, gradually they decrease. The body begins to operate less efficiently and immune system decreases.
- At about late forties and early fifties, women stop menstruating (Menopause)

Menopause was once considered as having strong association with psychological symptoms including depression and memory loss. However, recent investigations show that a society's attitude and women's' perceived reactions to menopause are important variables than the physiological changes of menopause. According to the Ethiopian Anthropologist Yewubdar Beyene's study, women in Mayan village perceived menopause as something natural. She found out that some of the assumed

symptoms of menopause; hot flashes for example, were not problems of women in that particular society.

Except in decline in the amount of sperm production and frequency of orgasm, men remain fertile up to old age.

In general, the high value society attaches to the youth has more impact than the physical changes associated with aging during adulthood.

In general adulthood is a time of peak intellectual accomplishment. An increase in IQ is observed at this stage. They perform better on any learning or memory task. They find it easy to accept new ideas and they can readily shift their strategies for solving different problems.

Table 3: Typical life goals and concerns during adult stage are shown below.

Stages in adult hood	**Typical goals are related to**	**Typical concerns related to**
Young adult (17-45)	Education and family	Relationship and friends
Middle ages (40-65)	Children's lives and personal property	Occupational worries
Elderly (60 on wards)	Good health, retirement, leisure, community	Health fears

According to Erickson the stage of social development during early adult hood is termed as **intimacy versus isolation stage**. Young adults feel a need for intimacy in their life. After establishing a stable identity, a person is prepared to share meaningful love or deep friendship with others. By intimacy we mean an ability to care about others and to share experiences with them. One research showed that 75% of college -age men and women ranked a good marriage and family life as important adult goals. Failure to establish intimacy with others leads to a deep sense of isolation (feeling alone and uncared for in life).

Once two people have established some degree of intimacy, their interest begins to expand beyond just the two of them. They become concerned with rising the next generation. They enter the stage of **generativity versus stagnation.** Generativity refers to the creation and care for children. Parents must do more than giving birth to children. They must adequately care for and guide children for future life. But people can achieve a sense of generativity without having children of their own. Nuns and priests, for example, can still guide and care for the next generation by working with other people's children or helping to create a better world for them.

When generativity is lacking, the result is stagnation and impoverishment of the personality. In such case people often

become too exclusively involved in their interest and neglect the responsibility of caring for others.

6.4.2.6. Old age

Physical changes brought about by the aging process include skin wrinkling and folding, slight loss of height due to decrease in the size of disks between vertebrates in the spines.

Sensory activities i.e. Vision, hearing, smell and taste decrease.

The major theoretical explanations or reasons for physical decline are:

1. Genetic programming theories of aging

- The theory suggests that there is built in time limit to the reproduction of human cells.
- Some cells are genetically programmed and become harmful and self destructive to the internal biology of the body.

2. Wear and tear theories of aging

- The theory suggests that as time goes on functioning of the body stop working efficiently.
- Waste-by- products eventually accumulate and in effect creates problem on cells reproduction.

Conclusion: Consensus is not yet reached to decide on which theory provides a better explanation of aging.

Research findings elsewhere show that women live longer than men.

Although more males are conceived than females, males have a higher rate of prenatal, infant, and childhood deaths.

Activity: Browse statistical data on the lifespan of men and women, birth and death rates of male and female children in Ethiopia and compare it with the research findings cited above.

Gerontologists found out that elderly people are not forgetful and confused in their cognitive capacities as expected. When healthy elderly people are compared with a group of physically healthy younger people, their intellectual declines are not as such high.

Although reasoning, memory and information processing capabilities show decline in old age, skills and strategies that are learned remain steady and in some cases actually improve.

The social patterns and behaviors of the elderly change as an outcome of age.

The disengagement theory of aging sees aging as a gradual withdrawal from the world on physical, psychological and social skills.

Physically	less physical activity
Psychologically	focus shifts from others to the self
Socially	less interaction and participation in the society

The activity theory of aging suggests that continuation of activities from middle age and improving social interaction contribute to successful life.

Conclusion: We cannot say which of the two theories present accurate view of the elderly because there are individual differences in coping strategies of people.

The elderly must make physical and social adjustments. These adjustments are more of inner struggles. Older people look back and review their lives. According to Erickson they enter the stage of **ego integrity versus despair stage.** Ego integrity is the acceptance and satisfaction of ones past life. The person who has lived richly and responsibly develops a sense of integrity. This allows the person to face aging and death with dignity. Despair comes due to the feeling that life was not what it should have been. If previous life events are reviewed with regret, the elderly person experiences despair (heartache and remorse). The person feels like a failure and knows it is too late to reverse what has been done. Aging and the threat of death then become source of fear and depression.

Self assessment questions

1. Briefly discuss the nature-nurture issue
2. Are there psychological differences between males and females? Refer to research evidence.

3. Explain how parental treatment and the media influence the development of gender.
4. Briefly describe the physical changes, which take place at puberty. Explain some of the psychological effects of late and early maturation.
5. What cognitive changes occur during adolescence?
6. Briefly outline Erickson's theory of lifespan development.
7. What has research shown about attitudes towards the elderly in different cultures?

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CHAPTER SEVEN
PSYCHOLOGY OF PERSONALITY

By the end of this chapter the student is expected to:

- Describe and evaluate the different theories of personality;
- Assess the relevance of different techniques used in the study of personality.

7.1. Definition of personality and general remark

Man's interest in personality is as old as his interest in the supernatural. Thus some ideas about personality may be found in primitive customs, myths and superstitions as well as in all the great religions of the world. In Literature, since the days of the great poetry, character writers have presented interesting personality types.

Psychology of personality, however, is of recent growth. Though psychologists have been always concerned with personality, it was not till Galton and Freud that the study of personality became scientific. Psychology of personality, in a sense, is very old and at the same time, has a brief history. In the last three decades, however, there has been a very rapid development in this field with regard to concepts, techniques, findings, applications, publications and number of works.

The layman may identify personality with externals of an individual his looks, voice, dress, manners and gestures. We say somebody has a wonderful personality. The externals or physique and appearance constitute only one factor in one's personality: They do not constitute the whole thing.

Like other abstract terms defining personality is difficult. There are various definitions of personality. Allport, for example, has listed fifty definitions, including one of his own, in his book on personality.

- Personality is the total quality of an individual's behavior as it is shown in his habits of thinking, in his attitudes, interests, his manner of acting and his personal philosophy of life. It is the totality of his being. It includes his physical, mental, emotional and temperamental makeup and how it shows itself in behavior.
- These various components of personality do not stand apart from each other. They are interconnected and as a result of this integration gave rise to a characteristic behavior pattern or quality called personality.

Some of these aspects may be given more weight than others and play more vital role in the development of one's personality.

These variations cause differences in personality from one individual to another.

There are three basic factors, which have to be considered in describing personality. These are:

1. **The internal aspects:** these are feelings, the physiological systems, glands and inherently determined physical features.
2. **The social situation:** they include the influence of the family and other groups to which one belongs, the influence of customs, traditions and culture.
3. **The reactions or behavior;** they are results from the interaction of the individual and the stimuli from the environment.

Personality is a dynamic growing thing. It grows in a social setup, through social experiences and continual adjustment to the environment.

There are three main factors that contribute to differences in personality. These are:

1. The physiological factors. These include:

- The physique of the individual (his size, strength, looks);

- Physical appearances and deficiencies and how other people react to these characteristics;
- Endocrine glands production of hormones;

Example: excess insulin secretion may make the individual fatigued or anxious. Hypothyroidism may cause sluggishness, inertia or dullness, slowness or stupidity. Hyperthyroidism may cause nervous tension, excitement and over activity.

2. The environmental or social factors

- Reactions of other people and reactions to other people;

Example: relationships in the home and the family, the influence of school

- An atmosphere of peace, love, mutual understanding at home develops self-confidence and security;
- Repressive home atmosphere will result in rebellious or dependence as personality traits;
- Personality of the teacher, richness of the curriculum, the presence or absence of co curricula activities, methods of teaching affect the child's personality.

3. Mental or psychological factors include

- Motives, interests, activities, will and character, intellectual capacities, reasoning, attention, perception and imagination.

7.2. Brief historical development of personality psychology

7.2.1. The clinical influence

Clinical study of personality was started in France. Beginning from 19thc, psychology in France centered on psychopathology.

Philippe Pirelli's (1745-1826), idea helped to remove the chains in which mental patients had been kept. Later more systematic observation of mental patients was made resulting in a description of mental disorders. Jean Martin Char cot (1825-1893) used hypnosis and applied to hysterical disorders. Hysteria is loss of bodily functions without apparent organic or physiological cause. **Example-** Paralysis of the arm, Numbness

7.2.2. Psychoanalysis

- Before Freud, psychology was far removed from the study of personality.

- Wilhelm Wundt's experimental psychology had little contribution about human motives, feelings or traits.
- Freud, after a period of involvement in basic research in physiology and neurology opened a medical practice in neurology.
- Freud later realized that, he could find no organic neurological cause for the symptoms most of his patients brought to him for treatment.

7.2.3. Galena's theory of temperament

The theory is based on Hypocrite's doctrine. Hippcrates about 400 BC. thought that people could be classified into four types. Each of these types was connected with certain types of personality traits. These are:

- Sanguine------activity and rush ness
- Phlegmatic----slowness and stability
- Choleric--------ambitiousness, industrious
- Melancholic----pessimism and reflective ness

Modern theories of personality, however, show that human personality is not simply combination of four qualities.

Hippocrates's temperament theory related biological characteristics to personality traits.

7.2.4. The scientific era

Darwin's theory of evolution contributed to the study of human personality.

It contributed to the understanding of the importance of species differences and of personality differences.

7.2.5. Gal ton’s individual psychology

It was a step to the development of personality tests. The first group administered intelligence test the '**army alpha'** was developed which helped to classify and screen soldiers during the First World War.

7.3. Theories of Personality

When we study the field of personality psychology, in general, four areas are observed. These are theory, structure, development and dynamics.

Theory

It is a body of knowledge, which psychologists use to explain complex concepts in the study of personality.

Psychologists consider a number of approaches to the study of personality.

Structure

It is anatomy of personality with basic dispositions and interrelationships of different elements of personality.

These personality structures are enduring and stable aspects of personality.

Development

Individuals' are different from each other even at birth, in physical appearance or temperament.

The differences become more complex with increasing age and interaction with the environment.

Dynamics

The dynamic aspect of personality is concerned with the meaning and function of behavior.

It looks for the purpose or the objective of an act, why the individual behaves the way he/ she does.

7.3.1. General remark

Suppose you were asked to write a letter describing yourself to stranger. How could you paint an accurate self-portrait of yourself in words?

You may begin with simple facts.

Example: I am a student in the College of health sciences.
I am a member of the international red cross society etc.
I am thick-skinned or sensitive;
I am out going or shy;
I am aggressive or timid;
I am emotional or restrained.

Question: Do you think these traits will still describe you in the coming ten years?

Do your thinking and acting change in time?

Psychologists who study personality ask two key questions

Question.1 Why don't all people react in the same way to the same encounter?

Example a**.** When meeting with a group of strangers one finds it easy to start conversation, while another feels uncomfortable and shy?

b. One student begins to work out assignment promptly; another puts off until the last minute.

Psychologists have given a variety of answers to the above questions

- Some focus on the influence of early life experiences and childhood conflicts.

- Others stress on the influence of people's biological makeup.
- Others stress on the influence of learning.

Question 2 Do individual differences have power in shaping behavior?

Example

a. Do shyness, friendliness, punctuality exert a strong impact on behavior. Do they cause people to act in a certain way?
(Predictability of behavior)

b. Might the health officer student be extremely careful and honest in handling fund but be willing to cheat on exams if given the opportunity? Or his honesty can hold him to behave with integrity in both situations?

Theories of personality, therefore, concentrate on

- Specific traits (honesty, shyness) and how combination of traits can be measured and described.
- Factors that integrate personality (the concept of self).
- Internal feelings (anxiety, conflict, self-fulfillment)

The four major theories of personality are

1. Psychoanalytic theory
2. Trait and type theories
3. Humanistic theory
4. Social cognitive theory

7.3.2. Psychoanalytic theories

- It is general and best-known theory of personality.
- The greatest figure in psychoanalytic theory is Sigmund Freud (1856-1939).
- All psychoanalytic theories have two themes in common.

1. They are concerned with powerful but largely unconscious motivations believed to exist in every human being. This school emphasizes on childhood experiences as critically important in shaping adult personality.
2. Human personality is governed by conflict between opposing forces i.e.; anxiety over unacceptable motives and defense mechanisms that develop to prevent anxiety from becoming too great.

Basic theoretical concepts in psychoanalysis are understood within the context of a model.

Man ⟶ Biological Creature ⟶ Driven by needs ⟶ Psychological tension until satisfied

Food ⟶ appropriate activities ⟶ eat ⟶ internal stimulation stops.

From the biological survival model two broad theoretical concepts can be drawn. These are homeostasis and hedonism.

Homeostasis

- It is the Tendency toward the maintenance of a relatively internal environment.
- It is a state of equilibrium.

Example No food ⟶ tissue deficit ⟶ disequilibrium

Hedonism

- The concept of hedonism states that pleasure and happiness are the chief goals in life.
- In psychoanalytic language it is called the pleasure principle.

Freud's assumption about the unconscious

- The unconscious is the major motivating force behind human behavior.
- The unconscious are processes which are totally unaware and which are incapable of becoming conscious unless special methods of psychoanalysis are used.
- These processes lie buried deep down in the hidden recesses of our mind below the level of consciousness.
- The unconscious includes all forgotten past experiences our repressed wishes and desires, our fears and phobias for which we do not know the reasons.

- Much of what we say and do is either to find some socially acceptable way of expressing unconscious impulses or an effort to keep those impulses from being known by others.
- Even trivial words and actions often have deeper meanings in psychoanalysis.

Example: - According to psychoanalysts slips of the tongue, forgetfulness, mislaying objects, mispronunciation of a name, attempting at making a joke are all signs of unconscious drives, wishes and conflicts.

7.3.2.1. Personality structure

Freud divided the human mind into three separate but interacting elements. They are not totally separate parts. They are not physical divisions of the brain; instead they are names given to psychological forces and hypothetical concepts created by Freud to explain his theory. The existence of these structures is inferred from the ways that people behave in their lives.

1. The Id

- It is the reservoir of psychic energy.
- It is the storehouse of biological drives that arise from our needs for food,

water, warmth, sexual gratification and avoidance of pain etc.

- It is inborn.
- It is governed by the pleasure principle the principle of hedonism.
- The id has no link to objective reality
- It looks for immediate discharge of tension arising from biological drives, without regard for logic or reason, reality or morality.
- The id is like a demanding, selfish child. It looks only its own pleasure.
- The id has no way of determining which meanness of doing things (strategy) is safe and which are dangerous. Goal setting is not realistic.
- In the absence of external goal satisfaction, internal mental acts (Example: dream about accomplishment, achievement desire, daydream of attacking some one in order to gratify aggressive needs) are used to fulfill wishes.

2. The Ego

- It begins to develop soon after birth, but does not become apparent until the age of about six months.
- It serves as a mediator between the id impulse and reality.
- Unlike the id, the ego is conscious.
- It operates according to the reality principle. Satisfaction of biological needs is not given up; but reality is taken into account to satisfy these biological needs.
- Takes into consideration past experiences
- To obtain the most pleasure, it looks for the best time with the least pain or damage to the self.
- The ego cannot totally reject the id impulse. Rather like a patient parent, it attempts to control, divert and protect the id.

The ego follows the rules of adult thinking.

- Adult thinking is characterized → by logic
  → Time orientation
  → Distinction between reality and unreality.

The ego is partially conscious (preconscious): because it also uses temporary ways of resolving the contradiction between the biological drives and the reality.

3. The Superego

- It represents the ideals and moral standards of society as passed to the child by his or her parents in the process of socialization.
- Through the socialization process the child learns the entire dos and don’ts.
- Like the id, the superego is not attentive to reality, nor does it differentiate between desires and actions.
- It constantly commands that sexual and other biological urges should be stopped and pleasure is postponed according to the ideals and morality of society.
- The super ego has two main functions based on reinforcement processes. These are:

a. For good behavior - The super ego rewards

Consequence - feeling of pride and self-esteem

b. For bad behavior - The super ego uses punishment

Consequence - feeling of guilt and inferiority.

According to Freud the superego is harsh and punitive taskmaster. It wants the person to be perfect.

It doesn't take into account individual capabilities and circumstances in the environment

Integration of the three personality structures

Ego ⟶ executive agency (highest) structure in a person ⟶ mediates to satisfy the constant demands of id ⟶ but bound by the constraints of reality and moderate the ideals of superego.

The following hypothetical example illustrates how the three personality structures operate in real life situation.

A six-year-old child Bereket spots his favorite candy in a supermarket.

The id shouts - "I want it now! Take it!"

The super ego - "Thou shall not steal."

The ego -"I could ask my father Girma to buy it for me, but he might say no."

7.3.2.2. Anxiety and defense mechanisms

How does the ego then try to reconcile, moderate the opposing goals of the id and the superego?

When the ego loses its energy to resolve the divergent demands of the id, anxiety is signaled.

Anxiety is a feeling of apprehension or tension that hinders our daily functioning.

Anxiety arises when:

- Ego realizes that expression of an id impulse will lead to some kind of harm to the personality.
- The superego is making an impossible demand to the satisfaction of the biological needs.

Anxiety as an alarm signal tells ego that something must be done to resolve the conflict and to protect the personality from danger.

The ego, therefore, uses **defense mechanism**, a mental strategy to block the harmful forces while at the same time reducing anxiety.

It protects the individual from overwhelming anxiety, punishment of the superego and other unpleasant experiences.

There are varieties of defense mechanisms. The most common defense mechanisms are described below.

1. **Compensation**
    - When the individual tries to overcome a failure or deficiency in one area through achieving

recognition in another area, the adjustment is called compensation.

- This enables the individual to enhance his self-esteem.

Example- Demostnenes was a stutter, but he overcame his problem and became the greatest orator in Greece.

2. **Rationalization**
   - The individual who has been frustrated or who cannot solve the problem successfully feels discomforted and restless. To lessen his feelings of anxiety, he gives reasons other than true reasons.

   Example- A student who cannot do well academically, often satisfies himself by saying "It is not rewarding to work hard in this college"

3. **Projection**
   - When a person attributes his shortcomings, moral defects to others as a means of lessening a sense of guilt or inadequacy it is called projection.
   - Projection is deflection of the attention of others from our own shortcomings.

   Example- A student nurse who has cheated in an examination may satisfy herself by saying that others also have cheated. A medical student who is criticized for poor work on the wards by his/her professor may

retaliate by finding many weaknesses in his/ her profession.

4. **Displacement**
   - It is a specific form of projection

Example- The ward sister has scolded a student nurse for showing carelessness on duty. The student nurse instead of showing her anger towards the ward sister, the student nurse may show aggressive feelings on a patient.

5. **Identification**
   - It is an adjustment mechanism, which enables a person to achieve satisfaction from the success of other people, groups or organization.

Example- Boys identify themselves with their fathers, and girls with their mothers. Students identify themselves with their favorite teachers. A businessman who has not yet achieved success in business may identify himself with a well-known businessman.

If we assume the attitudes or behavior characteristics of another person with whom we identify, again and again the danger is that we may thereby, lose our own identity.

6. **Substitution**
   - It is an adjustment mechanism in which original goals or others substitute desires.

- The original goals are difficult to achieve and an attempt at achieving them may end in failure.
- The individual tries to lessen the effects of failure by selecting a new goal or a new situation, which is easier to attain.

Example- A student who has not been accepted for admission by a medical school may satisfy herself/himself by becoming a nurse. A student who cannot go to the medical college for lack of money takes evening courses in x- ray technology.

7. Sublimation

- It is a form of substitution in which our unacceptable desires or activities are redirected into social desirable channels.
- We cannot give direct expression to our sexual, or aggressive impulses due to many social restrictions, laws and regulations.
- These impulses have to be repressed and the energy associated with them may produce maladjustment.

Example- An unmarried woman interested in children may give expression to her repressed maternal need by engaging herself in orphanage work or in any child welfare institution.

- Unsatisfied sexual needs may be redirected in useful artistic and literary works.

8. Negativism

- Some individuals react to frustrating situation by becoming negative.
- They refuse to attack the problem.
- They become uncooperative and do the opposite of what should be done.

Example- patients, who have developed negativism, will not cooperate in the treatment planned for them.

Children who are treated unfairly and discriminately are likely to develop disobedience, tepertantrum.

9. Sympathies

- The individual avoids the necessity of solving his problems by obtaining the sympathy of others.
- The individual tries to get attention and concern of others.

Example- a student nurse is not doing well in her/his studies. Instead of finding out the cause realistically and making effort to improve herself, she/he may evoke by telling others how difficult things are for her, how her family is in great trouble.

7.3.2.3. Psychosexual stages and how personality develops.

General: Sexual impulses undergo five developmental stages. These are oral, anal, phallic, latency and genital. At each stage in a child's life, the drive for pleasure centers around a particular area of the body i.e. mouth, anus, and finally the genitals. Freud believed that adult personality is shaped by the way in which the conflicts between early id urges and the requirements imposed by society, like for example in weaning, toilet training, prohibitions against masturbation are resolved at each of the psychosexual stages.

Fixation

Adult emotional problems can be traced to specific disturbances during the four stages of psychosexual stages of development. When the individual is not able to resolve the conflicting demands of the id impulses and the restrictions of superego, development will be tied up at a certain stage. It is called **Fixation**. The greater the fixation at a certain stage, the lesser mental energy the person has for mature social and emotional relationships with his environment.

1. The oral stage

- Sexual pleasure focuses on the mouth.
- Sucking is an important activity at this stage not only to obtain food to satisfy hunger, but also a source of intense pleasure for the child. This is why babies suck, lick, bite, and chew anything they can get.

Fixation at the oral stage can occur for the following reasons.

a. When babies repeatedly experience anxiety over whether food will be given or not given.

b. When they come to learn that they are totally dependent on others.

Consequences

- Passive, over dependent, unenterprising adult.
- A child who experienced strong oral fixation, due to the birth of a sibling may revert to thumb sucking and exaggerated dependency. It is a form of regression.

2. The anal stage

- It occurs during the second year of life, when children begin to develop voluntary control over bowel movements.
- Holding in and expelling feces gives great sensual pleasure to the child.

- The demands of toilet training by parents are imposed at this stage.
- Toilet training, according to Freud, is a crucial event because it is the first big conflict between the child's id impulses and society's rules.

Fixation at this stage can occur due to strict and punitive toilet training.

Consequences

- The child may resist completely the urge to defecate in a free and enjoyable manner.
- May result in extreme orderliness during adulthood.
- May result in excessive neatness during adulthood.

3. The phallic stage

- It covers the years from about three to five or six years.
- Pleasure focuses on masturbation (self-manipulation) of the genitals.
- It is the period when the Oedipal and Electra conflicts occurs.

The concept of Oedipal and electra complex

At five or six, sexual behavior is directed to mother. The child sees his father as rival. This is the rise of Oedipal conflict. But the boy fears to retaliate his father. Freud called this castration anxiety. Castration anxiety is the earliest form of subsequent anxieties. In girls it is called Electra complex. The girl being

jealous of her mother maintains relationship with her father. But ultimately both boys and girls identify with parents of opposite sex with her mother.

Resolution of the Oedipal conflict

- The boy or the girl recognizes that he or she can never biologically possess the characteristics of the opposite sex parent.
- By means of **identification** the boy or the girl tries to adopt the attitudes, behaviors, and moral values of the same-sex parent.

4. The Latency stage

- The resolution of the Oedipal complex brings about a latency period lasting from about age six to eleven.
- During this stage the sexual and aggressive drives, which produced crises at earlier periods, are temporarily dormant. There is no sexual zone for this state.
- This doesn't mean that the child's life at this time is entirely conflict-free. For example, the birth of a sibling may rouse intense jealousy.

5. The genital stage

The stability of the latency period, however, does not last long. As Erickson says, ***'It is only a lull before the storm of puberty'.*** At puberty sexual energy becomes high. Once again, Oedipal

feelings threaten to break into consciousness, and now the young person is big enough to carry them out in reality.

Freud said that from puberty onward the individual's great task is freeing himself from the parents. For the son, this means releasing his tie to the mother and finding a woman of his own. The boy must also resolve his rivalry with his father and free himself of his father's domination of him. For the daughter, the tasks are the same; she too must separate from the parents and establish a life of her own. Freud noted, however, that independence never comes easily. Over the years we have built strong dependence upon our parents, and it is painful to separate ourselves emotionally from them.

Successful resolution of the Oedipal complex may result in:

- The formation of deep and mature love relationships with the opposite sex.
- Enabling the personality to assumes a place in the world as a fully independent matured adult.

7.3.3. Other psychoanalytic theories

7.3.3.1. General remark

Though a lot of controversial issues exist in the Freudian psychoanalytic theory, it attracted many followers. This resulted in the foundation of the psychoanalytic movement. Some became **descendants** by expanding and modifying Freud's original ideas. Others became

dissidents, took different directions and developed their own theory.

Differences between early psychoanalytic theories and post- Freudian theories

1. Post-Freudian theorists gave more importance to the ego and less importance to the id. In the foregoing pages, we saw that the ego is viewed as simply submissive. Post-Freudian analysts instead saw the ego as an important force, capable of much creativity, rational planning, and the formation of realistic goals.
2. Later psychoanalytic theorists emphasized the importance of social interaction in explaining how human personality develops. They saw human personality as the product of a child's relationships with significant others in his or her life.
3. Here we will discuss two theories, perceived as different from the earlier Freudian theory.

7.3.3.2. The analytic psychology of Carl Jung (1875-1961)

In 1910 the Psychoanalytic association was found. Carl Jung was the first president. But due to theoretical differences with Freud, their relationship was affected and Jung withdrew the association. But Jung developed his own theory and called it the Analytic Psychology.

Basic assumptions of Jung's theory

- Personality consists of competing forces and structures.

  Example .Masculine and feminine tendencies
  .Conscious and unconscious
  .Introversion and extroversion
- An integrated personality balances masculine aggressiveness with more famine sensitivity.
- A self-actualized individual emerges out of the struggle to balance and integrate the various opposing forces that make up the personality.

Jung emphasized on conflicts between opposing forces within the individual, not between the individual and the demands of society or between the individual and reality.

7.3.3.3. Alfred Adler's individual psychology (1870-1937)

The basic idea of Individual Psychology is that human beings have an innate social interest and are cooperative and interested in the welfare of other people.

Three concepts in Adler's individual psychology

1. Striving for superiority

- It is basic human tendency.
- Superiority for Adler is not necessarily mean power over others or competitive success. It refers to a more general

goal of perfection and self-realization. Human beings, therefore, constantly strive to move upward.

- In the neurotic or emotionally disturbed individual this positive force is misdirected.
- It is manifested in the pursuit of power, prestige and other selfish goals. Such individuals show power-oriented behaviors in response to feelings of inadequacy and inferiority.

2. Inferiority

- Individuals are in constant efforts to overcome feelings of inferiority.
- Inferiority can be physical (organ) deficit or psychological or social.
- Organ inferiority

Example-development of acute hearing as compensation for poor vision.

- Psychological inferiority

Example-a young child's feelings of inadequacy compared with an older sibling might lead him or her to learn new skills.

- Superiority complex and inferiority complex are extreme tendencies.
- Superiority complex is overestimation and inferiority complex is underestimation of oneself.

However, a realistic self-perception about the strengths and weaknesses is necessary to achieve success, self-improvement and perfection in life.

3. Style of life

- Refers to distinctive personality that each of us develop in response to our inferiorities.
- Refers to uniqueness, formed at the age of five that characterizes the person throughout life and becomes the distinguishing feature of the personality.

Adler's theory can be summarized by the following points

a. The theory presents a positive image of human nature and its potential to grow.

b. Human beings are motivated by social interest to overcome inferiority and attain perfection.

c Malpractices in child rearing can change this positive goal to destructiveness.

7.3.3.4. Evaluating psychoanalytic theories

1. Data are collected from case studies, usually of individuals undergoing psychoanalysis treatment in clinics privately. There is no way of checking the validity of what is said by the clients (patient).
2. The Freudian theory is reported based on small samples, namely, young and middle-aged women, white, above average intelligence and relatively from

well to do social classes. It does not represent the different social strata.

3. Freud's writings showed a stronger gender bias. According to Freud, when little girls notice that they lack a penis, " they feel themselves heavily handicapped and envy the boy's possession of it". Freud said, this is the beginning of inferiority. Gender movement groups seriously criticize this theory.

7.3.4. Trait Theories

7.3.4.1. Definition and general remark

Definition: - A trait is defined as any relatively enduring way in which one individual differs from another (Guilford, 1959).

Three assumptions are included in this definition

1. Personality traits are relatively stable over time.

Example- a person who is shy at parties at age twenty is likely still to be shy at Party five, ten, even twenty years later. Research evidence supports this view. James Conley (1985). for example, compared the personality traits of several hundred adults at three different times in their lives. He discovered that extraversion, neuroticism and impulse control did not showed major change over a forty-five years period.

2. Personality traits are consistent over time.

Example- A person who is domineering at work is likely to be domineering at home at parties or other settings. The assumption here is that on average people will act in the same way in many different situations. Research, too, supported this view. Nancy Cantor (1985), for example, found that college freshmen students used consistent strategies to pursue in their goals to get good grades and making friends.

3. Individual differences are the result of differences in the strength, number and combination of traits. No two individuals are alike, but the differences are largely a matter of degree.

Example- Everyone can be classified as more or less sociable. But sociability can be seen as a continuum with two extremes. Most people fall between these two extremes.

Extroversion Introversion

Figure 7: Extroversion- Introversion dimension

7.3.4.2. AllPort's Trait Approach

Gordon W, Allport (1936), searched for words that could describe people in a dictionary and found about 18,000 different words. After simplifying his descriptions, he came up with three kinds of traits

Activity : Try to list down as many words as possible that are used in our society to describe people's personality

1. Cardinal trait

- It is a single trait that directs a major portion of a person's behavior.

  Example- A person consumed by ambition or by greed would be characterized by a cardinal trait.

- The 16th C. Italian political theorist Nicholo Machiavell is usually taken as an example. Nowadays, a person who is persistently manipulating others for his own political ambition is considered as having **Machiavellian type personality**.
- Allport says cardinal traits are rare. Most individuals do not have one predominant trait. Instead they have combinations of different traits.

2. Central trait

- It is based on life experiences.
- Certain central traits are unified together and manifested in a person's behavior.

  Example For the Americans General Collin Powell, the first black American to be chief of staff, might be said to have central traits having ambition, achievement and

service to his country. Every society has public figures possessing central traits.

Activity: Encourage your students to identify personalities with important central traits in Ethiopian society.

3. Secondary traits

- They are characteristic modes of behavior that are less important than central traits
- They are seen in few situations.

Example- Tastes and preferences for certain foods or styles of music are secondary traits.

7.3.4.3. Cattel's personality traits

Cattel concluded that personality is composed of sixteen Primary or Source traits. These traits are opposing tendencies.

1.	Reserved	Out going
2.	Less intelligent	more intelligent
3.	Stable, ego strength	Emotionality/ neuroticism
4.	Humble	Assertive
5.	Sober	Happy-go-lucky
6.	Expedient	conscientious
7.	Shy	Venturesome
8.	Tough-minded	Tender-minded
9.	Trusting	Suspicious
10.	Practical	Imaginative

11.	Forthright	Shrewd
12.	Placid	Apprehensive
13.	Conservative	Experimenting
14.	Group-dependent	Self-sufficient
15.	Undisciplined	Controlled
16.	Relaxed	Tense

To Cattell, trait is structure of the personality inferred from behavior in different situations. He classified traits into four categories. These are:

1. Common traits: These are traits found widely distributed in the general population or among all groups (e.g.; honesty, aggression, cooperation)
2. Unique traits: These are traits possessed by particular persons as temperamental traits and emotional reactions.
3. Surface traits: These are traits which can be easily recognized by overt manifestations of behavior (e.g.; curiosity, integrity, tactfulness dependability)
4. Source traits: These are the underlying structure or sources that determine the behavior of the individual. They are inferred from behavior. Dominance and emotionality are source traits.

7.3.4.4. Eysenck's Dimensions of Personality

- Eysenck reduced personality traits into the following major dimensions.

Table 4: Dimensions of personality

1. Neuroticism Vs Emotional stability ▪ The degree to which people have control over their feelings.	**Neuroticism** ▪ Anxious ▪ Moody ▪ Touchy ▪ Restless ▪ Quick to fly ▪ Out of control	**Emotional Stability** ▪ Calm ▪ Even-tempered ▪ Reliable ▪ Almost never Falling to pieces
2. Extraversion Vs Introversion ▪ the degree to which people are sociallyout going or withdrawn	**Extraversion** ▪ Active ▪ Gregarious ▪ Impulsive ▪ Excitement of oriented	**Introversion** ▪ Passive ▪ Quiet ▪ Cautious ▪ Reserved
3. Psychopathology	▪ Lack of feeling for others ▪ A tough manner of interacting with others ▪ A tendency to be different ▪ Defy social conventions	--------

The followings are sample items taken from Eysenck's questionnaire to differentiate people according to the dimensions.

	Yes	No
1. Do you usually take the initiative in making new friends?	-	-
2. Do ideas run through your head so that you cannot sleep?	-	-
3. Are you inclined to keep in the background on social occasions?	-	-
4. Are you inclined to be moody?	-	-
5. Do you very much like good food?	-	-
6. When you get annoyed do you need someone friendly to take to about it?	-	-
7. Do you often make up your mind too late?	-	-

Eysenck hypothesized two explanations why people show different traits.

1. Extroverts have a naturally low level of arousal in the cortex of the brain.
2. The introverts in contrast, already have a naturally high level of cortical arousal

From these two hypotheses, it was found that

- The introverts take longer time to fall asleep;
- The introverts are more sensitive to pain than extraverts, suggesting that their brains are somehow more alert;
- Alcohol, which causes cortical arousal makes introverts more extraverted;
- Introverts usually do better in school than extraverts, particularly in higher-level subjects;
- Introverts prefer studying in quiet places with few interruptions.
- Introverts tend to be more careful in their activity;
- Extraverts are more likely to dropout of college for academic reasons than introverts are.

Research findings indicate that inherited biological factors do seem to make a major contribution to individual differences along the extraversion- Introversion dimension of personality (Shields, 1976)

7.3.4.5. The New Trend

Recent research findings indicate that people of different ages, different walks of life, and even different cultures repeatedly and consistently refer to five major dimensions of personality. These are sometimes called **the Big Five**. Table five below shows the big five personality dimensions.

Table5: The Big Five personality dimensions

No	Dimensionsof personality	Traits
1	Extraversion	Socially active, assertive, outgoing talkative- the opposite of shy.
2	Neuroticism	Emotionally unstable, anxiety, worry, fear, distress, poor emotional control, irritable, hypersensitive-the opposite of well adjusted.
3	Agreeableness	Helpful, cooperative, friendly, caring, nurturing, the opposite of hostile and self-centered.
4	Conscientiousness	Achievement oriented, dependable, responsible, prudent, hardworking, self controlled- the opposite of impulsive.
5	Openness to experience	Curious, imaginative, creative, original, intellectually adventure some, flexible-the opposite of rigidity.

Comments: Many personality psychologists agree that the development of the big five is a major scientific progress in the study of personality.

7.3.4.6. Evaluation of trait theories

1. Trait theorists see personality as static. However as we learned earlier, personality is dynamic. Trait theory doesn't fully answer the following questions.
   - Where do traits come from?
   - Can traits change?
   - Why does an individual develop one set of traits instead of another?
2. Research supports the idea of human inconsistency and day to day observation proves this. But trait theorists exaggerate the consistency of human behavior.

Example: An assertive boss in the office can be shy and hesitant in social gatherings.

7.3.5. Humanistic approaches to personality.

The major proponent of humanistic theory is Carl Rogers. The theory emphasized that people have natural tendency to grow to higher levels of functioning. Rogers suggested that people have a universal need to be loved and respected by others. To have positive regard for ourselves, we rely on the value others attach to us.

A balance between the individual's self concept and opinion of others is important for healthy personality development.

- If the discrepancy between the individual's self-concept and the opinion of others is great, it will lead to psychological disturbances such as anxiety.
- An attitude of acceptance respect and support from friends, a spouse or any other significant person allows people the opportunity to grow cognitively and emotionally and to develop more realistic self-concept.

For humanistic psychologists the final goal of personality growth is self-actualization.

Self-actualization is a state of self-fulfillment in which people realize their highest potential. A self-actualized person is one, who works hard, realizes his full potential and happens what he wants to be.

A self-actualized person is one who is committed, dedicated and contributing something worthmenioning to his people in particular and to human kind in general.

Example- Consider the contribution of Abebech Gobena, the creativity of Afework Tekle and other brilliant Ethiopians.

Activity-Ask your students to mention the names of Ethiopians who achieved great success, happiness and fulfillment in their lives and let them describe the achievements.

Reading assignment

Theories on personality are not only those mentioned above. For further knowledge read:

- Social cognitive approaches to personality;
- Biological approaches to personality;
- Eclectic approach to personality.

7.4. Personality assessment

7.4.1. Definition and general remarks

Personality assessment means judging, evaluation and measurement of personality traits or the general personality pattern possessed by an individual. Personality is a complex thing and it varies from person to person. It is very difficult to form a correct idea of one's personality by one method or technique. To have a good picture of an individual's personality applying combination of different assessment techniques is advantageous. There are a number of procedures and techniques that can be used for proper evaluation.

Psychologists frequently use tests to obtain information about clients. There are a number of approaches. The three commonly used approaches to study personality are:

1. What the individual says about himself (self report inventories)
2. What others say about the individual (socio metric inventories)
3. What the individual does in a particular kind of situation (observational techniques)

7.4.2. Self report inventories (Tests)

- It is the quickest method.
- It is the least expensive method. Because just as physicians draw a small sample of blood in order to test it, psychologists use self report measures to ask people about a relatively small sample of their behavior.

Assumptions

1. The inventories assume that people possess varying amounts of the trait being measured.
2. Many items are used to obtain a reliable assessment; a single item or question is not applicable to everyone.

- Psychologists who favor a trait approach to personality have developed self-report tests. Suppose we want to construct a test to study conscientiousness which is one of the **'Big Five'** personality traits. As we have seen this trait involves, achievement orientation, dependability and a sense of responsibility.The following sample items are meant to measure the trait.

a. I always make sure I finish the project I start Yes No Cannot say

b. If someone gives me a job to do,
I feel an obligation to do it well Yes No Cannot say

c. I am very careful and meticulous Yes No
Cannot say

- The Minnesota Multiphase Personality Inventory (MMPI) is the most widely used instrument to assess personality. (Hathaway and McKinley, 1940)
- It is used to asses psychiatric symptoms
- It is also given to a group of psychologically healthy people.

Example: -delusions, hallucinations, obsessive and compulsive states, sadistic and masochistic tendencies, physical health, and general habits. Family and marital status, occupational and educational problems, attitude toward religion, sex, politics and social problems are assessed using the instrument.

The MMPI scores are good predictors of whether college students will marry within ten years and whether they will get an advanced degree.

Police departments use the test to measure whether police officers are prone to use their weapons.

Psychologists in the former Soviet Union even administered the MMPI to their cosmonauts and Olympic athletes

- The inventory consists of a set of 567 True-False statements. It has 10 scales

Table 6: Clinical scales of the MMPI and its meanings

Scale name	**Scale name**	**Meanings of the scale**
1	Hypochondria	Preoccupation with body symptoms fears of illness
2	Depression	Hopeless, pessimistic attitude, dissatisfaction, low morale
3	Hysteria	Immaturity, denial problem
4	Psychopathic deviate	Delinquency, antisocial tendencies, family problem
5	Masculinity-femininity	Male and female interests
6	Paranoia	Suspiciousness, hostility, paranoid symptoms such as delusions (false beliefs)
7	Psychasnenia	Anxiety, psychological discomfort
8	Schizophrenia	Alienation, bizarre behavior or thoughts
9	Hippomania	Elevated mood, hyperactivity, impulsiveness
10	Social introversion extroversion	Tendency to withdraw or become uninvolved in social relationships

Sample items from MMPI

- I have never indulged in unusual sex practice.
- Someone has been trying to poison me.
- I am afraid of losing my mind.
- I get mad easily and then I get over it soon.
- My way of doing things is apt to be misunderstanding by others.
- I am troubled by attacks of nausea and vomiting.

7.4.3. Projective techniques

Psychologists with a psychoanalytic background use the projective tests. Because they believe that personality is shaped by unconscious conflicts. Projective tests assess the way people respond to and interpret ambiguous stimuli, such as inkblots and pictures in which the motives and feelings are not clear. The test takers describe what they see in the inkblots or pictures. In doing so they project their own unconscious feelings, conflicts, emotions, wishes and other reactions freely in some situations. They may be asked to write or tell stories with the help of the pictures or they may be asked to say what an inkblot looks like to him.

A child may be asked to play freely with toys and say what he is doing or paint freely what he wants to. The stories, the responses to inkblots, the arrangement of playing situations and the content

of drawings are then interpreted by the clinical psychologist who should be experienced and trained in the field.

Example: - Someone who repeatedly sees blind eyes and threatening figures in abstract blots of ink may project onto the inkblots the fears and suspicion of typical paranoia.

- Its use depends upon clinical interpretation. Interpretation by the psychoanalyst or clinical psychologist depends upon how people respond to and interpret ambiguous material.
- There are no right or wrong answers. Because there is no established meaning to the test materials.
- Therefore the procedure is individualistic and subjective.

Example: In 1942,the Rorschach Inkblot test developed by Hermann Rorschach, a Swiss psychiatrist, is a good example of this type of test.

7.4.4. Physiological Measures

- Emotion and physiological functioning are so closely related.
- Physiological measures are sometimes used to measure individual differences in personality.

Example: Rising blood pressure is connected with level of hostility. Anger is associated with rapid heart rate, increased skin conductance, and high blood pressure.

Anxiety is associated with rapid heart rate, rapid breathing, perspiration and muscle tension.

7.4.5. The Interview

- It is the oldest and the most common technique for assessing personality.
- It is commonly used in conjunction with objective and projective tests.
- The interviewer must display such attitudes as worth involvement, interest, and commitment during interview.
- It helps to communicate a feeling of empathy or understanding to the person being interviewed.
- Good interviewers are calm, relaxed, and confident.
- The interview technique gives unlimited opportunity to explore any area that the interviewer believes will aid in the assessment of personality.
- Interviews are two types. These are structured and unstructured.

a. Structured

- Interviewer asks the same set of questions in a particular order to all individuals participating in the study.
- The interviewer reads the questions and then records the responses.

b. Unstructured Interview

- The interviewer might begin anywhere, proceed in any direction.
- He can change the focus of the interview or whatever.
- The content of the interview depends upon the wishes of the interviewer.
- The interviewer lets the individual to speak freely, so as to get a clear picture of the individual.
- From what the interviewee says the interviewer knows about his/ her interests, problems, assets and limitations.

7.4.6. Behavioral Assessment

- It is based on the assumption that situations play an important role in behavior, so that human behavior can be measured only within the context in which they occur.
- The behaviorist approach of assessing personality, therefore, is that behavior should be studied directly rather than determined indirectly through test or talk

procedures. The focus is on observable behavior not searching for hidden motives.

- Behavioral assessment may be carried out naturalistically by observing people in their own setting, in the work place, at home or in school.
- Behavioral assessment can take place in the laboratory under controlled conditions in which a psychologist or any other researcher sets up a situation and observes an individual's behavior.

Example- An observer might record

- The number of social contacts an individual makes;
- The number of questions a student asks;
- The number of aggressive behavior by a child;
- The amount of time spent working.

Observation must be objective, carried for several days and done by more than one person.

Generally behaviorists have three goals

1. Identifying specific situations that trigger or cause the problem behavior;
2. Describing the problem behaviors in detail and know what they result and how severe they are;

3. Identifying environmental consequences that might be reinforcing an undesirable response, consequences that could be changed to help alleviate the problem.

The behavioral approach of assessing personality has been called the **ABC** technique. This is because it looks at:

- **A**ntecedent conditions
- The nature of the problem **b**ehavior
- **C**onsequences

Analyze the following case

Bereket is a five-year-old boy. His mother wanted to stop Bereket's tempera tantrum behavior. Bereket suddenly displays anger. She visited a behavioral therapist. The therapeutic session (procedure) was as follows.

1. The therapist tried to know about the tantrums i.e. how often they occur, what triggers them and the consequences they produce.
2. The therapist asked the mother the following questions.
   - Write down what happens before the tantrum.
   - Write down what happens during the tantrum.
   - Write down what happens after the tantrum.

OR

The therapist can make her/his own first hand observation in Bereket's home or in his/her own clinic.

After analyzing the situation the therapist found out that:

1. Bereket screams, kicks, hits and bites anything around him when he is denied something he wanted;
2. His mother periodically tries to calm him by giving candy. Her act rather reinforced the tantrum behavior.

Suggestions given by the therapist to the mother.

1. Put Bereket in a 'time-out' room whenever a tantrum begins.
2. Don't give candy, attention or other rewards until he has calmed down.
3. Reward Bereket's behavior i.e. praise Bereket when he doesn't have tantrum.

Conclusion: Behavioral assessment continues during this relearning process and the therapist and the mother evaluate changes that occurred.

7.4.7. Case study

- It is an in- depth study of personality.
- In a case study we integrate the information that we obtained from different sources about the individual.
- We can get information about the individuals parents and grand parents, his/ her home background, medical history, educational background, friendship, marital life, professional and other related things.

7.4.8. Personality and the health professional: concluding remarks.

The health professional is not only to acquire skills and scientific knowledge. He/ she should have and develop a pleasing and strong personality to accomplish the duties and responsibilities. Besides possessing professional qualities, integrity, dignity, self-confidence, dependability, sympathetic, understanding, friendliness, gracious manner are important traits. Patients in particular and the community at large appreciates a health professional who could bring physical comfort to them and understanding their emotional reactions and difficulties. In addition to the aforementioned qualities, a strong purpose and will power, a high standard of values, healthy work habits and managerial abilities are needed traits.

Activity- Collect The Ethiopian Herald of the last three months and look vacancy announcements in these papers. Then identify personality qualities that were required from job applicants such as "emotional maturity", "the ability to deal with difficult situations" etc.

Self assessment questions

1. Briefly explain some ways in which psychologists have defined personality.
2. What do you understand by type and trait approaches to the study of personality.

3. Briefly explain the nature and function of the major parts of the personality proposed by Freud.
4. What did Freud mean by ‘defense mechanisms’. Briefly describe three of them.
5. Explain the concept of fixation in relation to the development of the personality.
6. Outline Allport’s views of the nature of personality traits. Refer to cardinal traits and central traits.
7. Evaluate Roger’s self-theory.
8. Compare and contrast Freud’s personality theory with the Neo- Freudian theories.

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CHAPTER EIGHT

HEALTH STRESS AND COPING

By the end of this chapter the student is expected to:

- Explain the concept of health in its modern approach;
- Discuss some factors which may cause stress;
- Describe physiological response to stress;
- Discuss ways of coping with stress and managing stress;
- Explain the relationship between health, stress and coping.

Before we introduce the field of health psychology, it is important to know the concept of health and other issues related to it.

8.1. Health

8.1.1. What is health?

A hundred years ago, the view that, illness is caused by agents beyond one's control was considered accurate. But during the last decade of the twentieth century such a view has become outdated. Vaccinations, improved sanitation and other public health measures that proved successful in checking infection diseases are of little value in eliminating the major killers of today i.e. heart disease cancer, stroke and other chronic illnesses. In

spite of their persistent nature, these chronic illnesses remain increasing health problems. Because of this, during the past 100 years the concept of health has changed in several different ways.

1. The leading death causes have changed from infectious diseases to those that stem from unhealthy behavior and life style. AIDS, for example, which is related to behavior and life style, has become a major concern of all people throughout the world.
2. The growing cost of medical care has indicated the importance of educating people about how health-related practices can lower the risk of becoming ill. A new definition of health has emerged, so that health is now seen as the presence of positive well being, not merely the absence of disease (stone, 1979)
3. Physicians and others advocated a broader outlook of health and disease and questioned the usefulness of the traditional biomedical model (Engel, 1977)

Prevention of disease through a healthy life style, for example, educating people about weight control, smoking cessation, nutrition and exercise can optimize prevention, curing and

reduction of health risks and have all become part of a changing philosophy within the health care field.

In 1989 Julius Seeman insisted that total health should not be defined simply as an absence of disease. He emphasized that health includes not only the biological realm but also mental and social domains. This multifaceted view of health includes physical, mental, and social dimensions, indicating that health extends beyond the structure and function of our body to include feelings, values, and the ability to reason. It also includes the nature of your interpersonal relationships.

The above explanation of health is further expanded by a broader view known as **holistic health**. This view extends the concept of health to include intellectual, spiritual, and occupational dimensions. The holistically healthy person functions as a total person. Some experts say that holistically healthy people have reached a high level of wellness. In view of the holistic health a person who has a serious physical illness can also be considered quite healthy.

Another new view to explain health is the concept of health promotion. Health promotion is linked to disease prevention. Advocators of health promotion claim that health is the function of accepting scientific opinion and adopting specific health-enhancing practices.

To promote the health of a person or group, health professionals use a number of strategies. These include:

- Health screenings such as blood pressure or cholesterol measurements.
- Health education activities such as first aid, human immuno-deficiency virus(HIV) and
- Behavior change strategies such as the use of specific eating plans or exercise programs.

However these strategies would not guarantee a person to be healthy. Because not being sick and doing healthful things alone will not assure a person growing and developing to his fullest potential.

Another popular concept to explain health is wellness. Wellness is a process of periodically assessing risk factors and providing information, behavior change strategies, and the adoption of a wellness lifestyle. This life style is characterized by low risk, health-enhancing behavior which produce a sense of well-being.

According to this view, when people follow a wellness lifestyle, they can reach their fullest potential as they interact with the family, classroom, or workplace.

To realize this potential, individuals must take responsibility for their health behavior. People must understand that they have more control over their health behavior than they think.

A wellness perspective encourages people to focus on the present and future and not on the past, especially if one's past includes negative health behavior. Wellness also discourages blaming others for ones own behavior.

Empowerment is another concept used in the health literature. In the context of health, empowerment refers to:

- Increasing the capacity to control over ones health.
- Liberating oneself from a variety of barriers that restrict health enhancement
- To take charge of ones own life
- Focus on producing constructive change through dialogue and collaboration.

Empowerment programs have produced positive results particularly among the economically disadvantaged, the elderly, and the minority populations.

Activity: Ask your students to identify empowerment programs in their communities where people have organized at grass root level to prevent neighborhood violence, improve childhood nutrition, promote healthy lifestyle, or prevent drug use among the youth.

8.1.2. Mental Health

Definition- Mental health is an important aspect of ones total health status.

- It includes both the physical health and social effectiveness.
- From psychological point of view mental health is the ability of the individual to make personal and social adjustment.
- Social adjustment is establishing of a satisfactory relationship between the individual and his environment, between his needs, desires, and those of other people.
- A well-adjusted person feels happy because he has resolved emotional conflicts and tensions.
- In broader terms mental health refers to decision-making abilities, ability to carry responsibilities, finding satisfaction, success and happiness in life.

What are the characteristics of a mentally healthy individual?

1. A mentally healthy individual can realistically assess weaknesses and strengths.
2. His self-esteem is high. He has a sense of personal worth.
3. A mentally healthy person feels that he is wanted and loved by others and can give affection to others.
4. A mentally healthy person has the capacity to face reality rationally and objectively.

5. A mentally healthy person is able to regulate his emotions and expresses them in a socially desirable manner.

The mental health of an individual depends upon three factors: heredity, physical and social.

A. Hereditary factors

- Hereditary factors are potentials of an individual.
- These inherited potentials have relationship to physical growth, appearance, intelligence and lifestyle.
- Hereditary factors play an important role in the development of a particular type of mental illness.

Example- Heredity is a prominent factor in causing mental retardation.

B. Physical factors

- People with greater strength, better looks and health have a social advantage in the development of personality characteristics.
- Physically healthy person is enthusiastic, intellectually alert, and has high achievement motivation.

Example- A deficiency of red corpuscles produces characteristics symptoms of apathy, irritability, depression and anxiety. In general individuals who follow a hygienic way related to food, drink, physical activity,

effective time usage are more likely to have good mental health.

C. Social factors

- The social factors includes the individual's environment in which the person interacts and his/her social functioning with other people.
- The development and utilization of hereditary potentials is determined largely by social factors. It is the social environment that shapes the knowledge, the skills, interests, attitudes, habits, values and goals the individual acquires.
- The most important social factors are the home, the school and the community.

8.1.3. Health Models

There are two health models: the **bio-medical model** and the **bio-psycho-social model**.

The biomedical model is traditional. Totally it rests on biological explanation of diseases. According to the biomedical model illness is due to internal factors and that each disease is caused by a specific pathogen. Such explanation is simplistic and is not adequate.

George Engel (1977), being dissatisfied by the traditional bio-medical model proposed for a more comprehensive

model, the bio-psycho-social model. See the following quotation.

"To provide a basic for understanding the determinants of disease and arriving at rational treatments and patterns of health care, a medical model must also take into account the patient, the social context in which he lives and the complementary system devised by society to deal with the disruptive effects of illness, that is, the physician's role and the health care system. This requires a bio-psycho-social model." (P. 132)

8.2. Definition of stress and stressors

Definition: It is the response to events that are threatening or challenging. Any stimulus that places a strain on a person's physical or psychological capacity to adjust is called stressor. Stress and stressors have cause- and- effect relationship.

1. **Cataclysmic events**
   - These are strong stressors that occur suddenly affecting many people at once.

     Example: Natural disaster
2. **Post traumatic stress disorder (PTSD)**
   - It is a phenomenon in which victims of major catastrophes re-experience the original stress event and associated feelings in vivid flashbacks or dreams.

Example: sexually raped individuals usually experience posttraumatic stress disorder.

3. Personal stressors

- These are major life events such as the death of a family member. They have immediate negative consequences, which generally fade with time.
- Holmes and Rahe conducted research and identified stimuli that place a strain on a person's physical or psychological capacity to adjust (***see journal of psychosomatic research, 11.p.216)***

Table 7: The social readjustment rating scale

Rank	Life Event	Mean value
1	Death of a spouse	100
2	Divorce	73
3	Marital separation	65
4	Jail term	63
5	Death of close family member	63
6	Personal injury or illness	53
7	Marriage	50
8	Fired from work	47
9	Marital reconciliation	45
10	Retirement	45

11	Change in health of family member	44
12	Pregnancy	40
13	Sex difficulties	39
14	Gain of new family member	39
15	Business readjustment	39
16	Change in financial state	38
17	Death of close friend	37
18	Change to different line of work	36
19	Change in number of arguments with spouse	35
20	Mortgage over 10,000	31
21	Fore closure of mortgage of load	30
22	Change in responsibilities at work	29
23	Son or daughter leaving home	29
24	Trouble with in- laws	29
25	Outstanding personal achievement	28
26	Wife begin or stop work	26
27	Begin or end school	26
28	Change in living conditions	25
29	Revision of personal habits	24
30	Trouble with boss	23
31	Change in work hours or conditions	20
32	Change in residence	20

33	Change in school	20
34	Change in recreation	19
35	Change in church activities	19
36	Change in social activities	18
37	Mortgage or loan less than 10,000	17
38	Change in sleeping habits	16
39	Change in number of family get together	15
40	Change in eating habits	15
41	Vacation	13
42	Christmas	12
43	Minor violations of the law	11

8.3. The coping process and coping strategies

Coping refers to the way the mind responds to events that are challenging or threatening. It is important to be aware that an occurrence perceived as threatening by one person may be a challenge to another; and be perceived by a third person as normal.

Effective coping is the ability to manage internal or environmental stressors. Adequate physical, psychological, behavioral, or cognitive resources aid effective coping. The most commonly used coping strategies are discussed below.

1. Emotional focused coping

- It is a coping style in which a person experiencing stress attempts to relieve it by changing his or her internal reactions to environmental stressors.

  Example: talking to oneself to reduce worry.

  Having lunch with friend and talking about the stress.

  Using food or drink to reduce tension.

NB. These thoughts or actions do not change the external event. They change the internal emotional reaction to the event.

2. Problem focused coping.

- It is a coping style in which a person experiencing stress seeks to change the external event that is causing the internal stress reaction.

  Example: making an appointment with a teacher when a student is having difficulty with a course.
- Sitting down with a family member to attempt to resolve a problem when there is stress occurring within the family.
- Studying with another student before an exam.

Coping responses are not the same for all people. Coping is the result of the interplay between:

- Perception of stressful events
- The psychological meaning attributed to them and
- The physiological response associated with that meaning.

3. Appraisal focused coping

The mind is monitoring external and internal events that cause distress. It is engaged in active conscious problem solving about the distress. When the solutions work, we call it coping devices.

The mind also modifies the steps that make up the coping process. The mind constantly monitors the environment in order to provide safety. This monitoring process is called appraisal.

The three steps in process appraisal are:

A. Primary appraisal

- The event is unimportant and can be ignored.
- The event is good and contains no threat.
- The event is potentially or already threatening causing harm to self-esteem, relationship, and physical health.

B. Secondary appraisal

- The mind decides whether it is all right or in trouble.
- The mind considers the events as problem, and then it uses defense mechanism.
- The individual asks himself “what can I do to help myself”

C. Reappraisal

- The mind is continually evaluating the outcome of its coping efforts.

- The mind develops new strategies.

4. Defense Mechanisms. These are mental strategies we use when we do not wish to face reality.

Examples: avoidance, denial, repression

5. Mal- adaptive coping methods

Example: taking drugs, heavy alcohol, and other stimulants to cover the problem for only a limited time

6. Time management: It includes wise usage of time, planning, and prioritizing of activities

7. Assertiveness: It is to say no when there is imposition. It is a means of developing self-esteem.

8. Relaxation technique: included are focused attention, physical exercise and appropriate diet.

8.4. The general adaptive syndrome (GAS)

When coping efforts are not successful and defense mechanisms are not able to reduce the effects of stress, the result is a subjective feeling of anxiety and concurrent physiological symptoms created by the stressors.

Hans Sely, known as the father of stress research describes the physiological response to stress in a concept called the **general adaptive syndrome (GAS).** The **GAS** includes the following three stages.

1. The alarm reaction: The body responds to a stressor with a strong defensive response stimulated by hormones

from the adrenal cortex. If the stressor is not withdrawn, the body moves to the next step.

2. The stage of resistance: The body maintains resistance to the stressor until it disappears. If the stressor does not disappear the body moves to the next stage.
3. The stage of exhaustion: The effects of the continuing stressor cause the body's resistance ability to fail. Ultimately, without intervention, it may lead to death.

General responses to stress

A. Body response

- Increased heart rate
- Increased blood pressure
- Indigestion
- Diarrhea
- Prone to accident

B. Mind response (cognitive)

- Forgetting
- Math's and spelling errors
- Preoccupation

C. Emotional

- Anxiety
- Depression
- Feelings of worthlessness

- Self criticism
- Jealousy, suspiciousness, angry outbursts
- Spiritual response
- Decreased interest
- Decreased hope
- Decreased connectedness with others/isolation

8.5. The role of psychology in health

As we have discussed earlier, most chronic diseases stem at least partly from individual behavior. Psychology is the science of human behavior. Hence, psychology's involvement in health is clearly seen from its contribution in human behavior modification.

According to Shelly Taylor (1990), a large part of psychology's involvement in health is a commitment to keeping people healthy rather than waiting to treat them after they become ill. Its focus is preventive than curative. In fact this is something that it shares with medicine and other health disciplines. But unlike medicine which tends to study specific diseases, psychology's contribution is in formulating broad principles of behavior that are applicable to a wide range of health related problems.

Psychology's role is not limited to changing behaviors that have been implicated in chronic diseases. Psychologists use their skills:

- To relieve pain and reduce stress
- To improve health with medical advice
- To help patients and family members live with chronic illness (family counseling)

That is why, the distinguished psychologist J.B Watson, as early as the beginning of the 19th century, proposed a course in psychology for medical students.

Shelly Taylor further noted that health psychology was becoming better integrated into the health system. Their contribution advanced from merely being statistical consultants, test administrators, therapists to psychosomatic illnesses to the level of researcher. Nowadays, health psychology is part of the curriculum in almost all health institutions.

Let us sum up the above discussion by presenting a workable definition of Health Psychology given by Matarazzo.

"Health psychology is the aggregate of the specific educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, and the

identification of ethnological and diagnostic correlates of health, and related dysfunction." (Motarazzo, 1980, P.815)

Self assessment questions

1. Explain with some examples what the term stressors mean.
2. What is the use of social readjustment rating scale (SRRS)?
3. Describe a personality trait and say why it may produce stress in an individual?
4. Discuss whether occupation brings stress on an individual.
5. Compare and contrast the bio-medical and the bio-psycho-social health models.
6. Discuss how stress is relate to health.

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CHAPTER NINE
ABNORMAL PSYCHOLOGY

By the end of this chapter the student is expected to:

- Discuss the concept of normality and abnormality;
- Outline the diagnostic statistical manual (DSM) classification of mental illness;
- Discuss the relationship between genetic, environmental, neuro-chemical factors and mental disorders.

9.1. General remark

Why are we interested in Abnormal Psychology?

Despite some misconceptions, abnormal behavior is not limited to the strange actions of few individuals with unbalanced personality. We all have seen it in others to some degree and we all have experienced it ourselves.

Example - Anxiety and depression are common experiences.

-Hallucinations are part of each person's life

Abnormality' is part of our every day life. Psychodrama is common in plays. Some characters play the role of a criminal offense, and others act as outlaws. Still others play

the role of drug abusers or alcoholics. What is interesting about Abnormal Psychology is that it studies the unusual reactions and responses we make to our daily problems in life.

Death incidences due to abnormality in behavior are found recorded elsewhere in different parts of the world.

Activity-Project assignment for students. The instructor will divide the class into manageable groups and give this assignment. The students are expected to submit the project at the end of the chapter.

Health students are expected to gather and analyze data on the prevalence and incidence rate of deaths and other consequences due to various forms of abnormalities labeled as psycho-pathological. Sources are records kept in mental hospitals and the psychiatric departments in the teaching hospitals.

Abnormal Psychology focuses on the following issues.

- Why people show unusual reactions?
- How some people break with reality?
- How communication fails between two or more people?
- How violence erupts (example, terrorism)?
- Why individuals' needs collide with social needs?
- How sexual expression and enjoyment become blocked?

Abnormal psychology shares many things with other branches of psychology and discipline. Consider its relationship with the following sub fields of psychology.

Comparative psychology

Example-Monkeys deprived of contact with a mother when compared with matched groups grown up with parents showed abnormality.

Developmental psychology

Example-Punishing aggression during childhood produces hostility that eventually leads to aggressiveness at some other time and places.

Sociology

Example-The incidence of mental disorder is high among lower than among upper socioeconomic groups. Other disciplines related to abnormal psychology are cultural anthropology, genetics, biology and medicine.

Activity: Let students consult instructors in the colleges teaching anthropology, genetics, biology and medicine and find out the relationship between these disciplines and abnormal psychology.

9.2. Mental health professionals

Psychiatrists

- They get specialized training in mental hygiene settings.

- They receive training from medical school, followed by a three to four years practice in psychiatry.
- They are legally permitted to prescribe drugs and to use physical treatments such as electric shock and psychosurgery.

Clinical Psychologists

- They hold Ph.D. in psychology. They specialize in courses in diagnosing and treating abnormalities.
- They take courses in psychodynamics; psychotherapy
- They are trained in psychological testing, research methodology and statistical designs.

Psychiatric social workers

- They take MA degree in social work;
- They obtain social history of the patient from families, investigate home conditions, and advise patients;

9.3. Defining Psychological disorders

Problems in Defining 'Abnormality' and 'Normality'

Abnormality and Normality are difficult concepts to define. Human behavior is dynamic: because society is dynamic. Therefore before labeling a behavior as 'abnormal' or 'normal', one has to look at the changing values in the society. One criterion in order to classify a behavior as abnormal or normal is violation of socially accepted

expectations. For example; In the Southern Nations and Nationalities Regional States of Ethiopia, the Surma people have a ritual ceremony called Donga. In this ceremony young adults are chosen and beat each other with long wooden sticks. The fighting goes until the actors bleed. The one who tolerates the heavy lashes is taken as a hero. A stranger may consider the Donga play as savage act or may equate it as abnormal. However, for the Surmas, it is a normal practice. It is a norm, a binding force in the particular society. Few citizens of Nazi Germany who actively resisted their government's effort to exterminate Jews cannot be called abnormal, though they violated social expectations. Worshiping ancestral ghosts in some cultures can be considered as abnormal, but in others widely accepted. Therefore, labeling a behavior as abnormal or normal on the basis of social expectations is not always acceptable.

Abnormality and Normality have also statistical connotations. Departures from the average are sometimes taken as abnormal. But they are not necessarily pathological. Pathology refers to a harmful or undesirable departure from the average. If you find an unusually intelligent person in relation to the general population, it can be abnormality but not pathological.

A behavior is said to be psychopathological if it is harmful to that person's physical, social and mental health or proper functioning in the society. Is mental illness a disease? Is behavior deviation an illness like a physical disorder? Or is it simply a disturbance in interpersonal relationships? These questions have different answers. For instance compare the following two views.

George Albea (1969), former president of **APA** argued that, diagnosing an individual as sick when he is functioning well as a member of society is not acceptable. He proposed that state hospitals and public clinics should be replaced by social intervention centers staffed with less trained specialists like social workers.

In contrast David Ausbel (1990) argued that:

- Personality disorder is a disease
- Considering mental disorders as both expressions of problems of living and manifestations of illness is almost the same.
- A symptom need not necessarily reflect a physical wound or injury in order to qualify as a manifestation of disease.

There is no one and universally accepted definition of psychological disorder. Components of the widely accepted standard definitions are:

- Persistent emotional problem and suffering;
- Behaving in a way that is disturbing to others;

- Failing to perform ordinary day to day activities (at home, school, work place)
- Being irrational thinker or excessively lacking in self-control.

Activity-For illustrative purpose read the following cases and try to associate the personalities with your life-experiences

Case1.A twenty-four year old man, armed with a 44-caliber crossed the road late at night, looking for 'pretty girls' to shoot. At last when police captured him after a yearlong search, it was found that he has killed six people and wounded seven others. He said that "demons" drove him to commit these crimes.

Case2. A middle-aged businessman fade up with his stressful job, and the demands of daily hassle, packs a small bag and flees to the mountains, where he settles in a cave, determined not to return home.

Case3. A young woman who showed great academic promise in high school begins to have difficulty with her studies in the health college. She believes that she is constantly behind others and will not be able to catch up, no matter how hard she tries. She feels lonely and becomes increasingly depressed and withdrawn from her classmates.

Case4 A well-known young pianist, winner of many awards, begins to sweat whenever he plays before an audience. This anxiety becomes increasingly intense. The fear

develops into panic. Eventually even the simple thinking of playing a piano in a public, becomes a terrifying thing for him

In light of the above discussion let us define what abnormal psychology is?

Definition-Abnormal psychology is a branch of psychology that studies behavior defined as deviant, pathological, maladaptive, unfulfilling, self-destructive and self-defeating.

9.4. Perspectives on the causes of psychological disorders.

9.4.1. The biological perspective.

- The theory of wandering uterus: - physicians in ancient Greece believed that the effects of a wandering uterus might cause headaches, a sudden paralysis, sudden blindness or deafness. The uterus was considered as a separate living organism that could roam about the body, causing destruction wherever it went.
- These days the American women psychologists association also state that 'world ecology is womb ecology'. This is to explain the role of the womb in producing healthy generation. Conversely, if the womb is unhealthy it will

undoubtedly be a source of psychological, physical and other disorders.

9.4.2. The psychological perspectives. The psychological perspectives are:

1. Psychoanalytic perspective

- Abnormal behavior is caused by the Ego's inability to manage the conflicts between the opposing demands of the Id and the Superego.
- How people resolve emotional conflicts during childhood affects their thoughts and behaviors for the rest of their lives.

2. Learning perspectives

- Most emotional and mental disorders arise from inadequate or inappropriate learning.
- People acquire abnormal behaviors through the kinds of learning or imitation.

3. Cognitive perspective

- Whether we accept or belittle ourselves contributes to our behavior.
- Over estimation or under estimation of ourselves has a profound effect on our mental health and social effectiveness.

Example: Consider a student who fails a difficult exam in medical school. He decides that he does

not have the capacity for college. He becomes depressed and gives up trying. To stop his self-defeating tendency, he must first stop attributing his failure to lack of ability.

- Changing negative cognitions to positive image about ourselves and logical assessment of our problems is important.

9.4.3. The interpersonal or family-systems perspectives

- It assumes Psychological disorder as arising partly from a person's network of social relationship, the most important being the family.

9.4.4. The socio-culture perspective

- This perspective assumes that mental illness would result from such social problems as poverty, poor nutrition, inadequate housing, crime, and discrimination.
- The primary evidence in support of this view is the generally higher rate of mental disorders among the lowest socioeconomic classes. (**Example.** schizophrenia and alcoholism)

9.5. Classification of Psychological Disorders

The definition and classification used in this teaching material is the one provided by the American Psychiatric Association, revised manual called the Diagnostic and Statistical Manual of mental disorder (DSM-iv)

- The DSM-iv is meant to assist psychiatrists, psychologists, counselors, health and social workers in diagnosing disorders so that they can be effectively treated.
- DSM-iv lists and describes many different psychological disorders. All of these are not covered in this material. Instead, those disorders that are most common and received most attention in systematic research by psychologists are discussed.

9.5.1. Anxiety disorders

- It is a feeling of dread, apprehension or fear manifested by physiological arousal like increased heart beat, perspiration, muscle tension and rapid breathing.
- Anxiety affects cognition making problem solving difficult. We all experience moderate level of anxiety. Writing term papers, test taking (test anxiety) and several other day-to-day problems may give rise to mild forms of anxiety. Most

people have difficulty in coping with anxiety producing situations. These situations become major source of anxiety, taking more time and energy. Anxiety becomes severe or so persistent when it interferes with every day function in family life, social activities, work or school. When this happens, it is characterized as anxiety disorder. Anxiety can have different forms.

9.5.1.1. Generalized anxiety disorder

- It is a widespread anxiety that is impossible to manage by avoiding specific situations. The person expresses a great many worries but cannot specifically tell the causes. Freud named such anxiety **free-floating anxiety.**
- Physiological and behavioral manifestations are aching muscles, being easily tired, difficulty to relax, indigestion, diarrhea, frequent need to urinate, often complain of cold, clumsy hands and a racing heart.
- Such people expect the worst to happen. They fear that they will faint or lose control of themselves or worry that members of their family will develop some disease or be dashed by a car. As a result, they find it difficult to concentrate or fall asleep.
- In the morning they feel tired rather than relaxed.

9.5.1.2. Panic disorder

- The already existing state of tension as seen under 9.5.1.1. reaches an acute and overwhelming level.
- Heart begins to pound faster and breathing becomes difficult.
- This condition may last from 15 minutes to an hour.
- When panic attacks are related to a specific stimulus, it is classified as phobias.

9.5.1.3. Phobic Disorder

- When anxiety is centered on a particular object or situation with out any good reason, it is called phobia.
- Phobias sometimes develop after an initial association of fear with some stimulus. The stimulus can be a dangerous one, for example, dog, elevator, high place or a situation that carries no danger at all.

Common phobia types and stimuli in the environment

Phobia types	Feared objects or situation
Acrophobia	High place
Claustrophobia	Enclosed places
Ergasiophobia	Work
Gramophobia	Marriage
Haphephobia	Being touched
Hematophobia	Blood
Monophobia	Being alone
Ocholophobia	Crowds
Xenophobia	Strangers
Ophidiophobia	Fear of snakes

Activity-Cite individuals from your life experiences (friends, relatives, etc) you know, having one or other forms of phobic disorders. Describe the behavioral manifestations and how they affect their day-to-day life. Describe how the society attempts to resolve the problem of people with phobic disorders.

9.5.1.4. Obsessive-compulsive disorder

An Obsession is an involuntary, irrational thought that occurs repeatedly. Sometimes it is mild.

Example: a person locking and unlocking a door before leaving home.

At other times it can be severe.

Example: the desire to burn down a house, rape a neighbor.

This violence and sexual desire makes the person feel guilty and horrified.

Example- A bank clerk may go on adding a column of figures again and again for fear that he was not sure of the result of the addition.

The normal person also can suffer from indecision in a matter, which is important to him.

A compulsion is an action that a person uncontrollably performs again and again although she or he has no conscious desire to do so. The act is often senseless such as looking under the bed several times before going to sleep or locking and unlocking the door several times before going out.

Two general categories of compulsions

a. Checking rituals (**example-** looking under the bed.)

b. Contamination compulsions (**example-**hand washing)

9.5.2. Somatoform disorders

It is a persistence of symptoms that have physical form, but in which there is no actual physiological malfunction.

The two typical somatoform disorders are:

9.5.2.1.Hypochondriasis

It is the pre-occupation with bodily symptoms as possible signs of serious illness. The hypochondriac is perfectly healthy, but lives with the conviction that cancer, heart disease, diabetes or some other particular disorder is about to develop..

If a hypochondriac has a headache, he believes it is due to some serious kidney disorders. The stomachache will be taken as an evidence of stomach ulcers or cancer.

Behavioral manifestations are:

- Reading every popular magazine concerning health;
- Adopt difficult health routines like hours of sleep and rest;
- Stop eating certain foods and drinks;
- Consume vast quantities of vitamins and medicine;
- Frequently visits doctors.

9.5.2.2. Conversion disorders

- When certain part of the body is not functioning well (blindness, deafness, paralysis or loss of sensation) with no organic problems, it is called conversion disorder.

- The individual expresses some psychological problem, which does not necessarily exist.
- There are no hard and enough evidences to verify the causes of such disorders.

9.5.3. Dissociative Disorders

It is the dissociation or splitting of a certain kind of behavior that are normally integrated.

Example- Cases indicate that people who are wandering in the streets without the notion of who they are or where they came from have dissociation disorders.

Among the dissociate disorders are:

9.5.3.1. Amnesia

Amnesia is the partial or total loss of memory concerning past experiences, such as an automobile accident or a battle.

In the most severe forms, individuals cannot recall their names, unable to recognize their parents and do not know their addresses.

Psychological amnesia is different from organic amnesia in that:

- It appears suddenly, often following serious stress.
- It disappears suddenly.

- The forgotten material or situation can often be recovered as a result of suggestion given by the therapist.

Organic amnesic syndrome is physiological and is caused by some form of damage to brain tissues.

Brain damage may result due to the disturbed proportion of acid to alkali in the blood.

The insufficiency of oxygen may damage the brain tissue as well.

9.5.3.2. Fugue (flight)

- It is related to amnesia. Fugue is the Latin word for flight. It is a sudden and unexpected leaving from home and taking a new identity elsewhere.
- The individual may be absent for days or months or years and may take up a totally new life at the new place.
- During the fugue the individual does not remember the earlier life.
- Later recalling what had happened earlier might come back home.

9.5.3.3. Multiple personality (split personality)

- It is relatively rare disorder; fewer than 100 cases have been reported in the psychological literature.

- When the usual integrity of one's personality becomes so partitioned that two or more relatively independent sub personalities emerge, we name it multiple personality. Most normal persons show pronounced changes in style, behavior and reactivity as they move between different social situations and different social roles. One personality may be conformist and nice while the other is rebellious and naughty.

9.5.4. Mood Disorder

Experiences of being happy or upset in life are normal. In some people, however, changes of feelings are so long lasting that they affect every day life. When disturbances in emotional feelings are so strong enough, we call them mood disorders. Mood disorders tend to run in families; thus, genetic factors play a role in their occurrences.

The most common forms of mood disorders are:

9.5.4.1. Major depression

- It is the most frequent problem diagnosed in out patient clinics. Interviews conducted in many parts of the world show that incidence of depression has increased significantly in the previous years.

- In one study, the cost of depression to society is estimated to be 43.7 billion a year.
- People who suffer from major depression may feel useless, worthless, and lonely and may despair over the future.
- Depression also seems to involve disturbances in brain activity and biochemistry. Psychological factors such as learned helplessness, tendencies to attribute negative outcomes to internal causes, and neglect active perceptions of oneself and others are also involved.
- Suicide is a major cause of death among young people. Individuals are more likely to attempt suicide when they have recovered to some extent from depression than when they are in the depths of despair.
- The hallmark is that such feeling may continue for months and years.
- Women are found to experience major depression twice as men.

9.5.4.2 .Mania

- It refers to an extended state of intense euphoric.
- People experiencing mania feel intense happiness, power and energy.
- People with manic disorder may be involved in an activity much greater than their capacity believing that they will succeed at any thing they attempt.
- Sometimes mania and depression can come alternatively. The swings between high and low moods may alternate over a period of few days or years. This is called bipolar depression.

9.5.5. Schizophrenia

Evgen Bleuler (1911) coined the term schizophrenia. It is a general term for a number of psychotic disorders characterized by thought disturbance that may be accompanied by delusions, hallucinations, attention deficits and bizarre motor activity.

Schizophrenia is splitting in the function of the mind, emotion on one hand and thinking on the other.

Schizophrenia has complex origins, involving genetic factors, certain aspects of family structure, and

biochemical factors. Schizophrenia may also be related to damage in several regions of the brain. Many homeless persons appear to be individuals suffering from serious psychological disorders such as schizophrenia or mood disorders.

Schizophrenias are different and their causes and prognoses are also different. The distinct types are paranoid, disorganized, and catatonic. However the following features are taken as common properties.

a) Deterioration from previous levels of social, cognitive and vocational functioning.
b) Onsets before midlife (roughly 45-50 years of age)
c) Duration of at least six months and mostly noticeable
d) A pattern of psychotic features including thought disturbances, delusions, usually auditory hallucinations, disturbed sense of self and a loss of reality testing.

Schizophrenia is manifested in different forms. These are:

9.5.5.1. Disorder of thought

- A split among various ideas or between ideas and emotions;
- Incoherence or dissociation in the thought process;

- Concepts, ideas, symbols are sometimes put together simply because they seem similar;
- The tendency to jump from one track of thought to another.

9.5.5.2. Disorder of perception

- Distorted view of reality;
- The schizoid consistently reports distortions of sensory perception, auditory, somatic and tactile hallucinations.

Auditory- takes the form of insulting.

Tactile- feel burning sensations

Somatic- Sensation of something crawling under the abdomen.

9.5.5.3. Disorder of affect

- Frequently show inappropriate emotional responses or none at all;
- Might laugh when told of the death of a favorite relative;
- Might get angry when given a present. Face remains immobile, voice becomes monotone;
- The external situation or stimulus fails to trigger an appropriate response.

9.5.5.4. Disorder of motor behavior

- Perform repetitive and inappropriate behavior or acts.
- The schizoid might spend hours rubbing his forehead, slapping leg, or might sit all day, sometimes no physical activity (catatonic stupor).

9.5.6. Personality disorders

It is an umbrella term for a number of psychological disorders. It is a class of behavioral disorders manifested as pathological developments in one's overall personality. When personality traits become so inflexible and maladaptive that they impair a person's functioning, we label it as personality disorder. The different forms are:

9.5.6.1. Paranoid personality disorder: It involves pervasive mistrust of others. The paranoid suspects that virtually every one around him is trying to deceive or take advantage of him in some way.

9.5.6.2. **Schizoid personality disorder:** It is a personality disorder in which individuals become almost totally detached from the social world.

They show little interest in friendships, love affairs, or any other kind of intimate contact with other persons.

They are indifferent to praise and criticism and often show emotional coldness and detachment.

They perceive the people around them as obstacles to the goals they wish to reach.

9.5.6.3. Anti-social personality disorder: it is a personality disorder involving a lack of conscience and sense of responsibity, impulsive behavior, irritability, and aggressiveness.

Its essential feature is the violation of the rights of others.

Typical patterns of behavior are truancy from school, inability to hold a job, lying, stealing, aggressive sexual behavior drug and alcohol abuse, and a high rate of criminality.

Its main feature is absence of emotion in social relationships. They show no concern over the most callous murder and no sadness at the death of a parent or friend.

Even if they face prison terms, social sanctions, expulsion from school or face loss of jobs, they tend to repeat the same behavior patterns that resulted punishment upon them.

Substance Abuse

Psychoactive substances are those which when introduced into the body, affect the mental well being of the user. Abuse occurs when persistent use entails social, occupational, psychological or physical problems. Psychoactive substances include depressants, stimulants and hallucinogens, such as alcohol, tobacco, cannabis and khat. They are used for various ends. According to Nikowane and Jansen (1999)

- Street children use them to help them cope with the frustration, boredom, and hardships of street life
- Sex workers use substances to remain awake at night to withstand the difficulties of their occupation.
- For the unemployed such substances provide as a pass time and as an outlet for feelings of frustration.

Other underlying reasons for using substances are poverty, ignorance, and lack of organized recreational facilities or programs. Psychological, environmental and biological factors all play a role. If consumption of substances like tobacco, alcohol etc remains within reasonable bounds, the practice is not psychological disorders. But if the individual is dependent on one of the above indicated substances and devoted to get and use it, and then it fits the definition of abnormality.

Health consequences of substance abuse

1. Individuals using psychoactive substances are at risk for suicide, poisoning and acquisition of serious blood borne diseases, such as HIV and hepatitis B and C, especially when there is sharing of infection equipment.

   Example-Researchers found that sexual abuse has been linked to other behavioral problems, including excessive use of alcohol and other drugs, unprotected sex with multiple partners, and prostitution.

2. Other consequences are death due to overdose and accidents, and damage to the brain, liver lungs and heart.

3. Mental disorders are common and are often associated with physical trauma, suicide, and other violent acts. Studies have shown that up to 21% of psychiatric patients in some hospitals for alcoholic problems are found to have psychosis, while cannabis users are often in a range of mental problems.

   Example- In southern Africa, the proportion of lung cancer attributed to smoking is 86% for men and 38% for females.

   - In Zimbabwe lung cancer is now the third leading cause of death among African Men.

- Malnutrition is common among the children of smokers and drinkers, as income is used to buy cigarettes or alcohol.

Social damages of alcoholism

- Family disruption;
- Decreased job productivity due to inefficiency;
- Accidents;
- Absence or low morale;
- Death;
- Injury;
- Property damage from alcohol related automobile accidents;
- Increased medical care for alcoholics.

Economic damage of alcoholism

- Alcoholism costs all nations economy.

Personal damage

- Psychological and physiological dysfunction;
- In large quantities, it causes disorders of sensation and perception;
- It leads to self-destructive behavior (suicide);
- It is capable of producing coma and death.

Jellinek (1946) conducted a study on 2000 alcoholics and showed that the slide into alcoholism follows the following sequences.

1. Periodic excessive drinking;
2. Progress through blackouts (in darkness);
3. Sneaking drinks (secretly);
4. Losing control over the amount of alcohol drunk;
5. Move over drinking and rationalization of excess alcohol consumption;
6. Morning drinking;
7. Alcoholic binges lasting for several days;
8. The onset of alcohol related physical ailments;
9. The centering of life around alcohol;
10. The admission of defeat.

Project work: At the end of the chapter trainees are expected to undertake project works as part of the fulfillment of the course.

1. Collect and analyze data regarding the problem of rape and other sexually related violence.
2. Collect and analyze data regarding the problem of substance abuse, especially alcoholism and the cost entailed due to the problems.

9.5.7. Sexual and Gender Identity disorders

Sexual disorders- It involves disturbances in sexual desire, sexual arousal, or the ability to attain orgasm. Some of these are:

a. Sexual desire disorders: involves a lack of interest in sex or active aversion to sexual activities. Persons suffering from these

disorders report that they rarely have the sexual fantasies most persons generate, that they avoid all, or almost all-sexual activity, and that these reactions cause them considerable distress.

b. Sexual arousal disorders: involve the inability to attain or maintain an erection (males) or the absence of vaginal swelling and lubrication(females). Orgasm disorders involve the delay or absence of orgasm in both sexes, and may also include premature ejaculation.

c. Paraphilias: Sexual disorders involving choices of inappropriate sexual objects, such as young children, or the inability to experience arousal except in the presence of specific objects or fantasies.

Sexual behaviors the psychologists and psychiatrists consider as paraphilias are:

1. **Fetishism:** Sexual gratification that is dependent upon an inanimate object or some part of the body other than the genitals
2. **Transvestitism:** Sexual gratification obtained through dressing of the opposite sex.
3. **Transsexuals:** Gender identification with the opposite sex
4. **Exhibitionism**: Sexual gratification attained through exhibiting the genitals to involuntary observer
5. **Voyeurism:** Sexual gratification obtained through secretes observation of another person's sexual activities or genitals.

6. **Pedophilia:** Sexual gratification obtained through sexual contacts with children.
7. **Incest:** Sexual relations among members of the immediate family.
8. **Rape:** Sexual relations achieved by threatening or using force on another person.
9. **Sadism:** Sexual gratification obtained through inflicting pain on another person

Any stimulus that places a strain on a person's physical or psychological capacity to adjust is called stressor. Stress and stressors have cause- and- effect relationship.

10. **Masochism:** Sexual gratification obtained through having pain inflicted on oneself.

But: Mild forms of such abnormal behavior can appear among sexually normal individuals without being diagnosed as deviant.

Example: The feeling of sexually being aroused by swimming in the nude

Gender identity disorder: persons suffering from gender identity disorder feel that they were born with the wrong sexual identity and seek to change this identity through medical treatment or other means. Advances in surgical techniques have now made it possible for such persons to undergo sex-change operations, in which their sexual organs are actually altered to approximate those of the other sex. Before their operations these

individuals receive extended counseling, learning the mannerism of the other gender, how to wear its clothes, and so on.

Existing evidences indicate that these people are satisfied with the results and happier than they were before. However, follow-up studies suggest that some persons who undergo such operations experience regrets and unhappiness, sometimes to the extent that they commit suicides.

9.5.8. Eating Disorders: These are serious disturbances in eating habits or patterns that pose a threat to individuals' physical health and well-being. Eating disorders include anorexia nervosa and bulimia nervosa. Anorexia nervosa is a disorder in which individuals, intensely fearful of being or becoming fat starve themselves, failing to maintain a normal body weight. In contrast, bulimia nervosa involves episodes of binge eating followed by various forms of compensatory behavior designed to avoid weight gain, such as self-induced vomiting or over use of laxatives.

Eating disorders are much more common among females than among males. Both disorders seem to arise in part from dissatisfaction with personal appearance and efforts to match the thin-is-in model promoted strongly in the mass media.

Self assessment questions

1. What classification system is used to diagnose mental disorders?
2. What major criteria are applied when attempting to define abnormality, and what are the limitations of each?
3. How would you describe a normal person?
4. Identify the different perspectives used to explain causes of mental disorders.
5. Briefly outline some of the characteristics of substance abuse.
6. What is meant by 'multiple personality disorder?'
7. Describe some of the typical behaviors associated with schizophrenia. Why is it difficult to make a diagnosis of schizophrenia?

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CHAPTER TEN
TREATMENT OF PSYCHOLOGICAL DISORDERS

By the end of this chapter the student is expected to:

- Differentiate between various forms of treatments available for psychological disorders;
- Relate those treatments to the various approaches to psychology;
- Discuss research that indicates which treatment may be beneficial for a specific form of mental disorders;

10.1. Psychotherapy: General remark

- Human ailments are organic or non-organic.
- Psychotherapy is a way of solving non- organic or psychological problems by utilizing different psychological approaches.
- Psychotherapy is the treatment of problems of an emotional nature by psychological means.

The objective of psychotherapy is to bring:

- Ego strength
- Self-integration
- Self-direction

Therapy is directed towards modifying maladaptive behavior and fostering adaptive behavior. The primary goal of therapy is to help the client achieve more effective coping behavior.
The process is a professional relationship between the therapist and the client.

10.2. Treatment techniques of psychological disorders

10.2.1. Psychoanalytic therapy

1. Classical psychoanalysis

- It is based on the idea suggested by Freud, which says that the basic sources of abnormal behavior are unresolved past conflicts and anxieties.
- According to classical psychoanalysis, individuals use defense mechanisms to protect themselves from anxiety provoking conditions.
- But these conflicts cannot be completely resolved by means of defense mechanisms; because defense mechanisms are temporary strategies to resolve psychological problems.
- Individuals to get rid of the anxiety-producing situations should bring unwanted impulses out of the unconscious part of the mind into the conscious part.
- Psychoanalysts, to explore and understand the unconscious, use a technique called free-association. In

this technique, the patient (client) is asked by the therapist to say aloud whatever thoughts or ideas come to his/her mind freely.

- The psychoanalyst recognizes all forms of information and makes connections between what the client says and the repressed feelings.
- Dream analysis is another technique. Freud assumed that during sleep hours the use of defense mechanisms is low. This allows the repressed wants and desires to surface. The psychoanalyst moves beyond the surface description of the client's dream, and examines its underlying meaning.

2. Ego analysis

- The goal of this therapy is to bring Ego strength so that individuals take active part in trying to control their environment.
- The therapist assists the client in recognizing his/her conscious aims and capabilities, and controls the Id.
- The process enables the client to select an optimum means to change himself/herself by active interaction with the environment.

3. Play therapy

- It is the application of psychoanalytic therapy on children who cannot speak out their problems.

- In play therapy, the therapist observes the child in a playroom. The therapist never criticizes the child, or stops the child from displaying any varieties of plays.
- From series of observations, the therapist tries to determine the root causes of the child's problems.

Comment on the psychoanalytic therapy

- Psychoanalysis is time consuming and expensive. A client meets with his/her therapist an hour a day, four to six days in a week, for several days.

10.2.2. Behavioral therapy

It is concerned with behavioral changes. It involves the application of the principles of learning theories of operant or classical conditioning, which are discussed in chapter four. From behaviorist point of view all positive and negative behaviors are primarily learned.

Behaviorists' theory employs the following four principles of learning.

a. Every response is modifiable by the use of an appropriate system of reinforcement.
b. Unlike psychoanalysis, behaviorism is least concerned with the past.
c. The past for the behaviorist is something, which cannot be modified.

d. The behavioral therapy is not concerned with case history.

Behaviorist therapy based on classical conditioning.

1. Systematic desensitization

- It is the most successful treatment based on classical conditioning
- Phobias, anxiety disorder, impotence and fear of sexual contact are often treated successfully using this technique.
- Patients are taught to relax and then are shown pictures of their feared object or problem, to desensitize them, or reduce their unfavorable response patterns.
- The threatening stimuli are systematically paired with less threatening stimuli and proceed to more threatening representation of the real object.

Example: A person begins to sweat and to shake when he/she starts thinking about flying by airplane. Using systematic desensitization, the client would first be trained in relaxation techniques by a behaviorist therapy. The steps in relaxation technique are:

- Relax one muscle group at a time;
- Then Progressively the entire muscle groups are relaxed;

- Develop a list in order of increasing severity, of the things that are associated with the fears.

For the above behavioral problem the hierarchy can be:

- Watching a plane flying in the sky;
- Going to an airport;
- Buying a ticket;
- Stepping into the plane;
- Seeing the plane door close;
- Having the plane taxi down the runway;
- Taking off;
- Being in the air.

Activity: Suppose a college student has an irrational fear of spiders. Construct a hierarchy of fears to employ systematic desensitization.

2. Aversion therapy

- It is mainly used for addictions or unwanted behaviors.
- In this technique a negative feeling is attached to stimuli, which are supposed to bring undesirable behaviors.

Example: For a person with drinking problem, an alcoholic drink is paired with a drug that causes severe nausea and vomiting. After few pairings the alcohol becomes associated with vomiting.

Activity: Suppose your classmate frequently uses khat in his course work in the college. Develop a strategy that would help him to abandon khat chewing.

Behavioral modification therapy based on operant conditioning.

1. General remark

- It is a process for changing behavior through the application of operant conditioning principles.
- The goal is to shape behavior, not to alleviate the problem.
- Different kinds of childhood problems; for example, bedwetting, thumb sucking, hyperactivity, poor school performance, extreme social withdrawal are dealt using operant conditioning techniques. The techniques are also effectively used with autistic and mentally retarded children, to improve social skills.
- Reinforcers include praise, attention, financial compensation, special foods, sweets or toys.

Example: Nursing staff and patient's spouse have been trained to use praise and attention to reinforce more desirable behaviors and to withhold reinforcement, when patients exhibit less desirable behaviors. In other words, inappropriate groans and complaints are ignored and efforts toward more physical activity are reinforced.

Activity: Bezawit is a teenager living with her family. She is not willing to clean her teeth regularly. Devise a reinforcement program to encourage Bezawit to clean her teeth. Show breakdown (sequences) of the steps.

2. Biofeed back

- It is the process of providing information about the status of ones biological system.
- Electronic instruments measure biological responses, and the status of those responses is immediately available to the person being tested.
- This feedback allows the person to change his physiological responses that cannot voluntarily be controlled without the biofeedback information.
- The feedback can be supplied by way of auditory (dial), tactile (temperature), or visual signals (flash light).
- The most common kind of biofeedback in clinical use is electromyography (EMG) biofeedback.
- The EMG measures the level of electrical discharge, which shows the degree of tension or relaxation of the muscles.
- It is used to treat spasmodic disorders, facial tics, low back pain and headache.

Example: Heart beat- the machine is designed to give a signal in the form of a tone. The tone decreases in pitch as heart rate

decrease and vise versa. With such information, the patient can gain some degree of voluntary control over his heartbeat.

How effective is behavior modification?

Turner and Chapman (1982) found that treatment programs based on operant conditioning seemed to increase patients' level of physical activity and decrease their use of medication.

Comment on behavioral therapies

Behavioral therapies are criticized on the ground that they only change overt behavior and do not consider underlying causes.

10.2.3. Cognitive approaches to therapy

According to this approach a person's behavior is strongly affected by:

- That persons beliefs;
- Personal standards;
- Feelings of efficacy.

Cognitive therapies concentrate on changing the understanding of oneself and the environment rather than changing the behavior of the client.

Therapists assist clients to change their perceptions, to use reasoning and change thought-processes to modify their behavior.

Albert Ellis (1962) who developed the rational emotive therapy noted that thoughts are the roots of behavioral problems.

According to him the goal of cognitive therapy is to change irrational beliefs and thoughts to rational ones. Logic and reasoning will enable clients to deal effectively with their problems.

Rational emotive therapy is used to help a person develop rational statements regarding stressful situations rather than eliciting statements that worsen the situation.

Example: A Nurse working in the surgical ward may state that "Because the surgeon is harsh person, I can never be happy with my job and I am to lead miserable life."

A rational self-statement for the above is:

> "Even though the surgeon often behaves in an over demanding manner, I am not forced to react to his behavior with negative emotions; because I have the resources to constructively cope with these situations."

As applied to pain management technique, perceived self-efficacy can relieve pain by decreasing stress and tension. To achieve this, patients can pass through three stages.

1. **The conceptualization stage**
    - Patients are encouraged to accept that their problem has a psychological component and therapy can help them in alleviating their problem.

2. **Acquisition and rehearsal of skills**
    - Patients are thought relaxation and controlled breathing skills.
    - Patients are encouraged to direct their attention away from the pain experience by concentrating on a pleasant scene.

Example: thinking about a funny movie they have seen recently.

3. **Follow through phase of treatment**
    - Clients are encouraged to undertake physical activity and exercise greater feeling of self-efficacy.
    - Clients receive medication on the basis of time (schedule) rather than on reporting pain.
    - Spouses and family member are thought how to ignore pain behavior.
    - Developing a post treatment plan for coping with future pain.

Comment on cognitive approaches to therapy

- The Cognitive-behavioral therapists pay attention to what their clients perceive the world to be.

10.2.4. Humanistic therapy

- This therapeutic technique is based on the philosophical perspective of self-responsibility in developing treatment techniques.

The underlying ideas are:

- We have control of our own behavior
- We can make choices about the kinds of lives we want to live
- It is up to us to solve the difficulties that we encounter in our daily lives

The role of the therapist in this technique is to facilitate the therapeutic procedure so that people could come closer to the ideal condition for themselves.

Accordingly, psychological disorders are the result of people's inability to find meaning in life and of feeling lonely and unconnected with others.

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Self assessment Questions

1. What are the fundamental principles and beliefs in psychoanalytic theory?
2. How does ego analysis differ from classical psychoanalysis?
3. What are the criticisms of psychoanalytic therapies?
4. Briefly describe the theoretical basis of behavioral therapies, such as classical and operant conditioning?
5. Describe a technique based on classical conditioning.
6. Describe a technique based on operant conditioning.
7. What are the strengths and weaknesses of behavioral therapies?
8. How do cognitive behavioral therapies differ from behavioral therapies?
9. Describe how cognitive restructuring therapy works.
10. Describe the strength and weaknesses of cognitive behavioral therapies

Assignment

1. When and where was psychology incorporated as a course into the curriculum of medical schools in Ethiopia for the first time? Identify course titles, credit hours and other related issues.

2. According to your view, should psychology be offered as a course for health science students else where in our medical schools? Reason out?
3. Are you of the opinion that physicians and other health practitioners in government hospitals lack the psychosocial aspect of treating patients? If so what do you think is the solution to the problem?
4. The present status of psychology course at College of Health Sciences is two or three credit hours. Forward your suggestions and comments.
5. As a prospective health practitioner can you imagine any difference in implementing (translating) psychological principles and theories in the armed forces and in the civilian population? Which is more demanding? Why?

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GLOSSARY

Army-Alpha tests: Tests of intelligence developed for use in screening recruits for the U.S. Army in world war one.

Autism: The tendency to be absorbed in oneself.

Behavior: A general term covering acts, activities, responses, reactions, movements, processes, operations, in short, any measurable responses of an organism.

Castration anxiety: A psychoanalytic term for the anxiety resulting from real or imagined threats to ones sexual functions.

Chromosomes: Microscopic body in the nucleus of a cell that carry the genes.

Cognition: A broad term, which has been traditionally used to refer to such activities as thinking, conceiving, reasoning, etc.

Conditioning: A general term for a set of empirical concepts, particularly those that specify the conditions under which associative learning takes place.

Consciousness: Having sensations and perceptions, reacting to stimuli, having feelings and emotions, having thoughts, ideas, plans and image

Counseling: A generic term that is used to cover the several processes of interviewing, testing, guiding, advising, etc. designed to help an individual solve problems.

Desensitization: Generally any decrease in reactivity or sensitivity.

Environment: The total physical and social surrounding of an individual organism.

Foundling home: An abandoned child of unknown parents who is found by somebody.

Geriatrics: The medical specialty dealing with treatment of the aged.

Gerontology: The study of the aged and the aging process.

Hedonism: The theory that states behavior is motivated by approach toward pleasure and avoidance of pain.

Heredity: The biological transmission of genetic characteristics from parents to offspring (biological, inborn, inherited, innate).

Hypotheses: Any statement, proposition or assumption that serves as a tentative explanation of certain facts.

Infancy: From the Latin infantia (inability to speak) the first year of life.

Insight: An act of apprehending or sensing intuitively the inner nature of something.

Instincts: unlearned response characteristics of the members of a given species.

Intelligence: Cognitive processes involving abstraction, learning and dealing with novelty.

Life span: The actual duration of life of an individual organism from inception to death.

Machiavellianism: Description of a pattern behaviors including manipulation of others through deception and opportunism with increase of power and control as the central motive.

Memory: The mental functions of retaining information about stimulus, events, images, ideas, etc., after the original stimuli are no longer present.

Model: A representation that illustrates a pattern of relationships observed in data or in nature.

Menopause: That period that marks the permanent cessation of menstrual activity.

Psychodynamics: A label used freely for all those psychological systems and theories that emphasizes processes of change and development.

Puberty: The period of life during which the sex organs become reproductively functional. Onset in the female is marked by the menarche and in the male by nocturnal emission.

Schizophrenia: A general label for a number of psychotic disorders with various cognitive, emotional and behavioral manifestations.

Self: An organized personalized whole.

Self-concept: One's concept of oneself in as complete and thorough a description as is possible for one to give.

Sensitive period: Period during which an organism is sensitive to particular forms of stimulus inputs.

Tantrum: A violent and uncontrolled display of anger.

Therapy: An inclusive label for all manners and form of treatment of disease or disease.

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