PSYCHOLOGY
for Nurses

Second Edition

R Sreevani

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Psychology
for
Nurses

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Students Wired

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Psychology for Nurses

Second Edition

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Psychology for Nurses

Foreword to the First Edition

It is a matter of immense pleasure that Ms R Sreevani, MSc (N) has again put her efforts together for the student community by compiling a comprehensive textbook titled *Psychology for Nurses* and requested me to give foreword for the same. Her previous publication *A Guide to Mental Health and Psychiatric Nursing* has been a phenomenal success and gained much recognition with the student community in particular.

The present publication broadly covers fundamental psychological concepts for the undergraduate and graduate nurses with special focus on nursing implications making it unique. The text is presented in line with the recently introduced Indian Nursing Council (INC) syllabus for GNM, BSc (N) and PC BSc (N) students.

The language used is simple and understandable. Right mix of tables, flow charts and figures has been used to make the concept comprehensible and aid learning. Units on Sensation and Perception, Learning, Memory, Thinking, Intelligence, Motivation, Emotions, Attitudes, Personality, Developmental Psychology, Social Psychology, Guidance and Counseling and Psychological Assessment have been dealt with in depth and incorporated Nursing Implications making it a must-buy for the nursing personnel.

I wish her success in all her future endeavors.

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Preface to the Second Edition

The first edition of *Psychology for Nurses* received strong acclaim for its content, approach and organization. While retaining these strengths in the second edition, I have added many more illustrations, figures, flow charts and tables where required. All theoretical aspects and psychological principles are well presented with figures and flow charts. They are immediately followed up with application in nursing practice enabling the students to grasp the concept.

Complex topics are also presented very interestingly. After going through this textbook, the students will be able to manage their examinations on psychology and also meet the psychological needs of patients more effectively.

The second edition is dramatically different from the first edition as it has been aligned as per the revised Indian Nursing Council (INC) syllabus. In the said process, the textbook has been rewritten and reorganized into nine chapters. Some of the noteworthy changes and highlights are as under:

Text Organization

Chapter 1–Deals with the history, origin and scope of psychology and also focuses on methods of psychology.

Chapter 2–Features the mind-body relationship, influence of heredity and environment on behavior, role of nervous system in behavior. The chapter ends with integrated responses of an organism.

Chapter 3–Incorporates a very detailed description of cognitive processes like attention, perception, learning, memory, thinking, intelligence and aptitude.

Chapter 4–Covers topics on motivation and emotional processes with a special focus on the related theories. It also includes a detailed description of the stress cycle, sources of stress and adaptation to stress. The chapter ends with a topic on behavior and attitude.

Chapter 5–Gives a classic account on theories of personality development and ends with alteration and factors influencing personality.

Chapter 6–Has been devoted to developmental psychology and psychology of vulnerable individuals.

Chapter 7–Deals with mental hygiene and mental health and also focuses on preventive mental health strategies, mental health services available in our country. The chapter ends with a detailed account on guidance and counseling.

Chapter 8–Deals with psychological assessment and tests and role of the nurses.

Chapter 9–Focuses on types, causes and nursing implications of individual differences.

Each chapter is followed by certain important questions culled out from the previous examinations. This will allow the students to get an idea of what is expected out of them. Chapter-wise multiple choice questions (MCQs) have been included at the end of the textbook so as to inculcate an active learning exercise. This book also includes an exhaustive glossary of various terms used in psychology which is a must for gaining a broad understanding of the subject. A list of bibliography has been furnished at the end of the textbook for further reading.

Students of general nursing, MSc nursing and other health professionals interested in getting an overview of psychology may also find it useful.

All constructive suggestions from the readers in making this book more valuable and helpful will be earnestly solicited. I am confident that the new edition reflects what instructors want and need: a book that motivates students to understand and apply psychology to their own lives.

R Sreevani

Preface to the First Edition

As per the Indian Nursing Council (INC) syllabus for GNM, BSc (N), PC BSc (N) students, psychology is prescribed as a subject in their academic curriculum. During my teaching experience, I have always found that, though many books have been published on the subject, they do not really cater to the specific needs of the student community, nurses in particular. The students have often sought recommendations for a publication which caters to their complete syllabus. For lack of such a textbook, there was always a high demand for prepared notes which they could use during their examinations. This edition is a genuine effort to mitigate their hardship and also to stimulate academic interest and build an appreciation of the relevance of psychology, motivating and engaging the students.

This edition of *Psychology for Nurses* though will add to the Psychology section in the book shelves, it will definitely be a special one for the nurse community. In this edition a concerted effort has been made to cover the basic principles of psychology and also focus on applied topics in units such as Sensation and Perception, Learning, Memory, Thinking, Intelligence, Motivation, Emotions, Attitudes, Personality, Developmental Psychology, Social Psychology, Guidance and Counseling and Psychological Assessment. The matter has been produced in a simple language with tables, figures and flow charts so as to directly support learning, easy understanding and retention of the concept. Learning new concepts and theories is of no much value unless the same can be put to use in real-life situations. In a unique effort to bridge the gap between theory and practice, special care has been exercised to incorporate Nursing Implications at all appropriate places, providing ample opportunity for the intelligent nurse to conceptualize her role.

An exhaustive glossary has been provided at the end of the text to aid the student nurse understand the meaning of the keywords and their usage. To facilitate the students from the examination point of view, a set of review questions—long essays, short essays and short answers type have been included at the end of each unit. To assess the level of understanding gained on various topics, a unit-wise question bank (objective) has been provided at the end of the text.

I will be deriving immense satisfaction, if the nursing personnel apply the psychological principles described in this textbook in their day-to-day learning and practice. I am confident that, this book will provide good teaching material for the instructor and moreover motivate the students towards understanding and applying psychology in their job and personal lives as well. Suggestions for improvement will be gratefully acknowledged.

R Sreevani

Acknowledgments

Contents

Introduction to Psychology

INTRODUCTION

Psychology is an offspring of subject philosophy. Psychology is a Greek word, 'psychi' and 'logos'. 'Psychi' means 'soul' and 'logos' means the 'study of' or 'knowledge'—study of soul. The word soul was used vaguely and there were many interpretations that could be given to it. Later on, William James used the term 'mind', which replaced 'soul'. As years went by, the meaning of psychology changed. Those who studied, what was called 'mind' found that they could neither see it nor understand it. Seeing what it did meant they had to study the activities of human beings. The influence of physiology made some scientists like Wilhelm Wundt of Germany define psychology as the study of 'consciousness'. However, this was also discarded in the course of time and the current definition of psychology, as the systematic study of human and animal 'behavior' came to be accepted (Figure 1.1).

MEANING OF BEHAVIOR

'Any manifestation of life is activity' and behavior is a collective name for these activities. The term behavior includes the following:

❶ Motor or conative activities (walking, swimming, dancing, etc.)

❷ Cognitive activities (thinking, reasoning, imagining).

❸ Affective activities (feeling happy, sad, angry, etc.) Behavior includes not only the conscious behavior and activities of the human mind, but also the subconscious and unconscious. It covers not

Figure 1.1: Evolution of meaning of psychology

only the overt behavior, but also the covert behavior involving all the inner experiences and mental processes.

In a nutshell the term behavior refers to the entire life activities and experiences of all the living organisms (Table 1.1).

HISTORY AND ORIGIN OF SCIENCE OF PSYCHOLOGY

Psychology as a separate area of study, split away from philosophy a little over 100 years ago. The successes of the experimental method in the physical sciences encouraged some philosophers to think that mind and behavior could be studied with scientific methods. In 1879, the first psychological laboratory was established at the University of Leipzig by the German philosopher and psychologist Wilhelm Wundt (1832 – 1920). Wundt was the first to measure human behavior accurately and is known as the 'Father of Psychology'.

William James, Wilhelm Wundt and other psychologists of the time thought of psychology as the study of mind. In the first decades of the twentieth

century, psychologists came to hold quite different views about the nature of mind and the best way to study it. Schools of thought formed around these psychologists. These schools of thought are known as the schools of psychology.

Structuralism

This early school of psychology grew up around the ideas of Wilhelm Wundt in Germany and was established by one of Wundt's students, Edward B. Titchener (1867–1927). The goal of the structuralist was to find the units or elements, which make up the mind. The main method used to discover these elementary units of mind was introspection.

Gestalt Psychology

This school of psychology was founded in Germany around 1912 by Max Wertheimer (1880–1943) and his colleagues. These psychologists felt that structuralists were wrong in thinking of the mind, as being made up of elements. They argued that mind could be thought of as resulting from the whole pattern of sensory activity and the relationships and organizations within this pattern.

Functionalism

Functionalists such as John Dewey (1873–1954), James R. Angell (1869–1949) and Harvey Carr (1873–1954) proposed that psychology should do "what mind and behavior do". The functionalists performed experiments on the ways in which learning, memory, problem solving and motivation help people and animals adapt to their environments.

Behaviorism

This school of psychology originated with John B.Watson (1879–1958). He insisted that psychology should be restricted to the study of the activities of people and animals—their behavior.

Psychoanalysis

Psychoanalysis was founded by Sigmund Freud (1856–1938). He developed a theory of behavior and mind, which said that much of what we do and think results from urges or drives, which seek expression in behavior and thought. It is the expression of the unconscious drives which shows up in behavior and thought. The term unconscious motivation thus describes the key idea of psychoanalysis (Table 1.2).

Table 1.1: Major perspectives of psychology

Nature	Explanation
Biological perspective	Psychologists with a biological perspective try to relate people's behavior and mental events (as observed through their behavior) to functions of their bodies-especially to the activity of their nervous and glandular systems
Cognitive perspective	From the cognitive perspective, behavior and mind are to be understood in terms of the ways in which information from the environment received through the senses is processed. Such processing is the basis of the experience. Differences in the way we process information may lead to differences in behavior
Social perspective	Psychologists with a social perspective are interested in the interactions between and among people, which influence the mind and behavior
Developmental perspective	The developmental perspective is concerned with characteristic changes that occur in people, as they mature and change in the way they think
Humanistic perspective	The humanistic perspective emphasizes a person's sense of self and each individual's attempts to achieve personal competence and self-esteem. The aim of humanism is to help each person attain his full potential in life or to become all that he can become
Psychoanalytic perspective	The psychoanalytic (psychodynamic) perspective focuses on the unconscious motives and defence mechanisms, which manifest themselves in mental life and behavior

Table 1.2: Major landmarks in the development of psychology

Year	Major landmarks
1879	Wilhelm Wundt inaugurates first psychology laboratory in Leipzig, Germany
1890	*Principles of Psychology* published by Williams James
1895	Functionalist model formulated
1900	Sigmund Freud develops the psychodynamic perspective
1904	Ivan Pavlov wins Nobel prize for work on fundamental principles of learning
1915	Strong emphasis on intelligence testing
1924	John B.Watson, an early behaviorist, publishes *Behaviorism*
1951	Carl Rogers publishes *Client-Centered Therapy*, helping to establish the humanistic perspective
1953	B.F.Skinner publishes *Science and Human Behavior*, advocating the behavioral perspective
1954	Abraham Maslow publishes *Motivation and Personality*, developing the concept of self-actualization
1957	Leon Festinger publishes *A Theory of Cognitive Dissonance*, producing a major impact on social psychology
1985	Increasing emphasis on cognitive perspective
1990	Greater emphasis on multiculturalism and diversity
2000	New subfields develop such as clinical neuropsychology and evolutionary psychology

Except for the modern version of behaviorism and psychoanalysis, the old schools of psychology are no more in existence. Psychology today is practiced as a blend of various methods. A modern day psychologist leans towards using one of the methods more than the other, but depends on all that has been developed in the past. Various viewpoints about what is important in understanding mental life and behavior, characterize the present outlook. Among these perspectives are the behavioral, biological, cognitive, social, developmental, humanistic and psychoanalytic aspects.

Psychology is an independent subject and a positive science. Psychology is also a biosocial science. It has an important relationship with both biological and social sciences. It may be considered as a link between the two groups. Study of psychology is necessary in the field of medicine, nursing and other areas of human endeavor.

DEFINITIONS OF PSYCHOLOGY

Psychology is the science of human and animal behavior; it includes the application of behavioral science to human problems.
Psychology is the science of human behavior.

(Walter Bowers Pillsbury—1911)

Psychology is a science, which aims to give us better understanding and control of the behavior of the organism as a whole.

(William McDoughall—1949)

Psychology is a science and the properly trained psychologist is a scientist or at least a practitioner, who uses scientific methods or information resulting from scientific investigation.

(NL Munn—1967)

Psychology is the investigation of human and animal behavior and of the mental and physiological processes associated with the behavior.

(Jackson—1976)

SCOPE OF PSYCHOLOGY

The scope of a subject can usually be discussed under the following two headings:

❶ The limits of its operations and applications.

❷ The branches, topics and subject matter with which it deals.
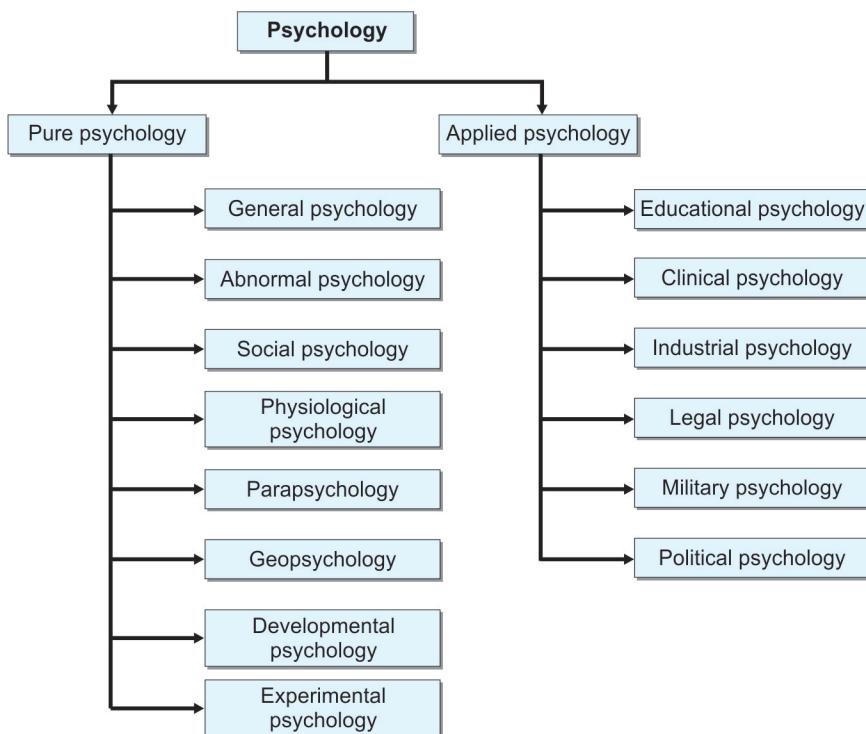
The field of operation and applications of the subject psychology is too vast.

❶ It studies, describes and explains the behavior of living organisms.

❷ It describes all types of life activities and experiences—whether conative, cognitive or affective, implicit or explicit, conscious, unconscious and subconscious of a living organism.

❸ It studies not only human behavior, but also human experience, language and other forms of communication. Psychologists are interested in individual differences, either they be genetically determined or occurring as a result of learning. They study how individuals and society interact and how they behave as members of small and large groups.

❹ It employs to all the living creatures created by the almighty irrespective of their species, caste, color, age, sex, mental or physical state. Thus normal, abnormal, children, adolescents, youth, adults, old persons, criminals, patients, workers, officials, students, teachers, parents, consumers, etc. all are studied in the subject psychology.

❺ It also studies the behavior of the animals, insects, birds and plant life.

No limit can be imposed upon the scope of subject psychology. It has many branches, fields and subfields (Table 1.3). For convenience, it may be broadly divided into pure and applied psychology (Figure 1.2). Pure psychology provides the framework and theory. It deals with the formulation of psychological principles and theories. It suggests various methods and techniques for the analysis, assessment, modification and improvement of behavior.

Figure 1.2: Branches of psychology

In applied psychology, the theory generated through pure psychology finds its practical shape. Here we discuss ways and means of the applications of psychological rules, principles, theories and techniques with reference to the real practical life situations.

Branches of Pure Psychology

General Psychology

General psychology deals with the fundamental rules, principles and theories of psychology in relation to the study of behavior of a normal adult.

Abnormal Psychology

Abnormal psychology deals with the behavior of individuals who are unusual. It studies mental disorders, their causes and treatment.

Social Psychology

Social psychology deals with the group behavior and interrelationships of people with other people (how an individual is influenced by others and how an individual influences others behavior). It studies various types of group phenomena such as public opinion, attitudes, beliefs and crowd behavior. Social

Table 1.3: Major subfields of psychology

Subfield	Description
Biopsychology	Biopsychology examines how biological structures and functions of the body affect behavior
Clinical neuropsychology	Clinical neuropsychology unites the areas of biopsychology and clinical psychology, focusing on the relationship between biological factors and psychological disorders
Cognitive psychology	Cognitive psychology focuses on the study of higher mental processes
Counseling psychology	Counseling psychology focuses primarily on educational, social and career adjustment problems
Cross-cultural psychology	Cross-cultural psychology investigates the similarities and differences in psychological functioning in and across various cultures and ethnic groups
Environmental psychology	Environmental psychology considers the relationship between people and their physical environment, including how our physical environment affects our emotions and the amount of stress, we experience in a particular setting
Evolutionary psychology	Evolutionary psychology considers how behavior is influenced by our genetic inheritance from our ancestors
Experimental psychology	Experimental psychology studies the processes of sensing, perceiving, learning and thinking about the world
Forensic psychology	Forensic psychology focuses on legal issues, such as deciding on criteria for determining whether a defendant was legally sane at the time a crime was committed
Health psychology	Health psychology explores the relationship between psychological factors and physical ailments or disease
Personality psychology	Personality psychology focuses on the consistency in people's behavior overtime and the traits that differentiate one person from another
School psychology	School psychology is devoted to counseling children in elementary and secondary schools, who have academic or emotional problems
Sport psychology	Sport psychology applies psychology to athletic activity and exercise

psychologists study the ways in which individuals are affected by other people.

Physiological Psychology

This branch of psychology describes and explains the biological and physiological basis of behavior. It concerns the structure and functions of sense organs, nervous system, muscles and glands underlying all behavior. It emphasizes on the influence of bodily factors on human behavior.

Parapsychology

Parapsychology deals with extra-sensory perceptions, causes of rebirth, telepathy and allied problems.

Geopsychology

This branch of psychology describes and explains the relation of physical environment particularly weather, climate and soil with behavior.

Developmental Psychology

This branch of psychology describes the processes and factors that influence the growth and development in relation to the behavior of an individual from birth to old age. It is further subdivided into branches like child psychology, adolescent, adult and old age psychology. Development psychologists try to understand complex behaviors by studying their beginning and the orderly ways in which they change or develop over the lifespan.

Experimental Psychology

This branch of psychology studies the ways and means of carrying out psychological experiments by using scientific methods. Experimental psychologists do basic research in an effort to discover and understand the fundamental and general causes of behavior. They study basic processes such as learning, memory, sensation, perception and motivation.

Branches of Applied Psychology

Educational Psychology

Educational psychology is a branch of applied psychology, which tries to apply the psychological principles, theories and techniques to human behavior in educational situations. The subject matter of this branch covers psychological ways and means of improving all aspects of the teaching/learning process. Educational psychologists are most often involved in the increase in efficiency of learning in schools by applying psychological knowledge about learning and motivation.

Clinical Psychology

This is the largest subfield of psychology. This branch of applied psychology describes the causes of mental illness, abnormal behavior of a patient and suggests treatment and effective adjustment of the affected person in society.

Industrial Psychology

This branch of applied psychology tries to seek application of the psychological principles, theories and techniques for the study of human behavior in relation to industrial environment. Industrial psychologists apply psychological principles to assist public and private organizations with their hiring and placement programs, the training and supervision of their personnel and the improvement of communication within the organization. They also counsel employees within the organization, who need help with their personal problems.

Legal Psychology

Legal psychology is a branch of applied psychology, which tries to study the behavior of persons like clients, criminals, witnesses, etc. with the help of applications of psychological principles and techniques. The root cause of crime, offence, dispute or any legal case can be properly understood through the use of this branch of psychology.

Military Psychology

This branch of psychology is concerned with the use of psychological principles and techniques in military science. How to keep the morale of the soldiers and citizens high during war time, how to secure better recruitment of the personnel for the fighting capacities and organizational climate and leadership, etc. are the various topics that are dealt with in this branch of psychology.

Political Psychology

This branch of psychology relates itself with the use of psychological principles and techniques in studying politics and deriving political gains.

Applications of Psychology

In the Field of Education

Theories of learning, motivation and personality, etc. have been responsible for shaping and designing the educational system according to the needs and requirements of the students. The application of psychology in the field of education has helped the learners to learn, the teachers to teach, administrators to administer and educational planners to plan effectively and efficiently.

In the Field of Medicine

A doctor, nurse or any person who attends the patient, needs to know the science of behavior to achieve good results. Psychology has contributed valuable therapeutic measures like behavior therapy, play therapy, group therapy, psychoanalysis, etc. for the diagnosis and cure of patients suffering from psychosomatic, as well as mental diseases.

In the Field of Business and Industry

It has highlighted the importance of knowledge of consumer's psychology and harmonious interpersonal relationship in the field of commerce and industry.

In the Field of Criminology
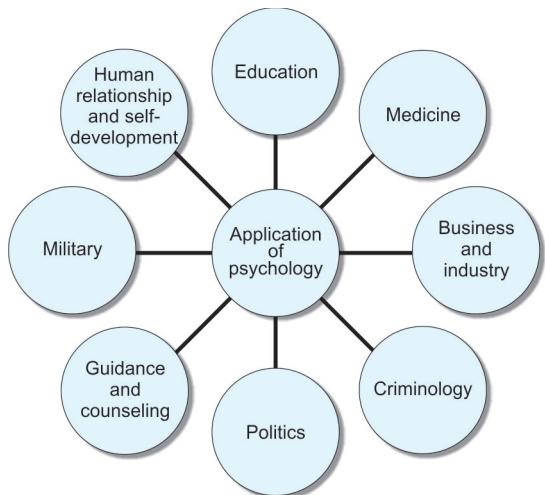
It has helped in detection of crimes and in dealing with criminals.

In the Field of Politics

It has proved useful to the politicians and leaders to learn the qualities of leadership for leading the masses.

In the Filed of Guidance and Counseling

It has provided valuable help in relation to guidance and counseling in educational, personal as well as vocational areas.

Figure 1.3: Application of psychology in various fields

In the Field of Military Science

Psychology helps in the selection, training, promotion and classification of defense personnel. In fighting the enemy, the morale of the defense personnel and of citizens must at all costs be high and this can only be achieved by providing suggestions, insight and confidence.

In the Field of Human Relationship and Self-Development

Finally it has helped human beings to learn the art of understanding their own behavior, seeking adjustment with their self and others and enhancing, as well as actualizing their potentialities to the utmost possible (Figure 1.3).

RELEVANCE TO NURSING

Psychology has become necessary in every profession including nursing today. This is because of increasing emphasis being laid out on the interplay of body, mind and spirit in the health status of every individual.

The success in life of many people depends on how they get along with others, influence others and react to others. The ability to understand ourselves and others comes from a wise study of psychology.

The learning of psychology helps a nurse in the following ways:

To Understand Her Own Self

The knowledge of psychology will help the nurse to get an insight into her own motives, desires, emotions, feelings, attitudes, personality characteristics and ambitions. She will realize how her personality is highly individualistic and complex, arrives at decisions in her life and solves her own problems. This knowledge also helps her to understand her strengths and weaknesses. By knowing these aspects, she can not only try to overcome such weaknesses, which affect her work, but also develop good personality characteristics, abilities to carry on her responsibilities and perform her duties effectively and efficiently. This will let her direct her own life more productively and relate more easily with others, enabling her to control situations and attain self-discipline.

To Understand Patients

The nurses are professionals meant for providing care to patients. The patient may be suffering from acute or chronic disease; may be male or female, young or old and come to the hospital with so many physical and psychological problems. They may also have tensions, worries, pains and also many doubts about their illness. The knowledge of psychology will help the nurse to understand the problems and needs of patients and attend to them. She can understand the motives, attitudes, perceptions and personality characteristics of patients in a better way. This will help the patient to attain quick relief and cure, which is the basic motto of a nurse.

To Recognize Abnormal Behavior

Psychology is relevant not only in physical health care, but also highly relevant in the field of mental health. Presently more and more people are suffering from mental illness. While some patients may have minor problems, others suffer with serious illness. The knowledge of psychology will help nurses to understand abnormal behaviors and help the patient in management of mental illnesses. Nurses working in mental hospitals definitely need an adequate knowledge of normal and abnormal psychology.

The knowledge of psychology helps the nurses in recognizing mental illnesses at general hospitals and community health centers and provide appropriate guidance to deal with stress, anxiety and other life problems.

To Understand Other People

The student nurse has to study, work and live with other nurses, doctors, patients and their family members. With her scientific knowledge of human nature, she will understand them better and thus achieve greater success in interpersonal relationships. She will learn why others differ from her in their likes and dislikes, in their interests and abilities or in their reactions to others. She will realize how differences in behavior to some extent, are due to differences in customs and beliefs or cultural patterns of the groups to which she belongs or to the way she has been brought up during her early years.

To Provide Quality Care to Patients

A nurse with good knowledge of human psychology can understand what fears or anxieties the patient faces, what he feels, what he would like to know and why he behaves the way he does. It will help the nurse to anticipate and meet requirements of the patients and his relatives, thus help patients and relatives adjust to the unavoidable circumstances in the best possible way. A good understanding of these patients by the nurse can be of best support to him.

Help Patients Adjust to the Situation

Illness and physical handicaps often bring about the need for major adjustments. Many diseases such as heart disease and cancer, etc. require special coping skills and health care. A nurse trained in psychology can be an effective health educator and help in these kind of adjustments.

Help the Student Nurse to Appreciate the Necessity for Changing the Environment or Surroundings

Good nursing care depends upon the ability of a nurse to understand the situations properly and

also in obtaining the cooperation of other people concerned. The change in the environment is sometimes necessary for better adjustment and happiness. For example, a boy who is completely denied the affectionate care of his parents may do better if he is given the care of foster parents.

Help for Effective Studying

The nurse has to learn many new things during her training. She has to obtain the knowledge of correct facts about disease conditions and their treatment. The study of psychology of learning will help the nurse to acquire knowledge in an effective way.

Readjustment

Every profession and career requires readjustment. A nurse needs to make the following kinds of adjustments for success in the nursing career:

❶ Overcoming homesickness and self-reliance is needed if she has to live smoothly in a hostel or a hospital.

❷ Adjusting to sick persons, who may cry or be desperate or even ventilate their anger by making the nurse a target of their abuses and curses.

❸ Trying to work and study together.

In these efforts knowledge of psychology can be helpful, as an insight into the emotions will clear lots of problems. The well-being of a patient is the prime responsibility of a nurse. She must not only treat him physically, but also instill confidence in his capacity to improve and recover fully. For this, knowledge of human psychology is essential. The physical and mental well-being of a patient mainly depends on the nurse. She has to deal with different people having different problems both physical and mental. To serve them satisfactorily, knowledge of psychology is quite essential.

METHODS OF PSYCHOLOGY
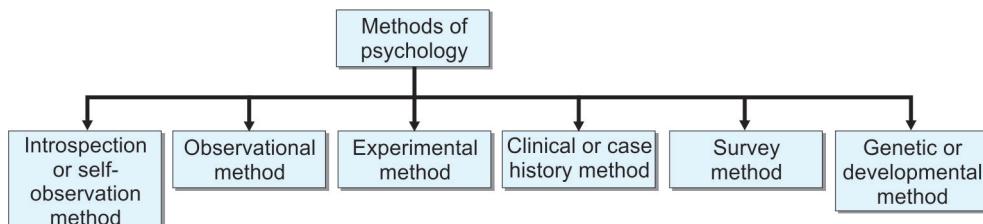
Psychology is termed as the scientific study of human behavior. Special tools and procedures help us in gathering and organizing its subject matter or the essential facts about behavior. These procedures are termed as methods, which are used to study human behavior (Figure 1.4). They are as under:

Introspection or Self-observation Method

This is one of the oldest methods of psychology. Introspection means 'to look within'. This is also known as self-observation method. It is not possible to understand the inner feelings and experiences of other persons. Here the subject is asked to systematically observe his own behavior and report the same; this is later analyzed to understand behavior. For example, a patient after an operation may be asked to report how he feels. The patient will try to look within and recall what happened and how he is presently feeling. This information will help for better treatment. This is the characteristic method of psychology, which is not available to other natural sciences.

Merits

❶ Introspection is the fundamental method of psychology. Observation and experimentation are based upon introspection.

Figure 1.4: Methods of psychology

❷ Introspection gives us direct, immediate and exact knowledge of our own mental processes.

❸ It enables us to fully understand the behavior of an individual.

❹ This method is inexpensive, easy and does not require any apparatus or laboratory.

Demerits

❶ This method is not applicable for children or animals or mentally retarded people, because they cannot introspect.

❷ It is a purely private affair and cannot be verified by other observers.

❸ In many cases, the patients may not have the insight to know about their conditions or language to describe them accurately.

❹ Introspection sometimes involves attention to a mental process (Example: perception), which is produced by an external object. When we attend to the mental process, we withdraw attention from the object and as soon as we withdraw attention from the object the mental process vanishes, thus making introspection impossible.

All the difficulties of introspection can be overcome by habit and discipline of mind. It requires a power of abstraction and mental alertness.

Observational Method

Observation is the objective method of studying the behavior of individuals. It consists of, perception of an individual's behavior under natural conditions by the other individuals and the interpretation and analyzes of this perceived behavior by them. It is essentially a way of perceiving the behavior as it is. In this method the observer observes and collects the data. Example, in the hospital the nurse makes an observation of patient's temperature, pulse, blood pressure, facial expressions, restlessness, etc. to understand clinical condition of the patient.

Steps in Observation Method

❶ Observation of behavior

❷ Noting of behavior

❸ Interpretation and analysis of behavior

❹ Generalization

Merits

❶ It is economical, natural, as well as flexible.

❷ The data, which is studied through observation can be analyzed, measured, classified and interpreted.

❸ The results can be verified and relied.

❹ Observation method is quite suitable for observing developmental characteristics like children's habits and interests. For example, the effect of absence of a mother or father or both on the child's development can be determined properly through observing the development of such deprived children.

Demerits

❶ There are chances of subjective report and also prejudices of observer may creep in.

❷ Sometimes to observe the natural behavior the observer may have to spend more time, energy and money.

❸ It lacks repeatability, as each natural situation can occur only once.

❹ Not being able to establish a proper cause-and-effect relationship.

The difficulties of observation method are overcome by cultivating an impartial attitude of mind, by constructive imagination and cautious observation.

Experimental Method

Experimental method is considered as the most scientific and objective method of studying behavior. The word experiment comes from a Latin word meaning 'to try', 'put to test'. Therefore, in experimentation we try or put to test the material or phenomenon, the characteristics of consequences of which we wish to ascertain. The use of this method has raised psychology to the status of an experimental science like physics, chemistry and physiology.

In psychology, experimental study is used to study the cause-and-effect relationship regarding the nature of human behavior, i.e. the effect of anxiety on the human behavior. To study the cause-and-effect relationship the psychologists use objective observations under controlled conditions to observe

actions or behaviors of individuals. From these observations certain conclusions are drawn and theories or principles established.

Essential Features of Experimental Method

❶ Requires two persons, the experimenter and the subject or the person, whose behavior is observed.
❷ Experimentation should be done on living organisms.
❸ All experiments are conducted under controlled conditions.

Steps in Experimentation

❶ *Stating the problem*: The first step in an experiment is stating the problem. For example, to study the effects of smoking on physical and mental health of students.
❷ *Formulation of hypothesis*: Hypothesis is a tentative answer to the problem. For the above example, the hypothesis can be–smoking is harmful for physical and mental health of students. This hypothesis will be tested.
❸ *To find out independent and dependent variables*: The effect of which we want to study will be called independent variable and the other the dependent variable. The independent variable stands for the cause and dependent variable is characterized as the effect of the cause. In the above example physical and mental health will be dependent variables and smoking will be an independent variable.
❹ *Arranging the environment*: Under controlled environment the variables are objectively observed. For example, physical and mental health of students (who are smoking) will be observed. In experimentation, it is important that only the specified independent variables be allowed to change. Factors other than the independent variable must be held constant.
❺ *Analysis of the results*: Generally the subjects of the experiment are divided into two groups, one controlled and the other experimental. They can be compared statistically. For example, smoker's and non-smokers mental and physical health can be compared.

❻ Testing of the hypothesis by the result of experiment: The results may prove or disprove the hypothesis.
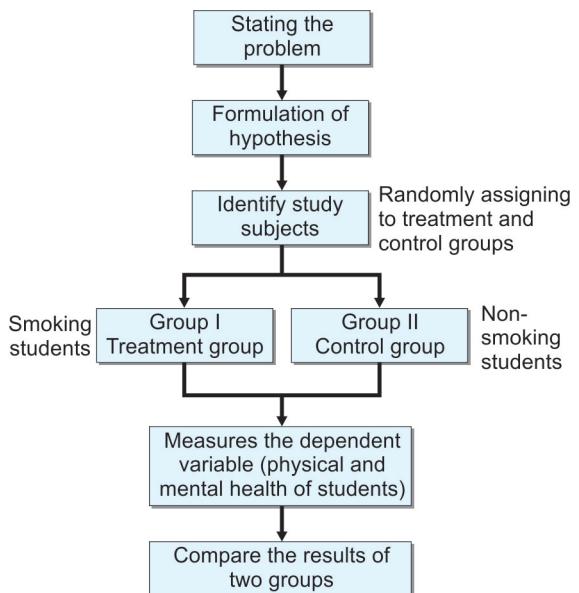
The various steps involved in experimental method have been depicted by way of a flow chart (Figure 1.5).

Merits

❶ Scientific method
❷ Finds out cause and effect relationship
❸ Maximum control of phenomena
❹ Repetition is possible

Demerits

❶ All problems of psychology cannot be studied by this method, as we cannot perform experiments for all the problems.
❷ Experimental method is a costly and time consuming method. Moreover handling of this method demands specialized knowledge and skill. In the absence of such expertise this method is not functional.

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                    ┌──────────────┐
                    │ Stating the  │
                    │   problem    │
                    └──────┬───────┘
                    ┌──────┴───────┐
                    │Formulation of│
                    │  hypothesis  │
                    └──────┬───────┘
                    ┌──────┴───────┐   Randomly assigning
                    │Identify study│   to treatment and
                    │  subjects    │   control groups
                    └──────┬───────┘
              ┌────────────┴────────────┐
Smoking ┌─────┴─────┐         ┌─────────┴─────┐ Non-
students│  Group I  │         │   Group II    │ smoking
        │Treatment  │         │ Control group │ students
        │  group    │         └───────┬───────┘
        └─────┬─────┘                 │
              └────────────┬──────────┘
                    ┌──────┴─────────────┐
                    │Measures the dependent│
                    │ variable (physical and│
                    │mental health of students)│
                    └──────┬─────────────┘
                    ┌──────┴───────┐
                    │Compare the results of│
                    │   two groups │
                    └──────────────┘
```

Figure 1.5: Various steps of experimental method

❸ Experimental method fails to study behavior in naturalistic conditions.

❹ It cannot always be used especially if the experiment might be dangerous to the subjects.

In spite of various limitations it is a fact that, the results obtained by experimental method are reliable, verifiable, definite, precise and capable of quantitative treatment than those obtained by the use of other methods.

Clinical or Case History Method

This method is used by clinical psychologists, psychiatrists, psychiatric social workers in child guidance clinics or mental hygiene clinics and the allied institutions. It aims at studying the cause and basis of people's anxieties, fears and personal maladjustments. A great deal of relevant data is collected by using case histories, interviews, home visits and psychological tests to draw valid inferences about the nature of the individual's difficulties and problems, the probable origin and course of development. This may suggest some course of action to be pursued in helping the individual.

In this technique information is collected from the memory of the individual, his parents, members of his family, friends, teachers and all other available records and reports. The information includes the past history of the disease, treatment already taken, changes if any like improvement, present condition, probable causes, signs and symptoms, etc.

Merits

❶ Case histories will give the clinician an insight into the causes of the problem and suggest possible solutions.

❷ Case studies can be productive sources of ideas for further investigation by other methods.

Demerits

The case history method depends largely on memory of incidents, which may have been observed inaccurately or over interpreted.

Survey Method

All problems in psychology cannot be studied by the experimental and other methods. Some problems like study of opinions, attitudes, health care needs, etc. can be studied by means of survey method. This is commonly employed in social psychology.

The survey method involves collection or gathering of information from a large number of people by using questionnaires, inventories, checklists, rating scales and interviews.

Merit

A large amount of data can be collected in a shorter time.

Demerit

The behavior is not observed directly.

Genetic or Developmental Method

Psychologists study not only the behavior of an individual at a particular time, but also his development from birth to death, the influence of heredity and environment in the development of the person and conditions favorable and unfavorable for normal and abnormal behavior. For example, to understand the learning behavior of an adult, the study will start from the childhood and adolescence. This can be done by two ways:

❶ Cross-sectional study in which, the children of different age groups will be studied simultaneously.

❷ Longitudinal study in which, the same child will be studied in different stages of life.

Merits

This is a more useful method to understand the behavior from point of view of hereditary and environmental influences.

Demerit

This method requires more time and energy.

REVIEW QUESTIONS

Long Essays

1. Define psychology and explain in detail the methods in psychology. (*Mar 2012*)
2. Define psychology. Explain methods of observation and case study. (*Mar 2009*)
3. Define psychology. Explain its nature and scope with reference to nursing. (*Mar 2009*)
4. Discuss various methods of psychology used to study the behavior. (*Oct 2007*)
5. Define psychology and explain its nature and scope with special reference to nursing. (*Mar 2012, Oct 2007, April 2006, 2004, Nov 2003*)
6. Critically examine observation method and experimental method—explain. (*April 2005*)
7. Define psychology. What are the different methods used in the study of psychology. Critically evaluate them. (*Mar 2004*)

Short Essays

1. Explain any two branches of psychology. (*Mar 2012*)
2. Scope of psychology in nursing profession. (*Mar 2011*)
3. Case study method. (*Aug 2010*)
4. Relevance of psychology to nursing. (*Mar 2009*)
5. Describe merits and demerits of experimental method. (*Mar 2009*)
6. Explain case study method. (*Aug 2009*)
7. Explain the relevance of psychology to nursing. (*Aug 2009*)
8. Explain experimental method in psychology. (*Mar 2012, April 2008*)
9. Bring out the similarities and differences between introspection and observation. (*April 2008*)
10. What is the general importance of psychology? Why should a student nurse study psychology? (*Oct 2007*)
11. Discuss the scope of psychology. (*Apr 2006*)
12. Define psychology. What are the different methods used in the study of psychology? (*2004*)
13. Discuss introspection its advantages and limitation as a method of psychology. (*Nov 2003*)

Short Answers

1. Write any two definitions of psychology. (*Mar 2012*)
2. Child psychology. (*Aug 2010*)
3. Methods of psychology. (*Mar 2009*)
4. Define any two branches of psychology. (*Mar 2009*)
5. Case history method. (*April 2008*)
6. List the branches of psychology. (*Oct 2007*)
7. Behavior. (*Oct 2007*) (*Nov 2003*)
8. Interview method. (*Oct 2006*)
9. Experimental method. (*April 2005*)
10. What is introspection? (*2004, Nov 2003*)
11. Observation method. (*2004*)
12. Definition of psychology. (*Nov 2003*)

Biology of Behavior

The biology of behavior is the study of behavioral functions of the nervous system, particularly the brain. 'Physiological psychology' is the branch of psychology, which seeks to determine how activity in the nervous system is related to behavior and the mind.

Many aspects of human behavior and mental functioning cannot be fully understood without some knowledge of the underlying biological processes. Our nervous system, sense organs, muscles and glands enable us to be aware of and adjust to our environment. Our perception of events depends on how our sense organs detect stimuli and how our brain interprets information originating from the senses.

BODY-MIND RELATIONSHIP— MODULATION PROCESS IN HEALTH AND ILLNESS

❖ Psychology studies human behavior, which involves both the body and the mind. They are interrelated and interact upon each other. Mental functions and physical states affect each other.

❖ Body and the mind are two aspects of the living, dynamic and adjusting personality. Mind is regarded as a function of the body; it does not exist apart from the body. It is the sum total of various mental processes such as observing, knowing, thinking, reasoning, feeling, imagining, remembering, judging, etc. Mind also grows just as the body grows.

❖ Body is represented by physical states and bodily functions. Our nervous system and glands, which are an important part of our body are responsible for our ways of thinking, feeling and doing.

❖ All behaviors have an anatomical and physiological basis. Physiological structures, body fluids, chemicals and mechanical events, all influence both our overt behavior and our feelings and experiences. Our mental functions like strong feelings, emotions, attitudes, motives, thinking, etc. influence our bodily activities and processes.

❖ Emotions are combination of bodily responses and mental processes. Body provides energy to fight or cope; mind contributes to the understanding, to offer an explanation for ones own actions or the actions of others. Just as the body produces epinephrine to fight danger, the mind helps to decide, whether it is needed or not.

Effects of Bodily Conditions on Mental Functioning

❖ Increased blood pressure causes mental excitement.
❖ Severe pain reduces the concentration level.
❖ Chronic illness causes depression.
❖ Malfunctioning of the endocrine glands may exert full influence on one's personality, resulting in lethargy, nervous tension, etc.
❖ Physical fatigue affects our mood and reduces our motivation, interest and concentration.

❖ Brain injury affects many psychological functions. At the same time well developed brain leads to the development of better intellectual functioning.

Effects of Mental Conditions on Bodily Functioning

❖ Unpleasant emotions like fear, anger and worry cause irritability, insomnia, headache, etc. Mental processes are intimately connected to brain or cortical processes, e.g. depression affects thinking and memory.

❖ Emotional conflicts are responsible for peptic ulcer, ulcerative colitis, etc.

❖ Deep thinking and concentration can cause physical strain.

❖ According to Franz Alexander, repressed feelings of hostility and aggression are expressed through the nervous system and cause hypertension and cardiac diseases. Repressed feelings of dependency, wish to receive love, affect parasympathetic nervous system resulting in gastrointestinal disorders or respiratory disorders.

❖ Unconscious motivation and conflicts gives rise to many physical complaints and neurotic disorders like conversion disorders.

Relationship between body and the mind has an effect on health and illness. If the relationship is harmonious, it leads to health, while an adverse relationship leads to illness. If all the body and mental processes are working within normal range, the individual will have good health. Disruption in any one of the processes will lead to illness.

Psychosomatic medicine deals with physical diseases caused by psychological factors. In these patients, the treatment should be given for both body and mind, e.g. in case of peptic ulcer the treatment includes both drugs and psychotherapy.

The nurse should understand the interrelationship between the body and the mind. She should also understand the emotional factors underlining the disease of the patient. It is always necessary to study the patient's physical and psychological problems in order to provide comprehensive care.

GENETICS AND BEHAVIOR: HEREDITY AND ENVIRONMENT

Heredity

Heredity is considered as "the sum total of inborn individual traits". Biologically, it has been defined as "the sum total of traits potentially present in the fertilized ovum". According to Douglas and Holland "one's heredity consists of all the structures, physical characteristics, functions or capacities derived from parents, other ancestry or species".

All organisms possess a life cycle, which includes growth, development, reproduction and decline. Though there is essential unity in life, the ways by which each organism exercises its capacities are different. These individual qualities of organisms and their basic properties are transmitted by means of heredity.

Mechanism of Heredity

The life cycle of an individual begins with the fusion of a sperm and ovum. The origin of every human life can be traced to a single cell called zygote. When a sperm unites with an ovum, zygote is produced. The genes, which are the carriers of distinctive traits are present both in the sperm and the ovum. In the fertilized ovum, there are 23 pairs of chromosomes, half of which are given by the father and the other half by the mother. While females have 23 pairs of XX chromosomes, males have 22 pairs of XX chromosomes plus two single chromosomes represented by X and Y. The X and Y are called as sex chromosomes.

Occasionally, through some unfortunate bodily error, aberrations in chromosomes appears. If an extra chromosome appears making the total 47 rather than the normal 46, mongolism (Down's syndrome or trisomy 21 anomaly) results. A child with Mongolism suffers from deceleration of growth during the prenatal period, which results in a highly complex, multidimensional disorder, in which every organ is involved.

When chromosomes are studied under a microscope, bands of markings appear, representing an entity called genes, which appear to be the actual de-

terminers of traits. Each chromosome is made up of many genes. Man has probably not less than 2,000 and not more than 50,000 genes in the chromosomes. Each gene is the determiner of a specific characteristic, such as straight nose or a deep lobed ear. At present, it appears that, there is no simple one-to-one relationship between genes and traits, i.e. one gene may influence many characteristics or traits or conversely many genes may combine to determine one characteristic.

Action of the genes on the cytoplasm changes the shape and other characteristics of the cells. The heredity basis of individual differences lies in the unlimited variety of possible gene combinations that can occur. No two siblings get an identical heredity, as they do not get the same genes from the parents. Fraternal or dizygotic twins born to the same parents are different from each other, because of different pairs of germ cells. However, identical or monozygotic twins develop from the same sperm and ovum, hence have exactly the same set of genes and therefore, resemble each other completely.

Determination of traits is not only due to combination of genes, but also due to their dominant or recessive nature. In the color of the eye, e.g. brown is dominant over blue, if one parent carries only brown and the other only blue, their offspring will have brown eyes. Many people however, carry both and if two recessive blues happen to match up in the assorting process of meiosis and fertilization, the child would have blue eyes even though parents and all the immediate relatives have brown eyes.

Some characteristics are sex linked, i.e. one sex shows the characteristics, while the other sex not apparently affected is the carrier. One such trait is color blindness. For example, the sons of a color blind man and normal woman do not inherit the defect, but the daughters may be carriers of the disorder to another generation of males, their sons. Another example is hemophilia; a bleeding disorder, which rarely occurs in women, but is transmitted by them to their sons (Stern, 1960).

Occasionally, in the reproductive cells of any living thing a change occurs, which causes the introduction of completely new traits in the next generation. Such changes are called mutations. Mutant plants and animals might have characteristics that breeders can use to improve existing varieties. In human beings, mutations are almost always undesirable. Their causes are not clear, but are known to be induced by atomic radiation.

Heredity is the basis for the development of human personality. It is like the raw material in the hands of the artist, out of which the potter or tailor prepare the specific objects. Any amount of molding and treatment with special processes will still retain the basic properties of the raw material.

Many aspects of human behavior and development range from physical characteristics such as height, weight, eye and skin color. The complex patterns of social and intellectual behavior are influenced by person's genetic endowment. They also include physical deficiencies and the nature of glandular functioning. Heredity is a source of both similarities and differences among individuals (Table 2.1).

Table 2.1: Characteristics influenced significantly by genetic factors

Physical characteristics	Intellectual characteristics	Emotional characteristics and disorders
Height	Memory	Shyness
Weight	Intelligence	Extraversion
Obesity	Age of language acquisition	Emotionality
Tone of voice	Reading disability	Neuroticism
Blood pressure	Mental retardation	Schizophrenia
Tooth decay		Anxiety
Athletic ability		
Firmness of handshake		
Age of death		
Activity level		

Environment

The child inherits the traits and characteristics of his parents and forefathers through genes at the time of conception. Therefore, what he possesses at the time of conception is all due to heredity.

After conception, how he develops is the outcome of the interaction between his heredity and environment. The forces of environment begin to play their part and influence the growth and development of an individual right from the time of fertilization of the ovum by the sperm. Therefore from the environmental point of view, not only what happens after birth is important, but what goes on inside the womb of the mother after conception is equally significant.

Environment covers the social, moral, economical, political, physical and intellectual factors, which influence the development of the individual from time to time.

Definitions

The environment is everything that affects the individual except his genes.

(Boring, Langfield and Weld)

Environment covers all the outside factors that have acted on the individual, since he began life.

(Woodworth)

Types of Environment

There are three types of environment that affect the individual directly or indirectly:
❶ Intercellular environment
❷ Intrauterine environment
❸ External environment

Intercellular environment: It relates to embryonic development. The cytoplasm is in the intercellular environment, because the genes surrounded by it are influenced by and in turn influence its characteristics. Endocrine glands and hormones also produce intercellular influence. Many congenital deformities are the result of overactive or underactive endocrine function.

Intrauterine environment: It shelters the baby during prenatal life. In the womb the growing organism is surrounded by amniotic fluid and attached to the mother by the umbilical cord. Thus, growth of the embryo depends on the nourishment provided by the mother. The physiological and psychological states of the mother during pregnancy, her habits and interests, etc. all influence the development of the child.

After birth, the child is exposed to the numerous environmental forces, which are purely external in nature.

External environment: It can be divided into three kinds:
❶ Physical environment
❷ Biological environment
❸ Psychosocial environment

Physical environment: Non-living things like water, air, housing, soil, climate, heat, light, radiation, noise, etc. form the physical environment. These affect the body and mind of the growing child. So, it is necessary to provide a decent home and locality for good physical and mental health of the child.

Biological environment: It refers to the living component of man's external environment, which consists of plants, animals, insects, bacteria and viruses. It is necessary that the child should be allowed to grow in a good, healthy biological environment. The child should be kept away from the disease carrying germs, bacteria and viruses.

Psychosocial environment: It includes cultural values, customs, habits, beliefs, attitudes, morals, religion, education, occupation, social and political organization, etc. Parents, members of the family, friends, classmates, neighbors, teachers, mass communication and recreation are also included in this environment. These different environmental forces have a desirable impact upon the physical, social, emotional, intellectual, moral and aesthetic development of an individual. Their influence is a continuous one, which begins with the emergence of life and goes on till death.

One example of the influence of environment upon potential height is found among the first and second generations of Japanese people in the United States (US). The children are generally taller than

their parents, because they have had the advantages of better food and better living conditions. Another example is the children of third world countries whose growth and development have been stunted by drought and famine. As food becomes available, many of these children show marked improvement in their physical conditions.

Interaction Between Heredity and Environment

Each individual enters the world with certain hereditary characteristics transmitted to him through his parents. He grows up in a certain environment with its human, social and material surroundings. Everything he does as a child or adult results from the complex interactions between heredity and environment.

- ❖ The relative influence of heredity and environment differs from one individual to another and from one human trait or condition to another.
- ❖ Heredity and environment are interdependent forces. Inheritance is an important factor in the development of the artistic abilities like music. Heredity supplies the potential talent, while favorable environment brings it out.
- ❖ Heredity and environment are equally important in shaping the temperament of the child. Heredity lays down the essential foundations, while environment can change these foundations for better or worse.
- ❖ Heredity provides the raw material from which a person is made. How the material is molded, and what he becomes depends chiefly on the environment. Good materials placed in good hands result in a fine finished product. Poor material, no matter how carefully fashioned can never become a first rate product.
- ❖ Our inheritance prescribes the limits, beyond which it may not be possible for any individual to develop, however wholesome and stimulating the environment may be.

Today no one believes that nature or nurture alone, completely determines the course of our development. Psychologists agree that development is shaped by the interaction of heredity and the environment. Within this interaction, our genetic endowment for many characteristics provides us with a reaction range of possible levels that we may ultimately reach depending on the quality of our experience in the environment. Heredity and environment are interdependent forces. The influence of heredity and environment are so interrelated that they are practically inseparable.

The knowledge of the mechanism of heredity and the influence of environment on the personality development is important for a nurse to understand the behavior of a patient.

BRAIN AND BEHAVIOR: NERVOUS SYSTEM, NEURONS AND SYNAPSE

- ❖ The entire behavior is effectively managed and controlled by the coordination and functioning of the nervous system.
- ❖ How we will behave in a particular situation depends upon the judgment of our brain.
- ❖ The sense impressions, which are received through the sense organs, do not bear any significance unless they are given a meaning by the nervous system.
- ❖ Learning also to a great extent is controlled by the nervous system.
- ❖ The proper growth and development of nerve tissues and nervous system as a whole helps in the task of proper intellectual development.
- ❖ Any defect in the spinal cord or the brain seriously affects the intellectual growth.
- ❖ The emotional behavior is also influenced by the nervous system, especially at the time of anger, fear and other emotional changes. During emotional outbursts, nerve tissues cause the change in the secretion of hormones by some glands and consequently influence the emotional behavior of an individual.
- ❖ The process of growth and development is also directly and indirectly controlled by the functioning of the nervous system.
- ❖ The personality of an individual is greatly influenced through the mechanism of the nervous system.

Through its receptors, the nervous system keeps us in touch with our environment, both external and internal. Like other systems in the body, the nervous system is composed of organs, particularly the brain, spinal cord, nerves and ganglia. These in turn, consist of various tissues, including nerve, blood and connective tissues. Together these carry out the complex activities of the nervous system.

Human behavior involves the body-mind interaction of the various bodily factors. The most important are:

❶ The sense organs, called receptors.
❷ The muscles and endocrine glands, called effectors.
❸ The nervous system known as the connecting or integrating mechanism.

Receptors (Psychology of Sensations)

Behavior in all its forms and shapes has definitely a biological or physiological base. The behavior is based on the various stimuli present in the external environment and lying within our body. The stimuli in the form of various sensory experiences are received by our sensory systems known as receptors.

External Receptors

External receptors are those sensory mechanisms that help us make contact with the outer world, for example, eyes, ears, nose, tongue and skin. The specific receptor cells for receiving the external stimuli lie within these sensory systems.

Sense organs:

❖ Our sense organs help in assimilating knowledge of the world around us. Each of our sense organs has a distinct function to perform.
❖ Sense organs consist of receptors, which are specialized sensitive cells associated with endings of sensory nerve fibers. These receptors are stimulated by objects outside the body and also by internal conditions.
❖ When the receptors are not functioning properly, they lead to sensory defects or disorders—visual, auditory, cutaneous, olfactory, gustatory and kinesthetic disorders.

Internal Receptors

Internal receptors are associated with the internal stimuli present in our body. They are responsible for feelings of pain, hunger or nausea. Another variety of these internal receptors helps us in maintaining balance, bodily posture and equilibrium and also exercise control over the muscles.

Sensation

Most of our behavior is dependent upon what our senses tell us. Vision, hearing, taste, smell and touch are called five senses. The functioning of the five senses is called sensation. Sensations are purely the result of physical stimuli operating on our nervous system.

Sensory experience: Each sensory system is a kind of a channel, consisting of a sensitive element (the receptor). The nerve fibers connect these receptors to the brain or spinal cord, various relay stations and processing areas within the brain. When a sensory channel is stimulated, we have a sensation that is characteristic of that channel. For instance, whether the eye is stimulated by light or by pressure on the eyeball, we have a visual experience. In order to know about the world around us, physical energy must be converted into activity within the nervous system. The process of converting physical energy into activity within the nervous system is called transduction. Transduction occurs in the receptor cells. During the transduction process, receptor cells convert physical energy into an electric voltage or potential, called the receptor potential. In some sensory systems, the receptor potential itself directly triggers the nerve impulses that travel to the brain or the spinal cord. In other sensory systems, the receptor potential leads to further electrical events, which in turn trigger nerve impulses. This is known as the 'generator potential'.

For any event in the environment, thousands of nerve impulses are generated and conducted to the central nervous system. Since, these impulses travel along many different nerve fibers at slightly different times, they form a pattern of input to the central

nervous system that is the basis for our sensory experience of the event (Figure 2.1).

Sometimes our sensations are not accurate because our sense organs or parts of the nerve complexes, which produce sensations are abnormal, sick or injured. When this happens, the information we receive is inaccurate and our responses become abnormal.

Nursing Implications of Sensory Process

The nurse always has to be alert to malfunctioning of sense organs and abnormal sensations in patients. A sick person reacts to colors. There are some colors, which are soothening. During illness even moderate lighting may irritate and cause discomfort. For patients, who need rest and sleep lights can be subdued. For stimulation and encouragement, warm bright lights can be used. An ageing patient may need a great deal of help than younger patients in order to see visual details.

A sick person is very much averse to loud noises. It increases the patient's irritability. The nurse must avoid loud noises in the ward. Patients with hearing loss require special effort by the nurse to be sure that the instructions are given clearly and questions are answered and understood.

Patients with loss of skin sensation require special attention to prevent further injuries to the skin, while

Figure 2.1: Schematic representation of sensory experience

treating or using treatments or applications of any kind. Bandages, adhesive tapes, plaster casts, heat or cold, even wrinkled linens may be very irritating to a patient. Gentle skin care is necessary to prevent irritation. Patients always should be handled gently and smoothly to avoid pain and discomfort.

In health-care environment, the possible sources for bad odor are: body eliminations, treatment procedures, dressings, drainages and medications. These must be controlled as much as possible by proper ventilation and prompt disposal of waste.

A sick person may not relish his food. Taste can be improved with good mouth care and well prepared, clean and fresh food served in an appetizing way. Those who have dizziness may need help in walking and protection from accidents and injury. Rough, fast or jerky movements cause discomfort and irritation to the patient. Patients should always be handled gently and smoothly to avoid discomfort.
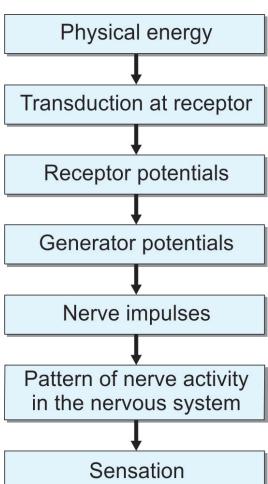
The nurse can use her knowledge concerning the sense organs for her sense training, so that her sensory organs may be trained for observations concerning her functions.

Effectors (Muscular and Glandular Controls of Behavior)

Effectors are termed as the organs of responses. What is received through the sensory organs in the form of sensory input is responded through bodily reactions and motor activities carried out through muscles and glands, particularly the hormones secreted by the ductless glands, which are responsible for most of our behavior patterns. The underactivity or overactivity of these glands, causes deficiency or excess of hormonal secretion. This affects the entire personality makeup of the individual.

Muscles

Our behavior and activity involves movement of different parts of our body. Muscles help the organism to carry out motor activities in order to respond to various stimuli. There are mainly three types of muscles, viz. smooth muscles, cardiac muscles and skeletal muscles. Smooth muscles are primarily concerned with the process of digestion, excretion and blood circulation. Their contraction and relaxation

produce constriction and dilation of blood vessels, thus increasing or decreasing blood pressure.

Cardiac muscles function smoothly in a rhythmic fashion, but when one is emotionally upset, their normal functioning is disturbed causing heart trouble.

Skeletal or striped muscles enable the individual to perform voluntary motor activities ranging from walking to the fine psychomotor skills like typing, etc.

Glands

Glands play an important role in human behavior. They also assist in the digestion of food, elimination of waste products, production and prolongation of emotional states and regulation of metabolism of the body. There are two types of glands:
❶ Duct glands
❷ Ductless or endocrine glands

Duct glands release their chemical secretion through little ducts or tubes into the body cavities or on the surface of the body. Some of the duct glands are:
❖ Salivary glands
❖ Gastric glands
❖ Sweat glands
❖ Lacrimal glands
❖ Kidneys
❖ Sex glands

The duct glands either become overactive or underactive, under the influence of emotions. There is a close and intimate connection between human behavior and the secretions of duct glands.

Ductless or endocrine glands secrete chemical substances called hormones. The hormones are released into the blood stream and are carried to all parts of the body. They play a vital role in the determination of human personality. They affect the development of the body, general metabolism, mental development, development of secondary sex characteristics and emotional behavior. The endocrine glands are:
❖ Pituitary gland
❖ Thyroid gland
❖ Parathyroid gland
❖ Adrenal glands
❖ Male sex glands or gonads
❖ Pancreas

The functioning of all the endocrine or ductless glands exercises a great influence on the various aspects of growth and development of human personality. The underactivity or overactivity of these glands caused by the deficiency or excess of the hormones secreted by them, affects not only the growth and development of the individual, but also the entire behavior. A slight imbalance, of the hormones may cause unusual restlessness, anxiety and weakness. Our physical strength, thinking and reasoning powers and decision making ability all depend upon the health of the glands (Figure 2.2).

Connectors

Connectors or adjusters help in regulating, controlling or coordinating the activities of receptors and effectors. The ability to play a piano, drive a car or hit a tennis ball depends on muscle coordination. It is necessary for the body to provide messages to the muscles to coordinate. These messages are passed through specialized cells called 'neurons'.
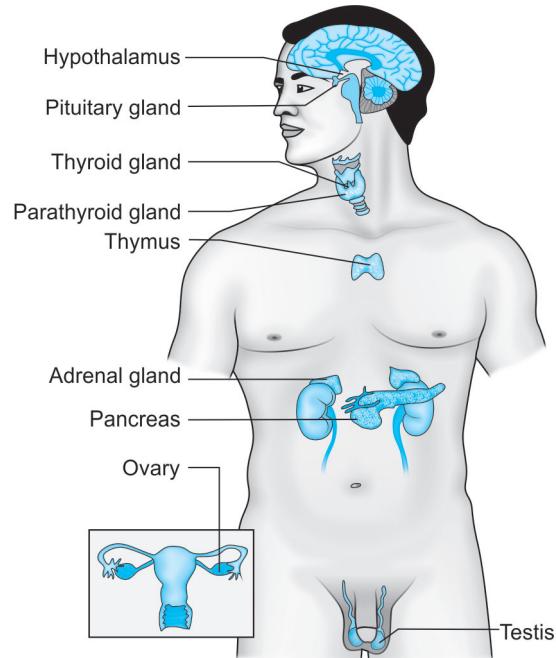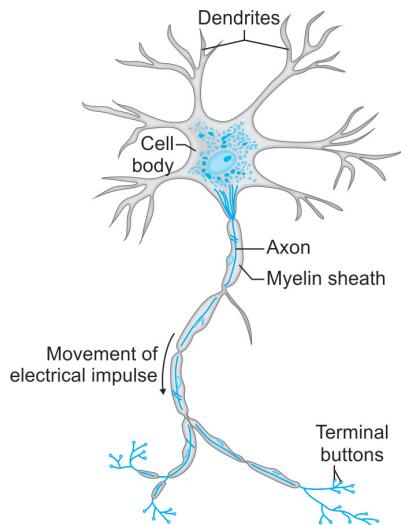
Figure 2.2: Location of major endocrine glands

Neuron

❖ A nerve cell with all its branches is called a neuron. These are the basic elements of the nervous system.
❖ A neuron has a nucleus, a cell body and a cell membrane to enclose the whole cell. There are tiny fibers extending out from the cell body called 'dendrites'.
❖ Their role is to receive messages through electrical impulses from the sense organs or adjacent neurons and carry them to the cell body.
❖ The messages from the cell body further travel the length of a nerve fiber known as the axon (Figure 2.3).
❖ A group of axons, bundled together like parallel wires in an electrical cable, is referred to as a nerve.
❖ The axon (but certainly not all of them) is surrounded by a fatty covering called the 'myelin sheath'. It serves to increase the velocity, with which the electrical impulses travel through the axons.
❖ There are three types of neurons.
   ❶ *Sensory neurons*—they help in the process of sensation and perception.
   ❷ *Motor neurons*—they are responsible for physical movements and activation of glands.
   ❸ *Interneurons or association neurons*—they carry signals in the form of memories and thoughts and add reflex or automatic activities.

Neural Impulse

❖ Neurons are the receivers and transmitters of messages. These messages are always in the form of electrochemical impulses.
❖ A neuron in its resting position is supposed to maintain a sort of electrical equilibrium, i.e. state of polarization. This state of polarization may be disturbed on account of the effect of trigger-like action of a stimulus applied to the membrane. It causes a sudden change in the electrical potentiality of the neuron. It gets depolarized and neural impulse is initiated. These impulses are carried along the neuron axons.

Figure 2.3: Structure of neuron

❖ There is a fluid-filled space called the synapse between the axon of the neuron and the receiving dendrite of the next neuron.
❖ Enlargements of the axon endings of transmitting neurons called boutons, contain neurotransmitter chemicals, which are stored in small vesicles.
❖ A nerve impulse reaching these boutons causes a neurotransmitter to be released into the synapse. With the help of the release of a neurotransmitter into the synapse, one neuron is capable of sending its message on to many other neurons.
❖ It makes it possible for a single neuron to receive messages from thousands of other neurons.

Synapse

❶ Information is transmitted through the body from one neuron to another. The junction between two neurons is called a synapse.
❷ The small space between the axon terminals of one neuron and the cell body or dendrites of another is called the synaptic cleft.
❸ Neurons conducting impulses toward the synapse are called presynaptic neurons and those conducting impulses away are called postsynaptic neurons.

❹ A chemical, called a neurotransmitter is stored in the axon terminals of the presynaptic neuron. An electrical impulse through the neuron causes the release of this neurotransmitter into the synaptic cleft.

❺ The neurotransmitter then diffuses across the synaptic cleft and combines with receptor sites that are situated on the cell membrane of the postsynaptic neuron.

❻ The cell body or dendrite of the postsynaptic neuron also contains a chemical inactivator that is specific to the neurotransmitter that has been released by the presynaptic neuron.

❼ When the synaptic transmission is complete, the chemical inactivation quickly inactivates the neurotransmitter to prevent unwanted continuous impulses.

Neurotransmitters

❶ Neurotransmitters play an essential function in the role of human emotion and behavior. These are chemicals that convey information across synaptic cleft to neighboring target cells.

❷ They are stored in small vesicles in the axon terminals of neurons.

❸ When electrical impulse reaches this point, the neurotransmitters are released from the vesicles.

❹ They cross the synaptic cleft and bind with receptor sites on the cell body of dendrites of the adjacent neuron to allow the impulse to continue its course or to prevent the impulse from continuing.

❺ After the neurotransmitter has performed its function in the synapse, it either returns to the vesicles to be stored and used again or it is inactivated and dissolved by enzymes.

❻ The process of being stored for reuse is called reuptake.

❼ Deficiency or an excess of a neurotransmitter can produce severe behavioral disorders. Some major neurotransmitters and their functions are given in Table 2.2.

NERVOUS SYSTEM

The nervous system is the master controlling, communicating and regulatory system in the body. Nervous system controls and coordinates all essential functions of the human body. It is the center of all mental activity including thought, learning and memory. Together with the endocrine system, the nervous system is responsible for regulating and maintaining homeostasis.
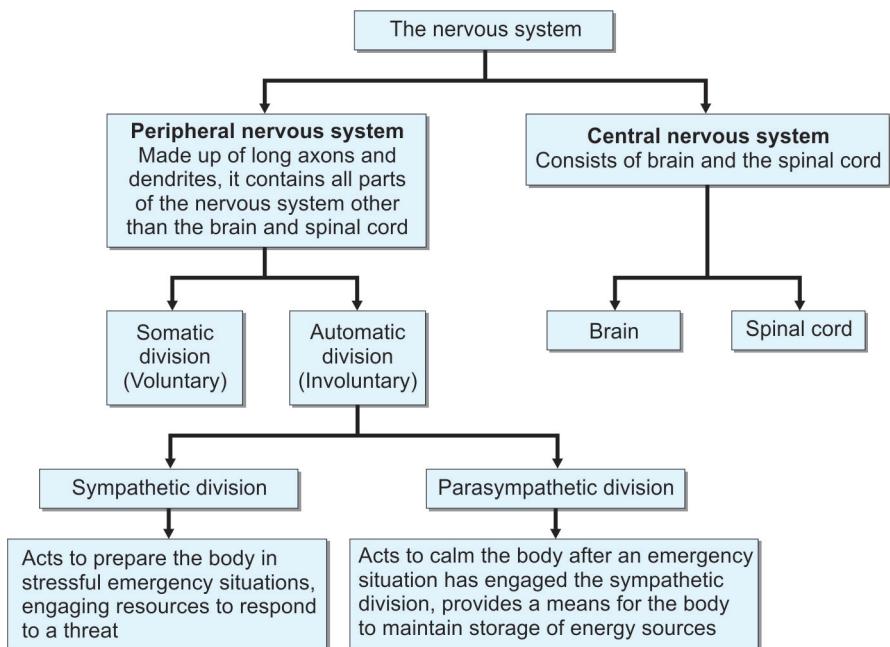
The human nervous system can be divided into two parts: the central nervous system and the peripheral nervous system. While the central nervous system constitutes of the brain and the spinal cord, the peripheral nervous system constitutes of the somatic system and the autonomic system (Figure 2.4).

Central Nervous System

Central nervous system (CNS) consists of brain and the spinal cord, which act as the integrating

Table 2.2: Functions of neurotransmitters

Neurotransmitter	Function
Acetylcholine	Regulates muscle movement and cognitive functioning
Glutamate	Helps in memory process
Gamma aminobutyric acid (GABA)	Moderates eating, aggression and sleeping
Dopamine	Regulates movements and coordination, emotions and voluntary decision making ability. Deficiency of dopamine causes Parkinson's disease, overproduction causes mental disorders like schizophrenia
Serotonin	Regulates sleep, eating, mood and pain
Endorphins	Reduces pain and pleasurable feelings

Figure 2.4: Schematic diagram of the relationship between parts of the nervous system
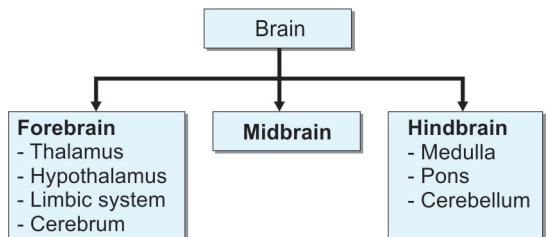
and command centers of the nervous system. They interpret incoming sensory information and issue instructions based on past experience and current conditions.

Brain is composed of three main divisions: the forebrain, midbrain and hindbrain (Figure 2.5).

Forebrain

Its important structures are thalamus, hypothalamus, limbic system and the cerebrum. All sensory impulses pass through from *thalamus* to the higher centers, therefore it is usually known as the relay station. In addition, the thalamus has some control over the autonomic nervous system and also plays a role in the control of sleep and alertness.

Hypothalamus lies below the thalamus. It exerts a key influence on all kind of emotional as well as motivational behavior. Centers in the hypothalamus have control over the important body processes like eating, drinking, sleeping, temperature control and sex. It also has control over the activities of pituitary gland.

Figure 2.5: Main divisions of the brain

Limbic system consists of structures in the thalamus, hypothalamus and cerebrum, which form a ring around the lower part of the forebrain. Major structures within this system include the olfactory bulb, septal nuclei, hippocampus, amygdala and cingulate gyrus of the cerebral cortex. The limbic system often called the emotional brain, functions in emotional aspects of behavior related to survival, memory, smell, pleasure and pain, rage and aggression, affection, sexual desire etc.

Cerebrum is the most complex and largest part of the brain. The cerebrum is covered by a thick layer of

tightly packed neurons called the cerebral cortex. It is divided into two hemispheres; the left and right hemispheres.

Right and Left Hemispheres, Association Cortex

Cerebral cortex is responsible for many higher order functions like language and information processing. The cerebral cortex is divided into sensory, motor and association areas (Table 2.3).

❖ Sensory area receives sensory input.

❖ Motor area controls movement of muscles.

❖ Association area is involved with more complex functions such as writing.

❖ Each cerebral hemisphere is divided into four lobes; frontal, parietal, occipital and temporal lobes. The different parts of the cerebrum are connected with different mental functions. The visual area lying in the occipital lobe is connected with the visual organs or eye through the optic nerve. It is the seat of visual sensations.

❖ The auditory area lies in the temporal lobe and is connected with the auditory organs or ears through the auditory nerves. It is the seat of auditory sensations and also involved in memory.

❖ The parietal lobe lies in the upper rear portion of the brain and is connected with the information about special relationship and structure.

❖ Frontal lobes contain several parts and are concerned with organizing and planning our actions, learning new tasks, generating motivation and regulation of behavior (Figure 2.6 and Table 2.4).

The cortex is divided into two hemispheres, left and right connected by a thick layer of cells called the corpus callosum. Some specific differences between the two hemispheres are presented in Table 2.5 and Figure 2.7.

Association Cortex

Association cortex deals with more complex, integrative functions such as memory, emotions, reasoning, will, judgment, personality traits and intelligence. The association areas are:

❖ *Somatosensory association areas*: It permits to determine the exact shape and texture of an object without looking at it.

❖ *Visual association areas*: It relates present to past, visual experiences with recognition and evaluation of what is seen.

❖ *Auditory association areas*: It determines if a sound is a speech, music or noise (Figure 2.8).

Midbrain

Midbrain is concerned with the relaying of messages particularly those related to hearing and sight to higher brain centers. One of its important structures is known as reticular activating system (RAS).

Table 2.3: Cortical areas and its functions

Cortical area	Function
Primary motor cortex	Initiation of voluntary movement
Primary somatosensory cortex	Receives tactile information, pain, pressure, position, movement and temperature
Motor association cortex	Coordination of complex movements
Speech center (Broca's area)	Speech production and articulation
Auditory cortex	Auditory perception and hearing
Auditory association area	Complex processing of auditory information
Sensory association area	Processing of multisensorial information
Visual association area	Primary visual perception
Wernicke's area	Comprehension of spoken language

Table 2.4: Lobes of brain and their functions

Lobe	Function
Occipital	Visual processing
Parietal	Movement, orientation, calculation, recognition
Temporal	Sound and speech processing, aspects of memory
Frontal	Thinking, conceptualization, planning
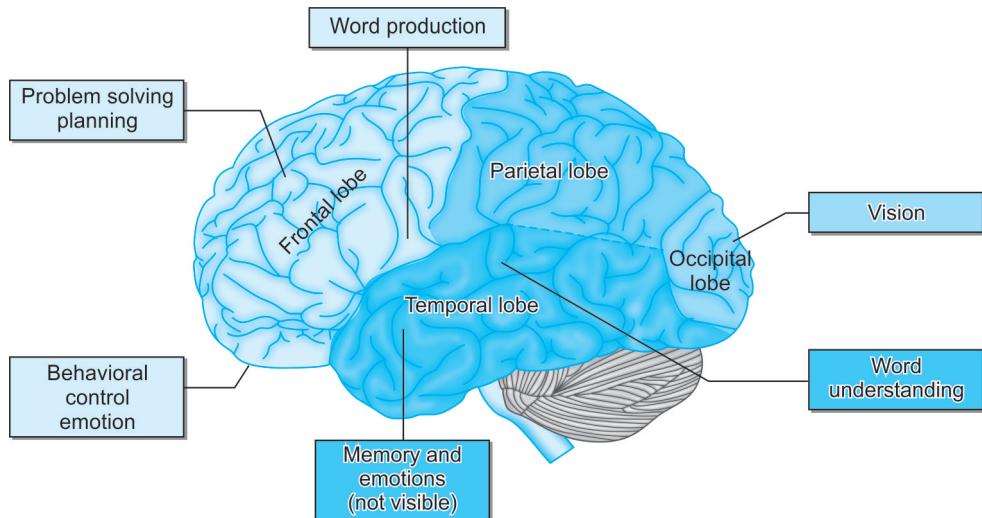
Figure 2.6: Lobes of brain

Table 2.5: Activities of right and left hemispheres

Activities	Right hemisphere	Left hemisphere
Specialties	• Copying of designs • Discrimination of shapes • Reading • Music • Holistic processing • Understanding metaphor • Expressing emotions	• Language skills • Skilled movements
Emotions	• Negative emotions	• Positive emotions
Neurotransmitters	• Higher levels of norepinephrine	• Higher levels of dopamine
Gray matter and white matter ratio	• More white matter on right	• More gray matter on the left
Shared	• Sensations on both sides of the face • Sound perceived by both ears • Pain • Hunger • Position	
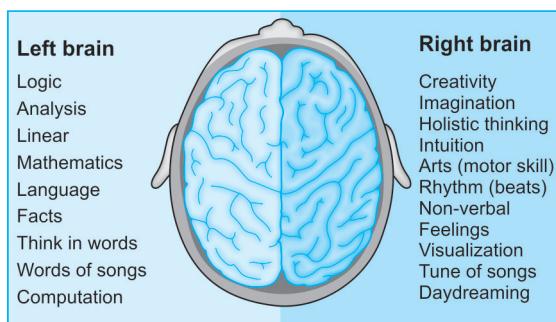
Figure 2.7: Left and right brains

With the help of this structure an individual is able to decide. which impulses should be registered consciously and, which should be rejected.

Hindbrain

Hindbrain is composed of three structures the medulla, pons and cerebellum. 'Medulla' controls breathing and many important reflexes, such as those that help us to maintain our upright postures. It also regulates the highly complex processes like digestion, respiration and circulation. The 'pons'

assist in breathing, transmitting impulses from the cerebellum to the higher brain regions and in coordinating the activities of both sides of the brain. 'Cerebellum' is responsible for body balance and the coordination of body movements like dancing, typing, playing, etc. (Figure 2.9).

Spinal Cord

Spinal cord works as a channel of communication from and to the brain. It is a rope-like structure, made up of long round nerve fibers. It also works as an
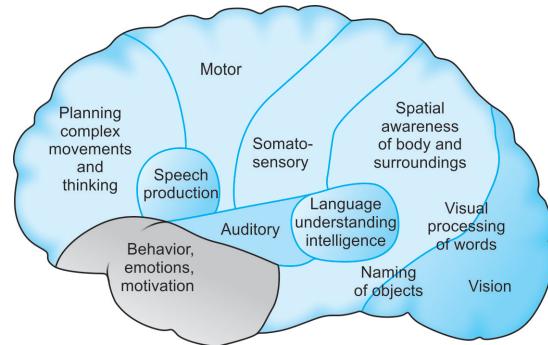
Figure 2.8: Localization of mental functions in the brain

organ for effective reflex actions like withdrawal of the hand when something is hot. These reflex actions are almost automatic in nature.

Peripheral Nervous System

The nerve tissues lying outside the bony case of the CNS come in the region of the peripheral nervous system. It consists of a network of nerves, which helps in passing the sense impressions to the CNS as well as in conveying the orders of the CNS to the muscles. This peripheral nervous system is subdivided into two parts, the somatic system and the autonomic system.

The somatic system is both a sensory and a motor system. The autonomic system is only a motor system consisting of two divisions, the sympathetic and parasympathetic system. The sympathetic system is connected to the spinal cord and carries messages to the muscles and glands particularly in stress situations to prepare for an emergency. The parasympathetic system is connected to the brain and to the lower portion of the spinal cord. It tends to be active when we are calm and relaxed. The messages conveyed by the nerve fibers of this system direct the
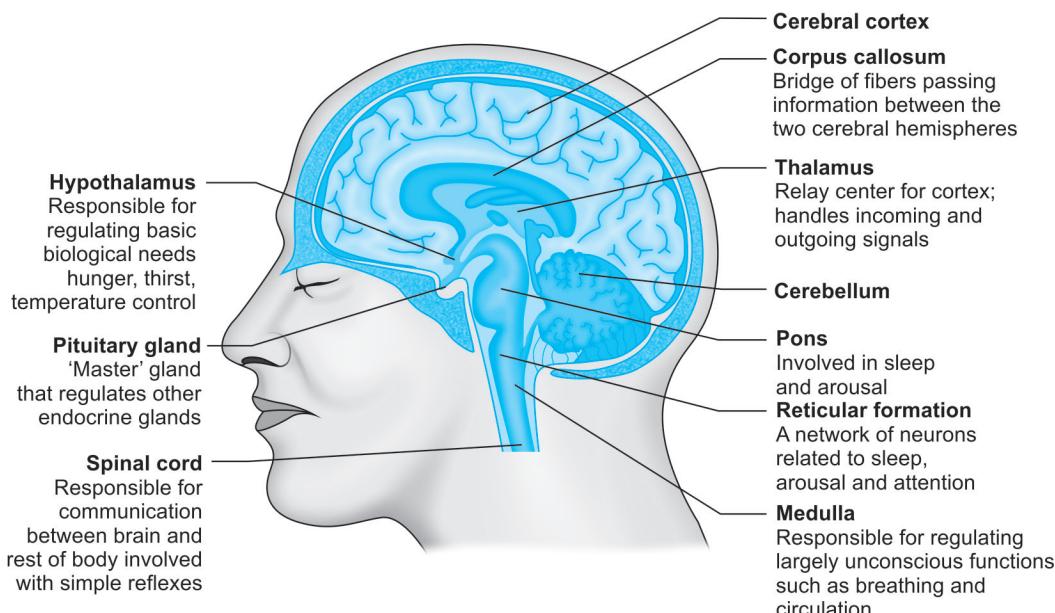
Figure 2.9: Major structures in the brain

organs to do just the opposite of what the sympathetic system had done. It directs the body organs to return to the normal state after the emergency has passed. The sympathetic and parasympathetic divisions of the autonomic nervous system work in close co-ordination for maintaining the equilibrium of the body function.

Nature of Behavior of an Organism, Integrated Responses

Integrative Function of the Nervous System

The various activities of the nervous system can be grouped together as three general, overlapping functions.

❶ Sensory
❷ Integrative
❸ Motor

Millions of sensory receptors detect changes, called stimuli, which occur inside and outside the body. They monitor such things as temperature, light and sound from the external environment. Inside the body, the internal environment, receptors detect variations in pressure, pH, carbon dioxide concentration and the levels of various electrolytes. All of this gathered information is called sensory input.

Sensory input is converted into electrical signals called nerve impulses that are transmitted to the brain. There the signals are brought together to create sensations, to produce thoughts or to add to memory; decisions are made each moment based on sensory input. This is integration.

Based on the sensory input and integration the nervous system responds by sending signals to muscles, causing them to contract or to glands causing them to produce secretions. Muscles and glands are called effectors, because they cause an effect in response to detections from the nervous system. This is the motor output or motor function.

The cerebral cortex has primary areas, which control the incoming sensory stimuli and the outgoing motor responses. An individual is able to adjust himself effectively to the environment, because the various nerve impulses are systematically integrated by the brain. There are millions of nerve fibers, which connect the various neurons of the brain.

The connecting nerve fibers are known as 'associate fibers'. The associate fibers are the foundations of memory, language, reasoning and other higher mental processes. There is great coordination between the various parts of the brain.

Autonomic nervous system is autonomous and works independent of voluntary control. It is made up of nerves connecting with the glands and smooth muscles, which are involved in respiration, circulation and digestion. These processes go on automatically without our knowledge. The system operates actively during emotional states. When we are well, physical and mental activities are integrated. We receive stimuli and are able to think, learn and remember. We are able to experience the various types of feelings. In illness, the normal healthy functioning of the body and its various organs is upset. Illness affects the threshold levels of our nervous system, may cause abnormal reactions to ordinary stimuli. It may adversely affect our coordination, may disturb our thinking processes. Even the process of association is adversely affected, resulting in funny and stray thoughts. Specific diseases and conditions have their own effects, some causing permanent damage to the nervous system and others causing only a temporary damage.

Importance of knowledge of the Nervous System and Glands to a Nurse

❖ It helps the nurse to understand the physiological basis of patient behavior.
❖ It helps the nurse to understand how glandular secretions influence personality.
❖ It helps the nurse to understand the various diseases of nervous system and glands and their effect on human behavior.

REVIEW QUESTIONS

Long Essays

1. Explain about the physiological basis of behavior. (*Apr 2006*)
2. Discuss endocrine system and its influence on development of behavior. (*Mar 2009*)

Short Essays

1. Importance of environment in behavior change. (*Mar 2012*)
2. Write a short note on sense organ. (*Apr 2006*)
3. What is the role of heredity and environment in shaping behavior? (*April 2005, 2004, Nov 2003*)
4. Genetics and behavior. (*Mar 2011*)
5. Heredity and environment (*Mar 2012, Mar 2009*)

Short Answers

1. Principles of heredity. (*Oct 2007*)
2. Genes. (*May 2007*)

3. Integrated responses. (*Oct 2007*)
4. Heredity. (*Mar 2011, May 2007, Nov 2003*)
5. Chromosomes. (*Oct 2006*)
6. Environment. (*Apr 2006*)
7. Identical and fraternal twins. (*Apr 2006*)
8. List of endocrine glands. (*Apr 2006*)
9. Name any four endocrine glands. (*2004, Nov 2003*)
10. What are 'endocrine glands'? (*2004*)
11. Principles of heredity. (*Sep 2011*)
12. Glands. (*Aug 2010*)
13. Parts of neuron. (*Mar 2009*)
14. Levels of consciousness. (*Mar 2009*)
15. Meiosis. (*Sep 2009*)

Cognitive Processes

ATTENTION

Attention is the focus of consciousness on a particular object or idea at a particular time, to the exclusion of other objects or ideas.

Definitions

Attention is defined as a process, which compels the individual to select some particular stimulus according to his interest and attitude out of the multiplicity of stimuli present in the environment.

(Sharma RN–1967)

Attention is the concentration of consciousness upon one object rather than upon another.

(Dumville–1938)

Types of Attention

- ❖ Voluntary (volitional)
- ❖ Involuntary (non-volitional)

Voluntary Attention

Voluntary attention demands a conscious effort on our part. For example, solving an assigned problem in Mathematics, answering a question in an examination needs voluntary attention. It is further subdivided into two categories:

- ❖ Implicit volitional attention
- ❖ Explicit volitional attention

Implicit volitional attention: A single act of will is responsible for arousing attention. For example, a teacher assigns practice work to a child and warns of punishment, if not completed. This can make him

exercise his will power, attend to the assigned task and finish it properly.

Explicit volitional attention: Attention is obtained by repeated acts of will. One has to struggle hard for keeping oneself attentive; it requires a strong will power, keen attention and strong motives for accomplishment of the task. For example, the attention paid during examination days for securing good grades.

Involuntary Attention

This type of attention is aroused without the play of will or without making a conscious effort on our part. For example, we give involuntary attention to loud sounds, bright lights and strong odors, etc.

- ❖ Involuntary or non-volitional attention aroused by the instincts is called enforced non-volitional attention. For example, giving attention out of curiosity.
- ❖ Non-volitional attention aroused by sentiments is called spontaneous non-volitional attention. For example, we give somewhat automatic or spontaneous attention towards some objects, idea, person, around which our sentiments are formed.

Determinants of Attention (or) Methods of Arousing Attention (or) Factors and Conditions Favorable for Capturing Attention

Certain factors produce and control the condition of attention in a person. These factors are classified

as, external (objective)–those found in one's environment and internal (subjective)–those within the person himself. The methods of securing attention are, based upon these external and internal factors of attention.

External Factors or Conditions

Nature of the stimulus: All types of stimuli are not able to evoke the same degree of attention. An attractive stimulus should always be chosen for capturing maximum attention. A picture attracts attention more readily than words. Among the pictures, the pictures of human being (especially beautiful woman or handsome men) capture more attention than those of animals or objects. It has been found that in comparison with other sensations, color and sound attract more attention.

Intensity of the stimulus: In comparison to a weak stimulus, an intense stimulus attracts more attention of an individual. Our attention becomes easily directed to a loud sound, a bright light or a strong smell.

Size of the stimulus: As a general rule bigger size objects in the environment are more likely to catch our attention than a small object. A small size on a very big background also attracts attention.

Contrast, change and novelty: Change and variety strike attention more easily than routine. The use of maps and charts suddenly attracts the student's attention, when compared to the routine verbal talk. We do not notice the ticking on the watch but it arrests our attention, as soon as it stops.

Any change in the stimulation to which we have become adapted immediately captures our attention.

Novelty means something new or different. It attracts attention very easily and is closely related to change. A new building, a new teacher are all examples of common novelty. So it is always better to introduce a change or novelty for breaking monotony and securing attention.

Location of the stimulus: The location of the stimulus also affects attention. In the case of visual stimuli, the most effective location is to be just in front of the eyes. For example, it has been found in experiments that advertisements given on the front page or on the upper half of any page attract more attention.

Repetition of the stimulus: A repeated stimulus attracts our attention. We may ignore a stimulus at first instance but, when it is repeated several times, it captures our attention. A mis-spelt word is more likely to be noticed, if it occurs twice in the same paragraph than if it occurs only once. But this practice of repetition should be carefully used. Too much repetition of a stimulus may bring diminishing returns.

Movement of the stimulus: A moving stimulus catches our attention more quickly than a stimulus that does not move. This is why the pictures on a television screen or those in a cinema hold our attention for hours at time.

Definite form of the object: A sharply defined object attracts our attention more than a broad indefinite object. A figure attracts more attention than the background. A very clearly defined object attracts our attention more than a vaguely indefinite object.

Isolation of the stimulus: Isolation is an important external determinant of attention. A student sitting alone in the corner of the class is seen first (attracts more attention than others).

Internal Factors or Conditions

A person's attention to a stimulus depends not only upon the characteristics of the stimulus or the favorable environmental conditions but also upon his interest, motives, basic needs and urges, etc.

Interest and attention: Interest is a very helpful factor in securing attention. We attend to objects, in which we are interested than those in which we are not interested.

Motives: The basic drives and urges of the individual are very important in securing attention. Thirst, hunger, sex, curiosity, fear are some of the important motives that exercise definite influence upon attention. When hungry we may attend to even distasteful food but while our belly is full we may not attend to even the tastiest one.

Mental set-up: A person always attends to those objects, towards which his mind has set. For example, on the day of examination the slightest thing concerning the examination easily attracts the attention of the students.

Past experience: Learning and previous experience facilitate attention. If we know by our past experience that a particular person is sincere to us, we pay attention to what ever he advices.

Emotion: The emotional state, in which a person determines attention. For example, a person attends only to bad qualities of his enemy.

Habit: Habit is also an important determinant of attention. A man develops the habit of attending to necessary and desirable things and on the other hand also develops habit of not attending to unnecessary and undesirable things.

Aim: Every man has some immediate and ultimate aims. So a student whose aim is to pass the examination will at once attend to the textbooks or notes.

Meaning: In comparison to meaningless stimuli, meaningful stimulus attracts more attention.

Disposition (natural tendency) and temperament: Both are important internal factors which attract attention. For example, a man having a religious disposition and spiritual temperament will attend to religious matters.

Besides the conditions described above many other factors influence attention, such as heredity, education, family, school, society, training etc. which have a wide influence on attention.

Duration and Degree of Attention

Span of Attention

The maximum amount of material that can be attended in one period of attention is called span of attention. This can be visual attention or auditory attention.

Span of visual attention: Experiments have been carried out to measure the span of visual attention by making brief exposures to a number of objects. The time of exposure is very short, ranging from 1/100 to 1/5 of a second. The objects exposed to the eye are simple like dots, lines, letters or complex words or triangles, etc. The mind can attend to only four or five separate units if the items are not grouped into familiar units. But if the items are combined into meaningful wholes, for instance, letters are arranged into words, a large number of items can be perceived at once.

Span of auditory attention: The number of auditory impressions perceived at a single instance is slightly greater. An adult can perceive eight sounds given rapidly in succession. But when sounds are given in a rhythm, a much larger number of sounds can be perceived.

Duration of Attention

It refers to, how long one can attend to an object without a break. If we attend to a single, simple object for instance, a dot, it will remain in the focus of our consciousness for only a second at the most, then something in the margin will crowd it out or memory of a past event will intrude.

The duration of attention depends upon the nature of the material, the interest of the observer, and other conditions.

Sustained Attention (Act of Fixation of Mind)

To sustain attention, is to concentrate one's activity continuously upon some object or a happening or a problem. The individual attention always remains on track and the activity proceeds systematically without any serious distraction. All internal as well as external factors of getting attention can be helpful in this track.

Shifting Attention

While paying attention towards an object or an event, it is not possible to hold attention continuously with the same intensity for a longer duration. It is constantly shifting from one object to another, from one aspect of the situation to another. We can perform only one voluntary act at a time and not two or more acts at a time. However, we can quickly shift attention from one voluntary act to another.

Division of Attention

Division of attention means to attend to two or more tasks simultaneously. Psychologists say we cannot attend to two things at a given time and there is no possibility of division of attention.

The reason for paying attention to more than one task at a given time can be:

❖ In performing two tasks simultaneously one of the two activities requires no attention.
❖ Attention rapidly shifts from one task to the other.

ALTERATIONS IN ATTENTION (DISTRACTION)

Distraction means any stimulus whose presence interferes with the process of attention or draws away attention from the object which we wish to attend.

(HR Bhatia—1968)

These alterations in attention reduce the efficiency of work.

Sources of Distraction

The sources of distraction vary very much. They affect the individual according to his own mental set-up and personality characteristics. The conditions which cause distraction to an individual may prove helpful in sustaining attention to others.

❖ External factors/environmental factors
❖ Internal factors

External Factors

Noise, music, improper lighting, uncomfortable seats, unfavorable temperature, inadequate ventilation, defective methods of teaching, defective voice of the teacher, etc.

Internal Factors

Emotional disturbances, ill health, boredom, lack of motivation, fatigue, etc.

The nurse should take great care to get away all possible causes of distractions in working area so as to sustain attention.

Types of Distraction

Continuous Distraction

The distraction is continuous in nature. For example, the sound of radio played continuously, the noise at the market place, etc. Experiments have shown that adjustment to continuous distraction takes place quickly.

Discontinuous Distraction

It is irregular. For example, the hearing of somebody's voice every now and then. It interferes with work because of the impossibility of adjustment.

Some major means of removing distractions are:

❖ Being active in work
❖ Disregard for distraction
❖ Making the distraction a part of the work

PERCEPTION

When our sense organs come in contact with the world and are stimulated by external stimuli and receive sensations, it results in perception. Sensation precedes perception. Sensation is the initial response of an individual to a stimulus. Perception is the interpretation of sensory stimuli, which reaches the sense organs and the brain. Interpretation gives meaning to sensation and we become aware of objects.

Definitions

Perception is the experience of objects, events or relationships obtained by extracting information from and interpreting sensations.

(JH Jackson, O Desiderato and DB Howieson—1976)

Perception is an individual's awareness aspect of behavior, for it is the way each person processes the raw data he receives from the environment, into meaningful patterns.

(RE Silverman—1976)
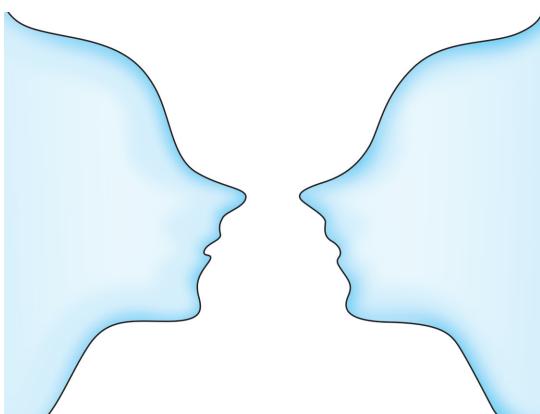
Principles of Perception (Perceptual Organization)

Individuals tend to organize environmental stimuli into some meaningful patterns or whole according to certain principles. Some of the important principles are:

Principle of Figure-Ground Relationship

According to principle of figure-ground relationship, a figure is perceived in relationship to its background. The perception of the object or figure in terms of color, size, shape and intensity, etc. depends upon the figure-ground relationship. We perceive a figure against a background or background against a figure depending upon the characteristics of the perceiver as well as the relative strength of the figure or ground. A proper figure-ground relationship is quite important from the angle of perception of the figure or the ground. In case, where such relationship does not exist we may witness ambiguity in terms of clear perception.

Sensory experiences other than visual experiences may also be perceived as figure and ground. Sometimes, when there are various parts within the general field of awareness, having equally balanced qualities, there could be a conflict and two or more figures may be formed. In such a case there will be a shifting of the ground and the figure. One part may be the ground at one moment and at the next moment the ground may become the figure. In this picture either the black faces or the white vase may become the figure. Moreover, it is impossible to perceive both figure and background at the same time (Figure 3.1).

Principle of Closure

According to principle of closure, while confronting an incomplete pattern one tends to complete or close the pattern or fill in sensory gaps and perceive it as a meaningful whole. This type of organization is extremely helpful in making valuable interpretation of various incomplete objects, patterns or stimuli present in our environment. For example, the lines in the figure may be well percieved as letters W, M and D (Figure 3.2).

Principle of Grouping
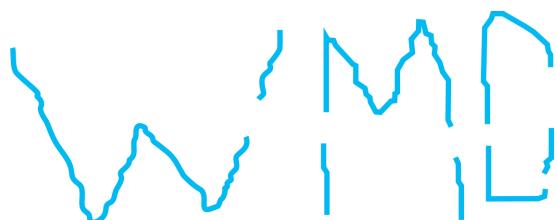
Principle of grouping refers to a tendency to perceive stimuli in some organized meaningful patterns by grouping them on some solid basis like similarity, proximity and continuity.

On the basis of similarity, objects or stimuli which look alike are usually perceived as a unit. For example, in the following figure vertical rows of black dots and blank dots may be seen to form separate groups in terms of their perception (Figure 3.3).

On proximity basis objects or stimuli, which appear close to one another are likely to be perceived as belonging to the same group.

Example: We see three sets of two lines each and not six separate lines (Figure 3.4):

❖ The objects or stimuli are perceived as a unit or group on the basis of their continuity. Our attention is being held more by a continuous pattern rather than discontinuous ones.

Figure 3.1: Figure-ground relationship

Figure 3.2: Principle of closure

Example: We see a curved line and a straight line. We do not see a straight line with small semi-circles above and below (Figure 3.5).

Principle of Simplicity

We perceive the simplest possible pattern because they enable the perceiver to perceive the whole from some of its parts.

Principle of Contour

A contour is said to be a boundary between a figure and its ground. The degree of the quality of this contour separating the figure from the ground is responsible for enabling us to organize stimuli or objects into meaningful patterns.
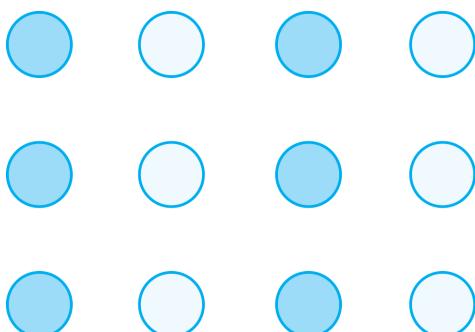
Figure 3.3
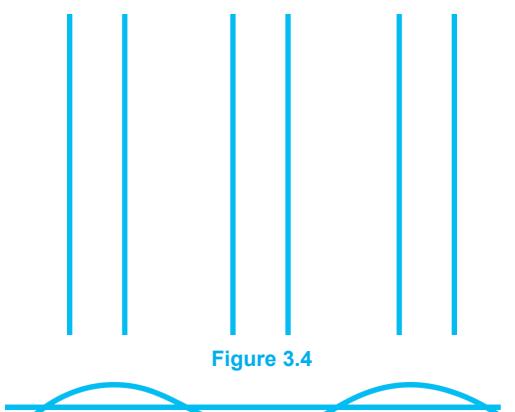
Figure 3.4

Figure 3.5

Figures 3.3 to 3.5: Principle of grouping

Principle of Context

Perceptual organization is also governed by the principle of context, i.e. an examiner may award higher marks to the same answer book in a pleasant context than in an unpleasant one.

Principle of Contrast

Perceptual organization is very much affected through contrast effects as the stimuli that are in sharp contrast to nearby stimuli may draw our maximum attention and carry different perceptual affects.

Example: Here the surrounding circles in A make the central circle seem larger than the central circle in B, even though the two are of the same size (Figure 3.6).

Principle of Adaptability

The perceptual organization for some stimuli depends upon the adaptability of the perceiver to perceive similar stimuli. An individual who adapts himself to work before an intense bright light will perceive normal sunlight as quite dim.

Factors Affecting Perception

Sense Organs

Perception depends upon the sense organs or receptors, on which the stimuli act and sensory neurons, which transmit the nerve current from the receptors to the sensory area of the brain. For example, if cones are not developed in the retina, color cannot be perceived.

Figure 3.6: Principle of contrast

Brain

Perception depends upon the functioning capacity of sensory area and the association areas of the brain. For example, if the auditory area is destroyed we cannot have auditory perception.

Memory Images of the Past Experience

Memory images help us in the comprehension of the object or stimulus before us. Generally, perception involves the integration of sensory experience in the light of past experience and present psychological conditions. Experiments have shown that whenever we come in contact with new stimuli we are inclined to interpret them in terms of our experiences with similar stimuli in the past. For example, a child has come in contact with a horse for the first time. He has already seen a cow. When he is asked what it (horse) is, he may say it is a cow or like a cow.

Personal Interests and Mind Set

We perceive those things quickly and clearly, which are concerned with our interests and mind set.

Acquired Interests

Our acquired interests also determine the object or objects, which we perceive. A person, who has a hobby of collecting stamps will quickly notice any new stamp on a letter.

Needs and Desires

Our needs or desires also modify our perceptions. Besides these, our beliefs, opinions and cultural ideals also modify our perception of things, situations and objects.

In addition to the above functional factors the structural factors, which affect perception are nature of physical stimuli and their arrangements and the neural effects they evoke in the nervous system of the individual.

Errors in Perception

Perceptual processes enable an individual to perceive things accurately and facilitate smooth functioning. However, some errors creep into this process under certain circumstances leading to impaired perceptions, these are: illusions and hallucinations.

Illusion

Illusion is a misinterpretation of actual perception. When the interpretation of a particular stimulus goes wrong, it gives rise to a wrong perception or illusion. For example, a rope in the dark is perceived as a snake.

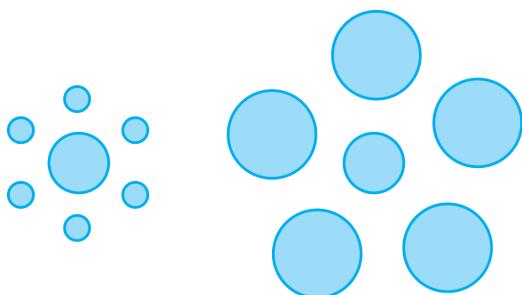Illusions are caused by inadequacies of our sense organs, distance of the object from the sense-organ which perceives it, misleading stimuli in the environment, our perceived notions and expectancy.

Hallucination

Hallucination is identified as one of the major errors of perception. These are sensory perceptions, in the absence of any corresponding external sensory stimuli. Hallucinations are imaginary perceptions, in which one sees or hears something that is not seen or heard by others around him. An alcoholic may see "pink elephants", a paranoid schizophrenic may hear voices, experience foul odors in the absence of any sensory stimulation. Hallucinations are more common in mentally ill people.

Depending upon the particular sensory modality people experience different types of hallucinations, for example, visual, auditory, kinesthetic, olfactory and gestatory.

Accurate perception is absolutely necessary in order to record an accurate observation. It is possible to make errors in perception due to a number of reasons.

Causes for Inaccurate Perception

❶ *Defective functioning of sense organs*: For example, myopia, deafness, anesthesia or other sensory defects can cause inaccurate perception.

❷ *Inadequate stimulus*: Our receptors may not be stimulated adequately, if stimuli were not strong enough, vague or indefinite. A very weak light or soft sound will make it difficult to perceive correctly.

❸ *Too many stimuli at one time*: When too many stimuli are present at one given time, perceiving

one stimulus correctly is difficult. For example, in the presence of loud noises, it may be difficult to perceive the call of a patient.

❹ *Poor health*: Sense organs cannot function adequately and correctly as a result of illness. For this reason, the perceptions of patients may be inaccurate.

❺ *Limited attention*: If we try to apprehend more things than we can at a time, we are liable to have an inaccurate perception.

❻ *Figure merges in the ground*: Sometimes objects are perceived with difficulty because they resemble their surroundings. For example, a white patch is difficult to detect on a white wall. The nurse learns to perceive sign of illness or wellness in patients only, when she learns what these signs are.

❼ *Guidance*: Perception is inaccurate, when we do not know what should be perceived.

LEARNING

One of the most important characteristics of human beings is their capacity to learn. An individual starts learning immediately after his birth or in a strict sense even earlier in the womb of the mother. Our personality–our habits, skills, knowledge, attitudes, interests and character is largely the result of learning. It is the key process in human behavior. All our adaptive as well as maladaptive, our cognitive as well as affective behavior are formed by learning processes. These are of vital importance in helping the individual to adapt to his changing environment.

Definitions

Learning is the acquisition of habits, knowledge and attitudes. It involves new ways of doing things and it operates on an individual's attempts to overcome obstacles or to adjust to new situations. It represents progressive changes in behavior. It enables him to satisfy interests to attain a goal.

(Crow and Crow—1973)

The term learning covers every modification in behavior to meet environmental requirements.

(Gardner Murphy—1968)

Nature of Learning

❶ Learning is a process and not a product.

❷ It involves all those experiences and trainings of an individual (right from his birth), which helps him to produce change in his behavior.

❸ Learning brings changes in the behavior but it does not necessarily mean these changes always bring improvement or development in the positive direction. One has equal chances to drift to the debit side of human personality.

❹ Learning prepares an individual for the necessary adjustment and adaptation.

❺ All learning is purposeful and goal-oriented. In case there is no purpose, there would hardly be any learning.

❻ The scope of learning is too wide to explain in words. It is a very comprehensive process, which covers nearly all the domains-conative, cognitive and affective of human behavior.

❼ Learning is universal and continuous. Every creature that lives learns. In human beings it is not limited to any age, sex, race or culture. It is a continuous never-ending process that goes from womb-to-tomb.

❽ Learning does not include the changes in behavior on account of maturation, fatigue, illness or drugs, etc.

❾ Learning is transferable from one situation to another.

❿ Learning helps in the proper growth and development.

⓫ Learning helps in the balanced development of personality.

Types of Learning

Stimulus Response Learning

Conditioning learning involves the conditioning of respondent behavior through a process of stimulus association and substitution. In this learning establishment of connections between sensory systems and motor systems will occur.

❶ *Classical conditioning*: Association between two stimuli viz. unconditioned stimulus (US), and conditioned stimulus (CS).

❷ *Instrumental conditioning*: Association between a response and a stimulus; allows an organism to adjust its behavior according to the consequences of that behavior. For example, reinforcement (positive, negative) and punishment.

Perception Learning

Sight, hearing, taste, smell and touch are considered as the five gateways of knowledge. All knowledge is based on sense perception. The individual receives information from sense organs and interprets them in the light of previous experience. The attaching of meaning to sensation is called perception. This perception is the foundation of all higher forms of learning and since it depends on sensations, the first physiological factor, which is involved in the learning process is sensation. Learning is dependent on the relative perception of the senses. This learning is confined to the presentation of the concrete object (Figure 3.7).

Verbal Learning

All learning taking place in formal education is verbal learning. Learning of this type helps in the acquisition of verbal behavior. The language we speak, communication devices we use are the result of such learning. Signs, pictures, symbols, words, figures, sounds and voices employed by individual are the essential instruments in the process of verbal learning.

Visual learner
Learns best by seeing

Auditory learner
Learns best by hearing

Kinesthetic learner
Learns best by feeling or experiencing
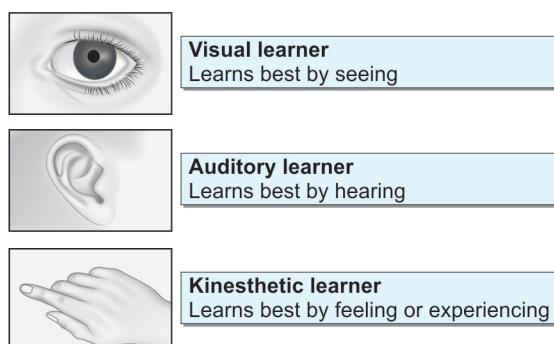
Figure 3.7: Types of perceptual learning

Motor Learning

When learning involves primarily the use of muscles, it is called motor learning. In this type the individual acquires new muscular coordinations as a mode of response to a similar situation. Learning to walk, swim, play throw ball, piano are examples of motor learning.

Concept Learning

A concept is the form of a mental image that denotes a generalized idea about things, persons or events. In learning a concept, an individual tries to find out some common property in a group of objects. This learning implies that the individual starts thinking in abstract terms. He understands about the object without its concrete form. These abstract concepts gradually multiply and become a part of the mental makeup.

For example, our concept of 'car' is a mental image that throws up the similarities or common properties of all the different cars we know. We will call a thing 'car' when it has some specific characteristics, the image of which we have already acquired in our mind on account of our previous experience, perception or exercise of imagination. The formation of such concepts on account of previous experience, training is called concept learning. Concept learning proves very useful in recognizing, naming and identifying things. Once a concept is formed, an individual manipulates it in language and thinking.

Problem Solving Learning

Problem solving learning is a higher type of learning. This learning requires the use of cognitive abilities like thinking, reasoning, generalization, imagination, etc.

Attitude Learning

Much of our learning is based on attitudes. Because of formation of attitudes we show favorable or unfavorable responses to various objects, persons or situations. The individual learns a subject based on his attitude towards the subject.

Paired-associate Learning

In paired-associate learning, learning tasks are presented in such a way that they may be learned by reason of their associations. Krishna, a boy's name may become easy to remember in a paired association with Lord Krishna. Much of the verbal or motor learning may be acquired by means of the technique of paired or multiple association.

Other Types of Learning

Visual learning, auditory learning, kinesthetic and tactile learning (Figure 3.8).

These types do not always occur independently. Two or more of the above types of learning are involved in many situations, for example, in typing both motor and verbal learning are involved. In playing chess problem solving, concept learning and verbal learning are involved.

Learner and Learning

There are certain fundamental qualities of a learner that can be considered as the learner's equipment in order for him or her to absorb the knowledge in learning. These fundamental equipments are the learners cognitive as well as the learner's appetitive faculties. These faculties will naturally help or guide the learner as he dealt with the learning process.

Visual	Auditory
Movies and Videos	Read aloud, text to speech
Pictures	Debates
Maps, charts, graphs	Formal and Informal
Field trips	Discussions
Computer software	Lectures and speeches
Dramatizations	Books on tape
Experiments	Plays
	Music and Songs

Kinesthetic	Tactile
Games	Arts and Craft
Models and diagrams	Clay modeling
Math manipulatives	Gardening
Computer software	Dress-up
Art and Crafts	Math manipulatives
Hands on practice	Sewing
Experiments	
Field trips	

Figure 3.8: Types of learning

The cognitive faculties of the learner include his or her five senses, memory, imagination, as well as the intellect. All of these faculties are related to the basic operation of the human brain and are necessary for the learning process.

❶ Through the five senses, the learners are able to see, hear, taste and smell. He or she can grasp different information from his or her surrounding environment using these natural senses.

❷ With the learner's imagination, he or she can form pictorial representation of material objects in his or her mind. This ability is an important factor in the learning process.

❸ The learner's memory is one of the important factors in learning. With the use of the memory, the learner can recall or retain post mental actions in his or her mind. The memory serves as storage for the prior knowledge of the learner.

❹ The learner's intellect is also an important factor in learning. With the use of the learner's intellect, he or she can form concepts of ideas, as well as make judgment from the given information and reason out.

The appetitive faculty of the learner that can also be considered as an equipment in learning includes the feeling, the emotion as well as the learner's rational will.

❶ Using the learner's feelings as well as his or her emotions, he or she can experience pain or joy, as well as the feelings of being happy, sad or angry towards a particular subject or situation.

❷ With his or her feelings, he can identify and experience the real feelings about a particular thing or situation.

❸ Using the learner's rational will, he or she has the capacity to think and choose, what is desirable according to his or her own analysis. His or her rational will, will serve as a kind of guiding force or a main integrating force in his or her character.

Factors Influencing Learning

Learning is a process of bringing relatively permanent change in behavior of the learner through experience or practice.

The learning process is centered on three elements:

❶ The learner, whose behavior is to be changed or modified.

❷ The type of experience or training required for modification in the learner's behavior.

❸ The men and material resources needed for providing desired experiences and training.

The success or failure in the task of learning depends upon the quality as well as control and management of the factors associated with the above elements.

Factors Associated with Learner

Learner's physical health: Physical health of the learner is an important factor. Fever, sensory defects particularly of the eyes or the ears, malnutrition, loss of sleep and fatigue are some of the physical handicaps that hinder effective learning. The learner should have sound health for learning.

Learner's mental health: Experiments have shown that worries, fears, persistent day dreams; feelings of loneliness and inferiority affect learning. If the learner has no self-confidence, self-reliance or self-respect due to the attitudes of teachers or others, it is very difficult for him or her to learn well. Hence, the necessity of building up the learner's self-confidence, self-respect, self-reliance through praise and approval for the work well done or well attempted is essential.

Basic potential of the learner:
❖ Learner's innate abilities and capacities for learning.
❖ Learner's general intelligence, knowledge, understanding skills, etc.
❖ Learner's basic interest, aptitudes and attitudes related to the learning of a particular thing or area.

The level of motivation: The stronger and clearer the motive in learning anything, the greater is the effort and interest shown by the learner in learning it. The result is greater and more permanent learning.

Goals of life: The philosophy of immediate as well as ultimate goals of one's life affects the process and product of learning.

Readiness and willpower: A learner's readiness and willpower to learn is a great deciding factor of his results in learning. If the learner has a will to learn a thing, he finds a way for effective learning.

Maturation: Maturation helps in the process of learning. We learn things, when we are mature to learn them. Maturation and learning are closely related to each other. Learning can only take place if the stage for that type of learning has been achieved through a process of maturation. For example, the child has to be physically mature before he can learn to walk or run.

Age: Age is also an important factor in learning. There are certain limitations that old people face in learning new things. They are physically weak and their ability to learn is slow. They have a poor recent memory and their reasoning speed decreases. Learning ability for verbal material increases till age twenty. After that there is a slow decline till the age of fifty followed by a sharp drop in the later years.

Emotions: Tension or anxiety is a double-edged emotion. It has a positive as well as a negative effect on learning. Some amount of stress or anxiety is essential for learning. It provides the drive to learn. Our learning improves with moderate amount of stress. But after a certain optimal level, learning efficiency declines with further increase in stress.

Sex: Although no sex is superior to the other, certain differences in interests and aptitudes are found between the two sexes. Females like to learn things that involve people, while men are more object-oriented.

Factors Associated with Type of Learning Experience

Nature of learning experience: Learning is influenced by the nature of the subject matter and the learning experiences presented to a learner, such as formal or informal, incidental or well planned, direct or indirect.

Methodology of learning: Learning depends upon the methods, techniques and approaches employed for the teaching and learning of the selected contents. Some of these techniques are:
❖ Linking the recent learning with those of the past.
❖ Correlating learning in one area with that of another.

- ❖ Utilization of maximum number of senses.
- ❖ Revision and practice.
- ❖ Provision of proper feedback and reinforcement.

Meaningfulness of material: The more meaningful the material, the faster it is learned.

Amount or length of material: Learning is influenced considerably by the amount and length of the material to be learned. In general, more the amount of material to be learned, more the time the person will take to learn it.

Factors Associated with Men and Material

A learner is helped by the available resources for bringing desirable changes in his behavior. Certain factors which affect learning are:
- ❖ Quality of teaching.
- ❖ Availability of appropriate learning material and facilities like teaching-learning aids, textbooks, library and laboratory facilities, project works, etc.
- ❖ Availability of conducive environment like, proper seating arrangement, calm and peaceful environment, absence of distractions, cooperative and competitive group situations, congenial learning environment at home, provision of opportunity for creativity and self-expression.

LAWS OF LEARNING

The various laws of learning are as under:
- ❖ Law of readiness
- ❖ Law of effect
- ❖ Law of exercise/use
- ❖ Law of frequency
- ❖ Law of disuse
- ❖ Law of recency
- ❖ Law of primacy
- ❖ Law of purpose
- ❖ Law of association

Law of Readiness

Learning takes place best, when a person is ready to learn. Some sort of preparatory attitude or a mindset is necessary. If nervous pathway is ready for action, the response quickly follows. If it is exhausted and not quick for action, the response does not follow readily. Learner's reaction depends upon the readiness of the sensory and motor neurons.

Law of Effect

A successful reaction gives satisfaction to the individual and the same reaction tends to be repeated. An unsuccessful reaction gives annoyance to the individual and tends to be inhibited. Thus, pleasure and pain have their effects on learning reactions.

Law of Exercise/Use

Native reactions are strengthened by practice. The use of any response strengthens it and makes it more prompt, easy and certain.

Law of Frequency

The law of frequency is correlated to law of use. If one response strengthens the situation-response connection, two responses will strengthen it further, three still further and so on. The more frequently a connection is exercised, the stronger the connection becomes.

Law of Disuse

Any learning process, which is not practiced for sometime gradually decays. Use strengthens a situation-response connection. Disuse weakens the connection. Material without any meaning like nonsense syllables is quickly forgotten. The material with a meaning like poetry is not so quickly forgotten.

Law of Recency

The law of recency is correlated to law of disuse. The more recent is the exercise, the stronger is the connection between the situation and the response. The connection between a situation and the response is weakened gradually through disuse.

Law of Primacy

The first experiences and acts are novel and apt to attract attention. They are readily impressed in the mind. The first day at school, the first act in learning to solve a puzzle are easily impressed.

Law of Purpose

With a clear or definite goal in mind, the student works towards a definite purpose.

Law of Association

It is on the basis of association of ideas that we can explain, why one idea gives way to the other and so on. When we recall the name, we at once remember about its association, for example, when we say Taj Mahal, we recall it is made of marble because these ideas are closely associated with one another. The laws which govern the association of ideas are as follows:

❖ The law of similarity
❖ The law of contrast

THEORIES OF LEARNING

Trial and Error Theory of Learning
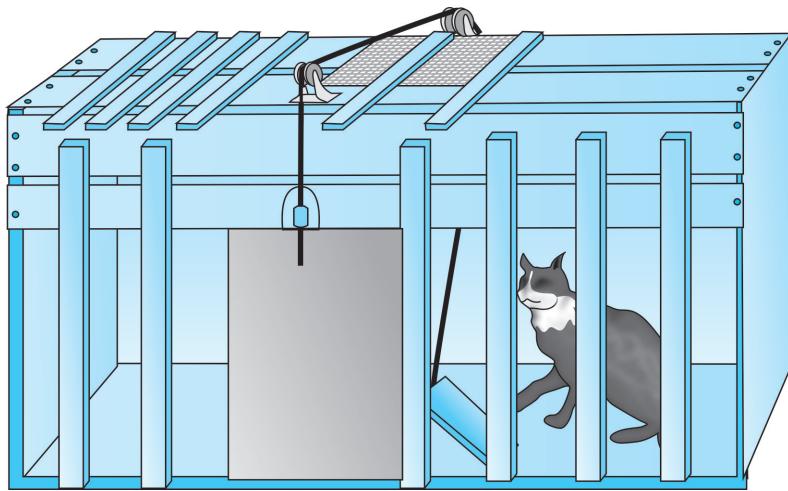

Figure 3.9: Edward Lee Thorndike

This theory was propagated by Edward Lee Thorndike (1874-1949). According to Thorndike (Figure 3.9), learning consists of making bonds or connections between stimuli and responses. These bonds are made in the nervous system. According to Thorndike, learning is nothing but the stamping in of the correct responses and stamping out of the incorrect responses through trial and error. To support his point of view, the following is one of the experiments conducted by Thorndike:

A hungry cat was placed in a box. There was only one door for exit, which could be opened by correctly manipulating a latch. A fish was placed outside the box, which worked as a strong motive for

the cat to come out of the box. Consequently, the cat made a number of random movements such as biting, clawing and scrambling around, as it struggled to come out the box. In one of the random movements, by chance, it manipulated the latch. The door then opened and the cat came out and got its reward.

For another trial, the process was repeated. But this time, it took less time in coming out. On subsequent trials, such incorrect responses like biting and clawing gradually diminished, until the cat reached a stage, when it manipulated the latch as soon as it was put in the box and came out immediately to eat the fish. In this way gradually, the cat learned the art of opening the door. Thorndike named the learning of his experimental cat as 'trial and error learning' (Figure 3.10). He maintained that learning is nothing but the stamping in of the correct responses and stamping out of the incorrect responses through trial and error. In trying for the correct solution the cat made many vain attempts, committed error after error before gaining success on subsequent trials, tried to avoid the erroneous ways and repeated correct way of manipulating the latch.

❖ From the above experiments, Thorndike said that the following components or elements are involved in the process of learning.
  – Drive
  – Goal
  – Barrier or blocks which prevent the individual reaching the goal
  – Random attempts to overcome the barriers
  – Chance success
  – Selection of the correct response
  – Fixation of the correct response in the neuromuscular system of the individual
❖ Major theoretical principles which form the basis of Thorndike theory of learning are:
  – Learning involves trial and error or selection and connection.
  – Learning is the result of the formation of connections.
  – Learning is improvement in performance not insightful.
  – Learning is direct, not mediated by ideas.
❖ Based on his theory, Thorndike put forward the following laws of learning:

Figure 3.10: Edward Lee Thorndike devised this puzzle box to study trial and error learning

- The law of readiness
- The law of effect of satisfaction/dissatisfaction
- The law of exercise or practice
- The law of multiple responses or varied reactions
- The law of attitude
- The law of analogy
- The law of associative shifting

Educational Implications of Thorndike Theory
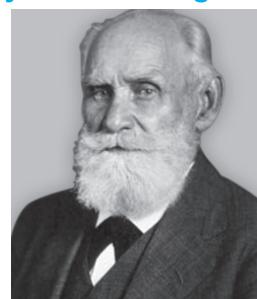
❶ According to Thorndike, when a child is ready to learn, he learns more quickly and effectively. He warns that the child should not be forced to learn when he is not ready and also not to miss any opportunity of providing the right learning experiences, when the child is prepared to learn. The task of the teacher is to motivate the students by arousing their attention, interest and curiosity, so that they want to learn (law of readiness).

❷ The teacher must try to strengthen the bonds or connections between stimuli and responses, through repetition, drill and practice. Otherwise, the bonds get weakened through disuse and learning fails to occur (law of practice).

❸ The child must be provided with learning experience, which gives him a sense of satisfaction. The child must be suitably rewarded as relevant, to make learning effective (law of effect).

❹ The learner should try to see the similarities and dissimilarities between the different kinds of responses to stimuli and by comparison and contrast try to apply the learning from one situation to other similar situations.

❺ The learner should be encouraged to perform his task independently. He must try various solutions to the problem before arriving at the correct one.

In general, Thorndike theory and laws of learning contributed towards making learning purposeful and goal oriented and has brought out the importance of motivation, rewards and practice in the process of teaching and learning.

Learning by Conditioning

Figure 3.11: Ivan pavlov
Propounded the classical theory of learning

Theory of classical conditioning (or) type-S conditioning or respondent learning.

The theory of classical conditioning was proposed by Ivan Pavlov (1849-1936), a Russian physiologist (Figure 3.11). Pavlov, while studying the physiology of digestion; found that behavior can be classically conditioned. He experimented on a dog and found that food placed in the mouth of a hungry dog automatically causes salivation. In this case, salivation is an unlearned response, or an unconditioned response and the food is an unconditioned stimulus (natural). Later on, a bell was rung each time before the food was presented. Pavlov now found that the dog started to salivate at the sound of the bell and this was termed as a conditioned response. The bell is a conditioned stimulus (artificial stimulus).
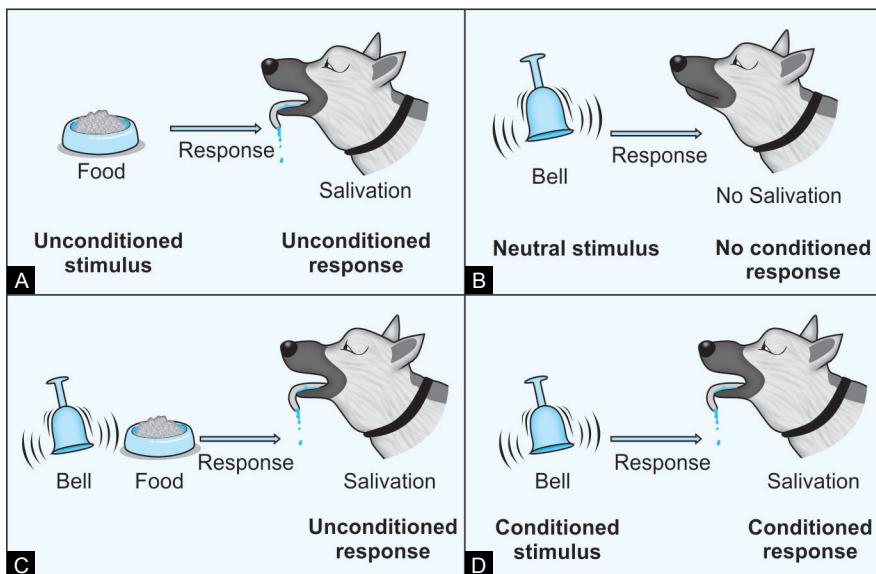
In later studies Pavlov noticed that if he did not provide food after the bell was rung, the dog eventually stopped salivating called 'extinction' and demonstrated that reinforcement is essential both to acquire and maintain respondent learning. Pavlov also found that if the dog is given a prolonged rest period during extinction, it will once again salivate when the bell is rung. This phenomenon is called as spontaneous recovery.

❶ Prior to conditioning, the ringing of a bell does not bring about salivation – making the bell a neutral stimulus. On the other hand, food naturally brings about salivation, making the food an unconditioned stimulus and salivation an unconditioned response (Figures 3.12A and B).

❷ During conditioning, the bell is rung just before the presentation of the food (Figure 3.12C).

❸ After conditioning, the ringing of the bell alone brings about salivation. The bell which was earlier considered as neutral stimulus is now considered as conditional stimulus bringing about conditioned response of salivation (Figure 3.12D).

Classical Conditioning

A type of learning, in which a neutral stimulus comes to bring about a response after it is paired with a stimulus that naturally brings about that response.

Figures 3.12 A to D: The basic process of classical conditioning: A and B. Before conditioning, C. During conditioning, D. After conditioning

Neutral Stimulus

A stimulus that, before conditioning, does not naturally bring about the response of interest.

Unconditioned Stimulus

A response that is natural and needs no training (Example, salivation at the smell of food).

Conditioned Stimulus

A neutral stimulus that has been paired with an unconditioned stimulus (UCS) to bring about a response earlier caused only by the UCS.

Conditioned Response

A response that, after conditioning, follows a previously, neutral stimulus (Example, salivation at the ringing of a bell).

Extinction

The decrease in frequency and eventual dis-appearance, of a previously conditioned response; one of the basic phenomena of learning.

Spontaneous Recovery

The re-emergence of an extinguished conditioned response after a period of rest.

Stimulus Generalization

A response to a stimulus that is similar to but different from a conditioned stimulus; the more similar the two stimuli, the more likely generalization is to occur.

Pavlov theory has also been called as Type S conditioning to stress the significance of the stimulus that comes before and elicits the response. The theory of conditions as advocated by Pavlov, thus, considers learning as habit formation and is based on the principle of association and substitution. It is simply a stimulus-response type of learning, where in place of a natural stimulus like food, water, sexual contact, etc. an artificial stimulus like the sound of the bell, sight of light of a definite color, etc. can evoke a natural response. When both the artificial stimulus (ringing of the bell) and the natural stimulus (food)

are brought together several times, the dog becomes conditioned to respond to this situation as perfect association occurs between the types of stimuli presented together. As a result, after some time, the natural stimulus can be substituted or replaced by an artificial stimulus and this artificial stimulus is able to evoke the natural response.

Educational Implications of Classical Conditioning Theory

❶ Fear, love or hatred towards a particular subject is created through conditioning. A teacher, with his defective methods of teaching or harsh treatment of his students, may create a strong dislike among them towards the subject.

❷ On the other hand, interesting and effective methodology in teaching along with sympathetic treatment can have a desirable impact on the students through the process of conditioning. They develop a positive attitude towards the subject as well as the teacher, who has imparted the knowledge to them.

❸ The theory of classical conditioning emphasizes that the students should be exposed to positive stimuli in order to develop desirable habits, interests and attitudes in them.

❹ Conditioning can also be used to remove unhealthy attitudes, superstitions and fears from the minds of the students by exposing them to positive stimuli (reconditioning).

Theory of Operant Conditioning (or) Type 'R' Conditioning (or) Instrumental Conditioning

The theory of learning by operant conditioning was given by BF Skinner (1904-1990).

Basically Skinner revolted against the concept of classical conditioning. He said that man is an active organism, and not a victim of his environment. He does not wait for the stimulus; instead, he acts or operates on the environment, so as to change it in some way. Thus, he called it as operant behavior (Figure 3.13).

Figure 3.13: BF Skinner promoted the behaviorist approach

According to Skinner, operant behavior is determined by the events or consequences that follow the response. If the consequences are favorable, the individual will repeat the same behavior. In this case, the consequences are said to have provided positive reinforcement and cause repetition of the behavior. Alternatively, if the consequences are unfavorable, they reduce the chances of the same behavior from getting repeated. In such a case, the consequences are said to have provided negative reinforcement and reduce the chances of the behavior from recurring again.

Thus, operant conditioning is called as type-R conditioning, to emphasize the effect of the response on future behavior. In this way Skinner said that learning is shaped and maintained by its consequences.

The following is one of the experiment carried out by Skinner to support his concept of operant conditioning. A hungry rat was placed in a box designed by Skinner, which was called as the Skinner box or operant chamber. The chamber contained a lever which would drop food pellets into the chamber if pressed. In the beginning the experimenter himself dropped the food pellets into the box and later stopped. The rat, being hungry, began to explore the box and pressed the lever accidentally. The food pellet was released into the box and the rat ate it up. After a while, it pressed the lever again and ate the food pellet, which got released. After the third or fourth time, the rat began to press the lever more rapidly. Thus, the food is said to have provided positive reinforcement to the

rat and operant behavior got established, i.e. the rat continued to press the lever, in order to obtain the food pellets (Figure 3.14). Based on the findings of his experiments, he concluded that behavior is shaped and maintained by its consequences. It is operated by the organism and maintained by its results.

Reinforcement

The process, by which a stimulus increases the probability that a preceding behavior will be repeated (Table 3.1).

Reinforcer

Any stimulus that increases the probability that a preceding behavior will occur again.

Positive Reinforcer

A stimulus added to the environment that brings about an increase in a preceding response.

Negative Reinforcer
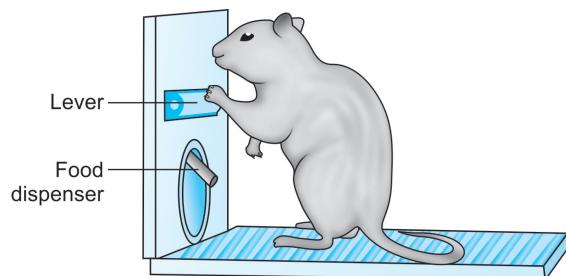
An unpleasant stimulus, whose removal leads to an increase in the probability that a preceding response will occur again in the future.

Punishment

A stimulus that decreases the probability that a previous behavior will occur again.

Schedules of Reinforcement

Objects or events, which provide reinforcement are called as reinforcers. There are two types of reinforcers: Primary and secondary reinforcers.

Figure 3.14: A Skinner box, used to study operant conditioning

Table 3.1: Types of reinforcement and punishment

Procedure	Effect on behavior	
	Increases	*Decreases*
Presentation of stimulus	*Positive reinforcement* *Example*: Giving a raise for good performance *Result*: Increase in frequency of response (good performance)	*Positive punishment* *Example*: Giving a punishment following misbehavior *Result*: Decrease in frequency of response (misbehavior)
Removal of stimulus	*Negative reinforcement* *Example*: Terminating a headache by taking aspirin *Result*: Increase in frequency of response (taking aspirin)	*Negative punishment* *Example*: Removal of favorite toy after misbehavior *Result*: Decrease in frequency of response (misbehavior)

❖ Primary reinforcers are those, which possess inherent reinforcing properties. Examples include food, water, physical comfort, etc.

❖ Secondary or conditioned reinforcers are those which acquire their reinforcing qualities through close association with a primary reinforcer. Examples of secondary reinforcers include money, attention, affection and good grades.

Skinner put forward the idea of planning of schedules of reinforcement in order to condition the operant behavior of the individual. The important schedules are as follows:

Continuous Reinforcement Schedule

Continuous reinforcement (CR) schedule is 100 percent reinforcement schedule, where every correct response of the individual is rewarded or reinforced. The learner is rewarded for every correct answer he gives to the questions put by his teacher.

Fixed-Interval Reinforcement Schedule

In fixed-interval (FI) reinforcement schedule, the individual is rewarded for a response only after a set interval of time. What is important here is the fixed responses during this interval. For example:

❖ Paying salaries for the work done on a weekly or monthly basis.

❖ Conducting examinations periodically for the students.

❖ Giving a person a periodic allowance, etc.

Fixed-Ratio Reinforcement Schedule

In fixed-ratio (FR) reinforcement schedule, the individual is reinforced following a 'fixed' number of correct responses. This schedule usually generated extremely high operant levels in the individuals, because the more they respond, the more reinforcement they receive. Example: Paying employees depending on the number of units they produce or sell.

Variable-Ratio Reinforcement Schedule

In variable-ratio (VR) reinforcement schedule, reinforcement is intermittent and irregular. The individual does not know when he is going to be rewarded and so he remains motivated through out the learning process. The most common example of this schedule is human behavior in gambling. Here rewards are unpredictable and keep the players motivated, though returns are occasional.

Educational Implications of Operant Conditioning Theory

❶ The key concept in Skinner's theory is reinforcement. In order to enable an individual to learn, the correct responses must be suitably rewarded or positively reinforced. Therefore, the learning process and environment must be designed so as to create minimum frustration and maximum satisfaction to the learner, to provide him with proper reinforcement.

❷ The principle of operant conditioning may be successfully applied in behavior modification. We have to find something, which is rewarding for the individual whose behavior we wish to modify, wait until the desired behavior occurs and immediately reward him when it does. When this is done, the frequency with which the desired response occurs goes up. When the behavior next occurs, it is again rewarded and the rate of response goes up even further. Proceeding in this manner, we can induce the individual to learn the desired behavior.

❸ Operant conditioning emphasizes the importance of schedules in the process of reinforcement of behavior. In trying to impart or teach a particular behavior, great care should be taken for the proper planning of the schedules of reinforcement.

❹ This theory advocated the avoidance of punishment for unlearning the undesirable behavior and for shaping the desirable behavior. Punishment proves ineffective in the long run. It appears that punishment simply suppresses behavior and when the threat of punishment is removed, the rate with which the behavior occurs returns to its original level. Therefore, operant conditioning experiments suggested appropriate alternatives to punishment, in the form of rewarding appropriate behavior and ignoring inappropriate behavior, for its gradual extinction.

❺ The theory of operant conditioning has shown that learning proceeds most effectively if:
   a. The learning material is so designed that it produces fewer chances for failure and more opportunities for success.
   b. The learner is given rapid feedback concerning the accuracy of his learning.
   c. The learner is able to learn at his own pace.

Theory of Insightful Learning (Gestalt Psychology)

Gestalt psychology was founded in Germany in 1912 by Max Wertheimer (1880-1943) and his colleagues. The word 'Gestalt' means 'form or shape or a particular arrangement of elements'. The basic idea behind Gestalt learning is that 'the whole is more than the sum of its parts'. Anything cannot be understood by a study of its constituent parts, but only by viewing it in its totality. The learner, while learning, always perceives the situation as a whole. After studying and evaluating the different relationships in the situation, he takes the proper decision in an intelligent way rather than simply reacting to specific stimuli.

Gestalt psychologists used the term 'insight' to describe the perception of the whole situation by the learner and his intelligence in responding to the proper relationships. Insight is often referred to as the end process of observational activity. Learning activities are said to be insightful for the desired learning. This reinforcement may be provided through verbal praise, positive facial expressions of the teacher, scores, grades, prizes, medals, etc.

In a nutshell, Gestalt psychologists tried to interpret learning as a purposive, exploratory and creative process, rather than mere trial and error or even conditioning. Learning is restructuring the field of perception through insight.
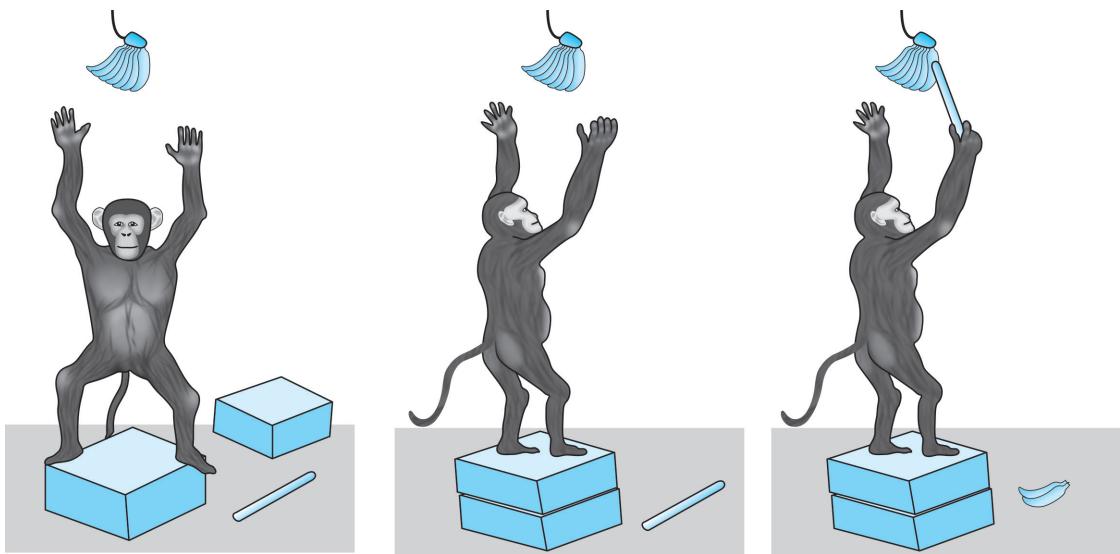
The following are some of the experiments carried out by Gestalt psychologists to support their view on learning:

Kohler (Figure 3.15) put a chimpanzee in a cage and a banana was hung from the roof of the cage. A box was placed inside the cage. The chimpanzee tried to reach the banana by jumping, but could not succeed. Suddenly, he got an idea and used the box as a jumping platform by placing it just below the banana (Figure 3.16).

In another experiment, the problem was made more difficult, and the chimpanzee had to use two or three boxes to reach the bananas. Moreover, the placing of one box over the other required different

Figure 3.15: Wolfgang Kohler (1887–1967) chief exponent of theory of learning by insight

Figure 3.16: Kohler's chimpanzee learns to reach the banana

specific arrangements. In a more complicated arrangement, the banana was placed outside the cage. Two sticks, one longer than the other were placed in the cage. One stick was hollow at one end, so that the other stick could be thrust into, forming a longer stick. The banana was kept at such a distance that it could not be picked up by anyone of the sticks. The chimpanzee first tried these sticks one after the other, but could not succeed. Suddenly, it got an idea of joining the two sticks together and finally reached the banana (Figure 3.17).
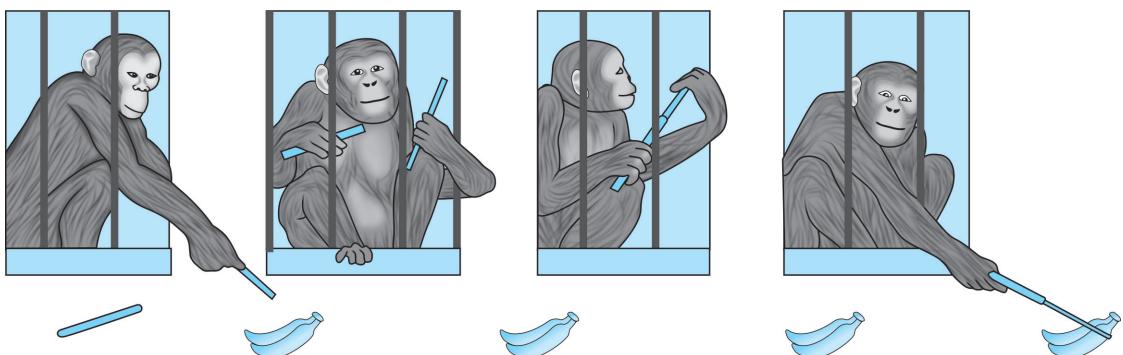
Based on their experiments the Gestalt psychologists concluded that, on the whole, insight depends on the following factors:

❶ Past experiences which help in the insightful solution.

❷ Insightful solutions depend upon the basic intelligence of the learner. The greater the intelligence, the more is the insight.

❸ Insight recurs when the learning situation is so arranged that all the necessary aspects are open for observation.

❹ Insightful learning may initially pass through the process of trial and error. But this stage does not last long. These initial efforts, in the form of simple trial and error, open the way for insightful learning.

❺ Repetition and generalization.

❻ After reaching an insightful solution to a particular problem, the individual tries to repeat it in another situation demanding similar type of solution. The solution found in one situation helps him to react insightfully in other situations.

Educational Implications of the Theory of Insightful Learning

❶ This theory emphasizes that trial and error learning must be minimized. The age-old mechanical memorization and drill with lack of basic understanding and use of creative mental abilities, must be stopped.

❷ Subject must be presented in Gestalt form. Also, in the organization of the syllabus and planning of the curriculum, the Gestalt principle should be given due consideration. A subject should not be treated as the mere collection of isolated facts or topics. It should be integrated into a whole. Similarly, the curriculum, comprising of different subjects and activities should reflect unity and integration.

❸ This theory has brought motivation to the forefront. The child should be motivated by arousing his interest and curiosity, in order to make learning goal-oriented and effective.

Figure 3.17: Kohler chimpanzee learns to assemble a long stick from two shorter ones

❹ The learner must be given plenty of opportunities to use his mental abilities. The classroom or environment, in which the child is learning is not just a body of discrete (separate) stimuli, nor are the child's responses to the environment trial and error. The world is organized; it has a meaning. The child can react with understanding; he has insight. Thus, learning should be made meaningful.

Cognitive Theory of Learning

Observational Learning

Learning through imitation (social learning theory).

According to psychologist Albert Bandura and colleagues (1977), a major part of human learning consists of observational learning; learning through observing the behavior of another person called a model (Figure 3.18).

Figure 3.18: Albert Bandura exponent of social learning theory

According to Bandura, observational learning takes place in four steps:
❶ Paying attention and perceiving the most critical features of another person's behavior
❷ Remembering the behavior
❸ Reproducing the action
❹ Being motivated to learn and carry out the behavior

Instead of learning occurring through trial and error, than, with successes being reinforced and failures punished, many important skills are learned through observational processes. For example, a girl happens to watch a TV program concerning the preparation of some new dishes. First she observes the demonstration of preparation of new dish on the TV screen and then tries to keep in her memory all that she has observed on the screen and then enters her kitchen to convert the stored observation into action. Her learning of the preparation of the new dishes may then be reinforced by the response she gets from the members of her family, who taste the new dishes.

Summary of Various Theories of Learning

Trial and error theory of learning, classical conditioning and operant conditioning theories interpret learning in terms of connection or association between stimulus and response. Insightful learning and observational learning theories emphasize the role of purpose, insight, understanding, reasoning, memory and other cognitive factors in the process of learning (Table 3.2).

Table 3.2: Summary of various theories of learning

Theory	Description
1. Trial and error theory of learning	Learning is nothing but the stamping in of the correct responses and stamping out of the incorrect responses through trial and error
2. Theory of classical conditioning	Learning occurs from associations between stimuli and response
3. Theory of operant conditioning	Learning is shaped and maintained by its consequences. Learning is a voluntary response which is strengthened or weakened depending on its favorable or unfavorable consequences
4. Theory of insightful learning	Learning is a purposive, exploratory and creative process rather than mere trial and error or even conditioning. Learning is restructuring the field of perception through insight
5. Observational learning	Learning occurs through observational process. It advocates that most of what we learn is acquired through simply observing and imitating the behavior of others who are taken as models

Learning Process

Learning is a sequence of mental events leading to a change in the learner.

Steps in Learning Process

Learning process has continuity and is carried over through various steps. According to HP Smith the learning process involves:

❖ A motive or drive
❖ An attractive goal
❖ A block to the attainment of the goal

Motive: These are the dynamic forces that energize behavior and compel the individual to act. The direction of learning will depend upon the relative strength of motives. Unsatisfied motives or needs compel the individual to satisfy them, which initiates a learner to learn something.

Goal: For satisfaction of needs the individual sets definite goals for achievement. The setting of goal helps in making the learning purposeful and interesting. The goal attracts the individual to learn.

Block to the attainment of the goal: If the individual faces no difficulty in attaining the goal, he will not change his present behavior; this means there is no necessity to learn. If a block or barrier obstructs the individual to reach a goal then the individual will try to change or modify his behavior. This means he

learns something to change his behavior or to reach a goal.

Along with the above steps individual readiness is important for learning, i.e. physical and mental maturity. Some other steps involved in learning are reinforcement and integration.

Reinforcement: If the response is successful in action in satisfying the need, that response is reinforced and on subsequent occasions the individual will tend to repeat it.

Integration: In this process the individual integrates the successful responses with the individual's previous learning, so that it becomes a part of a new functional whole.

Learning situation: Learning situation provides opportunity for learning. The quality, speed and effectiveness of learning depends much upon the kind of learning situation and environment available to the learner. Healthy and favorable learning environment brings satisfactory results in learning while the poor and unfavorable learning environment proves an obstacle in the path of learning.

The process of learning does not end only with the acquisition of certain knowledge, skill and changes in behavior in one particular situation. Learning is a never ending process, the change once acquired or the learning once accomplished, gets its fixation in other like wise situations. It stands for its

modification and thus seems always in a process of continuous change and development.

TRANSFER OF LEARNING

Transfer of learning or training is a process by which learning or training in one situation is carried over or transferred to other situations. Example, the learning of addition and subtraction helps the child in learning multiplication and division. Learning of mathematics helps in solving the numerical problems in physics.

Definitions

Transfer refers to the transfer of knowledge, training and habits acquired in one situation to another situation.   *(Sorenson—1948)*
The carry-over of the habits of thinking, feeling or working, of knowledge or of skills from one learning area to another is usually referred to as the transfer of training.   *(Crow and Crow—1973)*

Types of Transfer

There is no guarantee that learning in one situation or in one field will always help the learning in another situation or field. Sometimes the learning of one task creates difficulty in performing or learning another task. Having learned to pronounce 'but' correctly, the child finds it difficult to pronounce 'put' correctly. In this way transfer of training or learning also affects besides the positive and favorable ones. Transfer is said to have the following three forms:
❶ Positive transfer
❷ Negative transfer
❸ Zero transfer

Positive Transfer

Transfer is said to be positive, when something previously learned benefits performance or learning in a new situation. Example, if one has learned to play tennis he finds it easier to learn to play badminton.

Negative Transfer

When something previously learnt hinders performance or learning in a new situation, we call it negative transfer. Example, in India we find that the pronunciation of English words varies from region to region. If a child's mother tongue is Tamil or Gujarathi his pronunciation of English is affected by carry over of Tamil or Gujarathi intonation.

Zero Transfer

In case the previous learning makes no difference at all to the performance or learning in a new situation, there is said to be zero transfer from the previous situation to the new one. Example, learning history may neither help nor hinder the learning of economics.

Factors Influencing Transfer of Learning

Many factors influence the amount and direction of transfer. Two important factors are:
❶ Similarity of responses
❷ Similarity of stimuli
   a. When both the stimuli and responses in tasks are similar, learning of one facilitates the learning of the other.
   b. When both stimuli and responses are different, the learning of one has no effect on the learning of other.
   c. If responses are identical but stimuli are different, the learning of one aids in the learning of the other task.
   d. Maximum negative transfer is observed, when the stimuli are the same but the responses are different.

Some Other Factors are:

❶ Degree of transfer is closely related to the learner's intelligence.
❷ Formation of attitudes and ideals helps one to transfer the knowledge and the skill from one situation to another.
❸ Proper study habits have to be developed so that students try to see the relationship between various situations and try to apply what they know to other situations.
❹ Transfer relies heavily on meaningfulness of materials.
❺ Methods of teaching-student centered method of teaching will help to know the relationship between things.

Theories of Transfer of Learning

Apperception Theory of Transfer

According to apperception theory of transfer, learning results in the storage of ideas, expe-riences, etc. (called apperceptive mass) into one's unconscious mind and their strengthening with repetition. Such strengthened apperception mass then leads automatically to its transfer in the relevant learning situation.

The Theory of Identical Elements or Identical Components

According to theory of identical elements of Thorndike, there is transfer from one situation to another to the extent that the same elements or components are found in different situations. These identical elements may be in the form of content or technique.

Similarity of content: The study of 'Sanskrit' helps one with the study of Hindi or Kannada to an extent as the two languages contain identical components such as vocabulary or grammatical constructions.

Similarity in technique: Skill acquired in playing hockey may be useful in playing football to the extent that there are common elements such as running, judging the course of the ball and general physical ability. The skill acquired by the right hand transferred to the left hand is called as bilateral transfer. The amount of transfer will depend on the extent of similarity between the two situations. Greater the similarity, greater the transfer effect. In typing, for example, one can transfer his skill from one type of machine to another easily, but it may not be so easy in case of driving two cars having different gear shifts. The amount of transfer will differ in the two cases. Sometimes, little transfer occurs because the individual fails to detect the underlying similarities in two situations. Remember that transfer is not automatic.

Theory of Generalization

According to the theory of generalization, transfer occurs, when a person learns a principle or an idea in one situation and then is able to apply it in another situation. Thus, transfer results from the application of general ideas or skills or habits or attitudes. Transfer through generalization is possible only when systematization and organization of the knowledge and skill take place. If they are not systematized, they have little transfer value in other situations. It will depend upon the individual's ability to generalize his experience. Thus, it is positively related to intelligence.

Mere technique of generalization however may not bring about the transfer effect in all situations. *Example*: Hema who is extremely methodical in her office work, may be quite disorderly and chaotic in her house. This happens because generalization is not accompanied by an ideal and does not have emotional content. 'Bagley' has therefore emphasized transfer through the formulation of ideals and attitudes. A child, who is punctual as far as school routine is concerned, may not be punctual in out of school situations. This may happen because punctuality is not stressed as an ideal. Generalized concepts such as honesty, neatness or punctuality should be stressed not in specific situations but rather as an ideal.

Transposition Theory of Transfer

Transposition theory of transfer has been propagated by Gestalt field psychologists; they emphasized the role of insight in the mechanism of transfer of learning. They asserted that in transfer, the identical elements or generalizations do not get transferred automatically unless one has developed the proper insight of using and employing them and is desirous to transfer it at the right time. This process of gaining or developing insight into the use of concepts and generalizations in one situation and employing it afterwards in other situations is called transposition and it is this transposition of insight, which can be a medium or a base for the transfer of learning from one situation to another.

Theory of Ideals

Theory of ideals says that neither the isolated nor the generalizations but the ideals get transferred from one learning situation to another. That is why it gives proper weightage to the development of desired attitudes and ideas about the things in the form

of ideals for being transferred from one learning situation to another.

Educational Implications of Transfer of Learning

The mechanism of transfer of learning has wide educational implications for both the teachers and the learners as they come to realize that transfer helps in better teaching and learning. Learning in one situation is capable of exercising positive or negative influence over the learning in another situation.

As far as possible efforts should be made to seek positive transfer value of the learned thing by avoiding the negative ones. The extent of transfer of an academic subject clearly depends upon the teaching methods. Teaching for transfer of learning requires emphasizing the following principles:

❶ Emphasizing the similarities between the current subject and the situations, to which the new learning will transfer.

❷ Transfer takes place because of similarity of content, technique, method or generalization. If a student fails to detect the similarity between two situations, transfer will not take place. Transfer of learning does not take place automatically. We have to teach keeping transfer of learning in mind.

❸ Specific facts must be taught, with arriving at meaningful generalization.

❹ Teachers should provide varied experiences.

❺ As much as possible learning experiences must be made similar to life-like situations.

❻ Sometimes opportunities for transfer are lost because teachers do not alert students to look for relationships and to see how material, which is being learned can be of use in the future. In the teaching of regional languages, teacher should show how many of the words are derived from Sanskrit roots.

❼ It is now well established that greater transfer from subject matter can be achieved by changing the methods of teaching. If the subject matter is taught in isolation from the problems of daily life, the utility of the knowledge gained is extremely limited. In one study 16 percent increase in transfer was obtained by simply telling the students that the material they were learning would be useful in other situations.

❽ Teachers should remember that transfer is not accomplished with equal facility or in equal amounts by all individuals. It depends upon one's ability to generalize his experiences and the ability to perceive relationships between two situations. It is thus positively related to intelligence.

❾ Emphasis should be given on developing ideals and attitudes.

❿ Teachers are ordinarily advised not to present in close succession methods or ideas, which might easily be confused and thus cause negative transfer. In solving a problem if two methods are shown in succession without properly fixing the first, there is interference while learning the second method and the student gets confused.

The following suggestions can help the learner to achieve maximum positive transfer:

❶ What is being learned at present, should be linked with what has already been learned in the past.

❷ While engaging in learning, the learner should try to have integration of the theoretical studies with practical experiences.

❸ Learning should be properly correlated with life experiences, environmental surroundings and other areas of study and knowledge.

❹ The learner should identify identical components between the two learning situations.

❺ The learner should avoid rote learning. He must develop the habit of learning through proper understanding and insight.

❻ Learner should never hesitate to utilize the learning of one field in the learning of other fields.

❼ Instead of learning discrete and isolated facts, the learner should concentrate on the learning of the principles, generalizations and rules.

❽ Learner should try to gain proper knowledge and insight into making distinctions between positive and negative transfer of his learning.

❾ As far as possible, he should seek the maximum positive transfer of his learning or training by saving himself from the ill-effects of negative transfer.

Study Habits

A student nurse must bear in mind the following points for her learning to be effective:

❶ *Being Self-prepared*: Sound physical and mental healths are pre-requisites for good study. Besides this the student nurse should also have capacity for hard work.

❷ *Wholeness*: It is recommended to have a bird eye-view of the complete subject before going into details of the study. Dr Buchanan has suggested that the entire course outlines be skimmed in order to select main ideas of the whole course and find the parts, which deserve close study.

❸ *Planning and organization*: The student nurse should have a time-table for the whole day with a definite period for study. The time selected should be such that the chances for disturbance are minimum.

❹ *Clarity of purpose*: The student nurse should be clear about, what she is learning and associate with as many issues as possible. In particular she must know, how the piece of learning will help her in the career.

❺ *Prompt start*: When one has to study one should get down to it without delay and not waste any time in trivia.

❻ *Search for essentials in an assignment*: The students must always look for the basic facts of the subject study and give due importance to the general principles as well as details.

❼ *Note-taking*: Students should cultivate the habit of taking notes while studying. Intelligent note-taking lends seriousness to the study and helps the student to think and reason. Notes should be brief and concentrate on the vital ideas.

❽ *Review and over learn*: The rate of forgetting is far in excess of what is retained. Therefore, constant review is required to retain the essentials of any subject. Besides one must learn more than what is necessary. It is advisable to read the same topic from many books and also recall what has been learned. If the recall is unsatisfactory the lesson should be revised. Over learning is helped by repetition and recitation.

❾ *Paying attention to words, charts, tables and formulae*: During the course of the study as and when new words appear, the meanings should be noted down and an effort be made to use them effectively. The student nurse should also be able to study the charts and tables and remember the formulae, when required.

❿ *Proper physical surroundings*: If the place of study is fixed and the hours of study regular, one can easily get into the mood for study. The surroundings should invariably be sober, clean and adequately illuminated. Poor light, bad ventilation, extreme heat and cold reduce efficiency in learning.

⓫ *Interrelationship*: Interrelationship and correlation among various subjects such as anatomy, physiology, chemistry is conducive to effective learning. The student nurse should also know how it is useful in studying the patient. All old knowledge must be related with the new.

Studying for Examination

Points to be kept in mind, while studying for examinations are:

❶ Attitude should be positive and thinking hopeful.

❷ All nervousness should be avoided and it is better not to study any thing few hours before the examination.

❸ Keeping awake the previous night should be avoided as lack of sleep and nervous exhaustion distorts one's judgment.

❹ Cramming should be avoided as there is no intelligent learning or grasp. It is mechanical in nature. Useful study consists of constant review and should be reflective.

MEMORY

Memory plays a very important role in our learning and psychological growth. Through memory of our past experiences, we handle new situations; it helps us in our relearning problem solving and thinking. Memory is regarded as a special ability of our mind to conserve or store what has been previously learned or experienced to recollect or reproduce it after sometime. Memory is a complex process, which involves learning, retention, recall and recognition.

Definitions

Memory consists in remembering what has previously been learned.

(Woodworth and Marquis—1948)

The power that we have to 'store' our experiences, and to bring them into the field of consciousness sometime after experiences have occurred, is termed memory. *(Ryburn—1956)*

Memory and remembering carry the same meaning. While differentiating between memory and remembering, Levin (1978) says "Memory can be compared to a giant filing cabinet in the brain, with data stored, classified and cross-filed for future reference. Remembering depends upon how the brain goes about coding its input".

Types of Memory

❖ Immediate memory or sensory memory
❖ Short-term memory (STM)
❖ Long-term memory (LTM) (Figure 3.19)

Immediate or Sensory Memory

Immediate memory or sensory memory is that memory, which helps an individual to recall something a split second after having perceived it. In such type of memory retentive time is extremely brief generally from a fraction of a second to several seconds.

Immediate memory is needed, when we want to remember a thing for a short time and then forget it, which helps us to learn a thing immediately with speed and accuracy. For example, we look up a telephone number from the directory and remember it, but after making the call, we usually forget it.

Short-term Memory

Short-term memory (STM) holds a relatively small amount of information, about seven items, for a short period of (20–30 seconds) time though not nearly as short-lived as the immediate memory.

Long-term Memory

Long-term memory (LTM) has the unlimited capacity to store information for days, months, years and even a lifetime. LTM codes information according to meaning, pattern and other characteristics. With the help of LTM we can store, retain and remember most of the things in our life, at record notice and thus make things quite easy.

Long-term memory can be categorized into declarative and procedural memory. While information about things is stored in declarative memory, information regarding how to do things is stored in procedural memory. Declarative memory can be further subdivided into semantic memory and episodic memory (Figure 3.20).

Nature of Memory

Following are the fundamental characteristics of the memory process:

❶ Memory involves input – registering or encoding information, where a memory trace is formed from translating the sensory data.
❷ Storage – it is either temporary or permanent.
❸ Output – it involves retrieval – memory would be useless unless they could be retrieved.

Other factors involved in memory process are:
a. Learning or registration
b. Retention
c. Recall
d. Recognition

Learning or Registration

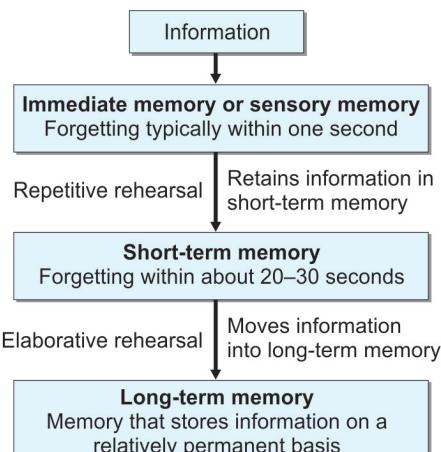Our mind has a special ability by virtue of which every experience or learning leaves behind traces,

Figure 3.19: Three stage model of memory

which are conserved in the form of 'engrains'. This is known as learning.

Retention

These engrains or memory traces are preserved in our brain with the help of our nervous system. This process is known as retention.

Recall

Recall means perfect revival of the past experiences.

Recognition

Recognition means that the recalled experience at the conscious level is the same from which the individual wanted to recall and had experience earlier. Recall and recognition are closely related. Recall provides the material in memory, while recognition is the process of accepting or rejecting it. Recall is an active process, recognition is more a passive behavior.

For example, remembering a person's name. This means the name was learned by us at some previous time. It was retained in the mind, when we did not think about it. We needed this name again. Many similar names will come before our mind;
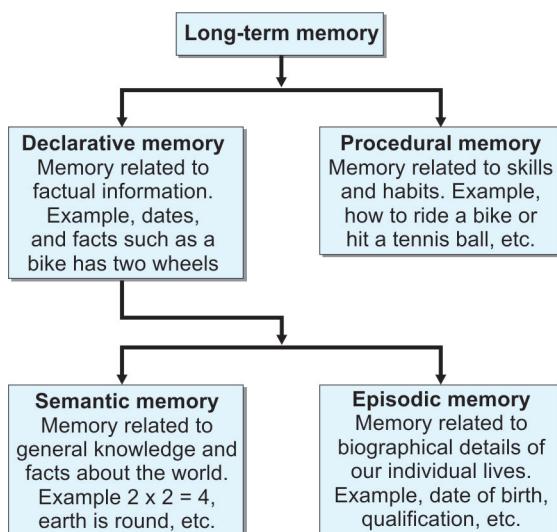

Figure 3.20: Classifications of long-term memory

the one needed was finally recalled or reproduced and recognized. It is recognized by us in the sense that we knew that the recalled name was the one, which we wanted to recall. Of these three aspects of memory, the most important is the ability to recall or reproduce.

Factors Influencing Memory

Memory refers to process of remembering. The factors, which influence memory are divided into extrinsic factors and intrinsic factors.

Extrinsic Factors

Meaningfulness of material to be memorized:

❶ What is useful, meaningful and suits the needs, motives and purposes of an individual can be learned properly retained for a long time and may be reproduced easily, when needed.

❷ Similarly the material in the form of sentences, paragraphs or longer passages or skills in the form of any actions can only be effectively managed and memorized, if they are meaningful.

❸ Such meaningful material draws the attention of the learner, creates a sense of will power and arouses his interest in learning, retaining and reproducing the material.

Amount of material to be memorized: Success in the task of effective memorization depends to a great extent upon the size and quantity of the material to be memorized. If the amount of material under memorization falls within the reasonable limit of the individual's memory, satisfactory result can be achieved, but in case it crosses one's reasonable limit no such result is likely to be achieved.

The greater the amount, the greater efforts in memorization it needs and the greater possibility of failure in terms of learning, retention and reproduction. Therefore, it is always safer to have a convenient amount of the material for memorization at a particular sitting.

Time required to vocalize responses: Memory span is consistently higher for short words than for long words. This increase is due to the decreased amount of time needed to pronounce the shorter words.

Distraction: Greater the distraction present in the situation, the poorer would be the performance of the individual. Alternately, either a calm and quite atmosphere or a stimulating environment proves to be an effective aid to learning.

Intrinsic Factors

Age of the individual: This is a factor, which definitely affects memory span. Investigators claim that memory span increases between the 16 and 26 years level. Youngsters can remember better than the aged.

Maturity: Very young children cannot retain and remember complex material.

Will to learn: Material read, heard or seen without genuine interest or inclination is difficult to be remembered or recalled at a later time.

Interest and attention: Interest as well as attention is essential for learning and memorization. A person who has no interest in what he learns, will not give due attention to it and consequently will not be able to learn it.

Intelligence: More intelligent person will have better memory than a less intelligent person.

Rest and sleep: Adequate sleep and rest helps to relieve fatigue and monotony. A mind which is fresh is naturally able to learn more and retain it for a longer period than a mind which is dull and fatigued.

Medical conditions: Major causes for memory loss are contributed by medical conditions and eating habits.

High blood pressure: This condition leads to the hardening of the arteries. This does not aid the flow of blood to the various parts of the body as it is supposed to. The circulation problem thus caused can lead to memory loss as the blood that carries oxygen and other nutrition to the brain does not reach it. Such effects on the circulation system can also lead to a stroke, which is the major cause for dementia. Dementia can leave a person with severe memory impairment.

Hypothyroidism: This is a condition caused, when not enough thyroid hormone is produced. The most common symptom of memory loss is hypothyroidism.

Brain tumors: This is a disease that causes the patients to forget people's names they interact with everyday or places that they go to everyday.

Alzheimer's disease: This is the most common cause of memory loss. Nerve cells are degenerated in this disease.

Attention deficit disorder (ADD) and attention deficit hyperdisorder (ADHD) are conditions that affect a person's ability to learn and remember.

Certain diet related problems that can cause memory loss or weak memory are as follows:

❶ Nutrient deficiencies—deficiency of certain minerals, vitamins and other nutrients can cause cognitive problems and also contribute to the beginning of Alzheimer's disease. A deficiency of minerals and vitamins including iron, zinc, B vitamins – B_{12}, B_6, folate, selenium, vitamin E and iodine can cause difficulties in concentrating, recalling, risk of developing Alzheimer and low level of oxygen in the brain.

❷ Alcohol—acts as a depressant by slowing down reaction time and thought processes. Short-term memory is affected by excessive drinking.

The other conditions that lead to cognitive problems are:

❶ Some drugs like benzodiazepines can cause temporary memory disturbance.

❷ A psychological problem like patients with anxiety and depression suffer with memory impairment.

❸ Head injury.

Theories of Memory

Theories of memory provide abstract representations of how memory is believed to work. Below are the theories proposed over the years by various psychologists:

Theory of General Memory Functions

Theory of general memory functions focuses on three distinct processes of memory; these are an encoding, storage and retrieval (Figure 3.21).

❶ Encoding is the process of receiving sensory input and transforming it into a code, which can be stored.

❷ Storage is a process of actually putting coded information into memory.

❸ Retrieval is the process of gaining access to stored coded information when it is needed.

Memory is seldom an accurate record of what was experienced.

Information Processing Theory

❶ Information processing theory was developed by Richard Atkinson and Richard Shiffrin (1968). According to this theory memory starts with a memory input from the environment.

❷ This input is held for a very brief time – several seconds at most in a sensory register associated with the sensory channels (vision, theory, touch and so forth).

❸ Information that is attended to and recognized in the sensory register may be passed on to STM, where it is held for 20 to 30 seconds.

❹ Some of the information reaching STM is processed by being rehearsed, i.e. by having attention focused on it, perhaps by being repeated over and over or being processed in some other way that will link it up with other information already stored in the memory.

❺ Information that is rehearsed by then is passed along to LTM. Information not so processed is lost.

❻ The information, which is placed in LTM will be organized into categories, where they may reside for days, months, years or for a life time. When we remember something, a representation of the item is withdrawn or retrieved from LTM.
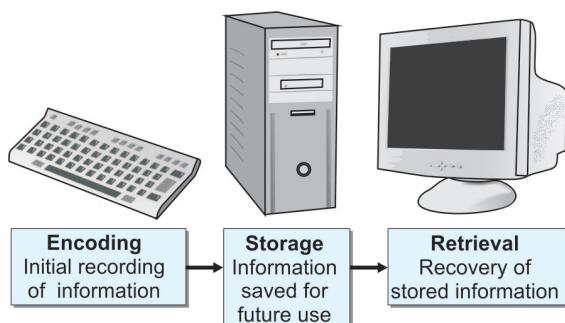
This theory has been criticized for being too simplistic. For instance, LTM is believed to be actually made up of multiple subcomponents, such as episodic and procedural memory. It also proposed that rehearsal is the only mechanism by which information eventually reaches long-term storage, but evidence shows that it is capable of remembering things even without a rehearsal (Figure 3.22).

Levels of Processing Theory

❶ Craik and Lockhart (1972) proposed that memory occurs on a continuum from shallow to deep, with no limit on the number of different levels.

❷ The shallow or superficial levels store information about identity of phenomena, including numerous attributes. These may be associated with a word or an image. The shallow levels involve analysis in terms of physical or sensory characteristics, such as brightness or pitch.

❸ The intermediate level of memory relates to recognition and labeling.

❹ The deep level is the storage of meaning and networks of association. Deeper processing results in more elaborate, long lasting and stronger memory traces. When the learner analyzes for meaning he may think of other, related associations, images and past experiences related to the stimulus.

❺ Factors which influence the depth of perceptual processing include the amount of attention devoted to the stimulus, its compatibility with existing memory structures in the learner's brain, and the amount of processing time available. In addition, the "self-reference effect", in which
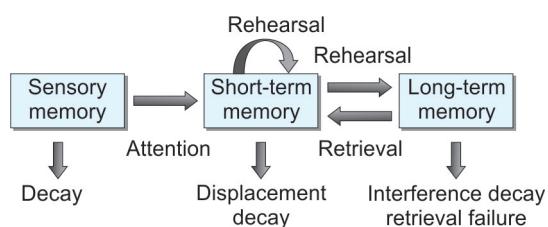
Figure 3.21: Stages of memory

Figure 3.22: Information processing theory

new information is related to the learner himself, takes learning to deeper levels and therefore promotes LTM.

Craik and Lockhart also discussed rehearsal, the process of cycling information through memory. Craik and Lockhart proposed two kinds of rehearsal. Maintenance rehearsal merely repeats the kind of analysis that has already been carried out. In contrast, elaborate rehearsal involves a deeper, more meaningful analysis of the stimulus. Elaboration is the process of adding more extensive information into the memory system. This serves to make existing information and incoming information more distinctive and unique (Figure 3.23).

Craik and Lockhart gave three examples of levels in which verbal information can be processed:

* Structural – this is shallow processing, looking at what the words only look like.
* Phonetic – processing the sound of the word.
* Semantic – this is deep processing, considering the meaning of the word.

Methods of Memorizing

Success in the process of memorization depends much on the methods of learning or memorization adopted by the learner. The choice of a particular method for bringing better results depends upon many factors like, the nature of the learner, the learning material and the learning situations, etc.

Whole and Part Method

There are two methods of memorizing a thing, for example a poem. One is to read the poem again and again from the beginning till the end as a whole. In the other method–the poem is divided into parts and each part is memorized separately. The whole method is found to be better than the part method in case of a short poem, while the part method proves more advantageous, if the poem is a larger one.

Space and Unspaced Method

In the spaced or distributed practice method of memorization, the principle of 'work and rest' is followed. For example, if one has to memorize a piece of poetry by this method, he will be advised to go on repeating it, after sometime he will be given some rest.

On the other hand, in unspaced or massed practice method of memorization the subject has to memorize the assigned material in one sitting without any rest. It has been observed that instead of working continuously without taking rest, it is better to distribute the hours of work in these sittings and introduce the periods of rest in between these settings. This helps in removing the monotony caused by long periods of study. Moreover, the subject gets a fresh start after a period of rest and thus his interest can be maintained in the task.

Repetition and Practice
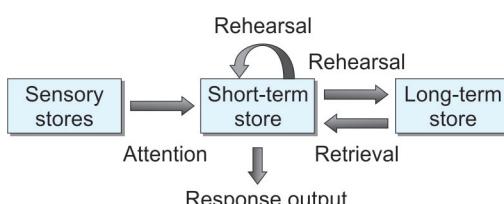
An intelligent repetition with full understanding always helps in achieving better results in the process of memorization. The things repeated and practiced frequently are remembered for a longer time in comparison to those for, which little or no time is spent for repetition and practice.

Making Use of the Principle of Association

It is always good to follow the principle of association in learning or memorization. Always attempts should be made to connect it with one's previous learning on the one hand and with so many related things on the other. Sometimes for association of ideas special techniques and devices are used for recall. For example, 'CAUTION' for cancer symptoms.

Grouping and Rhythm

Grouping and rhythm also facilitate learning and help in remembering. For example, a telephone number 567 345 234 can be easily memorized and recalled if we try to group it as 567 345 234.

Figure 3.23: Levels of processing theory

Similarly rhythm also proves as an aid in learning and memorizing. Children learn multiplication tables in the sing song fashion effectively. The arrangement of the material in the form of a verse with rhythm and rhyme is found very useful in this direction.

Recitation

After reading a lesson a few times, the student must try to review the whole thing without the help of a book; this method is referred to as self-recitation. Several studies have shown that self-recitation is a more economical use of one's study time than mere re-reading. This method not only economizes the energy to be applied, but also helps towards permanent retention.

Utilizing as many Senses as Possible

Things are better learnt and remembered, when they are presented through more than one sense. Therefore attempt should be made to take the help of audio-visual aid material and receive impressions through as many senses as possible.

Pulling at all Together

Organizing and ordering information can significantly improve memory. Learning a large amount of unconnected and unorganized information from various classes can be very challenging. By organizing and adding meaning to the material prior to learning facilitate both storage and retrieval.

Funnel Approach

The funnel approach means learning general concepts before moving on to specific details. When we understand the general concepts first, the details make more sense.

Acronym

Acronym is the method of creating combination of letters so as to recall certain enumerations. For example, to memorize the parts of a computer make a list, for example, keyboard, mouse, monitor and central processing unit (CPU). To make an acronym from that, pick the first letter from each word and combine them to get KMMC.

Acrostic

An invented sentence, where the first letter of each word is a clue to an idea you need to remember. Acrostics are especially useful for long lists of things whose names don't begin with vowels. For example, to remember the bones of the skull the acrostic sentence can be – Old People From Texas Eat Spiders – Occipital, Parietal, Frontal, Temporal, Ethmoid and Sphenoid.

Mnemonics

Mnemonics is another word for memory tool. Mnemonic are techniques for remembering information, i.e. otherwise quite difficult to recall. The idea behind using mnemonics is to encode difficult to remember information in a way that is much easier to remember.

Mnemonic link system: A method of remembering lists, based on creating an association between the elements of that list. For example, if one wished to remember the list (dog, envelope, thirteen, yarn, window), one could create a link system, such as a story about a "dog stuck in an envelope mailed to an unlucky black cat playing with yarn by the window". This story would be easier to remember than the list itself.

Memory peg system: A technique for memorizing lists. The main idea of these systems is to establish longterm memory, a well organized set of images to which the to be remembered items can be linked. In number systems, you form an image with each number. For instance, a rhyming system can be used for the numbers 1 through 10. think of words that rhyme with the numbers—1 is bun, 2 is a shoe, 3 is a tree, 4 is a door and so on. Now when you have a list to remember, you can associate the items on the list with your images of the numbers, you can associate the items on the list with your images of the numbers. If the first item on a grocery list is coffee, imagine a streaming cup of coffee next to a plate of buns; if the second item is hamburger, you might see

a giant shoe squashing hamburger into a patty and so on through the list, associating the number images with what is to be remembered.

Method of loci: 'Loci' is otherwise known as locations. The method of loci is also commonly called the mental walk. It is a method of memory enhancement, which uses visualization to organize and recall information. In this technique the subject memorizes the layout of some building or the arrangement of shops on a street or any geographical entity, which is composed of a number of discrete loci. When desiring to remember a set of items the subject literally 'walks' through these loci and commits an item to each one by forming an image between the items and any distinguishing feature of that locus. Retrieval of items is achieved by 'walking' through the 'loci' allowing the latter to activate the desired items.

Chunking: This is a technique generally used, when remembering numbers. It is based on the idea that STM is limited in the number of things that can be contained. A common rule is that a person can remember 7 (plus or minus 2) 'items' in STM. In other words, people can remember between 5 and 9 things at one time. When you use 'chunking' to remember, you decrease the number of items you are holding in memory by increasing the size of each item. In remembering the number string 64831996, you could try to remember each number individually or you could try thinking about the string as 64 83 19 96 (creating 'chunks' of numbers). This breaks the group into a smaller number of 'chunks.' Instead of remembering 8 individual numbers, you are remembering four larger numbers. This is particularly helpful when you form 'chunks' that are meaningful or familiar to you (in this case, the last four numbers in the series are '1996', which can easily be remembered as one chunk of information).

Forgetting

Forgetting means a failure to recall a fact, an idea, or a group of ideas. It is the weakening of the bonds that were formed in learning.

Definitions

Forgetting is the loss, permanent or temporary, of the ability to recall or recognize something learned earlier.

(Munn–1967)

Forgetting means failure at any time to recall an experience, when attempting to do so or to perform an action previously learned. (Drever–1952)

Types of Forgetting

Forgetting is just the opposite side of remembering and essentially a failure in the ability of reproducing. It is classified as:
❖ Natural forgetting and
❖ Morbid forgetting (abnormal)

Natural Forgetting

Forgetting occurs with the lapse of time in a quite normal way without any intention of forgetting on the part of the individual.

Morbid Forgetting (Abnormal)

Person deliberately tries to forget something (repression).

According to some other view, forgetting may be classified as general or specific:
❖ In general forgetfulness one suffers a total loss in one's recalling some previous learning.
❖ In specific forgetfulness the individual forgets only one or the other specific part of his earlier learning.

According to Another Classification

❖ In physical forgetfulness one loses his memory on account of the factors of age, disease, biological malfunctioning of the brain and nervous system, accidents, consumption of liquor or other intoxicating materials, etc.
❖ In psychological forgetfulness one loses his memory on account of factors like stress, anxiety, conflicts, temper provocation, lack of interest, apathy, repression or similar other emotional and psychic difficulties.

Causes of Forgetting

❶ *Inadequate impression at the time of learning*: Inadequate or improper learning is likely to be forgotten. Intention or will is the most important factor in remembering a thing. Forced learning either results in no learning or has a very temporary effect.

❷ *Lapse of time*: Time is said to be a great healing factor. What is learned or experienced is forgotten with the lapse of time.

❸ *Interference of association*: We forget something because what we have learned previously interferes with the remembering of what we learn afterwards. We also forget because we tend to learn new things all the time and new learning interferes in the retention of old learning.

❹ *Rise of emotions*: Emotions play a key role in learning as well as in forgetting. Sudden rise of emotions in excess blocks the process of the recall.

❺ *Poor health and defective mental state*: Deterioration in health makes an individual less confident and more perturbed. He remains under the state of tension and thus is unable to concentrate upon a thing at a particular time. Neither is he able to learn it effectively nor can he recall it easily after some time. People having lower intelligence quotient (IQ) or suffering from mental defects have been generally found to be very poor in retention and recall. In some cases a brain injury may also become a sole cause for the loss of memory. In such cases people are found to forget all about their previous experiences and happenings.

❻ *Inadequate repetition or practice of learning material*: We forget facts which we do not subsequently make use of. We forget because of inadequate repetition or practice of learning material that has been over learned with long hours of studying one thing, without changing the subject. Studying without proper spacing strains our nerves and results in fatigue.

In addition to factors mentioned above, there are many others which result in forgetfulness. They include fatigue, long illness, forces of distraction, lack of interest and purpose, lack of willingness or intention to learn or recall, unfavorable situations or conditions at the time of learning and reproduction. These factors make the material easily slip out of the mind.

Theories of Forgetting

Trace Decay Theory

According to many psychologists, time is the cause of much forgetting, what is learnt or experienced is forgotten with the lapse of time. The cause of such natural forgetting can be explained through a process known as decay of the memory trace. It says that learning results in neurological changes leaving certain types of memory traces or engrams in the brain. With the passage of time through disuse, these memory traces of learning impressions get weaker and weaker and finally fade away. It leads us to conclude that the older an experience, the weaker its memory and as time passes, the amount of forgetting goes on increasing.

This theory has proved a failure in many instances of forgetting. In LTM, such as learning to ride a bicycle forgetting does not occur even after years of neglect. However, this theory has provided good results in explaining forgetfulness in the case of STM. Drill, practice, rehearsal or repetition of learning always results in preventing decay.

Interference Theory

Mechanism of interference is responsible for forgetting. Interference is caused on account of the negative inhibiting effects of one learning experience on another. We forget things because of such interference. The interfering effects of things previously learnt and retained in our memory with the things of our recent memory can work both ways, backward and forward. The psychological term used for these types of interference is retroactive inhibition and proactive inhibition.

❶ In retroactive inhibition the acquisition of new learning works backward to impair the retention of the previously learned material. For example, a second list of words, formulations or equations may impair the retention of a first list.

❷ Proactive inhibition is just the reverse of retroactive inhibition. Here the old learning

or experiences retained in our memory works forward to disrupt the memory of what we acquire or learn afterwards. For example, learning a new formula may be hampered on account of the previously learned formulae in one's memory.

In both the types of inhibitions, it can be easily seen that similar experiences, when follow each other produce more interference than dissimilar experiences. Because in this case all experiences are so intermingled that a state of utter confusion prevails in the mind of an individual and consequently he faces a difficulty in retention and recall (Figure 3.24).

Interference theory as a whole has been proved quite successful in providing adequate explanation for natural and normal forgetting for both the STM and LTM (Table 3.3).
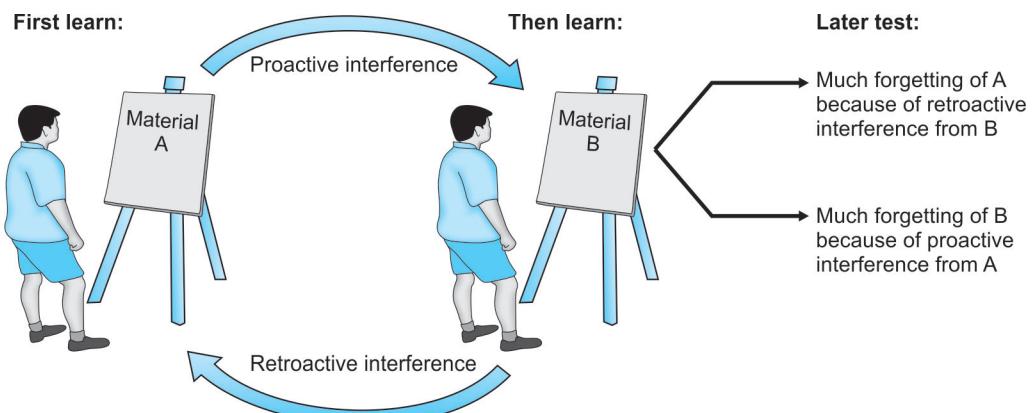
Repression Theory

The 'repression theory' was put forward by Freud's psychoanalytic school of psychology. Repression, according to this school, is a mental function that safeguards the mind from the impact of painful experiences. As a result of this function we actually push the unpleasant and painful memories into the unconscious and thus try to avoid at least consciously the conflicts that bother us. This leads to forgetting things, which we do not want to remember.

People under a heavy emotional shock are seen to forget even their names, homes, wives and children. Apart from causing abnormal forgetting, the impaired emotional behavior of an individual also plays its part in disrupting the normal memory process. For example, a sudden rise of emotions in excess, may completely block the process of recall. When one is taken over by emotions like fear, anger or love, one may forget all he has experienced, learned or thought before hand. During these emotions one becomes so self-conscious that his thinking is paralyzed. That is

Table 3.3: Summary of decay and interference theories

Decay theory	Interference theory
Forgetting occurs because as time passes, the memory trace gradually fades away. A name you once knew, for instance, is no longer available for recall because the physiological basis for the memory has eroded	Proactive interference: Material learned initially prevents you from recalling material learned later (for example, Spanish words interfere with your memory of French words that were learned later)
	Retroactive interference: Material learned after previously learned material prevents you from recalling the previously learned material (for example, you cannot remember someone's phone number given to you at the beginning of a party because activities that occurred later block your memory)

Figure 3.24: Interference theory

why a child fails to recall the answer to a question in the presence of a teacher whom he fears very much.

THINKING

Thinking is a complex mental activity. It is symbolic in character, initiated by a problem, which the individual is facing, involves the response of the individual to this problem.

Definitions

Thinking is behavior, which is often implicit and hidden and in which symbols (images, ideas and concepts) are ordinarily employed. *(Garrett—1968)* Thinking is a problem solving process, in which we use ideas or symbols in places of overt activity.

(Gilmer—1970)

Types of Thinking

Thinking, as a mental process, is usually classified into the following types:
- ❖ Perceptual or concrete thinking
- ❖ Conceptual or abstract thinking
- ❖ Reflective or logical thinking
- ❖ Creative thinking
- ❖ Critical thinking

Perceptual or Concrete Thinking

Perceptual thinking is the simplest form of thinking. The basis of this type of thinking is perception, i.e. interpretation of sensation according to one's experience. It is also named as concrete thinking as it is carried by the perception of actual or concrete objects and events. It is thinking of a lower order. Such type of thinking is present in animals and children.

Conceptual or Abstract Thinking

Like perceptual thinking it does not require the perception of actual objects or events. It is an abstract thinking where one makes use of concepts, the generalized ideas and language. It is regarded as a superior type of thinking to perceptual thinking as it economizes efforts in understanding and problem solving.

Reflective Thinking or Logical Thinking

Reflective thinking aims at solving complex problems rather than simple problems. It requires reorganization of all the relevant experiences and finding new ways of reacting to a situation. Mental activity in reflective thinking does not undergo any mechanical trial and error type of effort. There is an insightful cognitive approach in reflective thinking. It takes logic into account, in which all the relevant facts are arranged in a logical order so as to arrive at a solution to the problem in hand.

Creative Thinking

Creative thinking is chiefly aimed at creating something new. It is in search of new relationships and associations to describe and interpret the nature of things, events and situations. It is not bound by any pre-established rules. The individual himself usually formulates the problem and is free to collect evidence and invent tools for its solution. The thinking of the scientists or inventors is an example of creative thinking.

Critical Thinking

Critical thinking is a higher order well-disciplined thought process, which involves the use of cognitive skills like conceptualization, interpretation, analysis, synthesis and evaluation for arriving at an unbiased, valid and reliable judgment of the gathered or communicated information or data as a guide to one's belief and action.

Two Main Types of Thinking

❶ Controlled thinking
❷ Free thinking

Controlled Thinking

In controlled thinking the process of thinking is controlled and regulated. Thoughts keep in close touch with reality and are directed towards the achievement of a specific goal. Reasoning, problem solving and creative thinking are examples of controlled thinking.

Reasoning: It is one of the methods of finding solution to a problem. It is referred to as a highly specialized thinking involving some well organized systematic steps for the mental exploration of a cause and effect relationship or solution of a problem.

Definitions: Reasoning is stepwise thinking with a purpose or goal in mind.

(Garrett—1968)

Reasoning is combining past experience in order to solve a problem, which cannot be solved by mere reproduction of earlier solutions.

(Mann—1967)

Reasoning may be classified into two broad types:
❖ Inductive reasoning
❖ Deductive reasoning

Inductive reasoning: In this we proceed from specific facts or observations to general principles. Induction is a way of providing a statement or generalizing a rule or principle that if a statement or a rule is true in one particular case, it will be true in cases, which appear in the same serial order and thus it may be applied generally to all such types of cases. For example, iron expands when heated; water also expands when heated; air also expands when heated. Therefore, all types of matter – solid, liquid and gas – expand when heated. We make use of many experiences and examples for arriving at a genera-lized principle or conclusion.

Deductive reasoning: Deductive reasoning is just the opposite of inductive reasoning. In deductive reasoning we proceed from general principles to specific situations. For example, matter expands when heated; iron is a form of matter and thus expands when heated.

Problem solving: Problem solving as a deliberate and serious act, involves the use of some novel methods, higher thinking and systematic scientific steps for the realization of the set goals.

Definition: Problem solving is a process of overcoming difficulties that appear to interfere with the attainment of a goal. It is a procedure of making adjustments in spite of interferences.

(Skinner—1968)

Scientific method of problem solving:
1. Problem awareness
2. Problem understanding
3. Collection of relevant information
4. Formulation of hypotheses or hunch for possible solution
5. Selection of a proper solution
6. Verification of the concluded solution or hypothesis

Problem awareness: The first step in problem-solving behavior of an individual concerns his awareness of the difficulty or problem that needs a solution.

Problem understanding: The difficulty or problem experienced by the individual should be properly identified by a careful analysis. He should be clear about his problem. The problem then should be pinpointed in terms of the specific goals and objectives. Thus, all the difficulties and obstacles in the path of the solution must be properly named and identified and what is to be got through the problem-solving efforts should then be properly analyzed.

Collection of relevant information: In this step, the individual is required to collect all the relevant information about the problem through all possible sources. He may consult experienced persons, read the available literature, revive his old experiences, think of possible solutions and put in all relevant efforts for widening the scope of his knowledge concerning the problem in hand.

Formulation of hypothesis or hunch for possible solutions: In the light of the collected relevant information and nature of his problem, one may then engage in some serious cognitive activities to think of the various possibilities for the solution of one's problem. As a result, he may start with a few possible solutions for his problem.

Selection of a proper solution: In this step, all the possible solutions, thought of in the previous step, are closely analyzed and evaluated. Gates and others (1946) have suggested the following activities in the evaluation of the assumed hypothesis or solution:

❖ One should determine the conclusion that completely satisfies the demands of the problem.

❖ One should find out whether the solution is consistent with other facts and principles, which have been well established.

❖ One should make a deliberate search for negative instances, which might cast doubts on the conclusion.

The above suggestions can help the individual to consider a suitable solution for his problem out of the many possible solutions.

Verification of the concluded solution or hypothesis: The solution arrived at or conclusion drawn must be further verified by applying it in the solution of various similar problems and only if the derived solution helps in the solution of these problems the same may be applied.

John Bransford and Barry Stein (1984) advocated five steps that are basically associated with the task of problem solving. They referred to these steps as 'IDEAL' thinking and arranged them in the following order:

I   —   Identifying the problem.
D   —   Defining and representing the problem.
E   —   Exploring possible strategies.
A   —   Acting on the strategies.
L   —   Looking back and evaluating the effects of one's activities.

Creative thinking: Creative thinking is a process, in which the individual generates an original, unusual and productive solution to a problem. It is defined as personal, imaginative thinking which produces a new, novel and useful solution. Unlike ordinary solution to problems, creative solutions are new ones that other people have not thought of before. The product of creative thinking may be a new and unique way of conceptualizing the world around us.

Stages of Creative Thinking

Stage I–preparation: The creative thinker formulates the problem and collects the facts and materials necessary for the new solution. Very frequently, he finds that the problem cannot be solved inspite of days, weeks or months of concentrated effort. Failing to solve the problem, the thinker turns away from it, either deliberately or involuntarily.

Stage II–incubation: This stage is initiated, when the creative thinker turns away from the problem. During this stage, the ideas that were interfering with the solution of the problem begin to fade. The unconscious thought processes involved in creative thinking are also at work during this stage. All this leads to the third stage.

Stage III–insight (illumination): During this stage, the creative thinker experiences sudden appearance of the solution to his problems, which is termed as 'insight'.

Stage IV–verification (evaluation): During this stage, the insight is tested to see, if it satisfactorily solves the problem. If not satisfactory, the thinker is back at the beginning of the creative process. On the other hand, if the solution is satisfactory, stage V is reached.

Stage V–revision: During this stage, any modifications needed are made. The creative thinker never considers his solution as perfect or final. It is open for modification or revision at anytime as essential.

Free Thinking

In free thinking, thought processes are allowed much greater freedom of action. Neither there are any restrictions of reality in terms of time and space nor any desire on the part of the thinker to achieve a certain goal which is realistic. Examples of free thinking are imagination, daydreaming and dreaming.

❶ *Imagination*: It is a mental activity, in which we make use of images and also go beyond them. When we are imagining an object or situation we do not have any sense perception of the object or situation at that time. We only have the mental image of the object or the situation and create something of our own. Thus, the object or situation or the past experience is reorganized and sometimes looks new and unusual.

❷ *Daydreaming*: It is a kind of idle imagination. In day dreamers, impossible things become possible like our wishes, which cannot be fulfilled in real life are fulfilled. Daydreaming provides a person with an opportunity to develop his power of imagination and with much satisfaction and pleasure and provides an escape from the routine daily life. If we spend a major portion of our time in daydream, we may not be able to cope with the actual problems in real life.

❸ *Dreaming*: Dreams are mental activities of lighter sleep. It is not subject to the personal and environmental controls that operate, when we are awake. They emerge in response to some stimulus either internal or external. In some of our dreams we solve the problems, which were perplexing us during our waking hours. Some dreams may be simple reminiscences or reproductions of what happened during the day.

Levels of Thinking (Based on 'Bloom's Taxonomy)

Level 1: Knowledge

Exhibits previously learned material by recalling facts, terms, basic concepts and answers.
Keywords: Who, what, when, omit, where, which, choose, find, how, define, label, show, spell, list, match, name, relate, tell, recall, select.

Level 2: Comprehension

Demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas.
Keywords: Compare, contrast, demonstrate, interpret, explain, extend, illustrate, infer, outline, relate, rephrase, translate, summarize, show, classify.

Level 3: Application

Solving problems by applying acquired knowledge, facts, techniques and rules in a different way.
Keywords: Apply, build, choose, construct, develop, interview, make use of, organize, experiment with, plan, select, solve, utilize, model, identify.

Level 4: Analysis

Examining and breaking information into parts by identifying motives or causes; making inferences and finding evidence to support generalizations.
Keywords: Analyze, categorize, compare, contrast, discover, dissect, divide, examine, inspect, simplify, survey, take part in, test for, distinguish, list, distinction, theme, relationships, function, motive, inference, assumption, conclusion.

Level 5: Synthesis

Compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Keywords: Build, choose, combine, compile, compose, construct, create, design, develop, estimate, formulate, imagine, invent, make up, originate, plan, predict, propose, solve, solution, suppose, discuss, modify, change, original, improve, adapt, minimize, maximize, delete, theorize, elaborate, test, improve, happen, change.

Elements in Development of Thought (Tools of Thinking)

Images

Images, as mind pictures, consist of personal experiences of objects, persons or scenes once actually seen, heard or felt. These mind pictures symbolize the actual objects, experiences and activities. In thinking, we usually manipulate the images instead of actual objects, experiences or activities.

Concepts

Concepts are important language symbols used in thinking. Concepts are categorizations of objects, events or people that share common properties. By employing concepts, we are able to organize complex phenomena into simple phenomena. For example, with the concept of 'soft' we sort out objects into soft and hard. The features we select define the concept and form the basis for making classifications. When a classification has been made, we tend to behave toward and think about, members of the class in

similar ways. Thus, since concepts are ways of classifying the diverse elements in the world around us, they are convenient tools to use in thinking about the world and in solving problems.

Steps in concept development:

❶ The first step in the development of a concept is the awareness of a variety of connected experiences revealed to the individual through perception.

❷ In the second stage, comparison of these experiences occurs, which highlights the essential attributes commonly found in all these experiences.

❸ In the third stage, abstraction of these common characteristics occurs. Abstraction is the mental step of conceiving of qualities apart from the things, in which they are present. Then the abstracted common traits are verified and a name in language is coined to represent this unity. After this the name stands for the concept.

❹ Language plays a significant role in the development and stability of concepts.

Uses of concepts:

❖ It is a time and labor saving device.
❖ It facilitates the transfer of learning.
❖ It reduces the complexity of the individual's world.

Symbols and Signs

Symbols and signs represent and stand as substitutes for actual objects, experiences and activities. In this sense they cannot be confined to words and mathematical numerals and terms. Traffic lights, railway signals, school bells, badges, songs, flags and slogans all stand for the symbolic expression. These symbols and signs stimulate and economize thinking. They at once tell us, what to do or how to act. For example, the waving of the green flag by the guard tells us that the train is about to move and we should get into the train.

Languages

Language is the most efficient and developed vehicle used for carrying out the process of thinking. When one listens or reads or writes words, phrases or sentences or observes gestures in any language,

one is stimulated to think. Reading and writing of the written documents and literature also helps in stimulating and promoting our thinking process. The language broadens our thinking.

Brain Functions

Our mind or brain is said to be the chief instrument or reservoir, for carrying out the process of thinking. Whatever is experienced through our sense organs, carries no meaning and thus cannot serve as a stimulating agent unless the same is received by our brain cells and properly interpreted for driving some meaning. The mental pictures or images can be stored, formed, reconstructed or put to some use only through the functioning of the brain.

Errors in Thinking

Our response to stimuli is determined entirely by the information present in our brain at that time. When our information about the stimulus is complete and correct, we respond appropriately and achieve our objective. When our information is incomplete and/or incorrect, our response is inappropriate. An inappropriate response will be called an error. All errors in thinking occur because of incomplete or incorrect information about how to deal with the stimuli detected.

It is necessary that we should be aware of the errors in thinking. There are five such errors in thinking:

❶ Partialism
❷ Adversary thinking
❸ Time scale error
❹ Initial judgment
❺ Arrogance and conceit

Partialism

This error occurs when the thinker observes the problem through one perspective only, i.e. the thinker examines only one or two factors of the problem and arrives at a premature solution.

Adversary Thinking

This is like "You are wrong. So, I should be right." type of reasoning. Politicians are the masters in this type of thinking and they use it to their advantage.

Time Scale Error

This is a kind of partialism in thinking, in which the thinker sees the problem from a limited time frame. It is similar to short-sightedness.

Initial Judgment

Here, the thinker becomes very subjective. Instead of considering the issue or problem objectively, the thinker approaches it with prejudice or bias.

Arrogance and Conceit

This error is sometimes called the "Village Venus Effect", because like the villagers, who think that the most beautiful girl in the world is the most beautiful girl in their village, the thinker believes that there is no better solution other than that he has already found. This blocks creativity.

Cognitive Thinking Errors

❶ *Black and white thinking*: Thinking of things in absolute terms, like 'always', 'every' or 'never'. For example, if your performance falls short of perfect, you see yourself as a total failure.

❷ *Overgeneralization*: Taking isolated cases and using them to make wide generalizations. For example, you see a single negative event as a never-ending pattern of defeat: "She yelled at me. She is always yelling at me. She must not like me."

❸ *Mental filter*: Focusing exclusively on certain, usually negative or upsetting, aspects of something, while ignoring the rest. For example, you selectively hear the one tiny negative thing surrounded by all the huge positive stuff.

❹ *Jumping to conclusions*: Assuming something negative; where there is actually no evidence to support it.

❺ *Magnification and minimization*: Exaggerating negatives and understating positives.

❻ *Emotional reasoning*: Making decisions and arguments based on how you feel rather than objective reality.

Favorable Elements in Development of Correct Thinking

Correct thinking leads to correct learning. Correct learning leads to correct living. Every individual is not a born thinker. He has to learn and adopt various ways of correct thinking.

Interest and Attention

Both interest and attention favor thinking. Attention is difficult in the absence of interest. Without attention, thinking cannot take place.

Strong Motivation

Organized and controlled thinking needs strong motivation. The effort of the mind in thinking corresponds to the strength of motivation for the solution of the problem. Motivation maintains enthusiasm and postpones fatigue. Necessary mobilization of energy for thinking is made easier by motivation.

Alertness and flexibility: Alertness checks mistakes and fallacies from creeping into thinking. Flexibility keeps thinking free from conservatism and blind belief. Proper thinking aims at the solution of problems and ensures there are no omissions and mistakes. This requires alertness. If one solution does not serve the purpose, it is discarded and replaced by another. This needs flexibility. Thus, both alertness and flexibility serve useful purposes in thinking.

Flexible time limit: Rigid time schedule hampers normal thinking. Inflexible and short time do not admit valid thinking.

Wide range of intelligence: If a solution is to be evolved, it is essential to keep an eye on various aspects of the problem and their mental relationships. This needs a developed and mature range of intelligence.

Adequacy of the knowledge and experiences: Thinking, no matter how simple or complex rests on the previous knowledge and experience of the

thinker. Adequacy of knowledge and experiences brings adequacy in thinking. Lack of knowledge and experience is the common cause of erroneous thinking.

Thinking with a definite aim: Thinking is a purposeful activity. Unless there is a definite aim or purpose, it cannot proceed on the right track.

Freedom and flexibility in thinking: Thinking should not be obstructed by imposing unnecessary restrictions and narrowing of the field of thought process. Actually a person should have flexible attitude towards himself, so that he can set his thinking according to the requirements of the situation. For example, if children are not able to solve their problems with habitual methods, one should give them freedom to take up new directions of thinking. They should be allowed to form new associations and relationships.

Incubation: When one fails in solving a problem in spite of constant and grueling work, it is suitable to lay aside the problem for some time and relax for a while or engage in some other activity. During this period, the unconscious mind starts working on the problem and just as eggs are hatched by incubation, a solution is evolved through the efforts of our unconscious mind. The use of the phenomenon of incubation is very helpful in bringing adequacy in the process of thinking.

Intelligence and wisdom: It is the level of intelligence, which determines our capacity for thinking. Children with superior intelligence are able to think quickly and sharply. Wisdom helps in thinking and getting an insight into the problem. Proper care should be taken to use intelligence, wisdom and other similar cognitive abilities for carrying out the process of thinking.

Proper development of concepts and language: Concepts, symbols, signs, words and language are instruments of thought. Therefore proper care should be taken to develop right concepts and linguistic ability by using various symbols, signs and formulae besides words and language in the process of thinking.

Adequacy of reasoning process: Logic is the science of correct reasoning, which helps to think correctly. Therefore, we should cultivate the habit of logical reasoning among our children.

Control over emotions: In emotional situations, one loses balance of mind. It is essential, to train ourselves in exercising control over our emotions. Prejudices, superstitions and incorrect beliefs also arrest thinking and make it biased and one-sided. Correct thinking requires elimination of all such obstructing factors.

Stages in Development of Thinking

Figure 3.25: Jean Piaget formulated theory of children's thinking that helped shape current ideas about developmental psychology

Jean Piaget (1896-1980), (Figure 3.25) a Swiss philosopher and psychologist, dedicated his life work to observing and interacting with children to determine how their thinking processes differed from adults.

❶ According to Piaget's theory of cognitive development, the developing child passes through four main discrete stages: the sensorimotor stage, the preoperational stage, the stage of concrete operations and the stage of formal operations. Each stage reflects a range of organizational patterns that occur in definite sequence and within an approximate age span.

❷ Development is influenced by biological maturation, social experiences and experiences with the physical environment. During cognitive development, the individual strives to find equilibrium between self and environment.

❸ Cognitive theory explains how thought processes are structured, how they developed and their influence on behavior. Structuring of thought processes occurs through the development of schema (i.e. mental images or cognitive structures). Thought processes develop through assimilation and accommodation. When the child encounters new information that is recognized and understood within existing schema, assimilation of that new information occurs. If new information cannot be linked to existing schema, the child must learn to develop new mental images or patterns through the process of accommodation. As long as the child is able to assimilate or accommodate adequately to new knowledge, the child is able to achieve equilibrium or mental balance. When schemas are inadequate to facilitate learning, disequilibrium may occur (Figure 3.26 and Table 3.4).

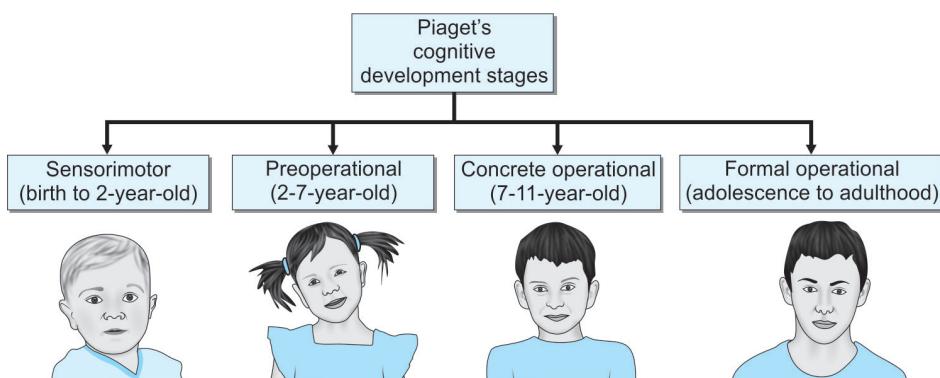### Sensorimotor (Birth to 2 Years)

During this stage, the child learns about himself and his environment through motor and reflex actions. Thought derives from sensation and movement. The child learns that he is separate from his environment and that aspects of his environment—his parents or favorite toy continue to exist even though they may be outside the reach of his senses.

Preoperational (2 to 7 Years)

During this stage sensory motor operations are replaced by words and child learns language. Applying his new knowledge of language, the child begins to use symbols to represent objects. He is now better able to think about things and events that are not immediately present. His thought process at this stage usually displaces a high degree of ego-centricism, means an inability to take the point of view of another person, his thinking is influenced by fantasy—the way he would like things to be and he assumes that others see situations from his viewpoint. He takes information and then changes it in his mind to fit his ideas. Children in this stage do not understand cause-effect relationships.

Concrete Operational (7 to 11 Years)

During this stage, accommodation increases. The child develops an ability to think abstractly and to make rational judgments about concrete or observable phenomena, which in the past he needed to manipulate physically to understand. During this stage children use logic and begin to grasp such important principles of nature such as number, classification and conservation of mass and length. Their thought processes are limited to concrete objects and events. Due to influence of social environment, school, peers and teachers. There is corresponding expansion in ways of thinking about people.

Figure 3.26: Piaget's four stages of cognitive development

Table 3.4: Piaget's four stages of cognitive development

Stage and age range	Description
Sensorimotor (Birth to 2 years)	An infant progresses from reflexive, instinctual action at birth to the beginning of symbolic thought. The infant constructs an understanding of the world by co-ordinating sensory experiences with physical actions
Preoperational (2 to 7 years)	The child begins to represent the world with words and images; these words and images reflect increased symbolic thinking and go beyond the connection of sensory information and physical action
Concrete operational (7 to 11 years)	The child can now reason logically about concrete events and classify objects into different sets
Formal operational (11 to 15 years)	The adolescent reasons in more abstract and logical ways. Thought is more idealistic

Formal Operational (11 to15 Years)

This stage brings cognition to its final form. During this stage the person thinks in terms of abstract concepts that are not physically present in nature. The child develops ability to think on scientific basis and find solutions to problems. At this point, he is capable of hypothetical and deductive reasoning.

Thinking in Relation to Language and Communication

❶ Language is the means by which we express our thoughts to others either in verbal or written forms. If we confine ourselves to perceptual or ideational thinking that merely involves images, our thinking would remain at a relatively low level. Through the use of language, we can develop complex and abstract concepts. We learn through discussion about the essential characteristics of concepts.

❷ Language like thought is directed to some purpose or goal. It has a unity and organization about the goal. Words and symbols constitute the stuff of the language. They have the capacity of freezing or enlarging our thoughts. According to Piaget, language is the symbolic vehicle by which thought is carried.

❸ Language is extremely important in the process of thinking. It allows new learning to be communicated to others and saved for future generations. Human learning often depends upon what has been learned and saved through some form of communication and recording in the form of language.

❹ The use of language, i.e. the communication of information through symbols arranged according to systematic rules, clearly is an important cognitive ability, one that is indispensable for communicating with others.

❺ Language provides us with categories that we use to construct our view of people and events in the world around us. Consequently language shapes and produces thought.

INTELLIGENCE

Intelligence is the general capacity for comprehension and reasoning that manifests itself in various ways. It consists of an individual's mental or cognitive ability, which helps the person in solving his actual life problems and leading a happy and well-contended life.

Definitions

Intelligence is the aggregate or global capacity of the individual to think rationally, to act purposefully and to deal effectively with the environment.

(Wechsler—1944)

Intelligence is the ability to master the information and skills needed to succeed within a particular culture. *(Lolurto—1991)*

Intelligence can be defined as a sort of mental energy, in the form of mental or cognitive abilities available with an individual, which enables him to handle his

environment in terms of adaptation to face novel situations as effectively as possible.

(Mangal–1993)

Classification of Intelligence

Intelligence can be divided into three kinds:
1. Concrete intelligence
2. Social intelligence
3. Abstract or general intelligence.

Concrete Intelligence

Concrete intelligence is related to concrete materials. This type of intelligence is applicable when the individual is handling concrete objects or machines. The person uses this intelligence in the operation of tools and instruments. Example: Engineers, mechanics generally have this type of intelligence.

Social Intelligence

Social intelligence is the ability of an individual to react to social situations in daily life. It includes the ability to understand people and act wisely in human relationships. Persons having this type of intelligence, know the art of winning friends and influence them.

Example: Leaders, ministers, salesmen, diplomats are socially intelligent.

Abstract or General Intelligence

General intelligence is the ability to respond to words, numbers and letters, etc. This type of intelligence is acquired by study of books and related literature. Mostly good teachers, lawyers, doctors, philosophers have this type of intelligence.

Gardner's Multiple Intelligence

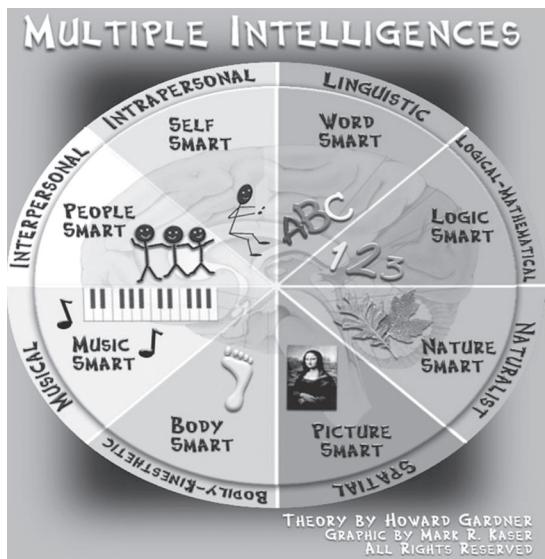According to Howard Gardner, there are eight major kinds of intelligence (Table 3.5 and Figure 3.27).

Emotional Intelligence

Intelligence that provides an understanding of what other people are feeling and experiencing, and permits us to respond appropriately to other's needs is called emotional intelligence. It is the basis of empathy for others, self-awareness and social skills. High emotional intelligence might enable the individual to tune into other's feelings, permitting a high degree of responsiveness to others.

Table 3.5: Gardner's eight major kinds of intelligence

Type of intelligence	Description
1. Musical intelligence	Skills in tasks involving music. Example: Musicians
2. Bodily-kinesthetic intelligence	Skills in using the whole body or various portions of it, in the solution of problems or in the construction of products. Example: Dancers, athletes, actors, surgeons, etc.
3. Logical-mathematical intelligence	Skills in problem solving and scientific thinking. Example: Scientists
4. Linguistic intelligence	Skills involved in the production and use of language. Example: Literati
5. Spatial intelligence	Skills involving spatial configurations, such as those used by artists and architects
6. Interpersonal intelligence	Skills in interacting with others, such as sensitivity to the moods, temperaments, motivations and intentions of others
7. Intrapersonal intelligence	Knowledge of the internal aspects of one self; access to one's own feelings and emotions
8. Naturalist intelligence	Ability to identify and classify patterns in nature

Adapted from Gardner, 2000

Figure 3.27: Gardner's eight major kinds of intelligence

Abilities in emotional intelligence might help to explain why people with only moderate intelligence quotient (IQ) scores can be quite successful, despite their lack of traditional intelligence.

Intelligence Quotient

The idea of intelligence quotient was utilized first in 1916 by Stanford-Binet tests. Intelligence quotient is the ratio between mental age (MA) and chronological age (CA). While the chronological age is determined from the date of birth, mental age is determined by intelligence tests.

$$IQ = \frac{MA}{CA} \times 100$$

Imagine a 10-year-old boy scores a mental age of 12. His IQ will be

$$IQ = \frac{MA}{CA} \times 100 = \frac{12}{10} \times 100 = 120$$

Classification of Individuals According to IQ

There exists a wide individual difference among individuals with regard to intelligence. No two individuals, even the identical twins nurtured almost in similar environment have same level of intelligence. This is an important fact that every nurse must understand. Because of these individual differences some patients understand the instructions of the nurse without much difficulty, while others cannot in spite of their best efforts.

Genius	140 and above
Very superior	130 to 140
Superior	120 to 130
Above average	110 to 120
Average	90 to 110
Dull average	80 to 90
Borderline	70 to 80
Mild mental retardation	50 to 70
Moderate mental retardation	35 to 50
Severe mental retardation	20 to 35
Profound mental retardation	0 to 20

Uses of Intelligence

❖ Intelligence helps the individual to adjust to changing situations quickly and correctly.
❖ It helps to carry on the higher mental processes such as reasoning, judging and criticizing.
❖ It helps to learn difficult tasks and solve problems.
❖ It helps the individual to improve performance in any situation.
❖ It helps in quick understanding of things.
❖ It helps the individual to apply the knowledge gained in various subjects/situations in dealing with present situation.

Theories of Intelligence

Factor Theories of Intelligence

Two-factor theory or general intelligence (G-Factor) theory: It was advocated by Charles Spearman (1927), a British psychologist.

Spearman proposed a broad general intelligence factor (G) involved in every intellectual activity an individual undertakes. Every individual possesses general intelligence factor (G) in varying amount. This determines the individual's overall ability. 'G' is a universal inborn ability. Higher the 'G' in an individual, greater is the success in life. In addition to the G-factor, there are specific abilities, which allow an individual to deal with particular kinds of problems. Specific

intelligence factor (S) is learned and acquired from environment, it varies from activity to activity even in the same individual. Examples of these specific abilities can be language ability, mathematical ability, musical or drawing skills and so on. These specific abilities may be represented as S1, S2, S3, etc.

Thus, an individual's total ability or intelligence (A) is the sum of the general factor and all his specific abilities. This can be expressed as:

$$A = G + S1 + S2 + S3 + \ldots\ldots$$

Group factor or multifactor theory: This theory was expounded by L L Thurstone in 1938. Thurstone explained that certain mental operations have a common primary factor, which gives them psychological and functional unity and which differentiates them from other mental operations. These mental operations constitute a group factor. So, there are a number of groups of mental abilities and each of these groups has its own primary factor. Thurstone and his associates have identified seven such factors. They are:

- ❖ *Verbal factor (V):* Comprehension of verbal ideas or words.
- ❖ *Spatial factor (S):* Ability to imagine an object in space.
- ❖ *Numerical factor (N):* Ability to perform mathematical calculations, rapidly and accurately.
- ❖ *Memory factor (M):* Ability to memorize quickly.
- ❖ *Reasoning factor (R):* Ability to reason and think things out.
- ❖ *Perceptual factor (P):* Ability to perceive objects accurately.
- ❖ *Problem-solving factor (PS):* Ability to solve problems independently.

Process-Oriented Theories of Intelligence

These theories have focused on intellectual processes — the pattern of thinking that people use when they reason and solve problems. These theorists prefer to use the term cognitive processes in place of intelligence. They are often more interested in how people solve problems and how many get the right solution. They have focused on the development of cognitive abilities. Piaget's work is a significant contribution in this area.

Piaget's theory (Jean Piaget 1970): According to Piaget, intelligence is an adaptive process involving interplay of biological maturation and interaction with the environment. He viewed intelligence as an evolution of cognitive processes such as understanding the laws of nature, principles of grammar and mathematical rules.

Bruner's theory (Jerome bruner, 1973): According to Bruner, intelligence is a growing dependence on internal representation of objects or situations. These growing abilities are influenced by the environment, especially the rewards and punishments people receive for using particular intellectual skills in particular ways.

Information-Processing Theory (Robert Sternberg, 1984)

The most recent acceptable theory of intelligence has been put forward by the American psychologist Robert Sternberg by adopting an information processing approach to cognition or problem solving. The information processing approach is the manner, in which one proceeds to perform a mental task or solve a problem from the time one comes across it, gathers information and makes use of this information for completing the task or solving the problem in hand. The theory propagated by Sternberg identified the following steps in the way one processes information:

❶ Encoding (identifying the relevant available information in the mind).
❷ Inferring (drawing the necessary inference).
❸ Mapping (establishing the relationship between a previous situation and the present one).
❹ Application (applying the inferred relationship).
❺ Justification (justifying the analyzed solution of the problem).
❻ Responding (providing the best possiblesolution).

APTITUDE

Aptitude means quickness in learning and understanding. It may be a natural talent or an acquired ability. It is the special aptness or fitness

for a special ability, such as mechanical, musical, artistic, scholastic or religious.

Aptitude refers to those qualities characterizing a person's way of behavior, which serves to indicate how well he can learn to meet and solve a certain specific kind of problem. People differ in terms of performance and human activity like leadership, music, art, teaching, etc. Individuals possess certain specific aptitude or ability in addition to intellectual abilities or intelligence, which helps them to achieve success in some specific occupations or activities. Thus aptitude means specific ability or capacity distinct from general intellectual ability that helps to acquire proficiency or achievement in a specific field.

Definitions

Aptitude is variously defined as innate learning ability, the specific ability needed to facilitate learning a job, aptness, knack, suitability, readiness, tendency, natural or acquired disposition or capacity for a particular activity or innate component of a competency.

Aptitude refers to those qualities characterizing a person's way of behavior, which serve to indicate how well he can learn to meet and solve a certain specified kinds of problem.   *(Bingham—1937)*

An aptitude is a combination of characteristics indicative of an individual's capacity to acquire (with training) some specific knowledge, skill or set of organized responses, such as the ability to speak a language, to become a musician, to do mechanical work.   *(Freeman—1971)*

Concepts

- ❖ An aptitude is an innate component of a competency to do a certain kind of work at a certain level. Aptitudes may be physical or mental. Aptitude is not knowledge, understanding, learned or acquired abilities (skills) or attitude. The innate nature of aptitude is in contrast to achievement, which represents knowledge or ability that is gained.
- ❖ Aptitudes are latent potentialities. Given opportunities for development, would result in great achievement.

- ❖ Aptitude is derived from general mental ability and it predicts one's possible success or failure in a vocation.
- ❖ An aptitude is an innate inborn ability to do a certain kind of work. Aptitudes may be physical or mental. Many of them have been identified and are testable.
- ❖ Aptitude helps an individual to learn faster and achieve success.
- ❖ Aptitude is very helpful in choosing any kind of activity, in which we wish to be successful or enjoy. For example, if you have an aptitude in dance, you would enjoy and be successful in dance training, if you do not have this aptitude, you would never enjoy nor progress in dance even if you took a great deal of training. Doing things in which you have an aptitude will protect you from frustrations and failures and help you to adjust and be successful much more quickly.
- ❖ To predict an achievement in some particular job or training courses we need to know more about one's aptitudes rather than his intelligence or general ability.
- ❖ Aptitude is a special ability, where as intelligence is a general ability. With the knowledge of intelligence of an individual we can predict his success in a number of situations involving mental function or activity. The knowledge of aptitude on the other hand acquaints us with the specific abilities and capabilities of an individual to succeed in a particular field of activity.
- ❖ Aptitude differs from ability and achievement, in that it is forward looking in nature, i.e. it gives an indication of the future success of an individual, where as ability limits itself to the present performance of an individual. Achievement, with its past oriented nature merely indicates what an individual has learned or acquired. Aptitude should not be confused with interest. One may show interest in a particular act or job, but may or may not have the aptitude for it. The opposite is also true. However, to achieve the desired success in a given task, one must have both interest as well as aptitude. Interest usually grows with knowledge. For example, if you have an interest in something, you will learn more about it. As

you learn more about that, your interest in it will grow. The interest in nursing will grow as you progress in the nursing education.

❖ Aptitude is different from skill and proficiency. Skill is the ability to perform a given act with ease and precision. For example, we may say that a person is skilled in carpentry or playing piano.

Skill refers to psychomotor ability. Proficiency has much the same meaning, except that it is more comprehensive. It includes not only skills in certain types of motor and manual activities, but also in other types of activities as shown by the extent of one's competence in language, book-keeping, etc.

Types

Manual aptitude: It indicates motor abilities or skills required for semi-skilled occupations.

Mechanical aptitude: This aptitude involves the ability to understand and solve problems involving mechanical relationships and arrangements such as those, which occur in the adjustment, repair and assembly of machinery.

Clerical aptitude: This aptitude indicates different abilities like perceptual, intellectual abilities, mental skills and motor skills.

Other types of aptitude: are musical, graphic, scholastic/professional aptitudes.

Commonly recognized aptitudes that are testable include:
❖ General learning ability
❖ Verbal aptitude
❖ Numerical aptitude
❖ Inductive reasoning aptitude, also called differentiation or inductive learning ability
❖ Finger dexterity aptitude
❖ Number series aptitude
❖ Language learning aptitude
❖ Mechanical comprehension
❖ Symbolic reasoning aptitude, also called analytical reasoning
❖ Visual memory
❖ Visual pursuit, also called line tracing

Individual Differences and Variability in Aptitude

Suppose that two persons of equal intelligence have the same opportunities to learn a job or develop a skill they attend the same on the job training or classes, study the same material and practice the same length of time. One of them acquires the knowledge or skill easily; the other has difficulty and takes more time, if they ever master the skill. These two people differ in aptitude for this type of work or skill acquisition.

Aptitudes are highly individualized and specialized apart from one's general level of intelligence. For example, two individuals may have same level of intelligence, but not do well in the same kind of education or training, because of differences in aptitude. Differences in aptitude will decide the area, in which they will practice successfully. One nurse may have an aptitude for handling surgical instruments and do well in the operation theater; another may have an aptitude for problem solving in research and enjoy research and teaching. Aptitudes are very important in determining success in professional practices.

An aptitude is a composite of different component abilities that together make for success in performance in a particular field. The higher the aptitude, the higher the chances of success. The lower the aptitude, the lower the probability of achievement. The higher the aptitude, the less the time required for learning and mastery. The lower the aptitude, the more the time required for learning.

Psychometric Assessment of Cognitive Process

Neuropsychological testing is a procedure that measures and identifies cognitive impairment and functioning in individuals. Neuropsychological testing provides diagnostic clarification and grading of clinical severity for patients with subtle or obvious cognitive disorders. These include:
❖ Children who are not achieving appropriate developmental milestones.

❖ Infants exposed to drugs, alcohol or illness *in-utero*.
❖ Patients with head injuries.
❖ Patients with Parkinson disease or other neurological diseases.
❖ Patients exposed to chemicals or toxins.
❖ Substance abusing patients.
❖ Stroke victims.
❖ Patients with dementia.

Neurological tests for assessing various cognitive processes are as below (Table 3.6):

Assessment of Intelligence

Intelligence can be assessed through psychological tests. Alfred Binet (1875-1911) was the first psychologist to device an intelligence test. Intelligence tests can be classified into two broad categories namely (Figure 3.28).

❶ Individual test
❷ Group test

Individual Verbal Tests

These tests only test one individual at a time. These tests make use of language. For example, Stanford-Binet scale.

Individual Performance Tests

The complete non-verbal or non-language tests of intelligence for testing an individual at a time, fall into this category. These tests involve the manipulation of objects (e.g. picture arrangement, picture completion, block design, etc.) with minimum use of paper and pencil. Instructions are generally given by demonstrations and gestures. These tests are used in infants, mentally retarded, foreigners and those who do not understand language, in which the tests are conducted. Example: Bhatia's Battery of performance test.

Group Verbal Intelligence Tests

These tests use language and are applied to a group of individuals at a time. For example, Army Alpha Test, Army General Classification Test.

Group Non-verbal Intelligence Tests

These tests do not necessitate the use of language and are applicable to the group of individuals at a time. In these tests, material does not contain words or numerical figures. It contains pictures, diagrams and geometrical figures, etc. printed in a booklet. The subject is required to do such activities as to fill in some empty spaces, draw some simple figures, point out similarities and dissimilarities, etc. For example: Army Beta Test, Raven's Progressive Matrices Test.

Comparison between individual and group tests: Comparison of both individual and group test for intelligence is given in Table 3.7.

Uses of Intelligence Tests

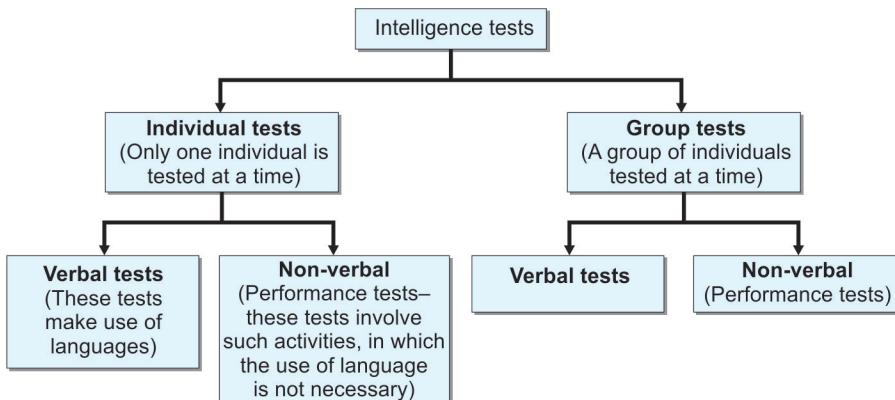❖ Intelligence testing is used to predict how well a person will learn in a program of study.

Figure 3.28: Classification of intelligence tests

Table 3.6: Neurological tests for assessing various cognitive processes

Domain	Neurological test
Intellectual functioning	– Wechsler Scales – Wechsler Adult Intelligence Scale-Revised (WAIS-R) – Wechsler Adult Intelligence Scale-III (WAIS-III) – Wechsler Intelligence Scale for Children-IV (WISC-IV) – Stanford-Binet Intelligence Scale-IV
Academic achievement	– Wechsler Individual Achievement Test (WIAT) – Woodcock-Johnson Achievement Test
Language processing	– Multilingual Aphasia Examination – Boston Diagnostic Aphasia Examination – Token Test
Visuo-spatial processing	– WAIS Block Design Subtest – Judgment of Line Orientation – Hooper Visual Organization Test
Attention/ concentration	– Digit Span Forward and Reversed – Cancellation Tasks (letter and symbol)
Verbal learning and memory	– Wechsler Memory Scale (WMS) – Logical Memory I and II - Contextualized prose – Verbal Paired-Associates – WMS-III Verbal Memory Index
Visual learning and memory	– Visual Reproduction I and II – Non-verbal Selective Reminding Test – Continuous Recognition Memory Test – Visuo-Motor Integration Test - Block design
Executive functions	– Wisconsin Card Sorting Test – WAIS Subtests of Similarities and Block Design
Speed of processing	– Simple and Choice Reaction Time – Symbol Digit Modalities Test—written and oral
Sensory-perceptual functions	– Halstead-Reitan Neuropsychological Battery (HRNB) – Actual Performance Test and Sensory Perceptual Examination
Motor speed and strength	– Index Finger Tapping
Motivation	– Rey 15 Item Test – Dot Counting – Forced-Choice Symptom Validity Testing
Personality assessment	– Minnesota Multiphasic Personality Inventory (MMPI) – Beck Depression Inventory (BDI) – Rorschach Test – Thematic Apperception Test for Children or Adults

Table 3.7: Comparison between individual and group tests

Individual tests	Group tests
1. They test one individual at a time. Hence, they are not economical in terms of time, labor and money	1. A group of children can be tested at the same time, hence economical
2. These are applicable both for children and adults	2. These tests cannot be administered to young children below the age of 10 years
3. These bring the tester and child closer and establish a better relationship between the two	3. Personal contact between the two is not possible

- ❖ They help classify students so that the teacher knows the capacity of each student to learn.
- ❖ They help to separate the slow learner from the gifted learner so that special methods can be adopted for training these two different groups.
- ❖ They are used in selection for admission into different courses of study and for awarding scholarships and vocational guidance.
- ❖ They are used in selection of candidates for different jobs.
- ❖ Intelligence tests are also useful in child guidance. With their help, we can discover the children's backwardness in studies or other educational difficulties.

Limitations of Intelligence Tests

❶ They cannot measure intelligence with mathematical accuracy. Nor can they predict with absolute certainty success in school or in a profession.

❷ They do not throw any light on the character, morals, emotions or temperament of the individual, the understanding of which is so essential in understanding one's personality.

Measurement of Aptitude

Aptitude assessments are used to predict success or failure in an activity. For vocational/career guidance and planning they are used to measure different aptitudes such as general learning ability, numerical ability, verbal ability, spatial perception and clerical perception. Objective aptitude tests are based on timed sub tests. Results are compared to age-group norms or other criteria as opposed to self-report inventories of abilities often found in computerized career exploration systems. For helping a person, find and pursue a career, course of study or work experience program, aptitude assessment should logically precede achievement testing or skills assessment.

Aptitude tests measure the degree or level of one's special flair. They are chiefly used to estimate the extent to which an individual would profit from a specific course or training or to predict the quality of his or her achievement in a given situation.

For example, mechanical aptitude test measures a person's aptitude for mechanical work; clerical aptitude tests are employed for measuring the aptitude for clerical work; musical aptitude tests measure the musical talent, etc.

Aptitude Test Types

❶ Verbal reasoning
❷ Numerical reasoning
❸ Abstract/inductive/diagrammatic reasoning
❹ Logical reasoning
❺ Specialty/technical/information technology (IT)

Verbal Reasoning

A verbal reasoning test is an aptitude test that measures the ability to comprehend complex written materials and deduct relevant information and conclusions. Verbal reasoning tests also include spelling,

grammar, logic and vocabulary tests. Different aptitude tests are administered to candidates in different professions.

Numerical Reasoning

A numerical reasoning test includes a wide range of aptitude tests varying from 'basic arithmetic tests' through 'estimation tests' that measure speed in making educated mathematical estimations to 'advanced numerical reasoning tests' that measure ability to interpret complex data presented in various graphic forms and to deduce information and conclusions.

Abstract/Inductive/Diagrammatic Reasoning

These aptitude tests measure logical reasoning and perceptual reasoning skills. These aptitude tests do not rely on acquired linguistic or numeric abilities, but on innate abilities and are thus called non-verbal reasoning tests.

Logical Reasoning

The logical reasoning test is an aptitude test meant to assess the ability to understand and make comprehensive conclusions from the provided data. It is one of the most common aptitude tests and although it may seem as one of the most difficult, with practice it becomes much simpler than it seems to be at first.

Specialty/Technical/IT

Certain sectors and positions require an aptitude test that measures specific skills related to certain positions. For example, there is a wide variety of niche aptitude tests for IT personnel and for clerical positions. These tests are administered in addition to the main aptitude tests.

Other types of aptitude tests are: mechanical aptitude test, musical aptitude test, art judgment test, professional aptitude test, scholastic aptitude test, clerical aptitude test.

Manual aptitude: It indicates motor abilities or skills required for semi-skilled occupations. Two tests, which will measure manual aptitude are:

❖ O'Connor Finger Dexterity and
❖ Tweezer Dexterity tests

Mechanical aptitude: It covers a variety of factors such as spatial visualization, perceptual speed, mechanical information and manual dexterity. This aptitude involves the ability to understand and solve problems involving mechanical relationships and arrangements such as those which occur in the adjustment, repair and assembly of machinery. Some of the well known mechanical aptitude tests are:
❖ Minnesota mechanical assembly test
❖ Minnesota spatial relations test
❖ A battery of mechanical aptitude tests
❖ Bennett tests of mechanical comprehension

Clerical aptitude: This aptitude indicates different abilities like perceptual, intellectual abilities, mental skills and motor skills. Some of the popular clerical aptitude tests are:
❖ Detroit clerical aptitude examination
❖ Minnesota vocational test for clerical workers.

Standardized aptitude tests are also available for the measurement of scholastic and professional aptitudes [scholastic aptitude tests (SAT)] of individuals for the specific courses or professions like *Engineering, Medicine, Law, Business Management, Teaching*, *etc*.

Instead of employing specialized aptitude tests for measuring specific aptitudes, the present trend is to use multiple aptitude test, batteries to assess the suitability of persons for different professions on the basis of scores in the relevant aptitude tests. Like intelligent tests, multiple aptitude test, batteries measure a number of abilities. For example, while general aptitude test battery (GATB)—measures the verbal aptitude, numerical aptitude, spatial aptitude, clerical perception and mortar coordination, differential aptitude test (DAT)–measures verbal reasoning, numerical ability, abstract reasoning, spatial relation, mechanical reasoning, clerical ability and linguistic ability.

Aptitude tests have a wide range of application. They have proven to be the backbone of all kinds of guidance services and selection programs as they are very useful for predicting the suitability of individuals for specific jobs and lines of work.

ALTERATIONS IN COGNITIVE PROCESSES

Alterations in Attention

Normal people typically pays selective attention to one message, screening out the stream of other distracting stimuli and thoughts. For example, now when you are reading you can ignore the noise and the visual clutter that could divert you from your goal of completing this sentence. However, people with schizophrenia and attention deficit hyperactivity disorder (ADHD) are easily distracted.

Attention deficit hyperactivity disorder is a disorder marked by inattention, impulsiveness, a low tolerance for frustration and generally a great deal of inappropriate activity. ADHD children have difficulty in sustaining attention, are distractible and often fail to follow instructions.

Alterations in Perception

Sensory information received by our sensory receptors is interpreted and given some meaning through the process of perception. Sometimes this interpretation goes wrong, so the resulting perception fails to correspond with reality. Such false perceptions are called perceptual illusions.

Types of Illusions

Illusion of size: This type of illusion provides false perception of the size of the objects. A larger background always makes the objects look smaller in comparison to a smaller background, where they will be perceived as larger. For example, in Ebbinghaus illusion, 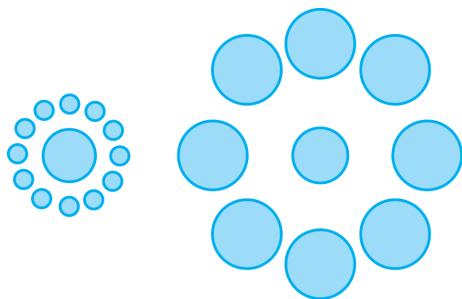two circles of the same size are perceived to be of different sizes because of the size of the surrounding objects (Figure 3.29).

Illusion of length: In Muller-Lyer Illusion, the line segments of the same size appear to be of different lengths based on the shapes that are placed at the ends (Figure 3.30).

Horizontal vertical illusion: In this, there are two straight lines, one horizontal and the other vertical. Both are equal in length, but invariably the vertical one is perceived to be longer than the other (Figure 3.31).

All these examples are optical illusions. Illusions arise either because of the ambiguous qualities of what is perceived or the state of the perceiving person or both.

Alterations in Learning

Learning disorders are academic difficulties experienced by children and adults of average to above average intelligence. People with learning
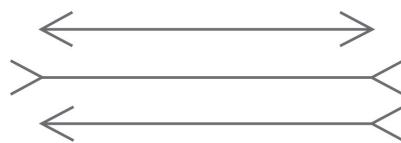

Figure 3.30: Illusion of length
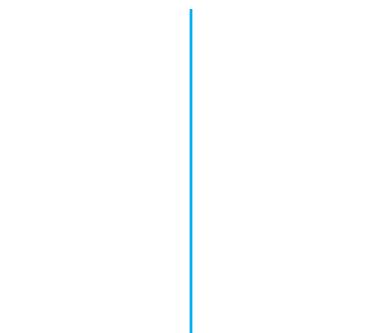

Figure 3.29: Illusion of size

Figure 3.31: Illusion of horizontal vertical illusion

disorders have difficulty with reading, writing, mathematics or a combination of the three. These difficulties significantly interfere with academic achievement or daily living.

Learning disorders are thought to be caused by neurological abnormalities that trigger impairments in the regions of the brain that control visual and language processing, attention and planning. These traits may be genetically linked. Children from families with a history of learning disorders are more likely to develop disorders themselves. Learning difficulties may also be caused by such medical conditions as a traumatic brain injury or brain infections such as encephalitis or meningitis. The three main types of learning disorders are reading disorders, mathematics disorders, and disorders of written expression.

Reading Disorders

Children with reading disorders have difficulty in recognizing and interpreting letters and words (dyslexia). They are unable to recognize and decode the sounds and syllables (phonetic structure) behind written words and language in general. This condition lowers accuracy and comprehension in reading.

Mathematics Disorders

Children with mathematics disorders (dyscalculia) have problems recognizing and counting numbers correctly. They have difficulty using numbers in everyday settings. Mathematics disorders are typically diagnosed in the first few years of elementary school when formal teaching of numbers and basic mathematic concepts begins.

Disorders of Written Expression

Disorders of written expression typically occur in combination with reading disorders or mathematics disorders or both. The condition is characterized by difficulty with written compositions (dysgraphia). Children with this type of learning disorder have problems with spelling, punctuation, grammar and organizing their thoughts in writing.

Alterations in Memory

Memory can be defined as an organism's ability to encode, retain and recall information. Alterations in memory can range from mild to severe, yet are all a result of damage to neuroanatomical structures; either in part or in full. This damage hinders the storage, retention and recollection of memories. The common memory disorders are presented below:

Agnosia is the inability to recognize certain objects, persons or sounds. Examples of specific types of agnosia include: visual agnosia, auditory agnosia, prosopagnosia, somatosensory agnosia, apraxia, associative agnosia, etc.

Alzheimer's disease is a progressive, degenerative and fatal brain disease, in which cell to cell connections in the brain are lost. As a result, the death of brain cells occur leading to severe cognitive impairment.

Amnesia is an abnormal mental state, in which memory and learning are affected out of all proportion to other cognitive functions. The two forms of amnesia are anterograde amnesia and retrograde amnesia.

Dementia refers to a large class of disorders characterized by the progressive deterioration of thinking ability and memory as the brain becomes damaged.

Hyperthymestic syndrome causes an individual to have an extremely detailed autobiographical memory. Patients with this disorder are able to recall events from everyday of their lives. This disorder is very rare with only a few confirmed cases.

Wernicke-Korsakoff syndrome is a severe neurological disorder caused by thiamine (vitamin B_1) deficiency and is usually associated with chronic excessive alcohol consumption. Symptoms of Wernicke-Korsakoff syndrome (WKS) include confusion, amnesia and impaired short-term memory. It also tends to impair the person's ability to learn new information or tasks. In addition, individuals often appear apathetic and inattentive and some may experience agitation.

Alterations in Thinking

Cognitive disorders are mental conditions that cause people to have difficulty thinking clearly and precisely. Although symptoms of cognitive disorders vary, they are generally marked by impaired awareness, perception, reasoning, memory and judgment. A wide variety of factors can lead to cognitive disorders, including general medical conditions, brain infections and head injury. The four major categories of cognitive disorders are:

❶ *Delirium*: A change in consciousness that develops over a short period of time, in which people have a reduced awareness of their environment.

❷ *Dementia*: A progressive deterioration of brain function that is marked by impairment of memory, confusion and inability to concentrate.

❸ *Amnesia*: A significant loss of the memory, despite, no loss of other cognitive functions like in dementia.

❹ *Cognitive disorders not otherwise specified*: Cognitive impairment presumed to be due to a general medical condition or substance use and does not fit into the other categories.

Alterations in Intelligence

People differ in intellectual ability and capacities like reasoning and thinking, power of imagination, creative expression, concentration, etc. Intelligence level differs from individual to individual. We can classify the individuals from super normal (IQ above 120) to idiots (IQ from 0 to 50) on the basis of their intelligence level.

Mental Subnormality

Mental subnormality refers to sub-average intellectual functioning, which originates in the developmental period and is associated with impairment in adaptive behavior. A person is regarded as mentally subnormal if:

❖ IQ attained is below 70 on standard psychological tests of intelligence;

❖ Their adaptive skills are inadequate to cope up with the daily routines.

Adaptation skills are those behaviors, by which an individual makes adjustments and independent living in the society. In childhood, these are the self-help activities such as eating and dressing independently. Later on the adaptive behaviors are concerned with basic academic skills and coping skills such as telling time, using money and assuming social responsibilities. Slowness in intellectual development may be widespread and affect all aspects of cognition. Mental subnormality is categorized into four levels—mild, moderate, severe and profound. Only the extremely retarded must be institutionalized. Others can be educated at a slower pace and trained for work and self-maintenance. Only 25 percent of mental retardation is caused by physical disorders. Other causes are unknown. Physical disorders include fetal birth injuries, damage, genetic abnormalities and metabolic disorders. These are phenylketonuria, microcephaly, hydrocephaly, cretinism and Down syndrome.

Mentally Gifted Children

These are the individuals with IQs of 140 or higher. In the early childhood, a gifted child is generally found to be a misfit in his class, because the level of teaching in normal class room is for an average child, where as the gifted child is able to comprehend much faster. As a consequence they often indulge in behavioral irregularities. They have been found to be gross underachievers and extremely unhappy. One problem seems to be that such extremely bright children find themselves intellectually misfit with children of their own age and physically misfit with the older people who are their intellectual equals. But things improve by adulthood and they appear to be happier and better adjusted than most others of their age. With the right type of training, their superior potential is channelized in constructive task.

The most common mental disorders that affect cognitive functions; mainly memory processing, perception and problem solving are amnesia, dementia and delirium. Others include anxiety disorders such as phobias, panic disorders, obsessive-compulsive disorder, generalized anxiety disorder and post-traumatic stress disorder. Mood disorders

such as depression and bipolar disorder are also cognitive mental disorders. Psychotic disorders such as schizophrenia and delusional disorder are also classified as cognitive mental disorders.

Cognitive disorders affect thinking and perceptual processes and the acquisition of knowledge and new information. Cognitive disorders have an enormous social impact, because special educational resources are required and independent living often cannot be achieved. Learning problems may lead to behavioral disorders in the home and community. Severe cognitive impairment is usually accompanied by physical abnormalities.

APPLICATIONS IN NURSING PROFESSION

Nursing Implications of Attention

❖ Attention helps in bringing mental alertness and preparedness. As a result the nurse becomes mentally alert and tries to exercise one's mental powers as effectively as possible for providing care.
❖ Attention helps the nurse to concentrate by focusing consciousness on one object at a time rather than two.
❖ Attention helps the nurse for better organization of the perceptual field for maximum clarity and understanding of the patient condition.
❖ Attention provides strength and ability to continue the task of cognitive functioning, despite the obstacles laid by the distractions.
❖ The nurse can use psychology of attention for invoking not only voluntary, but also involuntary attention to her job.

Nursing Implications of Perception

❖ Accurate perception and observation are very important for a nurse to provide quality care to a patient. All nursing activities require accurate observation and perception. For example, checking vital signs, assessing patient, administering medications, etc.
❖ If nurse is not a keen observer, nurse will not be able to note some very critical or important symptoms with the result that sometimes the patient may die premature.

❖ Accurate perception, and observation will help the nurse to gather accurate information and knowledge, which will help the nurse to learn more easily, adjust more quickly to new situations. It also prevents accidents and incidents harmful to the patient.
❖ With accurate perception, nurses memory improves, recording and reporting is more accurate and is helpful for the patient and other health, team members.
❖ All types of false perceptions, illusions should be scrupulously avoided by nurse.

Nursing Implications of Learning

❖ Learning is fundamental to the development and modification of behavior, thus knowledge of the learning process may be usefully applied to many clinical situations and academic work.
❖ Many of our subjective feelings, emotions and attitudes are probably conditioned responses. Through generalization, it becomes difficult to identify the origin of our emotional responses. Both our adaptive emotional responses as well as maladaptive responses are learned and can be unlearned through principle of learning.
❖ Learning methods have wide applications in educational setting. In programmed learning, the material to be learned is broken up into small easy steps, so that the learner can accomplish without frustrations. Also with programmed learning, learner can master the task at his own pace; with versatile and flexible learning, the learner can improve learning style.
❖ Applications of reinforcement principles can often increase productivity, both in studies as well as in vocation.
❖ A nurse should understand the nature of learning and the factors that which will affect learning. As learning modifies our behavior, it is necessary for a nurse to learn only the right things, so that modification takes place in the right direction.
❖ Nurse must have a well-defined purpose and goal in all learning situations.
❖ Nurse should always connect the new material with the old material.

❖ Repeated practice is more important for effective learning. Modern nursing requires skills in many complicated techniques. In order that these skills are learned proficiently, the nurse will need repeated day-to-day practice. Besides practice the nurse needs to observe attentively the demonstrated techniques, to understand the instructions given by the teacher and make use of her intelligence, thinking and memory.

Nursing Implications of Memory

The following are the tips to improve memory retention:

❖ Learning needs a desire, a receptive mood and interest in the learning task before any success can be anticipated.

❖ Things are better remembered when presented through more than one sense. Materials when seen and heard are better retained than the ones, which are only seen or heard. Use imagery to visualize the material and give auditory stimulation by reading aloud. For example, while studying nervous system, visualize the structure of nervous system and also read loudly.

❖ Develop as many associations as possible between the material presented and the one already learnt. A child for example, learns the alphabets easily through associations such as: A for 'apple', etc.

❖ Rhythm is an aid to learning. Children learn nursery rhymes easily, because of the rhythm.

❖ Distribute learning as much as possible. Studying in smaller units, but over a longer period stays longer than crammed up material.

❖ Rehearsal and recitation are useful in memorizing. Recitation gives us a chance for self-evaluation and builds confidence in oneself. Elaborative rehearsal is more effective than maintenance rehearsal.

❖ Retention occurs better if, an attempt is made at having a general look at the entire material even before intensive study is taken up. Going over the whole unit gives the general picture before it is broken into units.

❖ Since, forgetting is much faster during the period immediately following learning, the obvious thing to do is to review early and often. Periodical review will help retention of the material learnt.

❖ Meaningful material is not only more easily learnt than non-sense material, but it is also remembered longer and more fully.

❖ Give some short rest pauses between study times. It would help to consolidate the learned material. Periods of rest and preferably sleep help retention.

❖ Over learning aids retention.

❖ Very often forgetting can occurs, because of interference. Teachers should normally avoid presenting ideas, which might easily be confused in close succession.

❖ Review before examination.

Nursing Interventions for Impaired Memory

❖ Encourage the patient to use written cues such as calendar lists or a notebook. These cues decrease the patients need to recall appointments, activities and so on without assistance.

❖ Provide single step instructions for the patient, because patient with memory impairment cannot remember multistep instructions.

❖ Keep environmental changes to a necessary minimum.

❖ It is important to maximize independent function and to unobtrusively assist the patient when memory function has deteriorated further.

❖ It is important to preserve the patient's dignity and minimize his frustration with progressive memory loss.

Nursing Implications of Thinking

Correct thinking is one of the greatest assets for a nurse. Certain recommendations for student nurses in order to think correctly and reason out properly are as under:

❶ The nurse should meet problems directly instead of evading them or shifting responsibility to another person. She should look for the central problem.

❷ The job of a nurse requires a lot of thinking. The knowledge of psychology of thinking as well as the technique is therefore very much helpful to the nurse. The nurse uses thinking to understand

rationale behind each procedure. In order to think correctly, a nurse should have adequate knowledge and experience. She should be able to distinguish between facts and opinion.

❸ Logical thinking helps to think correctly. Hence, she should develop the habit of thinking scientifically.

❹ Nurse should be able to size up the whole situation. A nurse should try to think on definite lines with a definite purpose. Unless there is a definite aim or purpose thinking cannot proceed on the right track.

❺ Nurses with past experiences or habitual methods do not help in solving problems; she should strive for new associations, relationships and possibilities for arriving at satisfactory results.

❻ She should form the habit of looking for relationships and generalizing from facts.

❼ She should cultivate the right habits of observation and attention for collection of factual data, on which the thinking can be based.

❽ A nurse should also adopt a flexible attitude towards patient's problems.

❾ Nurse's emotions should not control the reason. Also moods, attitudes or behavior of the patients should not interfere with her scientific thoughts and ideas with regard to treatment. Nurse should avoid prejudice and look for a new meaning.

❿ Muscular responses should be recognized as an important part of thinking. It is possible to recognize muscular tensions in oneself and others when thinking deeply. Some muscle tension may be exhibited by the patient using body language, which needs to be observed and understood by the nurse.

⓫ It is an error to assume that a person cannot think when paralyzed or seriously ill.

⓬ In the midst of all the superstitions and contrary beliefs of patients, the nurse must always insist upon what is factual, rational and helpful to the patient.

Nursing Implications of Intelligence

❶ Knowledge about the nature of intelligence and its measurement is useful to the nurse in understanding herself, her colleagues as well as her patients.

❷ Nurse's explanations or guidance to the patient would be according to the patient's intellectual level.

❸ As a student and later as a teacher, the knowledge of intellectual function is useful for a nurse. Teaching method, content of the subject matter and expectations from students should be based on student's intellectual functioning.

❹ Knowledge regarding intelligence helps the nurse in diagnosing a patient with mental sub-normality or with very superior intelligence.

❺ In diseases related to neuropsychiatric disorders, epilepsy, psychiatric disorders and some of the endocrinal disorders, assessment of intelligence is of great assistance in their management.

❻ Knowledge about abnormalities in newborns and development of their intelligence helps the nurse in providing suitable care.

❼ Aging patients though physically slow, retain their levels of intelligence. Respect and encouragement with combined nursing care has to be ensured.

Every individual is unique, especially when intelligence is the judging factor. A nurse in the course of discharging the duties has to heavily rely on verbal and non-verbal communication patterns. Nurse may have to interact with the patient, patient's family members, explain and clarify procedures and medications. The intelligence level of the patient and family members decides how effectively the nurse is able to communicate and discharge her duties. Lower the levels of intelligence, more the time and patience, the nurse will have to invest in caring for the patient. The instructions may have to be simple and repeated more often. However, where the patient is more intelligent he can be expected to take an active part in his own health care in the future.

Nursing Implications of Aptitude

❶ Knowledge of the aptitudes, their measurements and conditions will be helpful to the nurse to develop a proper aptitude for her profession and to guide those around her in entering professions according to their aptitudes.

❷ The knowledge of the aptitude will also give her optimism in her own future success.

❸ If nurse has an aptitude for her profession she is bound to be a successful nurse, whatever the impediments she might meet in her path.

REVIEW QUESTIONS

Attention

Short Essay

1. Explain factors influencing attention. (Mar 2012)

Short Answers

1. Attention. (*Mar 2012*)
2. Varieties of attention. (*Sep 2011*)
3. Fluctuation of attention. (*April 2008, May 2007*)
4. Sensation and perception. (*April 2008, 2004*)
5. Distraction of attention. (Oct 2007)
6. Sensation. (*Oct 2007, 2004, Aug 2010*)
7. List the determinants of attention. (*April 2006*)
8. Division of attention. (*Mar 2009, April 2005*)
9. Extra sensory perception. (*April 2005*)
10. What are common errors in perception? (2004)
11. What are 'illusions'? (*2004*)
12. Span of attention. (*Nov 2003*)

PERCEPTION

Long Essays

1. Define perception and discuss the organization of perception.   (Oct 2007)
2. What are the factors influencing perception and what is the relation between sensation and perception? (April 2005)
3. Describe sensory disorders and explain nursing implications for sensory abnormalities.

Short Essays

1. Organization of perception. (*Mar 2012*)
2. What are errors in perception? Write the differences. (*May 2007*)
3. Varieties of attention. (*May 2007*)
4. Factors influencing perception. (*Oct 2006*)
5. Describe the factors that control and direct attention. (*Oct 2006*)
6. Write the difference between sensation and perception. (*Apr 2006*)

7. Discuss the salient features of sensation and perception. (*Apr 2006*)
8. Can attention be divided? Explain. (*2004*)
9. Define perception. What are the factors affecting perception? (*2004*)
10. Explain the factors affecting sensation and perception. (*2004*)
11. Briefly discuss the objective conditions of attention. (*Nov 2003*)
12. Enumerate and explain determinants of attention. (*April 2003*)
13. Describe the principles of perceptual organization. (*Sep 2011*)
14. Organization of perception. (*Mar 2011, Mar 2009*)
15. Characteristics of perception. (*Aug 2010, Sep 2009*)
16. Errors of perception. (*Mar 2009*)
17. Explain factors influencing perception. (*Mar 2009*)

Short Answers

1. Illusions. (*Mar 2012, Sept 2011, Aug 2010, Sep 2011, Mar 2009*)
2. Perception. (*Mar 2012*)
3. Law of Proximity. (*Mar 2011*)
4. Sensation. (*Aug 2010*)
5. Division of attention. (*Mar 2009*)
6. Errors in perception. (*Mar 2009*)
7. Meaning of perception. (*Mar 2009, Sep 2009*)

LEARNING

Long Essays

1. Define learning. Explain operant conditioning given by skinner. (*Sep 2009*)
2. Define Learning. Explain the Psychic secretion and the operant conditioning. (*Mar 2009*)
3. What is transfer of training? Discuss the theories of transfer. (*Apr 2008, May 2007*)
4. Discuss the laws of learning. Explain the role of motivation and anxiety on learning process. (*Oct 2006*)
5. Define learning. Describe learning by conditioning and its educational implication in nursing. (*Apr 2006*)
6. Explain the laws of learning and what are the factors influencing our memory. (*April 2005*)
7. Define learning. What are the laws of learning? Explain the different types of learning quoting studies wherever necessary. (*2004*)

Short Essays

1. Explain the various types of learning. (*Mar 2012*)
2. Classical conditioning. (*Mar 2012, Mar 2011*)
3. Difference between learning by classical conditioning and operant conditioning. (*Sept 2011*)
4. Explain trial and error method of learning. (*Sep 2011, Mar 2009*)
5. Transfer of learning. (*Aug 2010, Sep 2009*)
6. Techniques of learning. (*Mar 2009*)
7. Describe the laws of learning and their educational implications. (*May 2007*)
8. Explain part vs whole and massed vs spaced method of learning. (*Apr 2006*)
9. What is learning and explain trial and error method of learning? (*April 2005*)
10. Enumerate the differences between learning by classical conditioning and operant conditioning. (*April 2005*)
11. What is classical conditioning with special reference to Pavlov? (*April 2005*)
12. Describe the operant conditioning by Skinner. (*2004*)
13. Discuss the different methods of learning with suitable examples. (*2004*)
14. Steps in learning. (*Nov 2003*)
15. Explain educational implications of transfer of learning. (*Nov 2003*)

Short Answers

1. Reinforcement. (*Mar 2012, Mar 2011*)
2. Insightful learning. (*Mar 2012, Mar 2009, Oct 2006*)
3. Learning. (*Mar 2009*)
4. Extinction and spontaneous recovery. (*Mar 2009, 2004*)
5. Trial and error. (*Apr 2008*)
6. Maturation and learning. (*May 2007*)
7. Transfer of learning. (*Apr 2006*)
8. List any four factors affecting learning. (*2004*)
9. "Aha! Effect" in insight learning. (*Nov 2003*)

MEMORY

Long Essays

1. What is memory? Explain the techniques to improve memory. (*Aug 2010*)
2. What is forgetting? Explain theories of forgetting. (*Sep 2009*)

3. Define learning and explain efficient methods of memorizing. (*Apr 2008*)

Short Essays

1. List factors influencing forgetting. (*Mar 2012*)
2. Differentiate between long term and short term memory. (*Sep 2011*)
3. Theories of forgetting. (*Mar 2011, Mar 2009*)
4. Causes of Forgetting. (*Mar 2012, Aug 2010*)
5. What is forgetting? How can it be minimized? (*Mar 2009*)
6. Mention the meaning and nature of forgetting. (*Oct 2007*)
7. Discuss various economical methods of memorization and how it is useful in education. (*May 2007*)
8. Explain the factors influencing memory. (*Oct 2006*)
9. What are the types of memory? How can memory be improved? (*Oct 2006*)
10. Explain the causes of forgetting. (*Apr 2006*)
11. What is forgetting? What are the causes of forgetting? Describe the methods to improve memory. (*2004*)
12. Differentiate between long-term and short-term memory. (*2004*)
13. Define memory. Explain the methods to improve memory. (*2004*)
14. Elaborate effective ways of memorizing. (*Nov 2003*)
15. What is forgetting? Explain the organic (Biological) causes of forgetting. (*Nov 2003*)

Short Answers

1. Chunking. (*Mar 2012*)
2. Types of memory. (*Mar 2012*)
3. Amnesia. (*Mar 2011, Sep 2009, Oct 2006*)
4. Short-term memory. (*Mar 2011, Nov 2003*)
5. Mnemonics. (*Aug 2010*)
6. Learning. (*Mar 2009*)
7. Distributed practice in memorization. (*May 2007*)
8. What is forgetting? (*2004*)
9. Remembering.
10. Proactive and retroactive inhibition.

THINKING

Long Essays

1. How would you define thinking? Describe the process by means of which concepts are formed. (*Oct 2007*)

Short Essays

1. What is reasoning? Explain errors in thinking? (*Sep 2011*)
2. Explain Piaget and Bruner's contribution in concept formation. (*Apr 2008*)
3. What is concept, how it is developed? (*Apr 2008*)
4. Describe the steps involved in scientific problem solving. (*Oct 2007, Nov 2003*)
5. What is thinking? Describe the types of thinking. (*May 2007, 2004*)
6. What are errors in thinking? (*May 2007*)
7. What is thinking? What are the types of thinking? Explain the influence of language on thought. (*2004*)

Short Answers

1. Problem solving. (*Mar 2012*)
2. Tools of thinking. (*Sep 2011, Apr 2006*)
3. Thinking (*Mar 2011, March 2009, Sep 2009, Sep 2011, Mar 2009*)
4. Types of reasoning. (*March 2009*)
5. Errors in thinking. (*Apr 2008*)
6. Abstract thinking. (*May 2007*)
7. Define concepts. (*Oct 2006*)
8. Reasoning. (*Apr 2006*)
9. Define thinking. Name the types of thinking. (*2004*)
10. What is inductive reasoning? (*2004*)
11. Free thinking. (*Nov 2003*)

INTELLIGENCE

Long Essays

1. What is intelligence? Explain the different tools used for the measurement of IQ. (*2004*)
2. What is intelligence? Discuss the various intelligence tests and their use in a nursing situation. (*Nov 2003*)

Short Essays

1. Measurement of intelligence. (*Mar 2011, Aug 2010*)
2. Types of Intelligence tests. (*Aug 2010, Sep 2009*)

3. What is IQ? Discuss the present status of intelligence tests and its uses in nursing. (*May 2007*)
4. Discuss the factors influencing intelligence. (*Apr 2006*)
5. How intelligence is distributed in the general population? (*Apr 2006, Apr 2005*)
6. Explain the nature and factors influencing creativity. (*April 2005*)
7. What is intelligence test and elucidate its uses with examples? (*April 2005*)
8. What is IQ? Write a note on mental retardation and mentally superior. (*2004*)
9. What are aptitudes? Write a note on the measurement of aptitudes and skills. (*2004*)
10. Name the verbal and performance tests of intelligence. (*2004*)
11. Define mental retardation. Explain the types of MR. (*2004*)
12. Nature and assessment of aptitudes. (*Nov 2003*)
13. Bring out the steps in creative thinking. (*Nov 2003*)

Short Answers

1. IQ. (*Mar 2012*)
2. Creativity. (*Mar 11, Oct 2007, April 2005, 2004*)
3. Genius. (*Aug 2010, Oct 2006*)
4. Intelligence. (*Mar 2009*)
5. Steps involved in creative thinking. (*Apr 2006*)
6. Define intelligence. (*Apr 2006, Nov 2003*)
7. Who proposed the term "IQ"? How do you calculate IQ? (*2004*)
8. Name any two tests each of intelligence and personality. (2004)
9. What is IQ? Who proposed this term? (*2004*)

APTITUDE

Short Answers

1. Aptitude. (*Mar 2012, Aug 2010, Sept 2009*)
2. Aptitude test. (*Apr 2006*)
3. What are aptitudes? (*2004*)

Motivation and Emotional Processes

Psychology deals with not only what people do but also why they do so. Why they do and how they behave in a particular fashion at a particular moment can be understood in terms of motivation. Motivation is an organized condition of the organism, which serves to direct behavior towards a certain goal. Motives are inferences from observations of behavior. They are powerful tools for the explanation of behavior and they allow us to make predictions about future behavior. The activating forces working in motivation may be named as needs, drives or motives.

NEEDS

Needs are general wants or desires and are said to be the very basis of our behavior. Our behavior and feelings about ourselves and others, our values and priorities we set for ourselves all relate to our physiological and psychological needs. Every human being has to strive for the satisfaction of his basic needs, if he is to maintain and actualize or enhance himself in this world. They can be broadly classified as biological and psychosocial needs.

Biological Needs

Biological needs are necessary for the survival of the individual. These needs are generally caused by bodily wants. These are also called physiological or unlearned needs. The biological needs include all our bodily or organic needs like need for oxygen, food, water, temperature, rest, sleep and sex, etc. These needs must be met at least to the minimum for maintaining life.

Need for oxygen, water and food are most fundamental for our survival and existence. Prolonged deprivation of any of these needs may cause death. Oxygen is the most essential of all needs because all body cells require oxygen for survival. Healthy people drink fluids to satisfy thirst and maintain fluid balance. Food is a physiological need. Balance is maintained through digestive and metabolic processes.

Temperature, rest and sleep are essential for survival. The human body functions best at 98.6°F (37°C). Rest and sleep allow time for the body to rejuvenate and be free of stress.

The need for satisfaction of the sex urge or desire to seek sex experiences is not essential for the survival of the individual. But the satisfaction of this need and normal sexual behavior is most essential for a happy domestic life and the continuity and survival of the human species.

Psychosocial Needs

The psychosocial needs are acquired through social learning and contact with others. These needs become dynamic forces underlying behavior. These are linked with socio-cultural environment and psychological make up of an individual. These are also termed as secondary needs.

The needs, which fall under this category are need for freedom, security, love and affection, recognition and social approval, social company, self-assertion and self-actualization.

❶ All human beings have an urge to remain free and independent.

❷ Every one of us needs to feel secure, which means being protected from potential or actual harm. Safety and security need also includes trusting others and being free of fear, anxiety and apprehension.

❸ Love and belonging need includes the understanding and acceptance of others in both giving and receiving love and the feeling of belonging to families, peers, friends, neighborhood and a community. People who believe that their love and belonging needs are unmet, feel lonely and isolated.

❹ Each one of us has an inherent desire to gain recognition and appreciation from others.

❺ Man is called a social animal in the sense that he has a strong urge to be with his own kind and maintain social relations with them.

❻ Every one of us has an inherent desire to get an opportunity to rule or dominate over others. It may vary in intensity from person to person, but it is exhibited by all of us in one or the other situation.

❼ We all have an inherent craving for the expression of our self and actualization of our own potentialities.

DRIVES

A drive is an aroused state resulting from some bodily or tissue need. This aroused condition motivates the individual to initiate behavior to remedy the need. For example, lack of food produces certain chemical changes in the blood, indicating a need for food, which in turn creates a drive state of arousal or tension. The individual seeks to reduce this drive by doing something to satisfy the need.

Need refers to the physiological state of tissue deprivation, where as drive refers to the psychological consequences of a need. Drive does not necessarily get stronger as need gets stronger. A starved individual may be so weakened by his great need for food that drive (the motivation to get it) is weakened. People who have fasted for long periods report that their feelings of hunger (drive level) come and go even though their need for food persists. The strength of a drive depends upon the strength of the

stimuli involving the related need. Drives of any nature are divided into two categories:

❖ Biological or primary drive
❖ Socio-psychological or secondary drive

Biological Drive

Biological needs give birth to biological drives such as hunger, thirst, sex and escape from pain. The biological drives are basically unlearned in nature. They arise from our biological needs as a result of a biological mechanism called homeostasis.

Homeostasis: Our body system constantly works to maintain optimum level of functioning between input and output. For example, when blood sugar level drops, glands, stomach and other body parts send signals to the brain, which activate a hunger drive and make one feel hungry. After food has been consumed by the individual's body it returns to a state of balance. This maintenance of an overall physiological balance is called homeostasis. When there is an imbalance there is a need to restore balance and a drive arises, which in turn serves as an instigator of behavior.

Socio-psychological or Secondary Drive

It includes fear or anxiety, desire for approval, striving for achievement, aggression and dependence. These drives are not related to our physiological needs and therefore do not arise on account of imbalance in the body's internal functioning. They arise from the socio-psychological needs and are said to be acquired through social learning as a result of one's interaction with his socio-cultural environment. These drives move an individual to act for the satisfaction of his socio-psychological needs, which in turn act as a reinforcer of the behavior for the continuity and maintenance of the behavior.

Drives thus work as a basic activating force behind a behavior.

INCENTIVES

Anything that incites rouses or encourages a person is termed as an incentive. Drives are influenced and

guided by incentives. Praise, appreciation, regards, bonus, etc. are examples of incentives. Incentive works as a reinforcing agent, as it adds more strength to a drive like adding fuel to the already ignited fire. A piece of candy, chocolate or a toy may work as an incentive for a child to give more strength to his drive and as a result he may be further motivated to act or behave in a desirable way. Whether primary or secondary drive, it is greatly affected and directed by the incentives. These incentives work more forcefully in the case an individual who remains deprived of them for long.

MOTIVES

A motive etymologically means that 'which moves'. A motive may be considered as an energetic force or tendency (learned or innate) working within the individual to compel, persuade or inspire him to act for the satisfaction of his basic needs or attainment of some specific purpose. Motives can be seen in the form of various needs, desires and aspirations of an individual.

Definitions

A need gives rise to one or more motives. A motive is a rather specific process, which has been learned. It is directed towards a goal.

(*Carol—1969*)

A motive may be defined as a readiness or disposition to respond in some ways and not others to a variety of situations.

(*Rosen, Fox and Gregory—1972*)

Motive is an inner state of mind or an aroused feeling generated through basic needs or drives, which compel an individual to respond by creating a kind of tension or urge to act.

Motive may thus be considered to be an energetic force or tendency (learned or innate) working within the individual to compel. Persuade or inspire him to act either for the satisfaction of his basic needs or the attainment of some specific purpose.

CONCEPTS OF MOTIVATION

❖ Motivation is generated through basic needs or drives

❖ It compels an individual to respond by creating a kind of tension or urge to act
❖ It is a goal-directed activity, pursued till the attainment of the goal
❖ Attainment of a goal helps in the release of tension aroused by a specific motive
❖ A change in goal may bring changes in the nature and strength of the motive
❖ Motivation is an inner state or an aroused feeling.
❖ We experience motives as feelings of want, need and desire
❖ Motive may be considered as a learned response or tendency and also an innate disposition
❖ We cannot see motives directly, but must infer them from the behavior of people.

TYPES OF MOTIVES

Some of the psychologists have divided motives into two main categories:
❶ Innate or unlearned
❷ Acquired or learned.

Motives can also be classified as:
❶ Physiological or primary motives
❷ Social or secondary motives
❸ Personal motives
❹ Unconscious motives

Physiological or Primary Motives

Physiological motives are called biological or organic motives. These include hunger, sex, thirst, the need for oxygen, rest and sleep, avoid or seek relief from pain, activity and the elimination needs.

Hunger Motive

Food is seen to be a very dominant motive. If hunger motive is not adequately satisfied, behavior of the individual undergoes a series of changes, which includes lowering of their morale. When the food supply of the body has been exhausted, certain biochemical changes take place in the tissues of the body. This causes the stomach to contract, which gives hunger pains. Hunger must be satisfied in order to help the body to return to a physiological balance or homeostasis.

Thirst Motive

When deprived of water over a long period the individual becomes excessively restless and needs intake of water. The tissues of the body lose fluid when fluids have not been taken in. As a result the mucous membranes of the throat become dry and cause sensation of thirst.

Respiratory Motive

It is the drive for air and oxygen. One cannot survive for long without a regular supply of air or oxygen. When an individual suffers from oxygen want, his memory, sensory activity and muscular control are seriously impaired.

Need for Rest and Sleep

Need for sleep is one more physiological motive. When the body continues activities without rest or sleep for a long time, it is possible to experience confusion, fatigue and discomfort.

Need for Elimination of Waste

When the bladder or intestine becomes distended with waste material, they cause pressure and discomfort. The person becomes restless until the waste materials are disposed off and pressure relieved.

Sex Motive

With the onset of puberty, the sex glands start functioning and as a result the sex drive is stimulated. Though it is a physiological drive it is regulated by customs, traditions and religious conventions. A number of taboos are associated with the satisfaction of sex drive. This motive within certain limits influences man's behavior a great deal. Its adequate satisfaction is desirable for the maintenance of normal mental health. It is considered a biological drive, since it is dependent on physiological conditions. Unlike hunger and thirst, sex is not essential for the survival of the individual, but is necessary for the survival of the species. The initial drive to sex activity comes from nerves tensions within the body set up by sex hormones. Its expression is subject to moral codes and civil law. We have to sublimate this sex drive by engaging ourselves with art and painting, creative writing, dramatics, etc.

The nurse has to recognize all these basic needs and drives in her patients. She has to remember that due to illness many of these drives become weak and queer in their expression. She should provide care in such a way as to satisfy all basic needs of the patient.

Social or Secondary Motives

Human beings are not only biological, but also social. Therefore, human behavior is activated by social motives such as, affiliation motives, need for status, power motives and social approval. These motives develop through relationship with people.

Affiliation Motives

We all love company. In general, pleasures of life cannot be enjoyed without company. We all resent loneliness. Even the simple routine activities of eating and drinking cannot be enjoyed without company. The need to be with other people is referred to as affiliation need. It is revealed by a need to be attached to others through friendship, sociability or group membership. Need to rely on others, which is called dependency motive is one form of the need for affiliation. The motive of affiliation is universally seen in all human cultures.

Need for Status

Almost all individuals have a desire to have some standing or position among the people of his society or group. Nobody likes to be considered inferior.

Power Motive

The desire to be in a position of control, to be the boss, to give orders, to command respect and obedience is called the power motive. Power motive directs the behavior of dictators, gang leaders and the builders of fraudulent financial empires.

Social Approval

We try our best to avoid doing anything that may evoke social disapproval. We often show an almost compulsive tendency to conform to the norms set by our social group.

A nurse has to remember that all these social motives are at work in the life of her patients,

colleagues and in her own daily relationships. She has to note the manifestations of these motives in her patients carefully, because some of them adopt peculiar means to satisfy them.

Personal Motives

Personal motives are allied with physiological needs and common social motives, but they are so much individualized that they are no longer common. They are our wants and aspirations, which are not shared commonly by others. Need for achievement, vocational ambitions and life goals, specific interests, habits and attitudes, levels of aspiration, curiosity and fear are our personal motives.

Need for Achievement

Achievement motivation refers to a drive towards some standard of excellence. People with high need for achievement prefer tasks which would promise success and are moderately difficult. David C McClelland has found that while high achievers tend to succeed, low achievers tend to avoid failures. High achievers challenge failures and work harder, while low achievers accept failure and go for less difficult task. High achievers prefer personal responsibility and like to get feedback about their works.

Vocational Ambitions and Life Goals

These desires are common to many others, but there is something unique about each one's desires. These are powerful determinants of our behavior.

Levels of Aspiration

Levels of aspiration imply the degrees of expectation which a person has, i.e. how much he expects to accomplish or achieve. We may have the same ambition or life goal, but may have different levels of aspiration. In general people tend to set their goals slightly higher than the level they are sure of attaining. This is a healthy tendency for progress. However, there are a few who set their level of aspiration much higher or lower in comparison to their actual level of performance leading to frustrations and disappointments. Repeated failure may lower the level of aspiration.

Force of Habit

A habit which has been formed acts as a drive and compels us to continue the accustomed ways of doing things. In other words, habits once formed persist and influence our behavior greatly.

Interests and Attitudes

The interests we have developed and the attitudes we have formed color our everyday behavior in many ways.

Curiosity

This is a motive, which is close to exploration. Exploration is a drive that aids the satisfaction of curiosity. The extent of man's knowledge and experience widens as a result of this drive. Curiosity thus adds to our competency.

Fear

Fear is a learned motive. It motivates individuals to escape from fear producing situation. Fear may also interfere with the satisfaction of other motives.

The nurse should understand that personal motives are no longer common. They are our wants and aspirations, which are not shared commonly by others. She has to put extra-attention to understand the personal motives.

Unconscious Motives

Unconscious motives are those of which we are not aware of. They may be in the form of our repressed desires or wishes or complexes. They determine our irrational fears or phobias, our eccentric likes and dislikes, our chronic headaches and gastric troubles (for which we have no organic causes) and our neuroses and insanities.

According to Freud, it is the unconscious mind that guides, directs and motivates dreams. The root cause of mental diseases is traced to the unconscious mind.

THEORIES OF MOTIVATION

Theories of motivation try to provide general sets of principles to guide our understanding of the urges,

Table 4.1: Major approaches to motivation

Theory	Main points
Instinct	Innate biological instincts guide behavior
Drive reduction	Behavior is guided by biological needs and learned ways of reducing drives arising from those needs
Arousal	People seek to maintain an optimal level of physiological arousal, which differs from person-to-person. Maximum performance occurs at optimal arousal level
Incentive	External stimuli direct and energize behavior
Hierarchy of needs	Needs form a hierarchy; lower order needs must be fulfilled before higher-order needs are met

wants, needs, desires and goals which fall under the category of motivation (Table 4.1).

Instinct Theory of Motivation

According to instinct theories, people are motivated to behave in certain ways because they are evolutionarily programmed to do so. An example of this in the animal world is seasonal migration. These animals do not learn to do this; it is instead an inborn pattern of behavior.

William James created a list of human instincts that included such things as attachment, play, shame, anger, fear, shyness, modesty and love. The main problem with this theory is that it did not really explain behavior, it just described it. By the 1920s, instinct theories were pushed aside in favor of other motivational theories, but contemporary evolutionary psychologists still study the influence of genetics and heredity on human behavior.

According to William McDougall all behavioral acts are essentially instinctive and this instinctive behavior is found to have three aspects:

❶ Cognitive (knowing)
❷ Affective (feeling)
❸ Conative (acting or doing)

For example, when a child sees a monkey coming towards him, first, he sees the monkey, second, he experiences an emotion of fear and third, he tries to run away. Thus, all human behaviors could be explained in terms of some instinct.

Drive Theory (Push Theory of Motivation)

Drive theory was developed by Clark Leonard Hull in 1943. According to the drive theory of motivation, people are motivated to take certain actions in order to reduce the internal tension that is caused by unmet needs. For example, a person might be motivated to drink a glass of water in order to reduce the internal state of thirst. Humans and other animals are motivated by four drives: hunger, thirst, sex and the avoidance of pain. This theory is useful in explaining behaviors that have a strong biological component, such as hunger or thirst. The problem with the drive theory of motivation is that these behaviors are not always motivated purely by physiological needs. For example, people often eat even when they are not really hungry.

Drive theories might be described as the 'push theories of motivation'; behavior is 'pushed' towards goals by driving states within the person. Drive theories say: when an internal drive state is aroused, the individual is pushed to engage in behavior, which will lead to a goal, reducing the intensity of the drive state. Motivation consists of:

❶ A drive state.
❷ Goal-directed behavior initiated by the drive state.
❸ The attainment of an appropriate goal.
❹ The reduction of the drive state and subjective satisfaction and relief when the goal is reached.

The sequence of events is called motivational cycle (Figure 4.1).

Drive theory includes the influence of learning in secondary drives. Primary drives are those which arise from basic biological needs, such as hunger, thirst and elimination, etc. However, through the process of conditioning and learning, people can acquire other drives. These learned drives are known as secondary drives; people are said to have learned drives for power, aggression or achievement, etc. Such learned driving states become enduring characteristics of the particular person and push him towards appropriate goals.

Arousal Theory of Motivation

Arousal is the level of alertness, wakefulness and activation caused by activity in the central nervous system. The optimal level of arousal varies with the person and the activity. The arousal theory of motivation suggests that people take certain actions to either decrease or increase levels of arousal. When arousal levels get too low, for example, a person might watch an exciting movie or go for a jog. When arousal levels get too high, on the other hand, a person would probably look for ways to relax such as meditating or reading a book. According to this theory, we are motivated to maintain an optimal level of arousal, although this level can vary based on the individual or the situation (Figure 4.2).

Incentive Theory of Motivation (Pull Theory of Motivation)

Incentive theory is based on behaviorists learning theories proposed by Thorndike, Pavlov, Watson and BF Skinner (1977). The incentive theory suggests that people are motivated to do things because of external rewards. This theory emphasizes that an attractive incentive energizes us to do something, while an unattractive incentive discourages us to do something. For example, a student is motivated by the incentive of good grades and a teacher is motivated by the incentive of a promotion.

In contrast with the push of drive theories, incentive theories are pull theories of motivation; stresses that environmental stimuli may motivate behavior by 'pulling' people towards them. We are pushed by our drives and pulled by incentives. The drive is the need and the incentive is the reward.

Maslow's Hierarchy of Needs

Abraham Maslow (1960–1970), a leader in the development of humanistic psychology proposed an interesting way of classifying human motives (Figure 4.3). He assumed a hierarchy of motives ascending from the basic biological needs present at birth to more complex psychological motives that become important only after the more basic needs have been satisfied. The needs at one level must at least be partially satisfied before those at the next

Figure 4.1: Motivational cycle
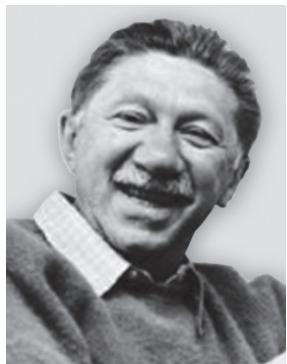
Figure 4.2: Arousal theory of motivation

level become important determiners of action. When food and safety are difficult to obtain, the satisfaction of these needs will dominate a person's actions and the higher motives will have little significance. Only when the satisfaction of the basic needs is easy, will the individual have the time and energy for esthetic and intellectual interests. Artistic and scientific endeavors do not flourish in societies where people must struggle for food, shelter and safety.

One of the basic themes underlying Maslow's theory is that motivation affects the person as a whole, rather than just a part. Maslow believed that people are motivated to seek personal goals, which make their lives rewarding and meaningful.

Abraham Maslow suggested that five basic classes of needs or motives influence human behavior. According to Maslow, needs at the lowest level of hierarchy must be satisfied before people can be motivated by higher-level goals (Figure 4.4). According to Maslow the five levels of motives from bottom to the top of the hierarchy are:

Physiological Needs

The physiological needs are most basic, powerful and urgent of all human needs that are essential to physical survival. Even, if one of these needs remains unsatisfied, the individual rapidly becomes dominated by it, so all other needs become secondary. The needs, which are included in this group are food, water, oxygen, activity, sleep, sex, homeostasis and excretion.

Safety and Security Needs

Once the physiological needs are fairly well-satisfied, safety and security needs predominate. The needs, which are included in this level are the need for security of body, employment, resources,

Figure 4.3: Abraham Maslow, leader in the development of humanistic psychology

Figure 4.4: Maslow's hierarchy of needs

morality, family, health and property. Safety needs are of greater importance in childhood. The failure to satisfy the needs of children may make them fearful, insecure adults who are unable to cope with the ordinary demands of the environment.

Need for Love and Belongingness

These needs become prominent when the physio-logical and safety/security needs have been met. The person at this level longs for affectionate relationship with others, for a place in his family and social groups. The secure individual will be able to reach out for friends, affiliate with a group and ultimately take on the responsibilities in marriage of being both a spouse and a parent. The needs, which are included in this level are need for friendship, family and sexual intimacy.

Self-Esteem Needs

Once people find themselves loved and loving members of an accepting circle, they then need to think highly of themselves and to have others think highly of them. They want self-respect and the respect, confidence and admiration of others. Maslow divided these needs into two types: self-respect and respect from others.

Self-respect includes a person's desire for com-petence, confidence, achievement and independence. Respect from others includes his desire for prestige, reputation, status, recognition, appreciation and ac-ceptance from others. Satisfaction of self-esteem needs generates feelings of self-confidence, self-worth and a sense of being useful and necessary in the world.

Dissatisfaction of self-esteem needs, in contrast, generate feelings of inferiority, weakness, passivity and dependency.

Self-Actualization

According to Maslow, self-actualization is the highest human motive. It is the need for self-fulfillment, the sense that one is becoming everything that he is capable of being. The person who has achieved this highest level presses towards the full use of his talents, capacities and potentialities. In short, the self-actualized person is someone who has reached the peak of his potential. Listed below are a number of characteristics that distinguish self-actualized people from others:

❖ They are realistically oriented.
❖ They accept themselves for what they are.
❖ Their thought is unconventional and spontaneous.
❖ They are problem centered.
❖ They have a need for privacy.
❖ They are independent.
❖ Their appreciation of people is fresh.
❖ They have spiritual experiences.
❖ They identify with people.
❖ They have intimate relationships.
❖ They are democratic.
❖ They have a good sense of humor.
❖ They do not confuse between means and ends.
❖ They are creative and non-conformist.
❖ They appreciate the environment.

Maslow's hierarchy provides a framework for nursing assessment and for understanding the needs of the patient at all levels so that interventions to meet the needs become a part of the care plans.

MOTIVES AND BEHAVIOR

❖ Motives act as the immediate force to energize, direct, sustain and stop a behavior.
❖ Motives are a powerful tool for explaining behavior.
❖ Motives help us to make predictions about behavior in many different situations.
❖ Motives do not tell us exactly what will happen, they give us an idea about the range of things a person will do. A person with a need to achieve will work hard in school, business, work situations, etc.
❖ Motives are inner forces that control an individual's behavior in a subtle manner.

FRUSTRATION

Every action arises in response to a need. So, it is always directed towards a goal. The blocking of activity directed towards a goal results in frustration. It always produces unpleasant feelings like anger, despair, irritation, anxiety, etc. This produces mental tension. For example, over restrictive parents would

be a source of frustration to an adolescent girl who wanted to attend a party, while lack of water would be a source of frustration to a man lost in the desert.

Definitions

The word frustration has been derived from a Latin word 'Frustra' meaning 'obstruct'. Frustration refers to the blocking of behavior directed towards the goal. Frustration means emotional tension resulting from the blocking of a desire or need.

(Good, Carter V)

Characteristics of Frustration

❶ Frustration produces an emotional state, which is always unpleasant. It creates tension or stress, which varies from simple annoyance to heated anger. The tension or stress aroused by frustration affects the vital balance.

❷ Frustration is a stage or condition in which failure dominates the attempts.

❸ In this state one experiences a major obstacle in the satisfaction of one's basic needs or goals.

❹ The significance of the goal and strength of the blockade increases the degree of frustration.

❺ The cause of frustration lies both in the individual himself and his environment.

Causes or Source of Frustration

There are two kinds of frustration. One is external and one is personal. External frustration is caused by conditions outside of oneself. Personal frustration is caused by conditions within oneself. These conditions can be categorized into external and internal factors:

External Factors (Environmental Factors)

❶ *Physical factors*: Natural calamities, obstacles in environment to reach a goal, environmental situations or conditions, which we cannot control. For example, a contagious disease, death of a friend or a beloved relative.

❷ *Social factors*: Conflicts with other people, customs, traditions, restrictions, taboos, laws, codes, etc.

❸ *Economic factors*: Financial problems.

Internal Factors

❶ Physical abnormalities or defects.
❷ Conflict of motives within the individual.
❸ The individual's morality and high ideals.
❹ High levels of aspiration.
❺ Lack of persistence and sincerity in efforts.

Reactions to Frustration

The important reactions are as follows:

Direct Approaches

❖ Increasing trials or improving efforts.
❖ Changing the goal to one that is more attainable.
❖ Adopt to compromising means.

Restlessness and Tension

When increased effort and variation in attack fail and substitute goals are unavailable and unacceptable, person shows restlessness and tension behavior.

Aggression

Direct aggression: Sometimes aggression is expressed directly against the individual or object, which is the source of frustration.

Displaced aggression: When circumstances block direct attack on the cause of frustration, aggression may be 'displaced'. Displaced aggression is an aggressive action against an innocent person or object rather than against the actual cause of the frustration.

Apathy

Those who find that they have no power to satisfy their needs by means of their own actions, whose aggressive outbursts are never successful, may well resort to apathy and withdrawal when confronted with a frustrating situation.

Fantasy

When problems become too much for an individual to handle, he sometimes seeks the solution of escape into a dream world, a solution based on fantasy rather than reality.

Stereotype

Stereotype is a repetitive, fixed behavior. When repeated frustration baffles a person, some flexibility appears to be lost and the person will stupidly make the same effort again and again, though experience has shown its futility.

Regression

Regression is defined as a return to more primitive modes of behavior, that is to modes of behavior characterizing a younger age. Individuals show considerable variability in behavior when their goal-seeking behavior is blocked.

CONFLICT

Conflict in life is one cause of stress. Conflict is a painful state or condition of an individual. During this state the person experiences an intense emotional tension. Conflict occurs when one has to choose between equally desirable or equally undesirable goals. These desires are contradictory in nature and therefore, cannot be satisfied fully at the same time. Thus, becoming a victim of the two opposing desires, he suffers from an inner conflict to either satisfy or not satisfy one or the other desire.

Definition

Conflict means a painful emotional state, which results from a tension between opposed and contra-dictory wishes.

(Douglas and Holland)

Types of Conflict

❶ Approach-approach conflict
❷ Avoidance-avoidance conflict
❸ Approach-avoidance conflict
❹ Multiple approach-avoidance conflict
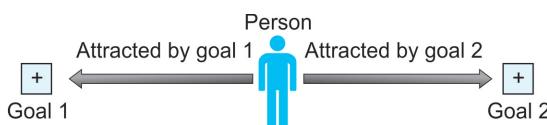
Figure 4.5: Approach-approach conflict

Approach-approach Conflict

Approach-approach conflict occurs when a person is forced with two attractive alternatives, while only one of them can be selected. For example, there are two courses that you want to take, but they are scheduled for the same time. Approach-approach conflicts are usually easy to resolve. But, they become serious, if the choice of one alternative means the loss of an extremely attractive alternative (Figure 4.5).

Avoidance-avoidance Conflict

Avoidance-avoidance conflict arises when a person faces two undesirable situations and avoidance of one forces exposure to the other. These types of conflicts are very difficult to resolve and create intense emotions. For example, a woman trying to choose between continuing an unwanted pregnancy and getting an abortion done (she may morally be opposed to abortion) (Figure 4.6).

Approach-avoidance Conflict

Approach-avoidance type of conflict exists when one event or activity has both attractive and unattractive features. The result is continuing oscillation between approach and avoidance, creating a great deal of emotional conflict and stress. For example, to marry or not to marry (Figure 4.7).

Multiple Approach-avoidance Conflict

Multiple approach-avoidance conflict exists when a choice must be made between two or more alternatives, each of which has both positive and negative features. Such conflicts are the most difficult to re-
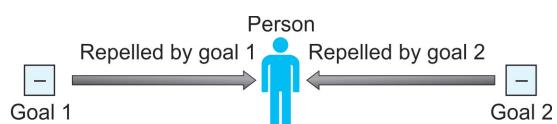
Figure 4.6: Avoidance-avoidance conflict
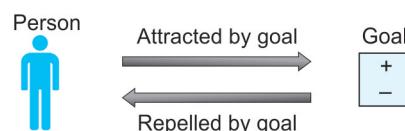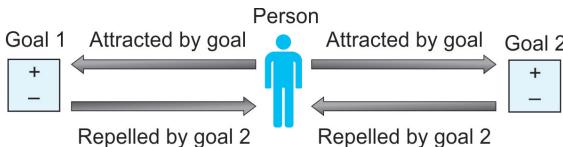
Figure 4.7: Approach-avoidance conflict

Figure 4.8: Multiple approach-avoidance conflict

solve and to make the right decision, the individual must analyze the expected values of each course of action.

For example, a person may have the alternative of accepting any of the two jobs, of which one may be boring, but with a very good pay and other may be interesting, but with a very poor pay. Either choice has a positive and a negative quality, so which one does he choose? The choice will be based on the person involved and his feelings about the pay or work involved.

When it is difficult to decide in a double approach-avoidance conflict people usually vacillate. That is, they waver or go back and forth between the two choices (Figure 4.8).

Internal Conflicts

Conflicts may be between one person and another or between a person and his environment or may be within the person himself. The most dangerous and serious conflict is the one within a person. This is called internal conflict, the conflict between one's motives, desires, sentiments and attitudes. Freud describes it as a conflict between the forces of the id, the ego and the super-ego, the three dynamic aspects of one's personality.

Our internal conflict may be conscious or unconscious. We are aware of its causes or sources when it is at the conscious level, whereas, we are not aware of the real motives causing the conflict at the unconscious level. The conflict at the unconscious level is responsible for many of our emotional disorders and mental illnesses.

RESOLUTION OF FRUSTRATION AND CONFLICT

Frustration and conflict lead to stress and anxiety causing harm to the body. Some methods of relieving frustration are:

❖ Identify the source of frustration, try to change or control it. If cannot, learn to accept it.
❖ Decide important things carefully, check everything carefully before taking a decision.
❖ Review the situation again.
❖ Change our goals or modify our desires.
❖ Substitute our goals by others, which are equally satisfying but are different and obtainable.
❖ Seek advice from experts, friends or relatives.
❖ Encourage full expression of positive and negative feelings within an accepting atmosphere.
❖ Avoid indecision. Stick with decisions and forget about the other choices.

EMOTIONS AND STRESS

Etymologically the word 'emotion' is derived from the Latin word, 'emovere' which means 'to stir up' or 'to excite'. In common usage emotion is referred to as a subjective feeling.

Feelings are simple experiences of the affective type, pleasant or unpleasant. Emotions are more complex affective experiences in which the whole individual is stirred up. Emotions are some sort of feelings or affective experiences, which are characterized by some physiological changes that generally lead them to perform some or the other types of behavioral acts.

Definitions

Emotion is a 'moved' or 'stirred-up' state of an organism. It is a stirred-up state of feeling that is the way it appears to the individual himself. It is a disturbed muscular and glandular activity that is the way it appears to an external observer.
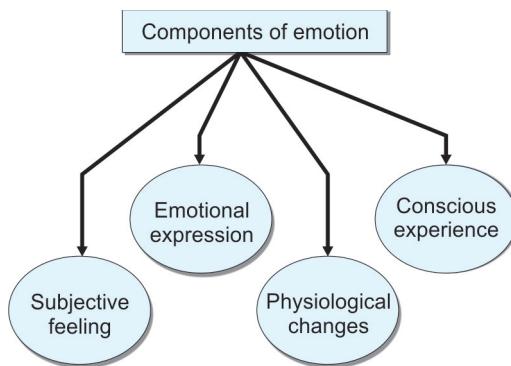
(*Woodworth—1945*)

Emotion is an affective experience that accompanies generalized inner adjustment and mental and physiological stirred-up states in the individual and that shows itself in his overt behavior.

(Crow and Crow—1973)

COMPONENTS OF EMOTION

Dennis Coon described four components of emotion (Figure 4.9):

Figure 4.9: Components of emotion

Subjective Feeling

Subjective feelings are what you believe and what you are feeling. It is conscious and an intellectual perception of a situation, if the situation is intense enough, it may provoke an emotion. Emotional feelings are experienced before expression.

Emotional Expression or Expressive Behavior

There are three ways in which an emotion can be expressed:
❶ Facial
❷ Vocal
❸ Bodily movements/gestures

Facial

The face is believed to be the most expressive part of the body. Some emotions like guilt, joy, anger, etc. can be perceived fairly accurately through facial expressions.

Vocal

Voice also tells us about an emotional state of an individual. A scream communicates fear, surprise or pain; a trembling voice means sorrow or disappointment; a loud, sharp, high-pitched voice means anger, irritability or frustration. Slow monotonous voice usually communicates sadness.

Bodily Movements or Gestures

Bodily movements and gestures also indicate the emotional state of an individual. In anger, a person clenches his fists and moves forward to attack. In fear a person runs away, in joy the person is excited, holds his head high and chest out.

Physiological Changes

Physiological changes that take place during an emotional state are caused mainly by the autonomic nervous system and the endocrine gland system. The autonomic nervous system has two subdivisions—the sympathetic division and the parasympathetic division. The sympathetic division of the autonomic nervous system prepares the body for emergency action during aroused states. It causes discharge of hormones, epinephrine (adrenaline) and norepinephrine (noradrenaline). Adrenaline gets circulated to different parts of the body through blood and is responsible for the following physical changes:

❖ Increased blood pressure (BP) and heart rate.
❖ Changes in the rate of respiration.
❖ Dilation of pupils.
❖ Sweating and decreased secretion of saliva.
❖ Increase in blood sugar level.
❖ Decreased mobility of the gastrointestinal tract.
❖ Erect hair on the skin.
❖ Muscular tensions and tremors.

When a period of intense emotion ends, the physiological response of the body is taken over by the parasympathetic branch of nervous system. This system slows down the entire metabolism of the body to bring it into balance once again. The parasympathetic system acts much more slowly than the sympathetic system. This is why the body responds very quickly to an intense emotion, but recovers its balance very slowly. The physiological changes produced by the parasympathetic nervous system are as follows:

❖ Reduces heart rate and BP.
❖ Diverts blood to the internal organs and digestive tract.
❖ It regulates the salt and water level of the body.
❖ It helps to build up and conserve the body's energy.

Conscious Experience

An emotion is not only a pattern of bodily changes, but also an experience. Emotional experience is

Table 4.2: Changes in emotional reactions

External changes	Internal changes	Psychological changes
• Facial expression	• Increased heart rate	• Clouding of consciousness
• Bodily movements	• Increased blood pressure	• Blocking of memory
• Gestures	• Changes in respirations	• Decreased learning capability
• Voice disturbances	• Increased blood sugar level	
	• Decreased motility of gastrointestinal system	

generally a conscious feeling. In order to assess an individual's emotion, his feelings and emotional experience is an important indicator.

CHANGES IN EMOTIONAL REACTIONS

Emotional reactions affect the autonomic nervous system the most. The following external, internal and psychological changes occur during emotional states (Table 4.2 and Figure 4.10).

External Changes

Facial expressions: They differ in different emotional reactions. The face is flushed in anger and pale in fear. Mouth turns down in unpleasant emotions and turns up in pleasant emotions.

Bodily movement and gestures: Unexpected fearful situation might cause a startle pattern in

Figure 4.10: Various emotional reactions

which the eyes close, mouth widens, head and neck are thrust forward. In anger one may clench ones fists and move to attack.

Voice disturbances: A tremor or a break in the voice may denote deep sorrow. A loud, sharp high-pitched voice usually denotes anger. Speech is low and monotonous in dejection and sadness and rapid in tension and excitement.

Internal Changes

During fear and anger, the pulse rate or heart rate increases. Blood pressure increases during emotional excitement. During excitement breathing is in short quick gasps, but in depression it is slow.

Psychological Changes

During emotional experiences, perception, learning, consciousness and memory are affected.

THEORIES OF EMOTION

Psychologists have proposed a number of theories about the origin and functions of emotion. However, the theorists behind the dissenting views do agree that emotion has a biological basis. This is evidenced by the fact that the amygdala (part of the limbic system of the brain), which plays a large role in emotion, is activated before any direct involvement of the cerebral cortex (where memory, awareness, and conscious 'thinking' take place).

In the history of emotion theory, four major explanations for the complex mental and physical experiences that we call 'feelings' have been put forward. They are: the James-Lange theory in the 1920s, the Cannon-Bard theory in the 1930s, the Schachter-Singer theory in the 1960s, and most

recently the Lazarus theory, developed in the 1980s and '90s (Table 4.3).

James-Lange Theory

In 1880, S William James formulated the first modern theory of emotion, at almost the same time a Danish psychologist Carl Lange reached the same conclusion independently. The James-Lange theory proposes that an event or stimulus causes a physiological arousal without any interpretation or conscious thought and you experience the resulting emotion only after you interpret the physical response (Figure 4.11).

Example: You are late leaving work and as you head across the parking lot to your car, you hear footsteps behind you in the dark. Your heart pounds and your hands start to shake. You interpret these physical responses as fear.
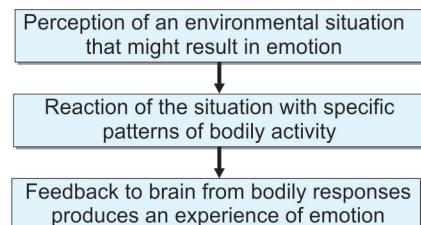
Figure 4.11: James-Lange theory

Table 4.3: Theories of emotion

Theory	Stimulus	Response	Report
Common sense		Fear — Subjective experience → Body response (arousal)	"My heart is pounding because I feel afraid."
James-Lange		Body response (arousal) → Fear — Subjective experience	"I feel afraid because my heart is pounding."
Cannon-Bard		Body response (arousal) / Fear — Subjective experience	"The dog makes me feel afraid and my heart pounds."
Schachter		Body response (aruosal) → Interpretation → Fear — Subjective experience	"My pounding heart means I am afraid because I interpret the situation as dangerous."

Cannon-Bard Theory

Cannon-Bard theory was proposed by Walter Cannon and Philip Bard in the 1920s. The Cannon-Bard theory, on the other hand, suggests that the given stimulus evokes both a physiological and an emotional response simultaneously and that neither one causes the other. According to Cannon's theory, the emotional experience occurs as soon as the cortex receives the message from the thalamus; it does not depend upon the feedback from internal organs and skeletal responses (Figure 4.12).

Example: You are home alone and hear creaking in the hallway outside your room. You begin to tremble and sweat and you feel afraid.

Schachter-Singer Theory (1962)

Schachter-Singer theory is called "cognitive theory of emotion". Schachter proposed that emotional

states are a function of the interaction of cognitive factors and a state of physiological arousal.

The Schachter-Singer theory takes a more cognitive approach to the issue. He believes that an event causes physiological arousal, but that you must then identify a reason for the arousal before you label the emotion (Figure 4.13).

The conscious experience of emotion involves the integration of information from three sources:

- ❖ Feedback to the brain from the internal organs and other body parts activated by the sympathetic nervous system
- ❖ Subject interpretation of aroused state
- ❖ Information stored in memory and the perception of what is taking place in the environment, i.e. memory of past experience and appraisal of current situation.

Example: You are taking the last bus of the night and you are the only passenger. A single man gets on and sits in the row behind you. When your stop comes around, he also gets off the bus and starts walking behind you. You feel tingles down your spine with a rush of adrenaline. You know that there have been several muggings in your city over the past few weeks, so you feel afraid.

Lazarus Theory

The Lazarus theory builds on the Schachter-Singer theory, taking it to another level. It proposes that

Figure 4.12: Cannon-Bard theory
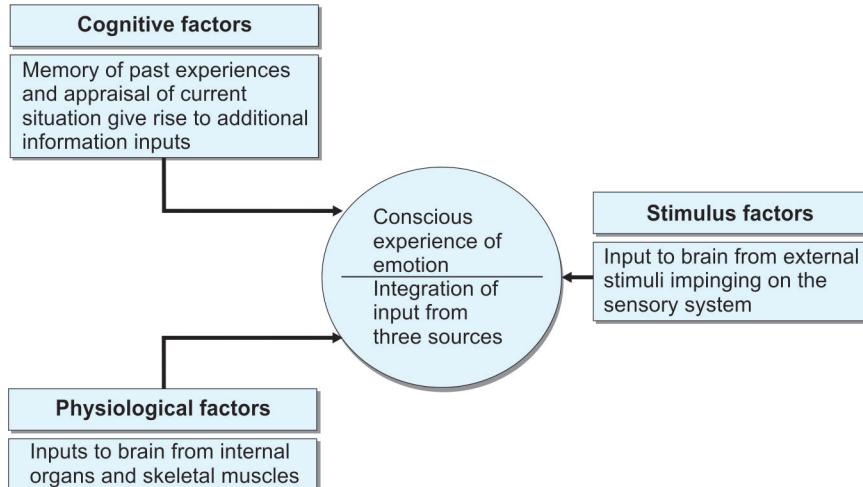
Figure 4.13: Theoretical model of Schachter-Singer theory

when an event occurs, a cognitive appraisal is made (either consciously or subconsciously) and based on the result of that appraisal, an emotion and physiological response follow (Figure 4.14).

Example: You are buying a few items at the super store, when two young men in hooded sweatshirts enter the store in a hurry, with their hands in their jacket pockets. You think perhaps they are here to rob the place, so you get scared and feel like you might throw up.

While each of these theories is based on research, there is no absolute proof as yet how emotions arise in our bodies and minds or what determines our own individual experiences of them. What we do know is that feelings are a powerful force to be reckoned with and should never be belittled.

EMOTIONAL ADJUSTMENTS

Emotional adjustment (also referred to as emotional equilibrium, emotional stability, neuroticism, personal adjustment or psychological adjustment) is the maintenance of emotional equilibrium in the face of internal and external stressors. This is facilitated by cognitive processes of acceptance and adaptation. An example would be maintaining emotional control and coping behavior in the face of an identity crisis.

Emotions play an important role in human life. Under ordinary circumstances the physiological reactions during an emotion facilitate the adjustment of the individual and these physiological reactions do not last a long time and not have any harmful effects on our body. But when an emotion recurs again and again and remains for a longer time, troubles may start, affecting the physical health. Autonomic nervous system, brain structures and hormones play an important role in emotional adjustment.

Autonomic Nervous system

Autonomic nervous system prepares the body for emotional responses by its two divisions—sympathetic and parasympathetic nervous system. Sympathetic nervous system is more active in unpleasant situations, while the parasympathetic division is more active with more pleasant situations. Strong emotional reactions like fear, anger, etc. stimulate the sympathetic nervous system that releases hormones from the adrenal gland.

The parasympathetic nervous system makes us calm by inhibiting the release of these hormones.

Brain Structures

Hypothalamus and limbic system are the structures, which control emotional systems by signaling the pituitary gland to release epinephrine, which is associated with the sympathetic nervous system.

Amygdala is another key player within the limbic system, receives information from the cortex and thalamus, involves in processing emotions like patterns of attack, defence and flight. Right hemisphere regulates facial expressions and the left hemispheres, deciphers emotional tone from the messages we fear.

Hormones

Hormones play an important role in regulation of emotions. During emotional states there is an increase in hormonal level in the blood and urine.

EMOTIONS IN HEALTH AND ILLNESS

Dr Schindler says—by controlling our own emotions we can eliminate half of the nagging illnesses that plague our daily lives. Our body functions well when
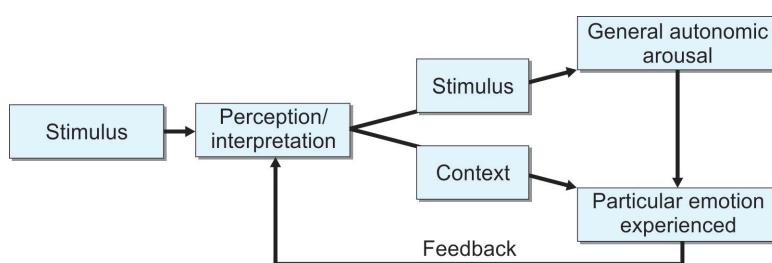
Figure 4.14: Lazarus theory

we are happy. There is an old saying, 'Joy is the best medicine'.

❶ Intense and unpleasant emotions disturb the whole individual; if they persist they may cause illness or worsen the condition of one already ill.

❷ Ordinarily physiological reactions during an emotion facilitate the adjustment of the individual and these reactions do not last a long time and not have any harmful effects on our body. But when an emotion recurs again and again and remains for a long time, troubles may start, affecting the physical health.

❸ Modern medicine shows that uncontrolled emotionality plays a vital role in the causation of many physical disorders, which include:
   – Peptic ulcer
   – Heart diseases
   – Epilepsy
   – Diabetes and tuberculosis (TB) are made worse
   – Bronchial asthma
   – Increased BP
   – Insomnia, chronic constipation
   – Functional colitis
   – Skin disorders like pruritus, psoriasis, etc.
   – Susceptible to infections

A nurse has to reduce the intensity of emotional disturbances as much as it is possible for her.

STRESS

Concepts of Stress

❶ Stress is a universal phenomenon. All people experience it.

❷ Stress can have both positive and negative effects.

❸ Stress is produced by a change in the environment that is perceived as a challenge, threat or danger.

❹ Stress affects the whole person in all the human dimensions (physical, emotional, intellectual, social and spiritual). The perception of stress and the responses to it are highly individualized, not only from person-to-person but also from one time to another in the same person.

❺ Stress is a condition in which the human system responds to changes in its normal balanced state.

❻ When a person faces a stressor, responses are referred to as coping strategies, coping responses or coping mechanisms.

Definitions

Stress is the "non-specific response of the body to any kind of demand made upon it".

(Selye—1956)

Stress is the arousal of mind and body in response to demands made upon them.

(Schafer—2000)

STRESSORS

Stressor can be any stimulus that causes an individual to experience stress. Three major categories of stressors are:

❶ Catastrophic events.

❷ Important life events (personal stressors).

❸ Daily hassles (background stressors).

Catastrophic Events

A catastrophe is a large scale disaster that affects numerous people and causes extensive damage. Catastrophes include earthquakes, hurricanes, war, toxic waste contamination and nuclear accidents. Stress induced by catastrophic events is shared by others who have also experienced the disaster. This permits people to offer one another social support.

Important Life Events

Major life events such as the death of a family member, which has immediate negative consequences usually fades with time. The major life events are death of a parent or spouse, the loss of one's job, diagnosis of a life-threatening illness, parent or relative in family getting very sick, breaking up with a close friend, starting a new school, moving to a new home, starting a new job, brother or sister getting married, etc.

Typically personal stressors produce an immediate major reaction. For example, stress arising from the death of a loved one tends to be greatest just after the time of death, but people begin to feel less

stressed and are better able to cope with the loss after the passage of time.

Daily Hassles

These are the minor irritants of life that we all face time and time again: traffic delays, noise, pollution, weather, social events, work demands, dissatisfaction with school or job, being in an unhappy relationship, people's irritating behavior, not enough time, too many things to do, concerns about standards, too many responsibilities and so on.

By themselves, daily hassles do not require much coping on the part of the individual, although they certainly do produce unpleasant emotions and moods. Yet, daily hassles add up and ultimately they can produce as great a toll as a single, more stressful incident. In fact, the number of daily hassles that people face is associated with psychological symptoms and health problems such as sore throat, flu and backaches.

Uplifts: Minor positive events that make one feel good. Uplifts range from relating well to a companion to finding ones surroundings pleasing. Common uplifts are relating well with spouse or lover or friend, completing the task, feeling healthy, getting enough sleep, eating out, spending time with family, meeting responsibilities and so on. These uplifts are associated with people's psychological health in just the opposite way that hassles are; the greater the number of uplifts experiences the fewer the psychological symptoms people later report.

STRESS CYCLE

Stress follows a cycle of events, which circle around and around. Each step increases the severity of the next step (Figure 4.16).

Stressor

Stressor can be any stimulus that causes an individual to experience stress. Stressors include either positive or negative life events, e.g. death, divorce, new job, marriage, etc. Stressors cause pressures, challenges or demands in life.

Ways to reduce stress: Avoiding or managing the stress, choosing what is important in life, time management, simple living, learning to say no, etc.

Reaction to Stress

Once there is a stressor our body will react to it. Reactions to stress relates to perception of the stress. When a person feels stressed from the stressor, the body begins to release chemicals to confront the stressor.

Reducing the reactions to stress: Asking God for help, spiritual practices, cognitive behavior therapy, reframing the problem, visualization of results.

Wear and Tear on the Body and Organ System

When a person becomes stressed and does not correct the stressor, the same stress reactions which helped in the beginning to cope, begin to wear one self-down.

Remedies: Improving diet, regular exercises, yoga, meditation. All these activities reduce the emotional and physical effects of stress.

Reduced Optimum Health

After a sustained period of chronic stress the body wears down, which can invite more serious

Stressor → Reaction to stress → Wear and tear on body and organ systems → Reduced optimum health → Increased sensitivity to stress → Stressor
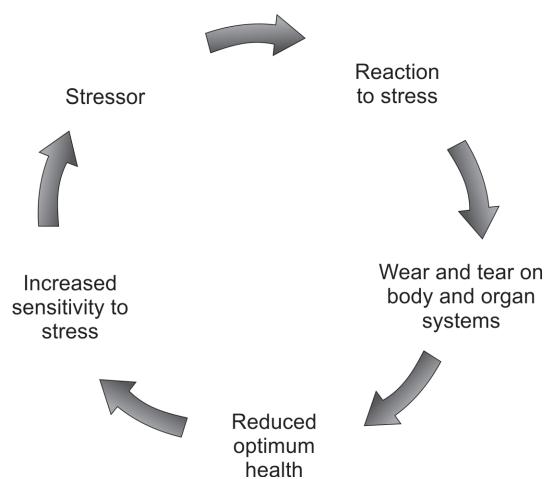
Figure 4.16: Stress cycle

diseases like high BP, heart problems, diabetes, skin conditions, asthama, arthritis, depression and even cancer. Many diseases are associated with chronic stress.

Remedies: Consulting allopathic or homeopathy doctor or acupuncturist or naturopath to make a plan for regaining health.

Increased Sensitivity to Stress

While once body is worn down and emotions worn and exhausted, sensitivity to stress increases. Overtime, a smaller and smaller stressor initiates the same stress reaction that a big event used to get.

Remedies: Try deep breathing or meditation, taking walks or talking with an objective friend may help to reduce sensitivity to stress.

EFFECTS OF STRESS

Stress is not always harmful. In fact it is recognized that low levels of stress can even help for better performance. For example, a student can prepare well for examination only, if she has some stress. However, excessive levels of stress are undoubtedly harmful.

❶ The body reacts to stressors by initiating a complex sequence of responses. If the perceived threat is resolved quickly, these emergency responses subside. But if the stressful situation continues, a different set of internal responses occurs as we attempt to adapt. Attempts to adapt to the continued presence of a stressor may deplete the body's resources and make it vulnerable to illness. It results in wear and tear from chronic overactivity of the physiological response to stress.

❷ Chronic stress can lead to physiological disorders such as ulcers, high BP and heart diseases. It may also impair the immune system, decreasing the body's ability to fight invading bacteria and viruses.

❸ Stress may affect health directly by creating chronic over arousal of the sympathetic division of the autonomic nervous system or the adrenal-cortical system or by impairing the immune system.

❹ People under stress may not engage in positive health-related behaviors and this may lead to illness. When we are stressed, we may be less likely to engage in healthy behaviors. For example, students taking exams stay up for most part of the night for several days, skip meals and snack on junk food.

❺ During stress some men consume excessive amount of alcohol and smoke excessively. People under stress cease normal exercise routines and become sedentary. Smoking is one of the leading causes of cardiovascular disease and emphysema. A high-fat diet contributes to many forms of cancer as well as cardiovascular diseases.

❻ People who do not regularly engage in a moderate amount of exercise are at an increased risk for heart disease and earlier death. Excessive alcohol consumption can lead to liver and cardiovascular diseases and may also contribute to cancers.

❼ Stress may indirectly affect health by reducing rates of positive health-related behaviors and increasing rates of negative behaviors. People who engage in a healthy lifestyle—eating a low-fat diet, getting enough sleep and exercising regularly often report that stressful events seem more manageable and that they feel more in control of their lives.

❽ Thus, engaging in healthy behaviors can help reduce the stressfulness of life as well as reducing the risk or progression of a number of serious diseases (Figure 4.17).

Three major types of consequences result from stress (Figure 4.18):

❶ Direct physiological effects
❷ Harmful behaviors
❸ Indirect health related behaviors

ADAPTATION TO STRESS

All of us face stress in our lives. Some psychologists believe that daily life actually involves a series of repeated consequences of perceiving a threat, considering ways to cope with it and ultimately adapting to threat with greater or lesser success. Although adaptation is often minor and occurs without our awareness, adaptation requires major

Physical or mental stresses may cause physical illness as well as mental. Here are the parts of the body most affected by stress:
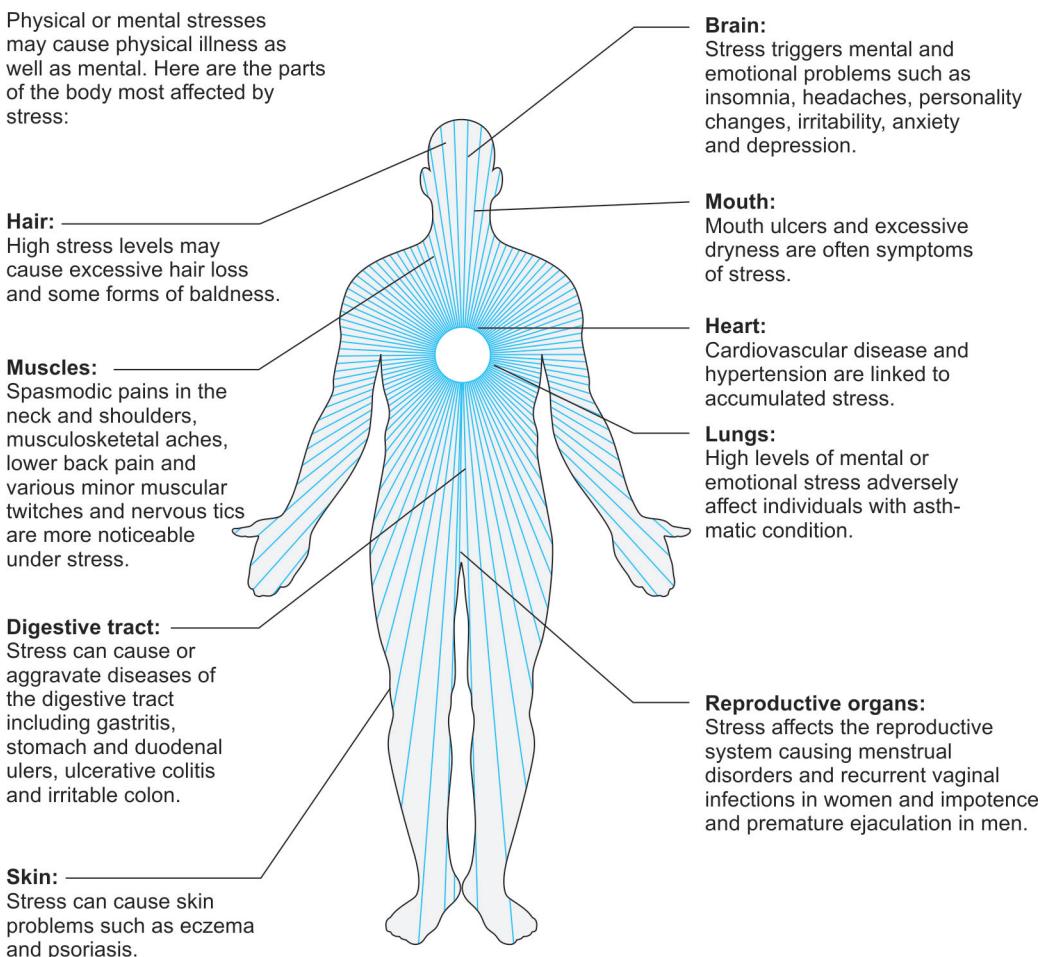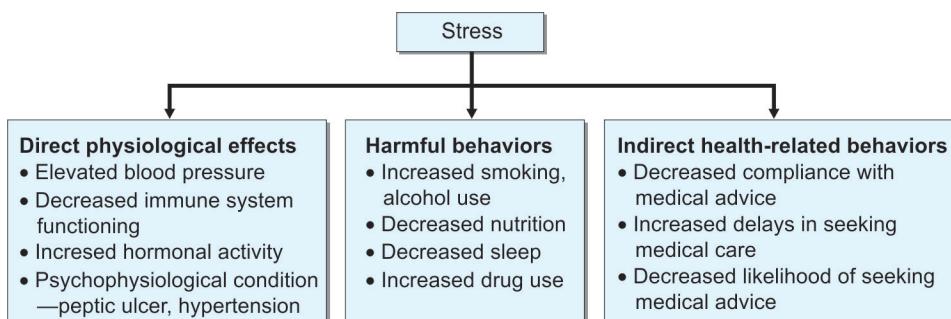
Hair:
High stress levels may cause excessive hair loss and some forms of baldness.

Muscles:
Spasmodic pains in the neck and shoulders, musculosketetal aches, lower back pain and various minor muscular twitches and nervous tics are more noticeable under stress.

Digestive tract:
Stress can cause or aggravate diseases of the digestive tract including gastritis, stomach and duodenal ulers, ulcerative colitis and irritable colon.

Skin:
Stress can cause skin problems such as eczema and psoriasis.

Brain:
Stress triggers mental and emotional problems such as insomnia, headaches, personality changes, irritability, anxiety and depression.

Mouth:
Mouth ulcers and excessive dryness are often symptoms of stress.

Heart:
Cardiovascular disease and hypertension are linked to accumulated stress.

Lungs:
High levels of mental or emotional stress adversely affect individuals with asthmatic condition.

Reproductive organs:
Stress affects the reproductive system causing menstrual disorders and recurrent vaginal infections in women and impotence and premature ejaculation in men.

Figure 4.17: Effects of stress

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                    Stress
      ┌───────────────┼───────────────┐
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Direct physiological effects	Harmful behaviors	Indirect health-related behaviors
• Elevated blood pressure • Decreased immune system functioning • Incresed hormonal activity • Psychophysiological condition —peptic ulcer, hypertension	• Increased smoking, alcohol use • Decreased nutrition • Decreased sleep • Increased drug use	• Decreased compliance with medical advice • Increased delays in seeking medical care • Decreased likelihood of seeking medical advice

Figure 4.18: Major types of consequences resulting from stress

effort when the stress is more severe or long lasting. Ultimately, our attempts to overcome stress can produce biological and psychological responses that result in health problems.

General Adaptation Syndrome (GAS) (Hans Selye, 1945)

Homeostatic mechanisms are aimed at counteracting the everyday stress of living. If they are successful, the internal environment maintains normal physiological limits of temperature, chemistry and pressure. If stress is extreme or long lasting, the normal mechanisms may not be sufficient. In this case, the stress triggers a wide-ranging set of bodily changes called the general adaptation syndrome (GAS).

Hans Selye, a pioneering stress theorist developed GAS model that suggests that a person's response to stress consists of three stages (Figure 4.19):

❶ Alarm
❷ Resistance
❸ Exhaustion
❖ When stress appears, it stimulates the hypothalamus to initiate the GAS through two pathways:
  – The first pathway is stimulation of the sympathetic division of the autonomic nervous system and adrenal medulla. This produces an immediate set of responses called the alarm reaction.
  – The second pathway, called the resistance reaction involves the anterior pituitary gland and adrenal cortex; the resistance reaction is slower to start, but its effects last longer.

Alarm Reaction or Fight-or-Flight Response

Alarm reaction is the body's initial reaction to a stressor. It is a set of reactions initiated when the hypothalamus stimulates the sympathetic division
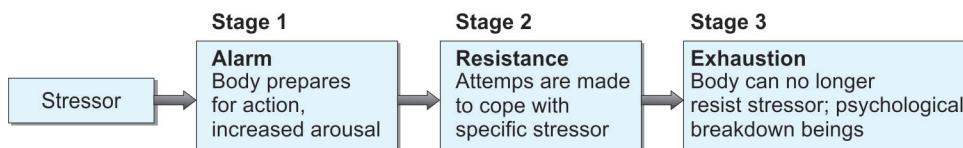
of the autonomic nervous system and the adrenal medulla. The alarm reaction is meant to counteract a danger by mobilizing the body's resources for immediate physical activity.

The stress responses, which characterize the alarm reaction include the following:

❶ Heart rate and strength of cardiac muscle contraction increases; this circulates blood quickly to areas where it is needed to fight the stress.
❷ Blood vessels supplying to the skin and viscera, except heart and lungs, constrict; at the same time blood vessels supplying to the skeletal muscles and brain dilate; these responses route more blood to organs active in the stress responses, thus decreasing blood supply to organs, which do not assume an immediate active role.
❸ Red blood cells (RBC) production is increased leading to an increase in the ability of the blood to clot. This helps control bleeding.
❹ Liver converts glycogen into glucose and releases it into the bloodstream; this provides the energy needed to fight the stressor.
❺ The rate of breathing increases and respiratory passages widen to accommodate more air; this enables the body to acquire more oxygen.
❻ Production of saliva and digestive enzymes reduces. This reaction takes place as digestive activity is not essential for counteracting stress (Figure 4.20).
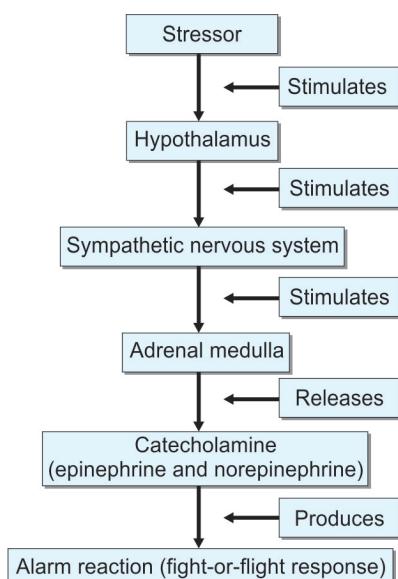
Resistance Reaction

❶ The resistance reaction is the second stage in the stress response. It is initiated by regulating hormones secreted by the hypothalamus and is a long-term reaction. These regulating hormones are corticotropin-releasing hormone (CRH), growth hormone-releasing hormone (GHRH) and thyrotropin-releasing hormone (TRH).

Stressor	Stage 1 **Alarm** Body prepares for action, increased arousal	Stage 2 **Resistance** Attemps are made to cope with specific stressor	Stage 3 **Exhaustion** Body can no longer resist stressor; psychological breakdown beings

Figure 4.19: Three-stage model of general adaptation syndrome

❷ CRH stimulates the anterior pituitary to increase its secretion of adrenocorticotropin hormone (ACTH). ACTH stimulates the adrenal cortex to secrete more of its hormones. The action of these hormones helps to control bleeding, maintain BP, etc.

❸ GHRH stimulates the anterior pituitary to secrete human growth hormone (HGH). TRH causes the anterior pituitary to secrete thyroid-stimulating hormone (TSH). The combined actions of HGH and TSH help to supply additional energy to the body.

❹ The resistance reaction allows the body to continue fighting a stressor for a long time. Thus, it helps us to meet emotional crisis, perform strenuous tasks, fight infection or resist the threat of bleeding to death.

❺ Generally, the resistance reaction is successful in helping us cope with a stressful situation and our bodies then return to normal. Occasionally it fails to fight the stressor, especially if it is too severe or long lasting. In this case, the GAS moves into the stage of exhaustion (Figure 4.21).

Figure 4.20: Diagrammatic representation of alarm reaction

Exhaustion Stage

At this stage, the cells start to die and the organs weaken. A long-term resistance reaction puts heavy demand on the body, particularly on the heart, blood vessels and adrenal cortex, which may suddenly fail under the strain. In this respect, ability to handle stressors is determined to a large extent by the general health.

Theorists have argued that Selye's model is limited because it does not give importance to psychological factors.

COPING WITH STRESS

Coping refers to the thoughts and behaviors we use to handle stress or anticipated stress. Coping includes efforts to control, reduce or learn to tolerate the threats that occur due to stress. Effective coping depends on the nature of the stressor and the degree to which it is possible to control it. Coping strategies fall into three categories (Figure 4.22):
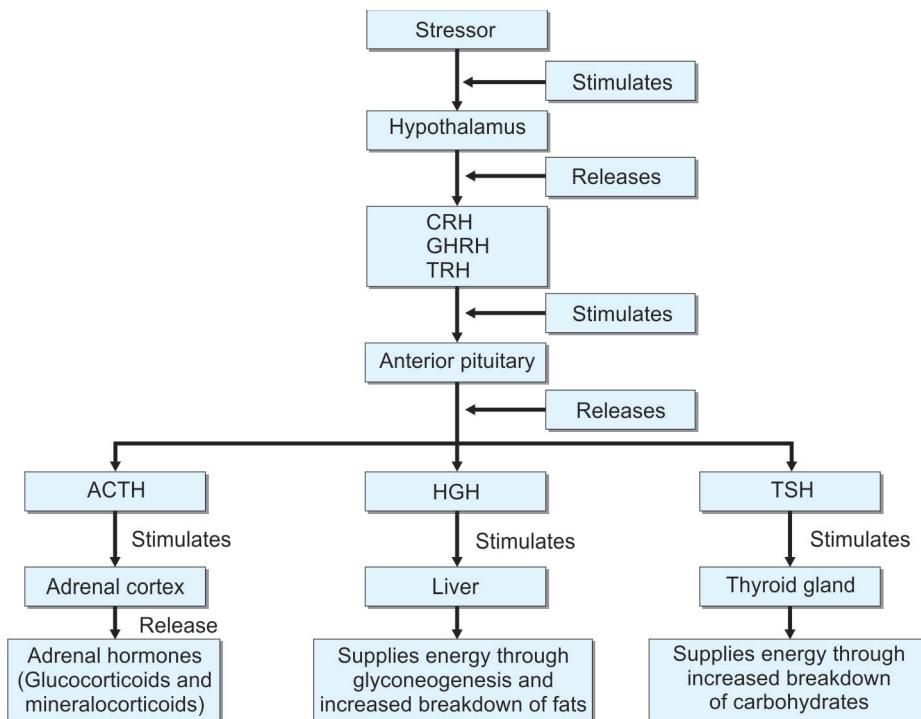
❶ Emotion-focused coping
❷ Problem-focused coping
❸ Avoidance coping

Emotion-focused Coping
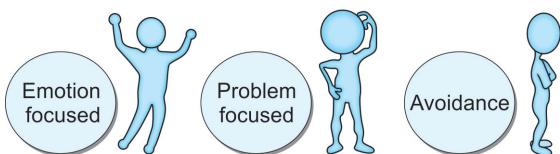
In this coping people try to manage their emotions in the face of stress, seeking to change the way they feel about or perceive a problem. Examples of emotion focused coping include accepting sympathy from others, seeking social support, denial of stress, etc. Emotional-focused strategies are more frequently used when stressful situation is unchangeable.

Problem-focused Coping

It includes taking direct action to solve problems as well as changing or modifying the stressful problem or the source of stress. Problem-focused strategy leads to change in behavior or to the development of a plan of action to deal with stress. Starting a group study to improve poor classroom performance is an example of problem-focused coping. Problem-focused approaches are more commonly used where the stressful situation is relatively modifiable.

Figure 4.21: Diagrammatic representation of resistance reaction (CRH = Corticotropin releasing-hormone, GHRH = Growth hormone-releasing hormone, TRH = Thyrotropin-releasing hormone, ACTH = Adrenocorticotropin hormone, HGH = Human growth hormone, TSH = Thyroid-stimulating hormone)

Figure 4.22: Types of coping strategies

In most stressful incidents, people employ both emotion-focused and problem-focused coping strategies.

Avoidance Coping

In this coping style people try to minimize or avoid threatening event. People who cope using avoidance may not make enough cognitive and emotional efforts to anticipate and manage long-term problems. Avoidance strategies are more effective in dealing with short-term threats.

Coping Styles According to Roger and Nash (1995)

According to Roger and Nash, the coping styles are adaptive and maladaptive (Tables 4.4 and 4.5).

❶ Adaptive styles involve an appropriate adjustment to the environment and gaining from the experience. These can be detached or rationale.

❷ Maladaptive styles involve failing to adjust to environment and experiencing misery and unhappiness as a result. These can be emotional and avoidance coping styles.

Classification of Coping Strategies According to Cohen and Lazarus (1979)

❶ *Direct action response*: The individual tries to directly change or manipulate the stressful situation such as coping with or removing it.

Table 4.4: Adaptive coping styles

Detached	Rationale
• Not seeing the problem or situation as a threat	• Taking action to change things
• Keeping a sense of humor	• Taking one step at a time and approaching the problem with logic
• Resolving the issue by dividing things into parts	• Using past experience for working out how to deal with the situation
• Taking nothing personally and seeing the problem as separate from one self	• Giving the situation full attention and treating it as a challenge to be met

Table 4.5: Maladaptive coping styles

Emotional	Avoidance
• Feeling helpless, miserable, depressed and angry	• Pretending there is nothing, if people ask
• Showing frustration on other people	• Sitting simply and hoping it all goes away
• Preparing for the worst possible outcome and seeking sympathy from others	• Thinking about something else and talking about the matter as little as possible
	• Trusting in fate and believing things will sort themselves out

❷ *Information seeking*: The individual tries to understand the situation better and predict future events that are related to the stress.

❸ *Inhibition of action*: Doing nothing.

❹ *Intrapsychic or palliative coping*: The individual reappraises the situation (use of psychological defense mechanisms) or change the internal environment (through drugs, alcohol, relaxation or meditation).

❺ *Turning to others*: Seeking others help or emotional support.

ATTITUDE

Meaning

Attitude is a specific mental state of an individual towards something according to which his behavior towards it is molded. Attitude is a way we perceive, think, feel and react more or less permanently in relation to something.

Definitions

An attitude can be defined, as an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individual's world.

(*Krech and Crutchfield—1948*)

An attitude may be defined as a learned and more or less generalized and an effective tendency or predisposition to respond in a rather persistent and characteristic manner, usually positively or negatively (for or against in reference to some situation, idea, value, material object or class) of such objects or person or group of persons.

(*Young K*)

CHARACTERISTICS/NATURE OF ATTITUDE

❶ *Attitudes are not innate*–Attitudes are formed or learnt by the individual.

❷ *Attitudes are more or less lasting*–Attitudes are enduring.

❸ *Attitudes imply a subject-object relationship*– Attitudes are always formed in relation to certain persons, groups or institutions. So, attitudes are not just internal factors without any relationship to the environment.

❹ *Attitudes are related to images, thoughts and external objects*–For example, upon hearing of the Pakistan attack on Indian territory, every Indian developed a negative attitude towards the Pakistan aggressors. In this the attitude involved is the thought that by attacking India, Pakistan has made a most unjustified and immoral move. In this attitude some imaginary concepts concerning the Pakistan aggressors are present in the mind of the individual and these are based upon his knowledge of the Pakistan attack. Because of this attitude, the individual is persuaded to contribute a portion of his wealth to the national defense fund in order to help expel the aggressor from the country.

❺ *Attitudes guide the behavior of the individual in one particular direction*–For example, due to negative attitude towards the Pakistan aggressors the individual was prepared to do his best to help the Indian soldiers who were fighting them. Since, attitudes direct the activities of an individual, his reaction can be predicted by knowing his attitudes.

❻ Various kinds of affective experiences are also attached to attitudes.

❼ The unconscious motive is an important factor in the creation of attitudes. Sometimes even the individual himself is unaware of the motive for his attitude towards a particular person or object because it is in his unconscious.

❽ Attitudes are related to the person's needs and problems.

FORMATION AND DEVELOPMENT OF ATTITUDE

❶ Heredity may play only a very small part in the development of attitude. It is mainly the environmental factors that are responsible for development of attitudes. These are parents, peers, school, cultural norms, our motives, our emotional conflicts, mass media, etc.

❷ Attitudes are formed in the context of the individual's wants, information, group affiliation and responsibility development. The individual in trying to satisfy his wants, develops attitudes. He develops favorable attitudes towards people and objects satisfying his wants. He develops unfavorable attitudes towards persons and objects that block the satisfaction of his wants and prevent him from achieving his goals. What attitudes we select for adoption depends on our needs, our motivations and personality that we have formed.

❸ Family is the first place for formation of attitudes. Parents are exceedingly important in the formation of attitudes. They control rewards and punishments. Their smiles are a sign of approval and their frowns a sign of disapproval of behavior of the child. It is the parents who establish the initial categories of good and bad. Their approval and disapproval of certain activities lays the foundation for the formation of favorable and unfavorable attitude towards that activity in the child. Attitudes shape the information to which the individual is exposed. The parents are the sources of information to the child regarding the social and national groups, regarding religion, rules of conduct, rules of thinking, etc.

❹ Group affiliations help in the formation of individual's attitudes. The peer group is a very important source of attitude formation. Especially the young people learn the attitudes of their peer groups in order to be accepted by them. Attitudes originated in the family are further strengthened when they are appreciated by peers and playmates.

❺ Attitudes are also influenced by mass media, e.g. newspapers, journals, books, movies, etc.

❻ Many of our attitudes are acquired by us as a result of the pressure from others or may be the outcome of some experience. For example, if you have had an unhappy experience in a hospital your attitude towards hospitals in general will be negative.

❼ Attitudes may be formed as a result of learning. This is the process of growing up and learning. For example, male supremacy may be developed inside a house when much attention is given to sons than to daughters.

❽ Attitudes may also be formed as a result of experiences. Experiences become more distinct and patterned as we grow up. One example for this is education, we can develop attitudes that are favorable when we experience success in school or when we realize how much society values education.

❾ Through a single traumatic experience, we may also develop attitudes. Molested children may feel bad when given something that reminds them of the person who molested them.

❿ Also, attitudes may be formed through imitation. This is done by imitating ready-made attitudes or prejudiced attitudes towards things. Racism is an attitude that some people imitate from others.

BEHAVIOR AND ATTITUDE

❶ Attitudes are the motivating forces behind man's social behavior. It is because of attitudes that the individual's behavior exhibits consistency. In the absence of a permanent organization the individual would be a new person in every situation. For example, if an individual has a negative attitude towards communism he will always be seen opposing the communist party.

❷ Attitudes also influence the individual's abnormal behavior. For example, some people believe in the existence of ghost, witches, etc. Consequently they develop specific attitudes towards certain objects and because of these attitudes they indulge in many kinds of religious rituals.

❸ An individual not only formulates attitudes towards external objects, but possesses attitudes even about him. These attitudes are very important for his social adjustment. His behavior may become abnormal, if he forms a wrong attitude towards himself. For the individual's behavior to be desirable, his attitude towards himself and external objects should be favorable.

❹ Attitudes are our expressions of the likes and dislikes towards the people and the objects. They determine or guide our behavior in social situations.

❺ An individual's entire personality structure and behavior may be thought of as organized around a central value system comprised of many related attitudes.

The major reason for studying attitudes is the expectation that they will enable us to predict a person's future behavior. In general, attitudes have been found to predict behavior best when:

❶ *They are strong and consistent*: Strong and consistent attitudes predict behavior better than weak or ambivalent ones. When the affective and cognitive components of an attitude are not consistent, ambivalence and conflict can arise from within the individual. It is often difficult to predict behavior. In general, when the components of an attitude are clear and consistent, they better predict behavior. For example, when we like something that we know is bad for us–it is often difficult to predict the behavior.

❷ *They are specifically related to the behavior being predicted*: For example, in one study students were asked about their general and specific attitudes towards nuclear war. Specific attitudes were much better predictors of activist behavior such as writing a letter to a newspaper or signing a petition than mere general attitudes. (Newcomb, Rabow and Hernandez, 1992).

❸ *They are based on the person's direct experience*: Attitudes based on direct experience predict behavior better than attitudes formed from reading or hearing about an issue.

❹ *The individual is aware of his or her attitudes*: There is evidence that people who are more aware of their attitudes are more likely to behave in ways that are consistent with those attitudes.

ATTITUDINAL CHANGE

Once the attitudes have been formed they have a tendency to persist or continue. It is therefore difficult to change the attitude that has been established. But it is necessary to modify unhealthy or irrational attitudes for learning new things. In order to change attitudes we should–

❶ Change perceptions by new experiences and factual knowledge. Provide information to the person concerned, who has a negative attitude towards the object/person; provide information that contradicts the attitude without any comments, suggestion, persuasion, etc. It allows the person to take a decision himself, without pressure, on his own and this may lead to a more favorable attitude towards the object/person concerned.

❷ The group support for the change should be obtained.

❸ Provide an opportunity for much closer contact with the object/person concerned. Let the person learn through it and modify his own attitude.

Health Education and Attitude Change

Health education means imparting knowledge and information in order to achieve and maintain health. Teaching helps the patient to cope with disease. Very often attitudes interfere with health and well being of the patient. The initial step of the health educator is to eradicate negative attitudes that the person may hold towards himself, his illness and his future life. Through health education cognitive component of an attitude is altered leading to emotional component being altered parallely.

FACTORS AFFECTING ATTITUDINAL CHANGE

❶ Attitudes can be changed through reducing cognitive dissonance. Cognitive dissonance is a state of unpleasant psychological tension that motivates us to reduce our cognitive inconsistencies by making our beliefs more consistent with each other (Atkinson et al, 1990). People experience dissonance when they do something that threatens their image of themselves as decent, kind, honest, specially if there is no way they can explain away this behavior as due to external circumstances. There are ways to reduce, lessen or minimize cognitive dissonance. One can add or change beliefs. One can add a new belief or change the old one he/she is holding so as to make it consistent with the behavior he/she is holding.

❷ Counterattitudinal advocacy, a process by which individuals are induced to state publicly an opinion or attitude that runs counter to their own private attitudes. For example, you can help smokers change their attitude towards smoking by letting them make a speech about the negative effects of smoking.

❸ Self-perception theory says that first, we observe and perceive our own behavior and then change our attitude.

❹ Although these dissonance techniques are powerful, they are difficult to carry out on a mass scale. In order to change as many people's attitudes as possible, one can use persuasive communication.

PSYCHOMETRIC ASSESSMENT OF MOTIVATION, EMOTIONS AND ATTITUDES

Psychometric Assessment of Motivation

The important methods used to measure motivation are projective techniques, personality inventories and situational tests.

Projective Techniques

Most commonly used projective technique to measure motives is Thematic Apperception Test (TAT). In this test subjects are shown a series of ambiguous pictures and asked to narrate a story about what is going on in each picture. The assumption is that while narrating stories, the subject projects his or her own needs into the behavior of the character. The psychologist then identifies the needs being projected and judges from the number of related items in the story how strong each need is.

Personality Inventories

These are pencil and paper questionnaires made up of true-false or multiple choice questions about a person's habits, likes and ambitions. For example, Edwards Personal Preference Schedule—measures human social needs, Taylors Manifest Anxiety Scale—measures anxiety level.

Situational Tests

In this test subjects are put into a real situation and an observer sees what they do. For example, a child's aggressiveness can be measured by letting it play with dolls and observing the number of times he is aggressive or does something destructive with them.

Psychometric Assessment of Emotions

Measurement of emotion is important in understanding the physiological basis of emotion. The following methods are used to measure emotions:

Galvanic skin response (GSR): This test measures the activation of sweat glands during emotional arousal resulting in lowering of electrical resistance of the skin.

Electrocardiography or electrocardiogram: This test measures changes in the rate and rhythm of the heart during emotional arousal.

Electroencephalogram (EEG): This test measures the brain rhythmic activity during emotional arousal.

Other tests: It include recording changes in muscle tension, breathing rate and BP during emotional arousal.

Psychometric Assessment of Attitudes

Measurement of Attitudes

Attitude is measured through attitude scales like the Likert scale, the semantic differential and the sociometry. These scales attempt to measure how one person or a group feels about one thing. The most commonly used among these is the Likert scale. In this scale, the respondent is asked a question and answer using any of these: strongly agree, agree, do not know, disagree or strongly disagree.

Attitudes cannot be directly observed, but are inferred from overt behavior, both verbal and non-verbal. Attitudes can be measured by the following tools:

Opinion Surveys (Public Opinion Polling) and Self-report Methods

These surveys are concerned with replies to specific questions in which people are asked to respond to questions by expressing their personal evaluations. The answers to such questions are separately tabulated in an effort to identify sources of particular opinion.

In the self-report method a questionnaire or a list of statements related to the attitudinal objects are given to the respondent. The response format is either fixed, i.e. categories for the responses are named such as agree-disagree, like-dislike, favorable-unfavorable; or left open ended where respondents can use their own words.

Attitude Scales

Attitude scales generally yield a total score indicating the direction and intensity of an individual's attitude towards an object, event or class of stimuli, e.g. Thurstone attitude scale, Likert scale, Guttmans scalogram and Osgood's semantic differential type.

Voluntary Behavioral Methods

In these the physiological measures are used. Earlier GSR and size of the pupil of the eye have been used as the indicator of arousal to measure attitudes. These have not been very successful as only extremity of attitudes can be measured and that too the direction of attitude cannot be specified. Recently electromyography recordings from the major facial muscles have been used to measure attitudes, but this has not been successfully established.

ALTERATIONS IN EMOTIONS DURING ILLNESS

People react differently to illness. Individual's emotional reactions depend on the nature of the illness, the patient's attitude towards it, the reaction of others

to it, patient's perceptions of illness, visibility of symptoms, availability of support system, economic variables and patient's coping skills. Short-term, non-life-threatening illness evokes few emotional changes. Severe illness, particularly one that is life threatening can lead to more extensive emotional reactions such as anxiety, shock, fear, anger, denial and depression.

❶ *Anxiety*: Anxiety is a feeling of apprehension, uneasiness, agitation, uncertainty and fear that occurs when individuals anticipate threats. In some individuals, anxiety is due to fear of a possible diagnosis or impending surgery, etc.

❷ *Worry*: A mild form of anxiety characterized by preoccupation of a problem. Common anxiety producing factors in the hospital environment are separation from significant others, lack of privacy, lack of understanding of hospital language, strange sights, sounds, odors, etc.

❸ *Fear*: An emotional state characterized by expected harm or unpleasantness.

❹ Shock: When patient or families are informed of a severe or life, threatening illness, shock responses may occur. They hear what has been said to them, but fail to respond or respond in a totally inappropriate manner.

❺ *Denial*: Denial is a mechanism by which the patient or family avoids emotional conflict and anxiety by refusing to acknowledge difficult facts. For example, a family knowing that their loved one has cancer may deny the diagnosis and attempt to continue as though nothing were wrong. Short-term denial can be an effective way of coping with an illness.

❻ *Anger*: An emotional state characterized by feelings of frustration and struggle with a threatening or unpleasant situation. Anger also may have effects on patient's social or spiritual dimensions.

❼ *Depression*: An emotional state characterized by a dejected mood. Depression occurs due to absence of cure, loss of personal control.

Nursing Interventions for Emotional Reactions

Nurses spend maximum time with the patients than any other hospital personnel and therefore, are in a position to assess the psychological reactions of the patients. They can understand their emotional needs and plan for appropriate nursing interventions.

Spend time with Patients

❖ Listen while the patient is describing his feelings.

❖ Try to identify what is frightening to the patient and offer appropriate explanations.

Facilitate verbalization of feelings: Allow the patient to explore his emotions/feelings. Verbalization often brings about a tremendous relief of tension.

Handling the Emotions

❶ Verbalization of distress is often accompanied by tearfulness. Many women get great relief from a good cry. Men should not be denied too, it is just a manifestation. Any cry should be handled with care and privacy and support given until composure is regained.

❷ Show acceptance of the patient's behavior even, if the anger is directed at the nurse.

❸ Try to determine the cause for anger and then deal with it as realistically as possible.

❹ Recognize that a patient using denial protects himself from something he does not wish to face.

❺ Deal with denial carefully and in cooperation with other health personnel.

❻ Try to help the patient find ways to cope with depression, such as engaging in some activity.

❼ Show respect for the patient's feelings.

Orientation of Patient to Health Care Facility

Provide detailed explanation of the patient care services and of rationale behind various medical and nursing procedures that the patient has to undergo, with constant reassurances all along. This will alleviate the fear of unknown in patients.

Identification of Learning Needs of Patients

Learning needs of patients have to be identified. For example, a patient before surgery may worry about prognosis, pain, ambulation, dependency, etc. Imparting knowledge on these aspects will satisfy patients need to know about his condition, treatment and thus reduce anxiety.

Provide Diversional Activities

Encourage diversional activities within the permissible limits of patient's condition that are pleasurable and tension reducing. Many chronically ill patients do not recognize their need for recreation. Offer praise in a sincere and appropriate manner as the patient makes progress towards independence.

Taking Care of Insomnia, Food and Fluid Intake, Elimination Pattern

❶ Employ measures such as low environmental stimuli, light meals in the night, engaging in day time activities, reading books, listening to music at bedtime to promote sleep.
❷ Nurses need to assure adequate fluid intake and nutrition. Many patients in depression have little interest in food and their nutritional status can decline sharply. Offer food of good nutritional quality. Offer small attractively served portions frequently, allow enough time for the patient to consume it.
❸ Ensure regular elimination pattern, constipation is a common complaint in distressed patients.

Maintain Cheerfulness and Humor

Human emotions can be contagious, hence patients tend to enjoy having persons who are cheerful and yet professionally competent and sincere about their work. Humor can often relieve anxiety, stress and anger and help to develop warm relationships when used appropriately.

Seek Help of Mental Health Professionals

Patients who experience serious and prolonged disruptions in their lifestyles and in their relationships with significant others due to their illness and emotional reactions, should know that psychiatric interventions can offer relief. Nurses should provide information about the sources of mental health care in community.

NURSING IMPLICATIONS OF MOTIVES

The nurse should know how behavior is motivated by different needs. The nurse should understand the role of primary, social, personal and unconscious motives in human behavior. She should understand her own motives, so that she can better understand patient motives.

❖ By an insight into the dynamics of motivation she can maintain her mental health and stay cheerful.
❖ Knowledge about physiological needs such as hunger and sleep, etc. help her in the physical care of the patient.
❖ Knowledge of psychological needs give her an insight into how to use them favorably for cure.
❖ It gives her an insight into the etiology of the patient's behavior, thus leading to better understanding.

Understanding motives in a patient helps the nurse in the following ways:
❖ To recognize motive behind the behavior of the patient.
❖ To recognize patient's needs and desires.
❖ To build a good relationship between the patient and the health team members.
❖ To provide priority care (i.e. meeting primary needs before meeting other needs).
❖ To satisfy patient needs.
❖ To promote healing and health in the patient.

Knowledge of the human needs assists nurses in responding therapeutically to patient's behavior and in understanding themselves and their own responses to needs. Human needs serve as a framework for assessing behavior, assigning priorities to desired outcomes and planning nursing interventions.

NURSING IMPLICATIONS OF EMOTIONS

The knowledge about emotions is important for a nurse. Normally the patients are less self-controlled because of their illness. They may be tense, irritable and unbalanced. Therefore, the nurse has to be very mature and balanced in her behavior towards the patient.

❶ The nurse has to substitute patient's negative emotions by positive emotions. She has to replace fear, depression and hatred by hope, courage and love.
❷ The nurse should avoid tensions at all costs; she should develop a sound philosophy of life and learn self-control.

For above reasons a nurse requires knowledge of emotions, their nature, dynamics and control.

ATTITUDE DURING HEALTH AND ILLNESS

Attitudes related to health may be based on factual information or misinformation, common sense or myths, reality or false expectations. Attitudes usually influence health behaviors; they can positively or negatively affect a patient's level of health.

As far as health is concerned there are favorable and unfavorable attitudes, which determine the outcome of illness. Attitudes related to some illnesses are:

❖ After brain damage one cannot become normal again.
❖ Chickenpox occurs due to the curse of Goddess.

Attitudes Towards Treatment

❖ Rural folk have a favorable attitude towards herbal and traditional medicines.
❖ Christians have favorable attitude, towards modern medicine as they are westernized.
❖ Muslims have favorable attitude towards Unani medicine as it is a part of Muslim culture.
❖ Those influenced by Gandhian thoughts have favorable attitudes towards naturopathy.
❖ Generally educated people have more favorable attitude towards allopathy system of medicine.

To most people illness comes as an unwelcome intrusion into their lives. Potentially it denies them their preferred pursuits and it may involve pain and discomfort. Despite this, some regard illness as a challenge. Their efforts to overcome illness and disability may lead to greater achievements. Some people, on recognizing permanent impairment of their lower limbs may compensate by engaging in sports and activities where the use of their arms is at a premium. Some people use a time of illness as an opportunity to develop new interests.

Suffering helps many people find a new faith in religion or discover a new purpose in life. In this way illness can be viewed positively, even leading to great personal fulfillment. Some illnesses bear a stigma despite the efforts of health education and attitude change. For example, people suffering with mental illness, epilepsy and venereal diseases may still be treated as outcasts.

In some cultures ill health is regarded as shameful and wicked. Children in particular may regard illness as some form of punishment. As it is not uncommon for people to adopt an attitude of guilt and shame towards their own pain and suffering, they find it impossible to discuss the illness even with a doctor or a nurse. While assessing the patient, the nurse needs to assess his beliefs and attitudes, which will influence his receptivity to nursing and medical care. Patient attitude to his own sex and the opposite sex, to youth, adulthood and old age will all have a bearing on his relationship with staff and other patients.

Nurses should understand patient's attitudes and values about health and illness, so that effective care can be provided. One of the great tasks of a nurse is to grasp any opportunity to modify harmful attitudes. Behavior resulting from negative attitudes not only militates against reaching an early diagnosis of the disorder, but may severely and unnecessarily disadvantage the sufferer by delaying the medical and nursing intervention.

NURSING IMPLICATIONS OF ATTITUDE

Attitudes influence the behavioral responses of the individuals. Importance of study of attitudes for nurses can be related to the following factors:

Patient Care

❶ Any negative attitude towards race, community or a disease results in a prejudiced behavior that affects the patient care. Many a times stereotypic beliefs, which the nurse might have developed in earlier socio-cultural milieu may not be based on rational scientific reasoning. Due to these she may behave inappropriately causing interference with her professional competence.
❷ The nurse should recognize her attitudes and prevent them from interfering with nursing care.
❸ The nurse should try to understand patient's attitudes. Some of them enter the hospital with a positive attitude, while some of the patients enter with a negative attitude. These are the result of previous experience in the hospital. Because of

this a patient with negative attitude may not co-operate with health care personnel.

❹ The nurse should try to find out the causes of unfavorable attitudes and change them into favorable ones as they help in treatment and recovery. A nurse can do this by providing efficient care, better experience and give adequate explanations where necessary.

❺ The nurse needs to develop and cultivate professional attitude, which will contribute to her success in the work.

Formation of Attitudes of Peers or Juniors

Senior nurses have a significant impact on the formation of opinion concerning health related issues. These attitudes could be cultivated by other peer nurses, student nurses and other hospital staff associated in health care. One has to be careful that the negative attitude of one person does not generate similar attitudes in the group. Her attitude should be in conformity with the rules and regulations of the profession for which she is preparing.

Acceptance of New Technology

In the present times, many new innovations in techniques, equipment and methods of health care delivery are taking place. Our attitudes can bias our acceptance towards new technology and high profile specialties.

Curriculum Planning

While planning a new curriculum or in revising an existing curriculum in educational courses one needs to identify the attitudes of students and the teachers. Accordingly attitude change for altered behavior patterns can be sought and incorporated in the curriculum. For example, to plan a course on acquired immunodeficiency syndrome (AIDS) one may study the attitudes on the nursing care of the AIDS patient. Misconception or areas, which need attitude change can be planned and incorporated. This would enhance the competency in dealing with AIDS patients.

Effects of Attitudes on Meaningful Learning and Retention

It is being recognized that besides cognitive factors, positive or negative attitudinal bias has differential effect on the learning of controversial material. With favorable attitude one is highly motivated to learn, put greater effort and concentrate better while analyzing new material. Negative attitude leads to a close minded view and hence learning is impaired. Attitude structure exerts an additional facilitating influence on retention that is independent of cognition and motivation. A nurse with favorable attitude on learning will be highly motivated to learn, puts greater effort and concentrates better.

Thus, a nurse should be aware of the correct attitudes required in her profession. A list of correct attitudes for a successful and efficient nurse, given by Kempf and Averill are:

❖ Ambition to do her task well.
❖ Conformity with the rules and regulations of the profession for which she is preparing.
❖ Willingness to work and to work with effectiveness.
❖ Cheerfulness and optimism.
❖ Interest in the problems and difficulties of other people.
❖ Cooperativeness, industriousness, respect for the opinion and judgment of others.
❖ Interest in increasing the fund of knowledge underlying effective nursing care.
❖ Determination to grow professionally.
❖ Maintenance of poise and self-control in all professional situations.
❖ Maintaining a consistent pride in their profession.
❖ Rising to the unexpected without undue panic.
❖ Determination to make the patient comfortable by giving attention to small details.

In order to succeed in her profession the nurse should develop the above attitudes and change her former attitudes accordingly.

REVIEW QUESTIONS

Long Essays

1. Explain the theories of emotions. (*Mar 2012*)
2. Explain the concepts and theories of motivation. (*Sept 2011*)

3. Define motivation. Explain the social motives. (*Mar 2011*)
4. What is an emotion. Explain the theories of emotions. (*Aug 2010*)
5. Explain the Maslow's theory of motivation. (*Aug 2010*)
6. Distinguish between primary and secondary drives. Describe briefly the physiological drives that determine our daily behavior. (*Oct 2007*)
7. Explain the concepts and theories of motivation. (*Oct 2007, Apr 2006*)
8. What are motives? Classify the different motives. (*2004*)
9. What is motive? Classify motives. Describe in detail about physiological motives. (*Nov 2003*)

Short Essays

1. Psychometric assessment of emotions and attitudes. (*Mar 2012*)
2. Theories of emotions. (*Mar 2012*)
3. Maslow's need theory. (*Mar 2012*)
4. Types of conflict. (*Mar 2012*)
5. Stress and adaptation. (*Mar 2012*)
6. Explain two theories of emotion. (*Sept 2011*)
7. Development of attitude. (*Mar 2011*)
8. Conflict resolution. (*Mar 2011, Mar 2009*)
9. Coping with stress. (*Mar 2011*)
10. Emotions and health. (*Aug 2010*)
11. Theories of emotion in brief. (*Mar 2009*)
12. Theories of motivation. (*Mar 2009*)
13. What are the characteristics of emotions. (*Mar 2009*)
14. Discuss Maslow's self-actualization theory .(*Mar 2009*)
15. What is a motive? Explain the biological motives hunger and thirst. (*Sept 2009*)

16. Define frustration and its sources. (*Oct 2006*)
17. Clarify need drive and motives. (*Apr 2006*)
18. What is frustration and conflict? Explain the sources of frustration. (*Apr 2006*)
19. Explain Abraham Maslow's theory of motivation. (*Apr 2006*)
20. What are conflicts? Explain the different types of conflicts with examples for each. (*2004*)
21. Explain biological and social drives with one example for each. (*2004*)

Short Answers

1. Adaptation and coping. (*Mar 2012*)
2. Stress. (*Mar 2012*)
3. Social motives. (*Mar 2012*)
4. Biological motives. (*Sept 2011*)
5. Stress. (*Sept 2011, Sept 2009*)
6. Personal motives. (*Sept 2011*)
7. Frustration. (*Aug 2010*)
8. Emotions and health. (*Mar 2009*)
9. Types of emotions. (*Mar 2009*)
10. Explain the development of attitudes. (*Sept 2009*)
11. Hunger drive. (*Oct 2007*)
12. Conflict. (*Sept 2011, Aug 2010, Oct 2007, Apr 2006, 2004, Nov 2003*)
13. Need. (*May 2007*)
14. Conflict in motives. (*Oct 2006*)
15. Maternal drive. (*Oct 2006*)
16. Self-actualization. (*Oct 2006*)
17. Social motive. (*Apr 2006, Nov 2003*)
18. Motivational cycle. (*Sept 2011, 2004, Nov 2003*)
19. Biological motives. (*2004*)
20. Name the different types of conflicts. (*2004*)
21. Approach-avoidance conflict. (*Nov 2003*)

Personality

Etymologically, the word personality has been derived from the Latin word 'persona'. At first this word was used for the mask worn by the actors (Roman and Greek) in ancient times, to indicate to the audience whether they played the villain's or the hero's role in a drama. Thus the mask gave the actor his characteristic features.

Personality is the total quality of an individual behavior as it is shown in the habits, thinking, attitudes, interests, the manner of acting and the personal philosophy of life. It is the totality of one's being. It includes physical, mental, emotional and temperamental makeup and how it shows itself in behavior.

DEFINITIONS

"Personality consists of the distinctive patterns of behavior including thoughts and emotions that characterize each individual's adaptation to the situations of his or her life".

(*Walter Mischel—1976*)

"Personality is the sum of activities that can be discovered by actual observations over a long enough period of time to give reliable information".

(*Watson*)

Personality refers to deeply ingrained patterns of behavior, which include the way one relates to, perceives and thinks about the environment and one self.

(American Psychiatric Association—1987)

TOPOGRAPHY OF PERSONALITY

❶ One of the most important characteristics of personality is that it is a product of heredity and environment. A child though not born with a personality, develops the same in course of continuous interaction with his environment. The social and cultural factors as well as the various experiences influence the development of personality.

❷ Personality includes the cognitive, affective and psychomotor behaviors and covers all the conscious, subconscious and unconscious also.

❸ It is specific and unique for each and every individual.

❹ It is not static, but dynamic in nature. Personality of an individual keeps adjusting itself to the environment on a continuous basis.

TYPES OF PERSONALITY

A type is a class of individual who shares a common collection of traits together in an individual.

Hippocrates Classification

Hippocrates tried to classify all human beings into four characteristic groups according to their temperament as follows (Table 5.1):

❶ Sanguine
❷ Phlegmatic
❸ Melancholic
❹ Choleric

Kretschmer's Classification

Kretschmer classified all human beings into certain biological types according to their physical structure (Table 5.2).

Table 5.1: Hippocrates classification of personality

Type of fluids in the body	Personality type	Temperamental characteristics
Blood	Sanguine	Optimistic, happy, hopeful, accommodating and light-hearted
Phlegm	Phlegmatic	Cold, calm, slow and indifferent
Black bile	Melancholic	Sad, depressed, pessimistic, dejected, deplorable and self-involved
Yellow bile	Choleric	Irritable, passionate, strong, active, imaginative

Table 5.2: Kretschmer's classification of personality

Personality type	Personality characteristics
Pyknic (having fat bodies)	Sociable, jolly, easy going and good natured
Athletic (balanced body)	Energetic, optimistic and adjustable
Leptosomatic (lean and thin)	Unsociable, reserved, shy, sensitive and pessimistic

Sheldon's Classification

Sheldon classified human beings into certain types according to their physical structure and attached certain temperamental characteristics to them as given below (Table 5.3 and Figure 5.1).
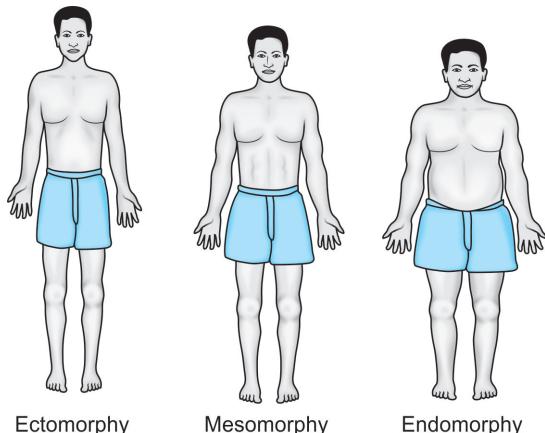
Jung's Classification

Dr Karl G Jung proposes to classify all individuals into two main groups (Table 5.4 and Figure 5.2).

There are very few people who are purely extroverted or introverted. Most of us have qualities of both these types; in other words, we are ambiverts.

Allport Classification

Allport classifies all individuals into two types viz ascendants and descendents (Table 5.5 and Figure 5.3).

Ectomorphy   Mesomorphy   Endomorphy
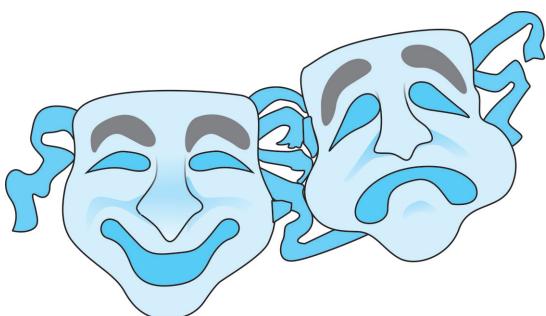
Figure 5.1: Sheldon's three basic somato types

Table 5.3: Sheldon's classification of personality
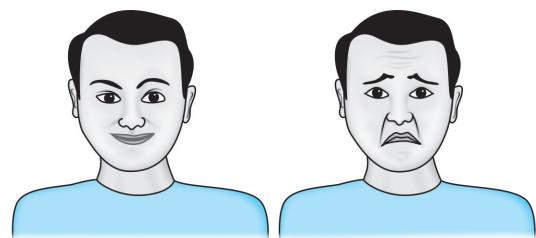
Name	Description	Characteristics
Endomorphic	Person having highly developed viscera, but weak somatic structure—fat, soft, round (like pyknic type)	Easy going, sociable, affectionate and fond of eating
Mesomorphic	Balanced development of viscera and strong somatic structure—muscular (like athletic type)	Craving for muscular activity, self-assertive, loves risk and adventure, energetic, assertive and bold tempered
Ectomorphic	Weak somatic structure as well as undeveloped viscera—thin, long, fragile (like leptosomatic type)	Pessimistic, unsociable, reserved, brainy, artistic and introvert

Table 5.4: Jung's classification of personality

Extroverts	Introverts
• The extroverts are interested in the world around them	• The introverts are interested in themselves, their own feelings, emotions and are unable to adjust easily to social situations
• They are sociable, friendly, not easily upset by difficulties	• Socially they are aloof and withdrawn
• They are men of action rather than reflection	• They are shy and reserved
• They are successful in adjusting to the realities of their environment, are socially active and more interested in leaving a good impression on others	• They prefer to work alone and avoid social contacts. They are inclined to worry and get easily embarrassed
• Their behavior is influenced more by physical stimulation than by their inner thoughts and ideas	• Introverts are persons who seek manifestation of their life through inner activities by going inward or dragging up things from within themselves
• Politicians, social workers, lawyers, insurance agents, salesmen, etc. fall in this category	• Philosophers, scientists, writers, etc. fall in this category

Figure 5.2: Jung's two basic types of personality

Figure 5.3: Allport's classification—Ascendant and descendent

Table 5.5: Allport's classification of personality

Ascendant	Descendant
The ascendant type tends to dominate a situation	The descendant (submissive) person is inclined to be self-critical, self-analytical and indecisive
He is outgoing and is interested in the world around him	He is daydreaming and withdraws from social or competitive situations

'Type psychologists' assume that human personalities can be classified into a few clearly defined types. Our observation, careful and detailed measurements of personality traits show that this assumption is wrong. We cannot classify people only as tall or short, thin or fat, intelligent or stupid, sociable or unsociable. Most of us possess qualities or traits which are somewhere between these two extremes.

Personality Types and Heart Disease

Two specific behavior pattern types are known to be associated with increased or decreased likelihood of coronary artery disease (Table 5.6).

❖ Type A personality
❖ Type B personality

THEORIES OF PERSONALITY DEVELOPMENT

Developmental theories identify behaviors associated with various stages through which individuals pass, thereby specifying what is appropriate or inappropriate at each developmental level. Nurses must have a basic knowledge of human personality development to understand maladaptive behavioral

responses commonly seen in the mentally ill. Knowledge of the appropriateness of behavior at each developmental level is vital to the planning and implementation of quality nursing care.

The major theoretical approaches to understand personality include trait theory, psychoanalytic theory, learning theory and humanistic theories (Table 5.7).

Table 5.6: Characteristics of type A and type B personality

Type A personality	Type B personality
• Type A persons are hard-driving and competitive	• Type B persons are quite the opposite. They are easy going, non-competitive, placid and unflappable
• They live under constant pressure, largely of their own making. They seek recognition and advancement and take on multiple activities with deadlines to meet. Much of the time they may function well as alert, competent, efficient people who get things done. When put under stressful conditions they cannot control, however, they are likely to become hostile, impatient, anxious and disorganized	• They bear stress easily. They are likely to live longer than Type A persons
• Given a task to do, Type As' tend to perform any task near their maximum capacity no matter what the situation calls for. They work hard at arithmetic problems whether or not a deadline is imposed	• Type Bs' work harder when given a deadline

Table 5.7: Major theoretical approaches to personality

Theory	Assumption
1. *Dynamic Personality Theories* • Psychoanalytic theory—Sigmund Freud • Jung's analytical psychology • Adler's individual psychology • Horney's psychoanalytic interpersonal theory • Psychosocial theory—Erikson	Psychoanalytic theory assumes that much of human motivation is unconscious and must be inferred indirectly from behavior. This theory emphasizes stages in development, a conflict between pleasure seeking and reality demands. It also suggests that sexuality is the source for conflict and human growth
2. *Humanistic Theories—Personality as the Self* • Roger's self-theory • Maslow's self-actualization theory	Humanistic theories of personality are concerned with the individual's personal view of the world, self-concept, and push towards growth or self-actualization
3. *Type and Trait Theories of Personality* • Type theories—Eysenck's hierarchial theory • Trait theories • Allport's theory	The basic assumption of the trait theories is that individual personalities can be described in terms of a limited number of dimensions
4. *Learning and Behavioral Theories of Personality* • Dollard and Millers early social learning theory • Skinner's radical behaviorism • Bandura and Watsons—later social learning theory	Social learning theory assumes that personality differences result from variations in learning experiences. Responses may be learned through observation without reinforcement, but reinforcement is important in determining whether the learned responses will be performed. Emphasis is on situation-specific behavior rather than on broad characterizations of personality across diverse situations
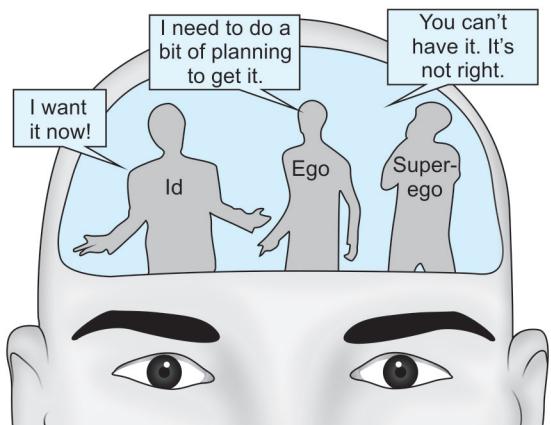
Despite the short comings of each of the major perspectives on personality theory each point of view has enlarged our understanding of human behavior. Psychoanalysis broadened our awareness of the continuity between infant and the adolescent. Learning theory provided insight into how behavior is acquired, maintained and extinguished. Humanistic theory enlarged our horizons by emphasizing human strivings towards self-fulfillment and growth.

Sigmund Freud (1856–1939) an Austrian neurologist is considered as the father of psychoanalytic theory (Figure 5.4). He emphasized the unconscious processes or psychodynamic factors as the basis for motivation and behavior. Freud categorized his personality theory according to structure, dynamics and development. Freud organized the structure of personality into three major components: the id, ego and superego (Figure 5.5).

PSYCHOANALYTIC THEORY

Figure 5.4: Sigmund Freud—Founder of psychoanalytic theory

Figure 5.5: Freud's components of personality: Id, ego and superego

Figure 5.6: Functioning of personality components
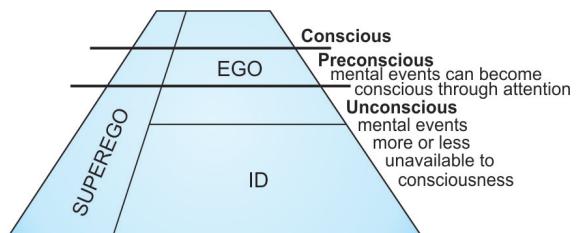
The id contains all our biologically based drives, it operates according to the 'pleasure principle'. Id driven behaviors are impulsive and may be irrational. The ego functions on the basis of 'reality principle'. It maintains harmony between the external world, the id and the superego. The superego is referred to as the 'perfection principle'. The superego is important in the socialization of the individual as it assists the ego in the control of id impulses (Figure 5.6).

A person who is well-adjusted or mentally healthy, has all three components of personality. Freud would expect anyone in whom any of the component is absent or out of balance to display maladaptive behaviors. Defense mechanisms have been associated strongly with Freud's theories.
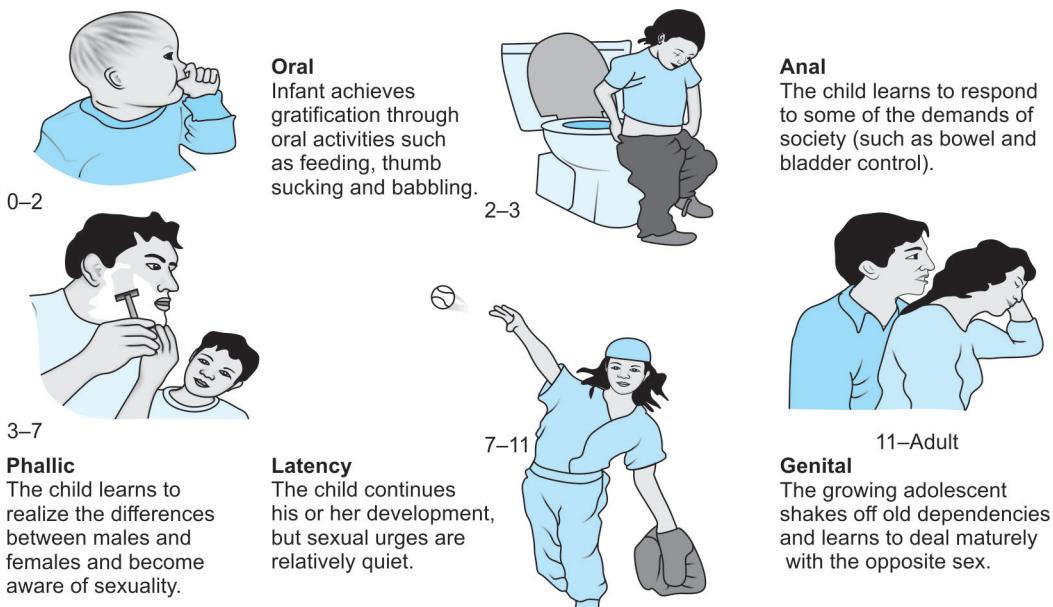
One of the Freud's main beliefs is that behaviors resulting from ineffective personality development are unconscious. He believed that ineffective personality development was in some way related to the relationship of the child with the parent and that it was related to what he called psychosexual development.

Dynamics of Personality

❶ Freud believed that 'psychic energy' is the force or impetus required for mental functioning. Originating in the id, it instinctually fulfills basic physiological needs. As the child matures, psychic energy is diverted from the id to form the ego and then from the ego to form the superego.

❷ Psychic energy is distributed within these three personality components, largest share to maintain a balance within id, the impulsive behavior and the idealistic behavior of the superego. If an excessive amount of psychic energy is stored in

Figure 5.7: Freud's structure of personality

Oral
Infant achieves gratification through oral activities such as feeding, thumb sucking and babbling.

0–2

Anal
The child learns to respond to some of the demands of society (such as bowel and bladder control).

2–3

Phallic
The child learns to realize the differences between males and females and become aware of sexuality.

3–7

Latency
The child continues his or her development, but sexual urges are relatively quiet.

7–11

Genital
The growing adolescent shakes off old dependencies and learns to deal maturely with the opposite sex.

11–Adult

Figure 5.8: Freud's stages of personality development

one of these personality components, behavior will reflect that part of the personality. For instance, impulsive behavior will prevail when excessive psychic energy is stored in the id.

❸ Overinvestment in the ego will reflect self-absorbed or narcissistic behaviors and an excess within the superego will result in rigid, self-deprecating behaviors.

❹ The human personality functions on three levels of awareness: conscious, preconscious and unconscious.

❺ Consciousness refers to the perception, thoughts and feelings existing in a person's immediate awareness.

❻ Preconscious content on the other hand, is not immediately accessible to awareness. Unlike conscious and preconscious, content in the unconscious remain inaccessible for the most part.

❼ The unconscious affects all the three personality structures—id, ego and the superego. Although the id's content resides totally in the unconscious, the superego and the ego have aspects in all the three levels of consciousness (Figure 5.7).

❽ Some ideas, memories, feelings or motives which are disturbing, forbidden and unacceptable and anxiety producing are repressed from consciousness. The process of repression itself is unconscious and automatic, it just happens without our knowledge. This repressed material continues to operate underground and converts the repressed conflicts into disturbed behavior

Table 5.8: Freud's stages of personality development

Stage of development	Main characteristics	Successful task completion	Examples of unsuccessful task completion
Oral Birth–2 years	Use mouth and tongue to deal with anxiety (e.g. sucking, feeding)	Oral gratification	Smoking, alcoholism, obesity, nail biting, drug addiction, difficulty in trusting others
Anal 2–3 years	Muscle control in bladder, rectum, anus provides sensual pleasure; toilet training can be a crisis	Bowel and bladder control	Constipation, perfectionism, obsessive compulsive disorder
Phallic 3–7 years	Learn sexual identity and awareness of genital area as a source of pleasure; conflict ends as child represses urge and identifies with same sex parent. The development of electra complex and oedipus complex occurs during this stage of development. Freud described this as the child's unconscious desire to eliminate the parent of the same sex and to possess the parent of the opposite sex	Becomes aware of sexuality	Homosexuality, transsexuality, sexual identity problems in general, difficulty in accepting authority
Latency 7–11 years	Quite stage in sexual development	Learns to socialize	Inability to conceptualize; lack of motivation in school or job
Genital 11 years– adulthood	Sexual maturity and satisfactory relationships with the opposite sex	Sexual maturity	Frigidity, impotence, premature ejaculation, unsatisfactory relationships

and unexplained signs and symptoms. According to Freud this repressed material is also responsible for some of our dreams, accidental slips of tongue, etc.

Freud's Stages of Personality Development

Freud described formation of personality through five stages of psychosexual development (Table 5.8 and Figure 5.8).

THEORY OF PSYCHOSOCIAL DEVELOPMENT

Erik Erikson (1902–1994) (Figure 5.9) was a German psychoanalyst who extended Freud's work on personality development across the life span while focusing on social and psychological development in the life stages. In his view, psychosocial growth occurs in sequential phases and each stage is dependent on completion of previous stage and life task. For example, in the infant stage, the infant must learn to develop basic trust (the positive outcome) such as that he or she will be fed and taken care of. The formation of trust is essential: mistrust, the negative outcome of this stage, will impair the person's development throughout his or her life (Table 5.9 and Figure 5.10).

Figure 5.9: Eric Erikson—Founder of psychosocial theory
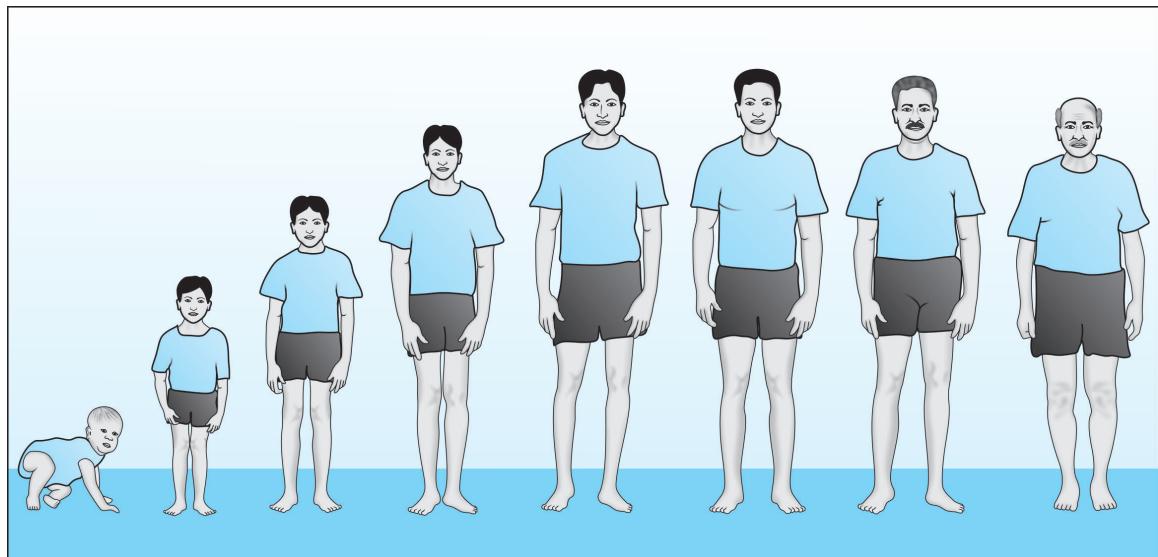
Figure 5.10: Erikson's eight stages of psychosocial development

Table 5.9: Erikson's eight stages of psychosocial development

Stage and approximate ages	Virtue	Task	Positive resolution	Consequences of unsuccessful task completion
Infant Trust vs Mistrust Birth–18 months	Hope	Viewing the world as safe and reliable, relationships as nurturing, stable and dependable	Sense of security	Suspiciousness, trouble with personal relationships
Toddler Autonomy vs Shame and doubt 1–3 years	Will	Achieving a sense of control and free will	Sense of independence	Low self-esteem, dependency (on substances or people)
Preschool Initiative vs Guilt 3–6 years	Purpose	Beginning development of a conscience learning to manage conflict and anxiety	Balance between spontaneity and restraint	Passive personality, strong feelings of guilt
School age Industry vs Inferiority 6–12 years	Comp-etence	Emerging confidence in own ability taking pleasure in accomplishments	Sense of self-confidence	Unmotivated, unreliable
Adolescence Identity vs Role confusion 12–18 years	Fidelity	Formulating a sense of self and belonging	Unified sense of self	Rebellion, substance abuse, difficulty keeping personal relationships. May regress to child play behaviors
Young adult Intimacy vs Isolation 18–25 years	Love	Formulating adult, loving relationships and meaningful attachments to others	Form close personal relationships	Emotional immaturity, may deny need for personal relationships
Middle adult Generativity vs Stagnation 25–45 years	Care	Being creative and productive; focus is on establishing family and guiding the next generation	Promote well being of others	Inability to show concern for anyone, but self
Maturity Ego integrity vs Despair 45 years–death	Wisdom	Accepting responsibility for one's self and life	Sense of satisfaction with life, well lived	Has difficulty, in dealing with issues of ageing and death; may have feelings of hopelessness

HUMANISTIC APPROACH

In contrast to the pessimism of the psychodynamic perspective, the humanistic approach optimistically argues that people have enormous potential for personal growth. When personality development focuses upon the development of self, it is called humanism. Humanists like Carl Rogers and Abraham Maslow reject the internal conflicts of Freud's view and the mechanistic nature of behaviorism. They believe that each person is creative and responsible, free to choose and each strives for fulfillment or self-actualization.

Humanistic theories emphasize the importance of people's subjective attitudes, feelings and beliefs especially with regard to the self. Carl Rogers theory focuses on the impact of disparity between a person's ideals, self and perceived real self. Maslow focuses on the significance of self-actualization.

Rogers Person-Centered Approach

Figure 5.11: Carl Rogers (1902–1987)—Major humanistic theorist

Rogers (Figure 5.11) emphasized that each of us interprets the same set of stimuli differently, so there are as many different 'real worlds' as there are people on this planet (Rogers, 1980).

Self-actualization
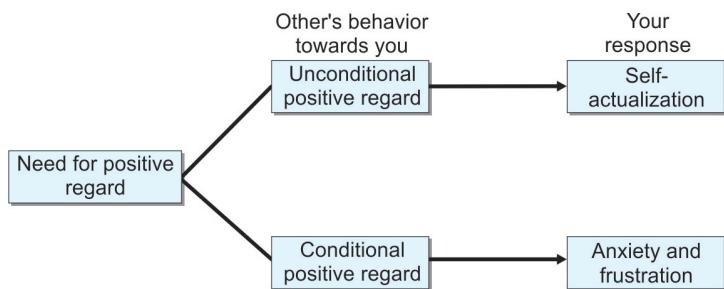
Carl Rogers used the term self-actualization to capture the nature underlying the tendency of humans to move forward and fulfill their true potential. He argued that people strive towards growth even in less favorable surroundings.

Personality Development

Carl Rogers proposed that even young children need to be highly regarded by other people. Children also need positive self-regard to be esteemed by self as well as others. Rogers believed that everyone should be given unconditional positive regard, which is a non-judgmental and genuine love without any strings attached (Figure 5.12).

Maslow's Hierarchy of Needs

❶ One of the basic themes underlying Maslow's theory is that motivation affects the person as a whole, rather than just in part. Maslow believed that people are motivated to seek personal goals, which make their lives rewarding and meaningful.

❷ Abraham Maslow suggested that five basic classes of needs or motives influence human behavior. According to Maslow, needs at the lowest level of the hierarchy must be satisfied

Figure 5.12: According to the humanistic view of Carl Rogers, people have a basic need to be loved and respected. If you have unconditional positive regard from others, you will develop more realistic self-concepts, but if the response is conditional it may lead to anxiety and frustration.

before people can be motivated by higher-level goals (Refer Chapter 4 – Page No. 98 for details).

TRAIT AND TYPE THEORIES OF PERSONALITY
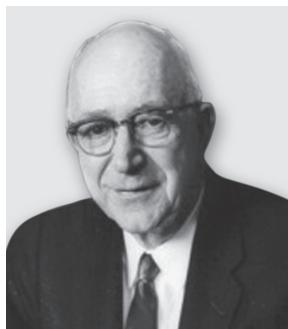
"Personality is the dynamic organization within the individual of those psychophysical systems that determine his/her unique adjustments to his environment". *(Gordon Allport—1937)*

Two major themes underlie trait and type theories of personality:

❖ No two individuals are alike
❖ People possess broad predispositions or traits to respond in certain ways in diverse situations; what this suggests is that people display consistency in their actions, thoughts and emotions across time, events and experiences.

Gordon Allport's Theory (1937)

❶ Allport's (Figure 5.13) theory asserts that no two individuals are alike. Allport regarded 'traits' as being responsible for these individual differences. According to Allport, trait is a predisposition to act in the same way in a wide range of situations.

❷ Allport distinguished between common traits and individual traits. Common traits are shared by several people within a given culture. Individual traits are peculiar to the person and do not permit comparisons among people. They guide, direct and motivate an individual's adjustment.

Figure 5.13: Gordon Allport's (1897–1967)—Exponent of trait and type theories of personality

Therefore, they accurately reflect the distinctiveness or uniqueness of his/her personality.

❸ Allport was deeply committed to the study of individual traits. He started calling them as 'personal' dispositions. Allport proposed that there are three types of personal dispositions.

a. *Cardinal disposition*: A cardinal disposition is so dominant that all actions of the person are guided by it. Very few people possess cardinal dispositions. For example, Ms Nightingale whose actions were driven by compassion for people.

b. *Central disposition*: These are not as dominant as cardinal dispositions, but they influence the person's behavior in a very prominent way. Therefore, they are called the building blocks of personality. For example, a person may have such central dispositions as punctuality, responsibility, attentiveness, honesty, loyalty, etc.

c. *Secondary disposition*: These are not very consistent and are thus less relevant in reflecting the personality of the individual. For example food and clothing preferences, specific attitudes, etc. may be considered as secondary dispositions.

Raymond Cattell's Theory (1965)

❶ Cattell spoke of the multiple traits that comprise the personality, the extent to which these traits are genetically and environmentally determined and the ways in which genetic and environmental factors interact to influence behavior.

❷ According to Cattell, personality is that which permits us to predict what a person will do in a given situation. In line with his mathematical analysis of personality, prediction of behavior can be made by means of a specification equation:

$$R = f(S, P)$$

According to this formula the response (R) of the person is a function (f) of the stimulus (S) at a given moment of time and of the existing personality structure (P). This equation conveys Cattell's strong belief that human behavior is determined and can be predicted.

❸ Traits are a major part of Cattell's theory, which he defined as the individual's stable and predictable characteristics.

❹ Cattell divided traits into surface traits and source traits. Surface traits are not consistent over time and do not have much value in accounting for the individual's personality. Source traits are the basic building blocks of personality which determine the consistencies of each person's behavior over an extended period of time.

❺ Basing on extensive research, Cattell identified sixteen source traits that constitute the underlying structure of personality (such as outgoing-reserved, stable-emotional, self-sufficient-group dependent, etc.) He constructed a scale to measure these source traits, which came to be known as 'Sixteen Personality Factor Questionnaire' (16 PF Questionnaire).

Hans Eysenck's Theory (Trait-type theory of Personality)

Personality is more or less stable and enduring organization of a person's character, temperament, intellect and physique, which determine the unique adjustment to the environment.   (*Eysenck*)

❶ The essence of Eysenck's theory is that the elements of personality can be arranged hierarchially. In this scheme certain super traits and types such as extroversion exert a powerful influence over behavior.

❷ Accordingly, Eysenck's focus has been on a small number of personality types, defined by two major dimensions: introversion-extro-version, stability-instability (neuroticism).

❸ Based on these personality types, Eysenck proposed four separate categories of people (Table 5.10).

❹ Later on, he added a third type of dimension to personality called as psychoticism-superego strength. People belonging to this category are selfish, impulsive and opposed to social customs.

❺ Basing on his categorization of personality types, Eysenck constructed an inventory called Eysenck

personality questionnaire (EPQ). It covers items from each of the personality types identified by him.

❻ Throughout his writings, Eysenck consistently emphasized the role of genetic factors and neurophysiological factors, role of the cerebral cortex, autonomous nervous system, limbic system, reticular activating system (RAS) in explaining individual differences in behavior.

❼ Cattell and Eysenck have been called as factor analytic trait theorists.

LEARNING THEORIES OF PERSONALITY

These theories emphasize the importance of learning and objectivity to understand personality.

Dollard and Miller's Learning Theory of Personality

This theory emphasizes the development of personality on the basis of the responses and behavior learnt through the process of motivation and reward. This theory stressed the habit formation through learning as a key factor in the development of

Table 5.10: Eysenck's trait-type theory of personality

	Emotionally Stable	Emotionally Unstable
I N T R O V E R T	Passive Careful Thoughtful Peaceful Controlled Reliable Even-tempered Clam	Quiet Pessimistic Unsociable Sober Rigid Moody Anxious Reserved
E X T R O V E R T	Sociable Outgoing Talkative Responsive Easy-going Lively Carefree Leader-like	Active Optimistic Impulsive Changeable Excitable Aggressive Restless Touchy

personality. Habits are formed by stimulus response connections through learning. As one's fund of learning grows on the basis of experiences and interaction with one's environment, one's habits are reorganized, new habits are learned and consequently one's personality is modified and developed in terms of learning new behavior and picking up new threads or styles of life.
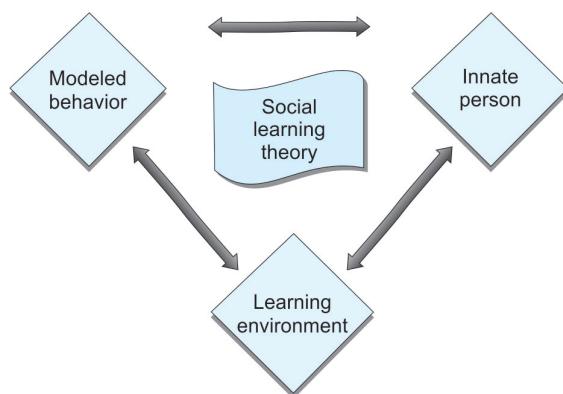
Bandura and Walter's Social Learning Theory

Albert Bandura and Richard Walters (1963) came out with an innovative approach to personality in the form of their social learning theory. They advanced the view that what an individual presents to the world at large as his personality, is acquired through a continuous process of structuring and restructuring of experiences, gathered by means of social learning and later imitated in corresponding situations (Figure 5.14) (Refer Chapter 3—Page No. 50 for details).

PSYCHOMETRIC ASSESSMENT OF PERSONALITY

Assessing means to measure or evaluate. Methods of assessing personality are very important because:

❖ They provide a means for studying personality.
❖ It is often helpful, for example, to be able to assess personality for the purpose of employment or selection for education.

Figure 5.14: Social learning theory

❖ It is also helpful for an individual to assess his/her own personality so that he/she can better understand himself/herself and others, choose a career wisely and therefore, find greater happiness in life.

As 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. There are a number of procedures and techniques that are being used for proper evaluation.

The following methods are commonly used for evaluation and measurement of personality traits:

❶ Interview method
❷ Observation method
❸ Personality inventories (rating scales and questionnaires)
❹ Projective techniques
❺ Situational tests

Interview Method

Interview can be defined as a face to face conversation carried on with some basic goals. Two broad types of interview are: structured and unstructured interview.

In 'structured interview' predetermined questions are asked for which answers are also highly specific. 'Unstructured interview' is an open interrogation. Here the interviewer questions or lets the individual speak freely so as to get a clear picture of the individual. From what he/she says, the interviewer knows about his/her interests, problems, assets and limitations.

Interview is a highly flexible tool and can be used with a wide variety of population. The person can be observed for body language in addition to what is said. Interview method has been criticized for being highly subjective. The results can get influenced by the personal qualities of the interviewer. It is time consuming and at times costly. This method requires a well trained and competent person to conduct the interview. An interview must be long and comprehensive to give a true picture of the individual's personality.

The seven-point plan (Roger, 1974) is possibly one of the most widely known formats for job interviewing. It provides a framework within which interviewers can work and suggests the following areas; should be explored in the context of matching the candidate with a job.

❶ Physical characteristics or abilities which are important to the job, for example, good health, vision, hearing and speech.

❷ Attainments which include education, personal and professional background and an assessment of how well the candidate has done in these areas.

❸ Overall general ability, especially general intelligence and cognitive skills.

❹ Special aptitudes; though desirable at an interview for selection to nursing the social skills are important.

❺ Interests and how they are pursued which are occupationally significant, for example, intellectual, physical and social pursuits.

❻ Personality attributes such as self-perception, reliability, sociability.

❼ Circumstances which might be important in relation to the person's life and aspirations.

Observation Method

In this method the individual is observed in various situations (such as observing a person at work or play) for several days and some conclusions are formulated. Direct observation is most accurate if the observers are well trained in this activity.

One of the disadvantages of observation is the possibility of prejudice in the observer. Evaluation by observing can be made more accurate and objective if the observer uses a list of behavioral traits as a guide and rates the person on a scale. Having more than one observer helps to improve accuracy and prevents bias in making assessments.

Personality Inventories

A personality inventory is a printed form containing statements, questions or adjectives which apply to human behavior. The subject indicates his/her reactions to the various items and then the test is scored and evaluated. Relative to other assessment procedures, inventories are less time consuming and easy to administer, but in some cases the subject can create a false impression about himself if he wishes to do so.

One of the most commonly used personality test is the 'Minnesota Multiphasic Personality Inventory' also called the MMPI. This test asks for answers of 'True' or 'False' or 'Cannot say' to 550 statements about different personality traits such as attitudes, emotional reactions, physical and psychological symptoms. The answers are quantitatively measured and personality assessment is done based on the scores.

Personality questionnaires are used in psychology for counseling and for research purpose. They are also used in selection process for employment or promotion. Some examples of questions used in personality inventories or questionnaires are given in Table 5.11.

Projective Techniques

Projective techniques are based on the principle that responses to unstructured stimuli reveal a subject's underlying motives, attitudes, fears and aspirations. In projective tests an individual is presented with a relatively unstructured or ambiguous task like a picture, inkblot or incomplete sentence, which permits a wide variety of interpretations by the subject. The basis of assumption underlying projective tests is that individual's interpretation of the task will project the characteristic mode of responses, the personal motives, emotions and desires and thus enable the examiner to understand more subtle aspects of the personality.

The most commonly used projective techniques are:

❖ Rorschach inkblot test
❖ Thematic apperception test
❖ Word association or free association test
❖ Sentence completion tests

Table 5.11: Personality questionnaire

Questions	Answers	
1. Do you adapt yourself easily to new conditions?	Yes	No
2. Do you have frequent ups and downs in mood?	Yes	No
3. Do you usually take the initiative in making new friends?	Yes	No
4. Do you prefer to work alone rather than with people?	Yes	No

Rorschach Inkblot Test

It was developed by Herman Rorschach in 1921. This test involves ten cards containing inkblots shown to the subject one at a time in a prescribed order. The subject is instructed to state whatever he/she sees in them or whatever they bring to mind. Based on subject's statement, assumptions are made on the nature of the personality (Figure 5.15).
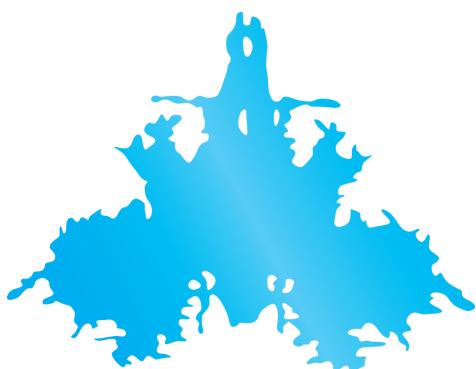
Thematic Apperception Test

This test was developed by CD Morgan and Henry A Murray in 1935. The assumption underlying the Thematic Apperception Test is that the meaning which we see in a picture reveals something of our past experience, feelings, attitudes and motives.

In this test, subject is shown ambiguous pictures and asked to make up a story for each one. The themes in these stories are likely to involve conflict, affection, fear, contentment or achievement assumed to be determined partly by the subject's underlying concerns (Figure 5.16).

Word Association Test

In the word association test the subject is informed that the examiner would utter a series of words, one word at a time and subject should immediately utter the first word which comes to his mind and that there are no right or wrong answers. The examiner then records the reply to each word spoken by him/her, the reaction time and any unusual speech or behavior manifestations which might accompany a given response. Based on subject response the examiner evaluates the individual's personality. In this test people were read a standard array of 100 terms for example, 'head', 'to sin', 'to pray', 'bride', 'to abuse' and instructed to respond to each term as quickly as possible with the first word that occurs to subject's mind.

Sentence Completion Test

In this, a number of incomplete sentences are given and the subject is required to complete them. For example, often I feel I am ………….

The subject is required to complete the sentence as he or she feels and the responses are analyzed for indications of one's personality. A basic problem with these tests is that the interpretation of response is very subjective and based on the experience of the examiner.

The sentence completion tests are considered superior to word association because the subject can respond in more than one word and so it becomes possible to have great flexibility and variety of responses as a result of which a wider area of personality and experiences may be revealed.

Situational Tests

Situational tests consist of certain real life situations where the subjects have to perform certain given

Figure 5.15: An inkblot of the type used in the Rorschach test

Figure 5.16: A sample picture from TAT

activities. Subject's performance and behavior with respect to such situations helps us to understand his/her personality. In this test, subject's behavior is evaluated by some trained judges. For example, a child's aggressiveness can be measured by letting it play with dolls and observing the number of times he is aggressive or does something destructive with them.

ALTERATIONS IN PERSONALITY DUE TO ILLNESS

Illness is a highly personal state in which the persons physical, emotional, intellectual, social, developmental or spiritual functioning is thought to be diminished or impaired compared with previous experience.

How people behave when they are ill is highly individualized and affected by many variables such as age, sex, occupation, socio-economic status, religion, ethnic origin, psychological stability, personality and mode of coping.

Behavioral changes associated with short-term illness are generally mild and short lived. An individual may become irritable resulting in lack of energy or desire to interact with family members or friends. More acute responses are likely with severe life threatening, chronic or disabling illness.

Common Behavioral Changes due to Illness

- ❖ Withdrawn behavior
- ❖ Changes in self-concept, body image and lifestyle
- ❖ Self-centeredness
- ❖ Demanding and dependent behavior
- ❖ Uncooperativeness
- ❖ Hostility
- ❖ Shame and guilt feeling

Withdrawn Behavior

Illness, particularly long-term or severe may cause patients to withdraw. Regardless of whether patients are in a hospital or at home, they may avoid interaction, remain in their rooms or resort to solitary activities. They may become apathetic and depressed and try to close themselves off from their surroundings. All these increase their loneliness and feelings of rejection.

Illness may weaken a patient's feeling of security. The factors which cause insecurity are delayed diagnosis and uncertainty of recovery, strangeness of place and people surrounding him, change of daily routine.

Changes in Self-concept, Body Image and Lifestyle

Certain illnesses can change the patient's body image or physical appearance, especially severe scarring or loss of a limb or a special sense organ. These patient's self-esteem and self-concept may also be affected.

Self-concept is important in relationship with other family members. A patient whose self-concept changes because of illness may no longer meet family expectations, leading to tension or conflict. As a result the family members may change their level of interaction with the patient.

Illness imposes a certain amount of restriction on the patient regardless of his age, socio-economic status or profession. Normal activities have to cease for some time, normal interests and responsibilities have to be given up.

Self-centeredness

The individual experiencing illness gets too personal. The threat posed by illness typically causes the patient to become preoccupied with himself and his health. The individual notes the changes in him and show much concern about his illness. As the seriousness of an illness increases even less attention is paid to the outside world or the concerns of others. He finds himself to be important and tries to be more careful about his health every time. Self-centeredness interferes with quick recovery.

Demanding and Dependent Behavior

Many patients tend to regress to a more childish level of behavior as a reaction to illness. This shows a behavior of adult patients who are highly demanding

or anxious or excessively dependent on others. Adult patients who seem to be afraid by taking the treatment and react timidly are also regressed.

Uncooperation

Individuals react to illness in many different ways. Some patients are uncooperative and show reluctance towards health care. Patients who do not follow advice of their caregivers are often labeled as resistive or non-compliant or uncooperative. Some times such patients fail to enter a treatment program or they drop out. Often they do not keep follow-up or referral appointments. At other times uncooperative patients do not take prescribed medications or they do not alter their lifestyles or activities. The mutual effort towards recovery becomes a tug of war between the nurse and the patient.

Hostility

Hostility is the type of aggression that is oriented to cause purposeful harm because of anger or provocation. Patient may be angry about the helplessness of the situation; unfair fate, etc. Hostility may in many circumstances be inwardly directed by persons having feeling of worthlessness and manifest itself in self-deprecating and self-punishing behavior.

Shame and Guilt Feelings

When patient believes that their illness is a punishment for sin or wrong doing (either imagined or real), he may react with feelings of shame and guilt. Certain diseases may make an individual feel disgraced or ashamed depending upon his family and cultural background. Some people feel that they shamed their family by having certain unacceptable conditions, for example, mental disorders, venereal diseases, epilepsy, etc. They may feel unrealistically responsible for having brought on the condition; such feelings of shame and guilt related to illness are damaging to the self-concept.

Illnesses that are socially unacceptable, for example, communicable diseases, AIDS, etc. cause the patient to be rejected.

Nursing Interventions

❶ Nurses need to help patients express their thoughts and feelings and to provide care that helps the patient effectively cope with change.

❷ Feelings of insecurity can be lesser by straight forward explanations of hospital conditions and procedures including details of routine by being warm and reassuring in her manner and through sincerity of personal interest in the patient.

❸ Withdrawn patients need gentle encouragement to talk, to express feelings and relate to the nurse. Nurse should spend time with these patients even in silence, as it increases their sense of worth.

❹ Explore the reasons for anxiety and communicate clearly.

❺ Convey an enthusiastic readiness to care for the patient. Failure to do so often aggravates dependent or demanding behavior.

❻ Patient's negative feelings must be replaced by feelings of hope, courage and willingness to cooperate.

❼ Nurses have to build-up healthy personal relationships that are the relationship of confidence and cooperation with the patient.

❽ Patient should not be allowed to regress, but should be encouraged to participate in recreational activities individually and in groups.

❾ Nurses should find out the reasons for anger and stop it right in its track.

❿ The nurse can help the patient verbalize his feelings and perceptions about his problems. With verbalization anxiety subsides and behavioral problems reduce.

ALTERATIONS IN PERSONALITY DUE TO PERSONALITY DISORDERS

Personality disorders result when personality traits become abnormal, i.e. become inflexible and maladaptive and cause significant social or occupational impairment or significant subjective distress.

The definition of abnormal personality given by International Statistical Classification of Diseases and Related Health Problems—9th revision (ICD9) is as follows:

"An abnormal personality is one in which there are deeply ingrained maladaptive patterns of behavior recognizable by the time of adolescence or earlier and continuing through most of adult life. Because of this, the patient suffers or others have to suffer and there is an adverse affect on the individual or on society."

Classification of Personality Disorders

- ❖ Paranoid personality disorder
- ❖ Schizoid personality disorder
- ❖ Dissocial (Antisocial) personality disorder
- ❖ Histrionic personality disorder
- ❖ Narcissistic personality disorder
- ❖ Borderline personality disorder
- ❖ Anxious personality disorder
- ❖ Dependent personality disorder
- ❖ Obsessive compulsive (Anankastic) personality disorder

The exact cause of personality disorder is unknown; most likely, they represent a combination of genetic, biological, social, psychological, developmental and environmental factors.

Clinical Features of Abnormal Personalities

Individuals with 'paranoid personality disorder' are marked by a distrust of other people and a constant unwarranted suspicion that others have sinister motives. Persons with paranoid personality disorder search for hidden meanings and hostile intentions in everything others say and do.

'Schizoid personality disorder' is characterized by detachment and social withdrawal. People with this disorder are commonly described as loners, with solitary interests and occupations and no close friends; typically they maintain a social distance even from family members and seem unconcerned about other's praise or criticism.

'Antisocial personality disorder' is characterized by chronic antisocial behavior that violates others rights or social norms, which predisposes the affected person to criminal behavior. The person is unable to maintain consistent, responsible functioning at work, school or as a parent.

Individuals with 'histrionic personality disorder' characteristically have a pervasive pattern of excessive emotionality and attention seeking behavior and are drawn to momentary excitements and fleeting adventures.

Individuals with 'narcissistic personality disorder' are self-centered, self-absorbed and lacking in empathy for others. He typically takes advantage of people to achieve his own ends and uses them without regard to their feelings.

'Borderline personality disorder' is marked by a pattern of instability in interpersonal relationships, mood, behavior and self-image.

'Anxious personality disorder' is marked by feelings of inadequacy, extreme social anxiety, social withdrawal and hypersensitivity to others opinions. People with this disorder have low self-esteem and poor self-confidence; they dwell on the negative and have difficulty viewing situations and interactions objectively.

'Dependent personality disorder' is characterized by an extreme need to be taken care of, which leads to submissive, clinging behavior and fear of separation or rejection. People with this disorder let others make important decisions for them and have a strong need for constant reassurance and support.

'Obsessive compulsive (Anankastic)' personality disorder is marked by a pervasive desire for perfection and order at the expense of openness, flexibility and efficiency. The individual places a great deal of pressure on himself and others not to make mistakes. May have a constant sense of righteous indignation and feelings of anger and contempt for anyone who disagrees with him, believes his way of doing something is the only right way, may force himself and others to follow right moral principles and to conform to extremely high standards of performance and insist on literal compliance with authority and rules.

Personality disorder is often difficult to treat. Drug treatment has a very limited role and may be used if associated with mental illness like depression or psychosis. Individual and group psychotherapy, therapeutic community and behavioral therapy may be beneficial. Manipulation of the social environment can be tried.

APPLICATIONS

An understanding of personality will help the nurse to predict her behavior as well as the behavior of others. Major decisions in life depend upon this knowledge. For example, selection of a career, spouse, etc. her relationship with friends and relatives depend upon her expectations of their behavior by understanding their personalities.

The nurse should not only acquire skills and knowledge, but also develop a pleasing and strong personality if she should be successful. Patients, doctors, coworkers and other important members of the society want certain behavior patterns and certain qualities from them. In particular, patients appreciate a nurse who brings physical comfort to them with her skills and who is prepared to understand their emotional reactions and difficulties which have been caused by illness.

Besides possessing such professional qualities as integrity, dignity, mental alertness, self-confidence, caring attitude, empathy, approachability, respect for the patient, ability to build trust and accepting the patient as he is, she ought to have such personal qualities as sympathetic understanding, friendliness of spirit, gracious manner, kindliness, adaptability, genuineness, optimism, sincerity and self-awareness.

Besides these qualities mentioned above, good health, fresh and neat appearance, a strong purpose and will power, a high standard of values, healthy work habits, sense of humor, teaching as well as managerial abilities and the ability to control one's emotions and have healthy and friendly interpersonal relationship are important traits that the professional nurse should cultivate.

The nurse deals with different age groups. A good, sensitive nurse should be aware of their personality. A sick person is very emotional, sensitive, dependent and demanding. A warm, sincere outlook can help them out.

REVIEW QUESTIONS

Long Essays

1. Define personality. Explain any one theory of personality development. (*Mar 2012*)
2. Define personality and theories of personality. (*Sept 2011*)
3. Define personality. Explain Freud's psychoanalytic theory. (*Mar 2011*)
4. List out types of personalities. Discuss in detail about Freud's theory of personality. (*Mar 2009*)
5. Write an essay on different types of personality. (*May 2007*)
6. Elucidate factors influencing the development of personality and its characteristics. (*Oct 2006*)
7. Define personality. Discuss the determinants of personality. (*Apr 2006*)
8. What is personality? Explain any three theories of personality with its evaluation. (*2004*)
9. How is personality assessed? What are the different types of personality? (*2004*)
10. Explain the trait theory of personality. Discuss the various trait compositions necessary to have effective nurse-patient relationship. (*2004*)
11. What are the personality changes due to illness?

Short Essays

1. Types of personality tests. (*Mar 2012*)
2. Assessment of personality. (*Aug 2010, Mar 2009*)
3. Discuss Freud's theory of psychosexual development. (*Mar 2009*)
4. What effect does acute illness have on personality? (*Oct 2007*)
5. Role of questionnaire in personality assessment. (*Oct 2007*)
6. Discuss various trait compositions necessary to have effective nurse-patient relationship. (*Oct 2007*)
7. Briefly describe the organization of personality. (*May 2007*)
8. Personality traits and an ideal nurse. (*Oct 2006*)
9. Discuss the personality traits of an effective teacher. (*Apr 2006*)
10. Briefly describe the organization of personality. (*Nov 2004*)
11. Explain the importance of personality in nursing. (*Feb 2004*)

12. What is the nature of personality? What factors contribute in development of personality? (*Nov 2003*)

13. What are projective tests? Explain their role in personality assessment. (*Nov 2003*)

Short Answers

1. Id. (*Mar 2012*)
2. Ego. (*Sept 2011, Mar 2012*)
3. Trait. (*Mar 2011*)
4. Projection. (*Apr 2008*)
5. Introverts. (*Oct 2006*)
6. Development of personality. (*Apr 2005*)
7. Physical traits. (*Apr 2005*)
8. Social traits. (*Apr 2005*)
9. What are "traits" and "types"? (*2004*)
10. Give two examples for projective tests of personality. (*2004*)
11. Superego. (*Nov 2003*)

Developmental Psychology

This branch of psychology describes the processes and factors that influence the growth and development in relation to the behavior of an individual from birth to old age. It is further subdivided into branches like child psychology, adolescent and adult and old age psychology. Development psychologists try to understand complex behaviors by studying their beginning and the orderly ways in which they change or develop over the lifespan.

PSYCHOLOGY OF PEOPLE AT DIFFERENT AGES FROM INFANCY TO OLD AGE

Infancy

The period of infancy begins with birth and lasts for 1 year. The infant is called a neonate for the first 4 weeks after birth. During the first 12 months the infant shows very rapid motor development and learns to sit, stand and begins to walk. Infant weight triples from birth weight by 1 year. Length increases by almost 50 percent from birth.

Psychological needs of an infant: It include need for security, love, affection, warmth, comfort, acceptance, nourishment, understanding and physical contact. The infant needs to be cuddled and fondled frequently and recognized consistently.

Children in Hospital

Very small children cannot bear to be separated from parents for long. Bowlby (1951) argued strongly that disturbances in mental health and personality development resulted from maternal deprivation. There is strong evidence that very small children suffer from a sense of loss, mourning and grief when away from their mothers (Robertson, 1970; Howthorn, 1974). At first the child may be fearful or angry; later there is a stage of resignation with lack of interest and an apparent inability to accept love or return affection. How much this affects the child's development and his/her ability to form relationships with other people later on in life, depends to some extent on the nature and duration of the separation from his/her mother and on the mother child relationship before separation (Clarke and Clarke, 1976). Rutter (1981) argues that the concept 'maternal deprivation' has been used to cover a wide range of different childhood experiences, which have different effects on development.

On admission to hospital, children experience many other distressing events, for example, the fact of being ill, strange medical and surgical procedures, different daily routines and a variety of unknown people. Nearly always, the child's rate of progress both physically and mentally is affected when there is lengthy or repeated separation from its mother. On returning home the child may refuse to recognize his/her mother and remain detached and unresponsive for sometime. Bowel or bladder control achieved earlier might be lost. There may be excessive clinging, nightmares and other emotional disturbances.

Role of a Nurse

❶ The nurse who is to take care of infants must realize that the primary task of an infant is to grow.

The growth and development of an infant is all round—physical, mental, social and emotional. The nurse who works with infants should give as much personal attention as possible such as handling, cuddling, holding and loving. This kind of care will prevent deprivation and promote healthy physical and emotional development.

❷ Accurate observation of the infant is extremely important as the infant cannot communicate its needs through speech. Cry is the infant's main method of communication. Restless movements of body parts are another way in which the infant communicates its needs.

❸ The nurse should know that the infant may cry when it is hungry, in pain, diaper is wet or feels uncomfortable for any reason.

❹ The nurse should very closely observe infant's growth and development for any abnormalities.

❺ The nurse should also be aware of normal individual differences in an infant's development.

❻ It is important for the nurse to accept the infant as a unique individual.

❼ Encourage parents to comfort the infant and also involve them in providing care.

❽ During care use sensory soothing measures. For example, stroking the skin, talking softly, giving pacifier, cuddling and hugging the child. The child should be given love, affection and care.

❾ The surroundings of the child should be pleasant and cheerful.

❿ Child should be given suitable toys to play with.

⓫ The use of force and violence should be avoided in dealing with the child.

Early Childhood (2 to 6 Years)

The growth rate slows down in most areas during this period. The average child becomes two and one-half inches taller and 5 to 7 pounds heavier during each year of early childhood.

The child during this period learns to walk, run, climb, jump and balance; he/she develops fine motor skills and muscular coordination. He/she also develops sensory perception of size and learns to speak. He/she is capable of practical thinking and solving simple problems. Learns how to dress and care.

Other important achievements during this period are learning how to use writing tools, identifying letters, numbers and sounds.

He/she experiences emotions of love and hate, jealousy and anxiety. He/she also learns to tolerate a certain degree of frustration and disappointment and deal with his/her own difficulties independently. Thus it is a period of rapid physical, intellectual and socioemotional growth.

Psychological needs during childhood: It include love, recognition, security, acceptance, encouragement, protection, discipline, nutrition, etc.

Older children, once they have recovered from an acute phase of illness, enjoy the companionship in the ward. During illness a certain amount of regression may occur. For example, the child behaves in a manner more appropriate to a younger age. The nurse needs to recognize and help the child to return to a more mature behavior. Child should not be penalized or insulted for wetting the bed or resorting to baby talk.

Role of a Nurse

❶ Tender loving care and physical security continue to be important to the child during these years.

❷ It is important that children's routine in hospital resembles normal life as far as possible. The child's day should be a well-established routine, which includes a right time for play, stories, bath and for rest.

❸ Accurate observation is important to find out any physical or emotional problems.

❹ A cordial relationship should be established with the young patient by talking to him at his own level such as asking him his, nickname and likes and dislikes.

❺ Provide love and affection.

❻ The nurse should be patient in dealing with children.

❼ The child should be encouraged to develop a spirit of independence.

❽ Allow the child to participate in care and to help whenever possible (for example, drink medicine from a cup, hold a dressing).

❾ Explain the procedure in simple terms and in relation to how it affects the child.

⑩ Give choices whenever possible but avoid excessive delays.

⑪ Praise the child for helping and attempting to cooperate, never shame the child for lack of co-operation.

⑫ Provide privacy from peers during procedure to maintain self-esteem.

⑬ It is desirable that the child acts independently and does not remain in a dependent state for too long. Encourage him to do things for himself.

⑭ See that the child does not remain worried, tense and moody or sad on account of being subjected to new, sudden and harsh changes such as unexpected separation from parents or preoperation fears.

⑮ Opportunities for play should be provided. Allow the child to choose his/her own play if possible. Drawing or scribbling is excellent for the child; picture books and puzzles are favored when the child is old enough. Through play, child may be able to express frustration by projecting feelings on its dolls.

⑯ Games and toys should be made available in the pediatric unit. If not, reading a story book or educational material to the child is a pleasant and useful amusement.

⑰ Nurses can learn to use play therapeutically.

Handling Parent's Anxiety

Parents of sick children need to be helped too. They may not behave very normally because of their acute anxiety. Some parents may become over-critical and fault-finding. They become annoyed and resentful when the nurse does not answer all their questions to satisfaction. A nurse should be sympathetic, tolerant and tactful when dealing with their questions and anxiety and not get upset or lose temper. There is a need to reassure parents and make them feel well and cheerful.

Small children do not understand the meaning of sickness very clearly. They cannot understand cause and effect, symptoms and treatment. They may blame the nurse or doctor for their pain. It may be necessary to separate the functions of the nurse so that the nurse who gives the child his/her daily care is never associated with causing him/her pain. Some children appear to associate the nurse's uniform with the unpleasant experience of sickness and pain. The child's early experiences with sickness, pain, hospitalization, separation from his/her mother and being cared for by nurses may influence attitude to sickness later in life.

Later Childhood (6 to 12 Years)

During this period physical growth is slow and gradual. The average child grows 2 to 3 inches in height and gains about 3 to 5 pounds of weight in a year.

The increased muscular development and resistance to fatigue makes new skills and activities possible. Children develop much smoother and well-coordinated muscle movements during this age. They become capable of many muscular activities such as running, swimming, riding a bicycle and throwing or catching a ball. Writing or reading and the ability to handle language are two important achievements during this age. The child is now able to make the finer movements necessary for writing. His/her thinking is more stimulated by concrete objects and situations, which can be seen. He/she cannot handle complex arithmetic problems.

Psychological needs during later childhood: It includes love, affection, security, belonging needs, understanding, attention and physical care, needs opportunities to exercise his/her muscles and to refine his motor coordination. He/she also needs protective environment, encouragement, discipline, provision for self-expression, guidance and direction to understand what behavior is expected.

Role of a Nurse

❶ Tender loving care and emotional support is important if the child is experiencing loneliness, pain or discomfort for any reason.

❷ He/she needs guidance and direction to understand what behavior is expected of him or what the rules are when hospitalized.

❸ The older child should be given explanations for procedures and reasons for hospital rules and policies. He/she may ask many questions, which the nurse must answer.

④ Health teaching should include teaching, which is directly related to an illness or prevention of illness. Habits of personal hygiene should be encouraged. Visual aids may be used while teaching. It is important to praise the child when he is successful in his learning.

⑤ Observation of the child's physical condition and his behavior is important. Problems in emotional health may be reflected by signs of depression or sadness, withdrawal from others or lack of self-control.

⑥ The intellectual development of the child can be evaluated by observing his/her ability to converse and reason, read, write or solve arithmetic problems.

⑦ Allow the child to participate in care and to help whenever possible.

⑧ Explain procedure in simple terms and in relation to how it affects the child.

⑨ Allow the child to play. Word puzzles, jigsaw puzzles and quite games are pleasant and amusing. The ambulatory child needs more physical exercise and should be encouraged to walk.

⑩ The child will expect the nurse to share her time and attention with him. It often may be a challenge for the nurse to be consistent and fair as she relates with each one.

Adolescence (12 to 19 Years)

Adolescence is a period of rapid physical, intellectual, emotional and social growth—a period of growing up. Physically, the boy or girl becomes an adult; sex organs mature. Adolescence begins with very rapid changes in the body. Changes can be seen in height and weight, shape of the body, sound of the voice, presence of pubic and facial hair and other external sex characteristics. The initial spurt in growth usually begins about 2 years earlier in girls than in boys.

There is intellectual growth towards a more abstract and mature mode of thinking. Intelligence reaches its maximum during this period. Emotionally, the adolescent grows independent of parents and prepares himself for entering into other relationships that are needed in marriage, work and in the community. Sex consciousness develops and this influences the emotional as well as the intellectual activities of the individual. Biological changes lead to moods, confusion and worries of all types.

Puberty is the important physical change during adolescence. He/she becomes mature or capable of sexual reproduction. Endocrine glands regulate puberty through the secretion of hormones. Adolescent girls and boys become very interested in sexual development and relationships with members of the opposite sex.

An adolescent has many variations in mood, variations between excessive bursts of energy and periods of laziness. They are extreme sensitiveness, self-consciousness, desire to be intellectually and emotionally independent.

Psychological needs of an adolescent: It include need for status, independence, satisfying philosophy of life, a proper orientation to the opposite sex and guidance in selecting a vocation.

Role of a Nurse

❶ Explain each procedure with scientific rationale. Much explanation should be given about rules policies and procedures as possible.

❷ Because the adolescent has a rapidly changing body and is extremely self-conscious of this, it is helpful to provide as much privacy as possible when care is given.

❸ Encourage questions regarding fears, options and alternatives.

❹ Discuss how nursing procedure may affect appearance and what can be done to minimize it.

❺ Involve in decision making and planning (for example, choice of time, place, individuals present during the procedure, etc.).

❻ Accept regression to more childish methods of coping. Adolescent may weep or become very emotionally upset when facing an injection or unpleasant treatment. They should be given extra emotional support and loving care when this happens.

❼ Allow adolescents to talk with other adolescents who have undergone the same procedure.

❽ Adolescent will most likely be able to make decisions about caring for himself and planning his health care for the future. In most cases,

he needs the parents to accord permission for decisions, which involve admission or discharge, surgery or other major hospital procedures.

Early Adulthood (20 to 40 Years)

During early adulthood, most adults reach their full height. A number of sensory and neural functions are also at optimal levels during this period. For women, reproductive capacity is at its peak during young adulthood. Intellectual abilities appear to peak during this period. Tasks requiring quick response time, short-term memory and ability to perceive complex relations are performed more efficiently during late teens and early twenties. Certain creative skills also reach highest level during young adulthood.

Young women have additional psychological differences related to body changes. About 75 percent of all women in young adulthood experience mood swings with the cycle of menstruation. These are believed to be caused by hormonal changes in the body.

Choosing a career and life partner are top priorities in this age. Child rearing is usually an important part of young adulthood.

During this period behavior is governed more by intelligence than emotions, adults adapt easily to social situations, face reality objectively, have normal drive to work or play and act according to own age. Adults are vocationally adjusted and are able to think and decide things on their own.

Psychological needs of early adulthood: It include a balance of intimacy, commitment, freedom and independence. The adult too like the child and adolescent needs security, self-realization and recognition. Other needs are development of intimate relationships, marriage and status in the society.

Role of a Nurse

❶ Young adults are rarely hospitalized. When they are, it is usually for childbirth, injuries from accidents or problems of the digestive or genitourinary system. Emotional support and understanding will be of help for all parents when childbirth occurs.

❷ Young adults need teaching and assistance in handling the baby. The teaching should also include the importance of good nutrition, adequate sleep, proper exercise and prevention of venereal diseases.

❸ Personality characteristics of the patient should be recognized and respected. The major task of the nurse is to respond to the different needs of different personalities.

❹ Explaining procedures and what is expected of the patient will relieve anxiety. Answering questions about the diagnosis, treatment and care also relieve anxiety.

❺ Assist the patient in solving problems about which they worry.

❻ The ultimate goal of the nurse-patient relationship throughout adulthood is helping the patient to achieve independence. Independence should be encouraged by the nurse as soon as the patient is ready.

Middle Adulthood (40 to 60 Years)

Middle adulthood, commonly called mid-life, brings with it dramatic changes in physical development. The slow decline of physical development, which begins during the late years of early adulthood appears to speed up and is much more visible as a person reaches the late forties.

In middle age, the skin looses some of the elasticity; hair begins to thin out and often turns grey or white. Muscular strength declines slowly, but steadily, from young adulthood onwards. A very major physical change comes about in the cardiovascular system of a person in middle life. The older heart cannot pump as much blood as the younger heart. Coronary arteries supplying the heart with blood begin to narrow. Cholesterol levels rise and begin to collect on the walls of the arteries, which are also beginning to thicken. Blood pressure usually rises during middle adulthood.

During middle adulthood, men and women undergo a number of changes in their reproductive and sexual organs, a process that generally is referred to as the climacteric. These changes are linked to decrease in the production of sex hormones, specifically estrogen and testosterone. For women in

mid-forties cessation of menstruation occurs termed as menopause. A number of unpleasant symptoms have been correlated with menopause, which include profuse sweating, hot flashes, dizziness, headache, irritability, depression, insomnia and weight gain. The male climacteric occurs at about 50 years of age, during which men experience a gradual decline in testosterone.

Role of a Nurse

❶ The middle-aged adult is most likely to be hospitalized for cardiovascular problems or cancer. Higher blood pressure as well as high cholesterol level may be evident. Other common health problems at this age are diabetes, peptic ulcer and communicable diseases.

❷ When a middle adult is admitted in the hospital he/she needs to feel welcome and secure. Explain hospital procedures and policies clearly.

❸ Anxieties apart from illness are experienced on account of different kinds of responsibilities faced by the person. These include personal anxieties about other family members, responsibilities at home, possible loss of a job, etc. The nurse needs to guide family members to help the patient in each of these areas.

❹ Observation of emotional and physical health is necessary to recognize signs of physical decline.

❺ Persons of this age need more lighting to see well or may need verbal directions repeated in order to hear what is being said and to remember what is being asked. Written instructions should be provided when needed.

❻ The nurse should recognize signs of an inability to deal with stress at home, at work or in the hospital, these signs are agitated body language, increased levels of vital signs, insomnia, irritability or depression.

❼ Health teaching should include the prevention and early diagnosis of most common diseases.

❽ The nurse should help them to take care of themselves. All health care members should encourage independence as soon as the patient is ready for it.

Late Adulthood (60 Years and Above)

The age of 60 years and above is commonly considered as old age. It is the period of retirement from active work. It is marked by impairment of sensory function (seeing and hearing). In general, there is a slowing down of motor functions, besides a gradual impairment in muscular coordination. The resistance to disease and injury diminish. Old people also show a gradual decline in mental ability. Memory, attention, thinking and ability to learn new things are affected.

Of all physical changes, a loss in the efficiency of the cardiovascular system has the maximum impact upon a person in late adulthood. Other chronic diseases, which are common among old age are cancer, arthritis, loss of hearing and vision.

Psychological needs of late adulthood: It include need for improvement of self-image, need for normal roles and relationships, need for love and relatedness, need to improve sense of hopefulness and need for accomplishment of tasks.

Role of a Nurse

❶ Older adults may be hospitalized more often than any other age group. Nursing care of the elderly is called geriatric nursing.

❷ A special effort should be made to make the elderly person feel respected and valued as an individual. Insecurities and apprehensions should be relieved as much as possible by giving careful explanations to the patient and the family members.

❸ Terminal illness is often a part of care for the older adult. The nurses should be prepared to give care and support as the patient prepares to die. Allow the patient to express their emotions.

❹ The nurse should observe the patient's ability to hear and see, the ability to walk and check the vital signs regularly.

❺ The elderly may not feel pain as readily as younger people and bedsores can quickly develop even with regular nursing care. If a patient cannot move easily without help the various parts of the body should be exercised regularly with assistance.

6. The older adult also needs close observation on behaviors such as depression, lack of interest in others or environment, withdrawing from others, sleeping poorly, expressing despair or sadness. All these reflect an inability to cope with the changing life situation.

7. Elderly people often express a longing for the warmth and personal touch of another person. Emotional help and support from others are very necessary in order for them to find the strength and inner resources to adapt to their changing lives and lifestyles. Personal relationships with others should be encouraged. Encourage appropriate activities such as playing games or listening to music, entertainment, creative hand work, etc.

8. The elderly often need help to see well. Some methods help the older adults to see well such as reducing glare for reading, give extra-lighting when possible, keep things near the visual field and use large print or magnifiers.

9. Physical protection from harm and injury should be provided to the older person. This may include assistance in walking or moving, bedside rails especially at night and protection from tissue injury when compressors or other skin applications are used. The elderly person is easily disoriented in a new environment and, if ambulatory, should be protected from becoming lost.

10. Health teaching should include personal hygiene, importance of exercise, good nutrition, etc. Teaching will be effective if pictures, diagrams and posters with large print can be used.

11. The most effective way of teaching for this group is to teach one thing at a time. The older adults can learn new things if they are presented in the right way and related to what are familiar.

12. Anything completely new and different may have to be repeated at regular intervals to help the person remember. It is most helpful to relate new things to old things or old ideas whenever possible.

PSYCHOLOGY OF VULNERABLE INDIVIDUALS

Psychology of Challenged Individuals

1. Chronic illness and prolonged disablement necessitate a reconstruction of patient's idea of himself and a complete reorganization of relationships.

2. Patient who realizes that he is permanently disabled becomes angry with himself and with others.

3. He may express anger towards the family members and towards the hospital staff.

4. He may refuse to meet people or to go out.

5. This phase of self-consciousness increases the difficulties, like family members or hospital staff feel embarrassed or discomfort due to patient's attitude.

6. When the patient first realizes that he cannot completely regain his original health condition he may become depressed.

7. He loses interest in himself and the surrounding and finds life not worth living.

8. He refuses to take sufficient nourishment, treatment, neglects personal hygiene and loses interest in all activities.

9. The will to live is essential to recover and the nurses must help the patient to see that inspite of his handicap he is needed by those who love him and that he can be useful to the community.

10. Some health conditions are progressive causing dependence, disablement and suffering. The patient may feel obligated to pretend that he feels optimistic in order not to cause pain to his relatives.

11. Some people who grow up with a disability (handicap) devote most of their time and energy in overcoming it and excelling in developing skills, which are difficult to acquire. While a few others cope with their disability by ignoring it and concentrating on achieving excellence in other areas.

⑫ The greatest isolation occurs in those who lose sight, speech or hearing. Sometimes this isolation may lead to confusion, disorientation and a terrifying feeling of being lost leading to aggressive behavior. Blind people need constant interpretation of their environment while they are learning to use their other senses. It is important for the nurse to learn communication skills with the deaf such as gestures, mime, writing and demonstration.

The nursing care and rehabilitation of the disabled must aim at helping the patient to acknowledge his disability so that he can create a new idea of himself, which includes his handicap.

Psychological Needs of Women

Just as physical disorders affect women differently than men, women's psychological needs are different. Also, some issues are specific to women.

Following are some examples:

Assertiveness

Many women have been raised to be passive and place the needs of others before themselves. For example, a woman, who is a wife and mother may define her role as the giver and nurturer and disregard her own emotional needs. She may reach a point where she begins to experience anxiety and depression as she has lost her own self-identity. A nurse can help the woman uncover her strengths and work towards understanding her needs and goals. The nurse will help her to become more assertive when addressing difficult interpersonal situations.

Body Image

In today's society there is a significant emphasis placed on body image. Through TV, magazine, movies and other media young women receive a distorted message regarding appropriate body image. Thus, women's definitions regarding their own body may be distorted, resulting in eating disorders such as anorexia nervosa and bulimia. Many women view their body with fear and loathing sometimes leading to self-injury. The nurse should help her to develop a positive body image.

Depression

Women are twice as likely as men to experience depression. Psychological studies show that women tend to respond to adversity by withdrawing and blaming themselves. In contrast, men tend to deny adversity and throw themselves into activities. Hormones can create mood changes before menstruation (premenstrual tension) and after childbirth (postpartum depression) or due to the use of oral contraceptives.

Teen Pregnancy

When an unwanted pregnancy occurs in this stage of a woman's life, it can significantly alter her eventual emotional development. The nurse can help her understand the options available and aid the use of her own strengths to cope with the current situation.

Infertility

Infertility can be financially, emotionally and psychologically draining. Although infertility affects both men and women, women often feel the loss of not becoming pregnant and a psychological loss of not being a 'real woman'. The nurse can help her to cope with the feelings of loss associated with infertility.

Domestic Violence

More than 50 percent of women experience some form of violence from their spouses. This may occur in the form of verbal abuse, limiting behavior or actual physical attack. Emotional abuse is difficult to identify and often leaves the victim with a sense of something wrong but doubting their own perceptions. The abuser degrades her dignity and self-worth and makes her feel worthless. The nurse can help the woman re-establish her sense of self-worth and remove herself from the violent situation.

Rape

Women who have been the victim of rape by a stranger, date rape or family member often experience a psychological effect known as rape trauma syndrome. Women experience low self-esteem or low confidence. There is a lot of self-blame and self-attack. Other common feelings are depression

and anger. It is important for women to process the feelings they have regarding the rape and resulting trauma with a qualified psychotherapist.

Psychology of Sick Person

The main aim of nursing care is to assist the patient in attaining the highest possible level of independence. Sickness interferes with self-care, interpersonal relationships, control over others, responsibilities and obligations particularly if admission to hospital is necessary. Inevitably illness results in disturbance of family and other social relationships. Illness also affects the emotional component in the individual.

Short-term, non-life-threatening illness evokes few emotional changes. Severe illness, particularly one that is life-threatening can lead to more extensive emotional reactions such as anxiety, shock, fear, anger, denial and depression. There may be anger about overwork, the hazards of the occupation, and about a dangerous lifestyle, which may be held responsible for the illness.

Communication problems among the patient and the family members may arise as they are not well informed about the health issue. It is compounded when the doctors and nurses are not forthcoming due to seriousness of the aliment or poor communication skills. Such issues require considerable amount of time, repeated contact, privacy and intimacy.

Patients need the stimulation of news about current events and of people in the outside world and visitors should be encouraged to give news rather than ask for it.

The need to maintain family relationships and friendships during illness is important when small children are involved. Separation of children from their parents can cause a lot of anxiety. If the child is the patient, the presence of the mother or the primary caregiver holds a lot of significance. When one of the parents is admitted in the hospital it is important that children should be allowed to visit them.

During illness when patients remain at home they retain greater independence. Under such circumstances the nurse's job becomes all that more challenging as the patient may more readily exercise his right to deny care and forgo advice. Prolonged illness at home often results in the isolation of the family due to the additional burden in providing health care to the patient.

Psychology of Caregivers during Illness

Illness in an individual also leads to considerable emotional disturbance among relatives who may feel guilty about not observing symptoms earlier or not taking complaints seriously.

If the illness is serious and the prognosis is poor, the relatives fear for the patient's life, which is accompanied by anxiety about impending bereavement and doubt about their own ability to cope.

The emotional and financial strain of chronic illness often results in a secret wish for early death. Such a wish is then followed by immediate regret and by attempts to compensate for the guilt feeling. Relatives need someone who can help them to see that such thoughts are normal and understandable. When relatives can talk about their feelings they can often continue to shoulder the burden of care. When they cannot talk about their feelings they may detach themselves prematurely.

For many the pain of witnessing deterioration in their loved one may be too much to bear. They mourn the loss of the perfect image of the person they loved. By the time the patient dies their grief may already be spent.

Loss and Grief

Patients who are terminally ill are often aware of the approach of death before anyone has discussed the subject with them. Glaser and Strauss (1965) have described three states of awareness that may surround the dying person and his family. These are closed awareness, mutual pretence and open awareness.

In closed awareness the patient and his family may be unaware of the impending death and may even lack a full appreciation of the illness. It may be that the relatives know but have decided that the patient should not be told. Conversely, the patient may know the truth but does not know if his closest relatives do. This creates problems for both the patient and his family and a dilemma for the nursing staff who may feel that the patient's trust in them may be threatened by less than honest communications.

In mutual pretence the patient, his family and the caregivers know that the prognosis is mortal but choose not to discuss the subject. Such mutual pretence is often motivated by concern to protect against distress but in reality may lead to a sense of discomfort and burden created by the absence of anyone in whom to confide.

In open awareness all concerned know the truth and feel able to acknowledge and discuss the impending death. By doing so, the patient in particular is able to express his needs and desires and experiences a continuing sense of belonging and participating. It must be said, however, that open awareness is not an easy option and many still avoid it; some may feel able to discuss practical arrangements but need support and understanding to come to terms with their emotional responses.

Kubler-Ross (1969) having done extensive research with terminally ill patients identified five stages of feelings and behavior that individuals experience in response to a real, perceived or anticipated loss:

Stage I-Denial: This is a stage of shock and disbelief. The response may be one of "No, it can't be true!" Denial is a protective mechanism that allows the individual to cope within an immediate time-frame while organizing more effective defense strategies.

Stage II-Anger: "Why me?" and "It is not fair!" are comments often expressed during the anger stage. Anger may be directed at self or displaced on loved ones, caregivers and even God. There may be a preoccupation with an idealized image of the lost entity.

Stage III-Bargaining: "If God will help me through this, i promise i will go to church every sunday and volunteer my time to help others". During this stage, which is generally not visible or evident to others, a bargain is made with God in an attempt to reverse or postpone the loss.

Stage IV-Depression: During this stage the full impact of the loss is experienced. This is a time of quiet desperation and disengagement from all associations with the lost entity.

Stage V-Acceptance: The final stage brings a feeling of peace regarding the loss that has occurred. Focus is on the reality of the loss and its meaning for the individuals affected by it.

All individuals do not experience each of these stages in response to a loss, nor do they necessarily experience them in this order. In some individuals grieving behavior may fluctuate and even overlap between stages. However, it is desirable to help the patient to reach a state of acceptance rather than die in despair. It may be essential to help the patient through the earlier stages and encourage him to talk about his feelings. The nurse has to cope with the emotions of dying patients and their relatives and accept the feelings they express.

Mourning

When death eventually occurs friends and relatives go through a period of mourning. Grieving relatives may feel at times an obligation to suppress their fears, appear tolerant, calm and unaffected. Adult mourners sometimes feel that children should be protected from discussions about death. Some bereaved persons never establish a satisfactory life for themselves after the death of spouse, parent or child. They continue a life that becomes pro-gressively more isolated and depressed. Some may develop extreme hostility and resentment towards those with whom they were formerly associated through the deceased person. Especially in elderly, the death of the remaining spouse may occur soon after bereavement.

Worden (1983) described four tasks of berea-ved. These are accepting the reality, accepting the pain that grief causes, adjusting to life without the loved one and able to reinvest emotions in other relationships.

Nurses should be available to support the bereaved. The nurse should know the duration of grieving process, if it is prolonged and unresolved it may result in physical and psychological problems.

Psychology of Groups

The basic unit of study in social psychology is the group, which is made up of two or more persons who

regularly relate with each other. Members of a group are united by social relations.

Group is defined as two or more people who influence one another through social interactions.

(*Baron—1993*)

Classification of Groups

Cooley CH classifies groups into three types:

❶ *Primary group*: In this type there is an intimate face to face relationship and cooperation between the members. All the members have a 'we' feeling and are prepared to make maximum sacrifice for each other, for example, family.

❷ *Secondary group*: In this group the relationship is more or less casual. It is marked by a single bond of interest. The example of this type of relationship is found in professional organizations, trade union groups, etc.

❸ *Tertiary group*: In this type of group the degree of intimacy or relationship is for a short period and marginal in character. The audience in a cinema hall or the passengers in a railway compartment are examples of this type of a group.

Influence of Group on Individual Behavior

Groups influence their members in many ways, but such effects are often produced through culture, values, norms and roles.

Culture is a complex whole, which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of the society. Our behavior is molded and controlled by the society and culture in which we are born. The most important parts of a culture, which are learned by each member of their group are values, norms and roles.

Values are the ideals of group, which decide whether something is good or bad. These may include such standards as human dignity, education, human rights or freedom.

Norms are very closely related to values. If we behave according to cultural norms we will be approved by others in that culture, called conformity. The behavior of a person who refuses to confirm to major social and cultural norms is called antisocial behavior. Norms include the social standards, customs, traditions and fashions.

Roles are behavior patterns expected from people in certain social positions. Society expects certain behavior from those in certain roles. Each person in a society takes on different roles in daily life and behaves according to the expectations of other people. Our behavior changes as we change our role. Almost all social situations are built around roles. They mold the behavior of every person in a society. Roles are useful because they help people know what to expect from each other.

Groups are crucial for the development of individuals and for some individuals changes in health are possible to achieve with group support and encouragement. The attitudes that individuals have are developed in kin and friendship group; continued membership throughout life in other groups influences thoughts, choices, behavior and values. People tend to find their social needs met through association with others and groups are a natural vehicle for these needs.

Health behavior is influenced greatly by the groups to which people belong and for which they value membership. The patterns and directions of everyday activities are learned in a family and these are later reinforced or challenged by new sets of important others.

Each group develops its own standards of values, its own rules about behavior and its own attitudes to which members are expected to conform. When individuals fail to conform, the group as a whole exerts pressure to bring the member's behavior within the range of acceptable behavior. It has been shown that groups are more efficient in solving problems than the individual members (Hoffman and Clark, 1976).

When a decision has been made by a whole group the members feel much more bound by the decision than if it had been imposed on the group by one person.

People in groups work together and have definite objectives and goals, in counseling, groups are formed with specific goals and intentions. In a group, performance is enhanced by mutual support.

Groups force people to conform to rules; conformity behavior helps groups to work for attainment of group goals.

Certain factors, which help for better functioning of a group are: group cohesion, group facilitation and group morale. Group cohesion refers to uniformity of opinion of its members. It is necessary for its effectiveness. Group facilitation gives members a feeling of contentment. Group morale is a positive group feeling of general satisfaction and enthusiasm for work. When group morale is high, the group tends to be more active and productive.

Group Therapy

In group therapy several unrelated people meet with a therapist to discuss some aspects of their psychological functioning. People typically discuss their problems with the group, which is often centered around a common difficulty such as alcoholism or lack of social skills. The other members of the group provide emotional support and describe how they have coped effectively with similar problems. In group therapy several people are treated simultaneously, it is a much more economical means of treatment than individual therapy. Group is effective in changing the thinking, attitude and feelings of group members. Interaction with other members in the group will help a patient to develop an insight and to overcome many feelings.

REVIEW QUESTIONS

Long Essays

1. Describe psychological needs at different age levels —Role of a nurse.
2. Describe psychological needs of patients—Role of a nurse.

Short Essays

1. Vulnerable individuals. (*Mar 2012*)
2. Psychological development during adolescence. (*Mar 2011*)
3. Developmental stages of an individual. *(Mar 2009)*
4. Explain the stages of development. *(Sept 2009)*

Short Answers

1. Geriatric Problems. (*Mar 2012*)
2. Psychological needs of infants.
3. Grief.
4. Mourning and loss.
5. Psychological reactions of terminal illness.

Mental Hygiene and Mental Health

MENTAL HYGIENE

Mental hygiene is the science, which studies laws and means of curing and preventing mental diseases, personality disorders and other abnormalities for balancing adjustment and healthy development of personality.

Definition

Mental hygiene consists of measures to reduce the incidence of mental illness through prevention and early treatment and to promote mental health.

(Singh and Tiwari—1971)

MENTAL HEALTH

Mental health is a state of balance between the individual and the surrounding world, a state of harmony between oneself and others, a coexistence between the realities of the self and other people and the environment.

Definitions

An adjustment of human beings to the world and to each other with a maximum of effectiveness and happiness. *(Karl Menninger—1947)*

Simultaneous success at working, loving and creating with the capacity for mature and flexible resolution of conflicts between instincts, conscience, important other people and reality.

The American Psychiatric Association (APA—1980)

Thus, mental health would include not only the absence of diagnostic labels such as schizophrenia and obsessive compulsive disorder, but also the ability to cope with the stressors of daily living, freedom from anxieties and generally a positive outlook towards change in fortunes and to cope with those.

CONCEPTS OF MENTAL HYGIENE

Prevention

The measures to be followed in preventing mental illnesses are:
- ❖ Identifying the causes leading to maladjustment, whether personal or social and taking suitable precautions to eliminate the same.
- ❖ Suggesting ways and means for achieving emotional and social adjustment.
- ❖ Suggesting methods for resolving inner conflicts and frustration for getting rid of anxieties, tension and emotional disturbances.

Preservation

One can enjoy good mental health, if suitable care is taken for its preservation and promotion. The following activities preserve mental health:
- ❖ Develop the inner potential of an individual.
- ❖ Attain emotional maturity and stability.
- ❖ Achieve personal and social security and adequacy.
- ❖ Promote healthy human relationships and group interaction.

Curative Measures

An individual can enjoy good mental health to the extent one is cured as early as possible of mental illnesses and diseases he is suffering from. The following are some curative measures:

- ❖ Adequately equip with the knowledge regarding types of mental illnesses and disorders.
- ❖ Suggest various therapies for treatment and curing mental illnesses and disorders.
- ❖ Suggest methods for rehabilitation and readjustment of mentally ill persons.

Balanced Development of the Personality

The balanced development of personality holds the key for an individual's adjustment with one own self and the environment. Lack of balanced development in all aspects of personality results in maladjustment and unhappiness. Thus, all round personality development is a prerequisite for an individual to be emotionally stable and well balanced.

Leading Happy and Contented Life

The ability of an individual to lead a fuller and a happier life is directly proportional to the mental health enjoyed by him. Thus, an individual must always strive to get along with himself and his environment well and avoid unnecessary anxieties, conflicts and frustrations.

CONCEPTS OF MENTAL HEALTH—JAHODA (1958)

A Positive Attitude Towards Self

A positive attitude towards self includes an objective view of self, including knowledge and acceptance of strengths and limitations. The individual feels a strong sense of personal identity and security within the environment.

Growth, Development and the Ability for Self-Actualization

Growth, development and the ability for self-actualization indicator correlates with whether the individual successfully achieves the tasks associated with each level of development.

Integration

Integration includes the ability to adaptively respond to the environment and the development of a philosophy of life, both of which help the individual maintain anxiety at a manageable level in response to stressful situations.

Autonomy

Refers to the individual's ability to perform, in an independent self-directed manner; the individual makes choices and accepts responsibility for the outcomes.

Perception of Reality

Perception of reality includes perception of the environment without distortion, as well as the capacity for empathy and social sensitivity—a respect and concern for the wants and needs of others.

Environmental Mastery

Environmental mastery indicator suggests that the individual has achieved a satisfactory role within the group, society or environment. He is able to love and accept the love of others.

CHARACTERISTICS OF A MENTALLY HEALTHY PERSON

- ❖ He has an ability to make adjustments.
- ❖ He has a sense of personal worth, feels worthwhile and important.
- ❖ He solves his problems largely by his own effort and makes his own decisions.
- ❖ He has a sense of personal security and feels secure in a group, shows understanding of other people's problems and motives.
- ❖ He has a sense of responsibility.
- ❖ He can give and accept love.
- ❖ He lives in a world of reality rather than fantasy.
- ❖ He shows emotional maturity in his behavior, and develops a capacity to tolerate frustration and disappointments in his daily life.
- ❖ He has developed a philosophy of life that gives meaning and purpose to his daily activities.
- ❖ He has a variety of interests and generally lives a well-balanced life of work, rest and recreation.

WARNING SIGNS OF POOR MENTAL HEALTH

Symptoms of mental disorders vary depending on the type and severity of the condition. Some general symptoms that may suggest a mental disorder include:

In Younger Children

- ❖ Changes in school performance
- ❖ Poor grades despite strong efforts
- ❖ Excessive worrying or anxiety
- ❖ Hyperactivity
- ❖ Persistent nightmares
- ❖ Persistent disobedience and/or aggressive behavior
- ❖ Frequent temper tantrums

In Older Children and Adolescents

- ❖ Abuse of drugs and/or alcohol
- ❖ Inability to cope with daily problems and activities
- ❖ Changes in sleeping and/or eating habits
- ❖ Excessive complaints of physical problems
- ❖ Defying authority, skipping school, stealing or damaging property
- ❖ Intense fear of gaining weight
- ❖ Long-lasting negative mood, often along with poor appetite and thoughts of death
- ❖ Frequent outbursts of anger

In Adults

- ❖ Confused thinking
- ❖ Long-lasting sadness or irritability
- ❖ Extreme highs and lows in mood
- ❖ Excessive fear, worrying or anxiety
- ❖ Social withdrawal
- ❖ Dramatic changes in eating or sleeping habits
- ❖ Strong feelings of anger
- ❖ Delusions or hallucinations (seeing or hearing things that are not really there)
- ❖ Increasing inability to cope with daily problems and activities
- ❖ Thoughts of suicide
- ❖ Denial of obvious problems
- ❖ Many unexplained physical problems
- ❖ Abuse of drugs and/or alcohol

PROMOTIVE AND PREVENTIVE MENTAL HEALTH STRATEGIES

In the 1960s, psychiatrist Gerald Caplan described levels of prevention specific to psychiatry. He described primary prevention as an effort directed towards reducing the incidence of mental disorders in a community. Secondary prevention refers to decreasing the duration of disorder, while tertiary prevention refers to reducing the level of impairment.

Primary Prevention

Primary prevention seeks to prevent the occurrence of mental disorders by strengthening individual, family and group coping abilities.

Role of a Nurse in Primary Prevention

Community mental health nurses are in a key position to identify individual, family and group needs, conflicts and stressors. Thus, they play a major role in identifying high-risk groups and preventing the occurrence of mental illness in them. Some interventions include:

Individual Centered Intervention

- ❖ Antenatal care to the mother and educating her regarding the adverse effects of irradiation, certain drugs and prematurity.
- ❖ Ensuring timely and efficient obstetrical assistance to guard against the ill effects of anoxia and injury to the newborn at birth.
- ❖ Dietary corrections to those infants suffering from metabolic disorders.
- ❖ Correction of endocrine disorders.
- ❖ Liberalization of laws regarding termination of pregnancy, when it is unwanted.
- ❖ Training programs for physically and mentally handicapped children like blind, deaf, mute and mentally subnormal, etc.
- ❖ Counseling the parents of physically and mentally handicapped children, with particular reference to the nature of defects. The parents need to accept and emotionally support the child and be satisfied with limited goals in the field of achievement.

❖ Fostering bonding behaviors. Explaining importance of warm, accepting, intimate relationship and avoiding the prolonged separation of mother and child are essential.

Interventions Oriented to the Child in the School

❖ Teaching growth and development to parents and teachers.
❖ Identifying the problems of scholastic performance and emotional disturbances among school children and giving timely intervention. School teachers can be taught to recognize the beginning symptoms of problems and referring to appropriate agencies.

Family Centered Interventions to Ensure Harmonious Relationship

❖ Consulting with parents about appropriate disciplinary measures.
❖ Promoting open health communication in families.
❖ Rendering crisis counseling to the parents of physically and mentally handicapped children.
❖ Ensuring harmonious relationship among members of the family and teaching healthy adaptive techniques at the time of stress producing events.

Interventions Oriented to Keep Families Intact

❖ Extending mental health education services at child guidance clinics about child rearing practices; at parent-teacher associations regarding the triad relationship between teacher, child and parent and at various extramural health agencies regarding integration of mental health into general health practice.
❖ Strengthening social support for the frustrated aged and helping them to retain their usefulness.
❖ Promoting educational services in the field of mental health and mental hygiene.
❖ Developing parent-teacher associations.
❖ Rendering home-maker services—when there is absence of the mother from home due to illness or other reasons for prolonged periods, the public health nurse can arrange for the service.

❖ Providing marital counseling for those having marital problems.

Interventions for Families in Crisis

In developmental crisis, situations such as the child passing through adolescence, birth of a new baby, retirement or menopause, death of a wage earner in the family, desertion by the spouse, etc. crisis intervention can be given at:
❖ Mental hygiene clinics
❖ Psychiatric first-aid centers
❖ Walk-in clinics

Mental Health Education

❖ Conduct mass health education programs through film shows, flash cards and appropriate audio-visual aids, regarding prevention of mental illnesses and promotion of mental health in the community.
❖ Educate health workers regarding prevention of mental illness, so that they can function effectively in all the areas of prevention.

Society-centered Preventive Measures

❖ Community development.
❖ Culturally deprived families need biological and psychosocial supplies. They need better hygienic living conditions, proper food, education, health facilities and recreational facilities. Otherwise psychopathy, alcoholism, drug addiction, crime and mental illness, will result in such situations.
❖ Collection and evaluation of epidemiological, biostatistical data.

Secondary Prevention

Secondary prevention targets people who show early symptoms of mental health disruption, but regain premorbid level of functioning through aggressive treatment.

Role of a Nurse in Secondary Prevention

❖ *Early diagnosis and case finding*: This can be achieved by educating the public, community

leaders, industrialists, Mahila Mandals, balwadis, etc. in how to recognize early symptoms of mental illness. Case finding through screening and periodic examination of population at risk, monitoring of patients, etc. Thus, in clinics, schools, home, health care and the work place, community mental health nurses detect early signs of increased levels of anxiety, decreased ability to cope with stress and failure to perceive self, the environment and/or reality accurately and provide direct services as appropriate.

❖ *Early reference*: The public should be educated to refer these cases to proper hospitals as soon as they recognize early symptoms of mental illness.

❖ *Screening programs*: Simple questionnaires should be developed to identify the symptoms of mental illness and administration of the same in the community for early identification of cases. These questionnaires can be simplified in local languages and used widely in colleges, schools, industries, etc.

❖ Early and effective treatment for patient, and if necessary, to family members as relevant; providing counseling services to caregivers of mentally ill patients.

❖ *Training of health personnel*: Orientation courses should be provided to health workers to detect cases in the course of their routine work.

❖ *Consultation services*: Nurses working in general hospitals may come across various conditions such as puerperial psychosis, anxiety states, peptic ulcer, ulcerative colitis, bronchial asthma, etc. These basic care providers need guidance and consultation to deal with such conditions in an effective manner.

❖ *Crisis intervention*: If crisis is not tackled in time, it may lead to mental disorders or even suicide. Sometimes, anticipating the crisis situation and guiding the individual in time can help them to cope with the crisis situation in a better way.

Tertiary Prevention

Tertiary prevention targets those with mental illness and helps to reduce the severity, discomfort and disability associated with their illness. In these terms, community mental health nurses play a vital role in monitoring the progress of discharged patients in halfway homes, houses, etc. especially with regard to their medication regimen, coordination of care, etc.

Role of a Nurse in Tertiary Prevention

❖ Family members should be involved actively in the treatment program, so that effective follow-up can be ensured.

❖ Occupational and recreational activities should be organized in the hospital, so that idling is prevented.

❖ Community based programs can be launched by meeting the family members when the need for discharge from the hospital should be emphasized. These programs can be implemented through day hospitals, night hospitals, after care clinics, half-way homes, ex-patient hostels, foster care homes, etc. Follow-up care can be handed over to community health nurses.

❖ There should be constant communication between the community health nurses and the mental health institution regarding the follow up of the discharged patient. The ultimate aim of the hospital and community-based programs is to re-socialize and re-motivate the patient for a functional role in the community, consistent with his resources.

❖ There are a wide range of services that need to be provided to patients as part of the tertiary prevention program. Nurses need to be familiar with the agencies in the community that provide these services. Collaborative relationships between mental health care providers and community agencies are absolutely essential, if rehabilitation is to succeed.

❖ An important intervention in the maintenance of patients at their own homes in the community is the Training in Community Living (TCL) program, designed by 'Stein and Test'. In this model, when a person is referred for hospital admission the staff goes to the community with him rather than he going to the hospital to be with the staff. This real world experience with the patient enables the nurse to accurately assess the skills that the person needs to develop and to mutually agree on realistic goals.

❖ Another aspect of community life that is more difficult to assess accurately and deal with effectively, is the stigma attached to mental illness. Many patients and their families try to avoid stigma by keeping the nature of the person's illness a secret. The need for secrecy places additional stress on the family system, because there is always the fear that the truth will be revealed. Nurses in the community are in a key position to monitor community attitudes and help in fostering a realistic attitude towards the mentally ill.

❖ For some patients, the emotional climate of the family to which they return can have a significant effect on their adjustment and eventually recovery from the debilitating effects of chronic mental illness. Families sometimes view mental illness as a weakness of character that can be overcome by exertion of moral effort. This type of familial attitude may result in guilt on the part of the patient who believes that he has disappointed his significant others. Guilt leads to increased anxiety and decreased self-esteem. These are the conditions that interfere with a high level of functioning. Therefore, nurses working with families need to foster healthy attitudes towards the mentally ill member.

MENTAL HEALTH SERVICES

Mental Health Agencies—Government at National Level

There are 42 mental hospitals in the country with a bed availability of 20,893 in the Government sector. In the private sector, there are 5,096 beds. These facilities have to manage an estimated 1.02 crore people with severe mental illness and 5.12 crore people with common mental disorders.

Mental Health Agencies—Voluntary

Voluntary organizations are a valuable community resource for mental health. They are often more sensitive to the local realities than centrally driven programs and are usually strongly committed to innovation and change. They often play an extremely important role in the absence of a formal or well-functioning mental health system, filling the gap between community needs and available community services and strategies.

Voluntary organizations can specially play an important role in developing suicide prevention and crisis support, formation of self-help of families, organizing community-based housing facilities for short-term and long-term care of persons with chronic illnesses, setting up of day-care centers, sheltered employment facilities, life skills programs for school drop-out children and public mental health education.

Non-Governmental Organizations

Non-governmental organizations (NGOs) are recognized by governments as non-profit or welfare oriented organizations, which play a key role as advocates, service providers, activists and researchers on a range of issues pertaining to human and social development. Mental health non-governmental organizations (MHNGOs) are located throughout India. While many are formed in urban areas, they have begun to extend services in rural areas too.

Partial Hospitalization

Partial hospitalization is an innovative alternative to hospitalization. It is ideally suited to most of the psychiatric syndromes, particularly chronic psychotic disorders, neurotic conditions, personality disorders, drug and alcohol dependence and mental retardation. Day-care centers, day hospitals and day treatment programs come under partial hospitalization. Partial hospitalization has the advantages of lesser separation from families, more involvement in the treatment program and a lessening of patient's preoccupation with the illness, which may be intensified by full hospitalization.

Quarterway Homes

Quarterway home is a place usually located within the hospital campus itself, but not having the regular services of a hospital. There may not be routine nursing staff or routine rounds and most of the activities of the place are taken care of by the patients themselves.

Halfway Home

A halfway home is a transitory residential center for mentally ill patients who no longer need the full services of a hospital, but are not yet ready for a completely independent living. It attempts to maintain a climate of health rather than of illness and to develop and strengthen individual capacities. At the same time, it enables the recognition of problems that require medical attention and permits the discovery of conditions in the community, which are acting adversely on the individual. Thus, halfway homes have a major role in the rehabilitation of the mentally ill individual.

Self-help Groups

- Self-help groups are composed of people who are trying to cope with a specific problem or life crisis and have improved the emotional health and well-being of many people. Usually, organized with a particular task in mind, such groups do not attempt to explore individual psychodynamics in great depth or change personality functioning significantly.
- A distinguishing characteristic of self-help groups is their homogeneity. The members have same disorders and share their experiences good or bad, successful or unsuccessful, with one another. The members work together using their strengths to gain control over their lives. By doing so, they educate each other, provide mutual support and alleviate the sense of alienation, usually felt by people drawn to this kind of a group. In other words, self-help groups are based on the premise that people who have experienced a particular problem are able to help others who have the same problem.

Suicide Prevention Centers

There are many suicide prevention centers in India in the voluntary sector doing good work and helping those in need. Some of them are:

- Helping Hands and Medico-Pastoral Association (MPA) in Bangalore
- Sneha in Chennai
- Sahara in Mumbai
- Sanjivini and Sumaitri in New Delhi

Other Mental Health Services

- Community group homes
- Large homes for long-term care
- Hostels
- Home care programs
- District rehabilitation centers

EGO DEFENCE MECHANISMS AND IMPLICATIONS

Motives cause conflicts and in turn conflicts cause anxiety, stress and frustration in the individual. In our life, we want many things and have different goals. But we cannot achieve everything we aspire for. In many instances, we become frustrated when we fail in our attempts. These failures and frustrations hurt our ego and cause a lot of anxiety and feelings of guilt. Under such circumstances, we do not want to accept failure easily. Instead, we resort to certain mechanisms by which we can safeguard our self-respect. The mechanisms used for maintaining harmony with environment can be grouped into two categories: direct and indirect methods.

Direct Methods

Direct methods are employed by the individual intentionally at the conscious level. These include:

- *Increasing trials or improving efforts:* When one finds it difficult to solve a problem or faces obstacles in the path, to cope with his environment, he can attempt with a new zeal by increasing his efforts and improving his behavioral process.
- *Adopting compromising means:* For maintaining harmony between his self and the environment one may adopt the following compromising postures:
  - He may altogether change his direction of efforts by changing the original goals, i.e. an aspirant for Indian Administrative Service (IAS) may direct his energies to become an officer in a nationalized bank.
  - He may seek partial substitution of goal like selection for the provincial civil services in place of IAS.

❖ *Withdrawal and submissiveness:* One may learn to cope with one's environment by just accepting defeat and surrendering oneself to the powerful forces of environment and circumstances.

Indirect Methods

Indirect methods are those methods by which a person tries to seek temporary adjustment to protect him for the time being against a psychological danger. These are purely psychic or mental devices—ways of perceiving situations as he wants to see them and imagining that things would happen according to his wishes.

The ego usually copes with anxiety through rational means. When anxiety is too painful, the individual copes by using defence mechanisms to protect the ego and diminish anxiety. Such mechanisms are also called mental mechanisms or ego defence mechanisms.

Ego Defence Mechanisms

Ego defence mechanisms are methods of attempting to protect self and cope with basic drives or emotionally painful thoughts, feelings or events. Ego defence mechanisms though originally conceived by Sigmund Freud, much of the development of defence mechanisms was done by his daughter Anna Freud. Ego defence mechanisms also referred to as defence mechanisms, are considered as protective barriers to manage instinct and affect in stressful situations (Freud, 1946).

Purposes

The purpose of Defence mechanisms is to reduce or eliminate anxiety. They may be used to resolve a mental conflict, to reduce anxiety or fear, to protect one's self-esteem or to protect one's sense of security. Depending upon their use, they are therapeutic or pathological.

They can be helpful when used in very small doses and if overused, become ineffective and can lead to a breakdown of the personality. Most defence mechanisms operate at the unconscious level of awareness (Table 7.1).

Table 7.1: Commonly used defence mechanisms

Defence mechanism and description	Example	Overuse can lead to
Repression: Unconscious and involuntary forgetting of painful ideas, events and conflicts	Forgetting a loved one's birth day after a fight	Conscious perception of instincts and feelings is blocked in repression
Denial: Unconscious refusal to admit an unacceptable idea or behavior	The mother of a child who is fatally ill may refuse to admit that there is anything wrong, even though she is fully informed of the diagnosis and expected outcome. It is because she cannot tolerate the pain that acknowledging reality would produce	Repression, dissociative disorders
Displacement: Unconsciously discharging pent-up feelings to a less threatening object	A husband comes home after a bad day at work and yells at his wife	Loss of friends and relationships, confusion in communication
Reaction formation: Replacing unacceptable feelings with their exact opposites	A jealous boy who hates his elder brother may show him exaggerated respect and affection towards him	Failure to resolve internal conflict
Rationalization: It is a process in which an individual justifies his failures and socially unacceptable behavior by giving socially approved reasons	A student who fails in the examination may complain that the hostel atmosphere is not favorable and has resulted in his failure	Self-deception

Contd...

Sublimation: Consciously or unconsciously channeling instinctual drives into acceptable activities	Aggressiveness might be transformed into competitiveness in business or sports	Sublimation allows instincts to be channeled, rather than blocked or diverted
Compensation: Consciously covering up for a weakness by over emphasizing or making up a desirable trait	A student who fails in his studies may compensate by becoming the college champion in athletics	Modest instinctual satisfaction occurs
Projection: Unconsciously (or consciously) blaming someone else for one's difficulties	A person who blames another for his own mistakes is using the projection mechanism. A surgeon whose patient does not respond as he anticipated, may tend to blame the theater nurse who helped that surgeon at the time of operation	Fails to learn to take personal responsibility. May develop into delusional tendencies
Intellectualization: Undue emphasis is focused on the inanimate in order to avoid intimacy with people, attention is paid to external reality to avoid the expression of inner feelings and stress is excessively placed on irrelevant details to avoid perceiving the whole	Person shows no emotional expression when discussing a serious car accident	Excessively using intellectual processes to avoid affective expression on experience
Undoing: Trying to reverse or 'undo' a thought or feeling by performing an action that signifies an opposite feeling than original thought or feeling	You have feelings of dislike for someone, so you buy them a gift	May send double message
Regression: Reverting to an older, less mature way of handling stresses and feelings	An adult throws a temper tantrum when he does not get his own way	May interfere with progression and development of personality
Dissociation: The unconscious separation of painful feelings and emotions from an unacceptable idea, situation or object	Amnesia that prevents recalls of previous days auto accident. Adult remembers nothing of childhood sexual abuse	One of the dissociative disorders
Conversion: The unconscious expression of intrapsychic conflict symbolically through physical symptoms	A student awakens with a migraine headache the morning of a final examination and feels too ill to take the test	Anxiety not dealt with can lead to actual physical disorders such as gastric ulcers
Suppression: Voluntary rejection of unacceptable thoughts or feelings from conscious awareness	Student who failed in an examination, states he is not ready to talk about his marks	Discomfort is acknowledged, but minimized
Substitution: Unconscious replacement of unacceptable impulses, attitudes, needs or emotions with those that are more acceptable	A student nurse decides to work in teaching side, because she is unable to master clinical competencies	Discomfort is acknowledged, but minimized
Isolation: Attempting to avoid a painful thought or feeling by objectifying and emotionally detaching oneself from the feeling	Acting aloof and indifferent towards someone when you really dislike that person	Avoids dealing with true feelings that increases stress

Types of Defence Mechanisms

Defence mechanisms can be divided into adaptive and maladaptive mechanisms (Table 7.2).

Implications

❖ Defence mechanisms enable a person to resolve conflicts. They are essential to the maintenance of normal equilibrium.

❖ Difficulties only occur if the defence mechanisms are inadequate to deal with anxiety or inappropriate to the situation in which they are used.

❖ Many mental mechanisms are a means of compromising with forbidden desires, feeling of guilt, etc.

❖ When mental mechanisms are used moderately they are harmless and help to face conflicts and frustrations easily and protect ego and also help to relieve tensions and feel comfortable.

❖ Excessive and persistent use of these defence mechanisms is harmful. They do not solve the problems, but only relieve the related anxiety. Too much dependence makes us unable to face problems. For example, if a student is unable to face the examination and withdraws from taking it, he may experience greater difficulty in the next attempt. Hence, it is better to learn to face the problems instead of resorting to these mechanisms.

❖ Many times more than one mechanism may operate in the process of adjusting to the situation.

Table 7.2: Types of defence mechanisms

Adaptive defence mechanisms	Maladaptive defence mechanisms
Repression	Displacement
Rationalization	Denial
Intellectualization	Isolation
Compensation	Suppression
Sublimation	Regression
Substitution	Reaction formation
	Projection
	Conversion
	Dissociation
	Undoing

Relevance to Nursing Practice

The nurse must recognize and understand maladaptive defence mechanisms that patients use. The nurse has to carefully point out these mechanisms and work with patients to encourage adaptive behaviors and discourage maladaptive ones.

PERSONAL AND SOCIAL ADJUSTMENT

Many individuals have a desire to attain great wealth or to become extremely popular or famous, but hardly a few of them attain these. Those of them, who take their failures realistically, become satisfied with what they have attained and face the world squarely. They can be called well-adjusted individuals. But those who are always brooding over their failures or adopt abnormal means to satisfy their desire for power or wealth by becoming too arrogant or day dreamers, etc. are the persons who have a maladjusted personality.

Definitions

Adjustment means the modification to compensate for or meet special conditions.   *(Webster—1951)*

Adjustment is the interaction between a person and his environment. How one adjusts in a particular situation depends upon one's personal characteristics as also the circumstances of the situation. In other words, both personal and environmental factors work side by side in adjustment. An individual is adjusted, if he is adjusted to himself and to his environment.

(Arkoff—1968)

Areas of Adjustment

Adjustment, although seeming to be a universal characteristic like quality, it may have different aspects and dimensions, such as:

❖ Health adjustment
❖ Emotional adjustment
❖ Social adjustment
❖ Home adjustment
❖ School or professional adjustment

Adjustment of a person is based on the harmony between his personal characteristics and the demands of the environment of which he is a part. Personal and

environmental factors work side by side in bringing about this harmony.

Personal Adjustment

Personal adjustment is a process of harmony between the individual and his environment. The individual purposefully applies efforts and energy not only to accommodate perfectly within the society and the environment, but also to fulfill his needs and lead a happy social life. The adjustment is highly selective and a specialized process. The adjustment of an individual is more dynamic and capable of readjustment with new environment and there is remarkable mobility in the process of adjustment.

Characteristics of a Well-adjusted Person

- ❖ Basic needs are satisfied
- ❖ Leads balanced life
- ❖ Respects self and others
- ❖ Has realistic goals
- ❖ Aware of one's own strengths and weaknesses
- ❖ Flexible mind-set
- ❖ Ability to deal with adverse circumstances
- ❖ Realistic perception of the world
- ❖ Comfortable with the surrounding environment
- ❖ Absence of fault-finding attitude

Social Adjustment

As social beings we live in a society. We form opinions about others and others form opinions about us. Everybody wants acceptance and recognition from and within the society. We try to behave according to the norms of the society, so that we can adjust with others.

Social adjustment can be defined as a psychological process. It frequently involves coping with new standards and values in the society. In the technical language of psychology, getting along with the members of the society as best as one can is called social adjustment.

Perception and Social Adjustment

Impartial perception is needed for social adjustment. The processes of behavior, e.g. learning, maturation, sensation, perception and motivation are significant in our life, because they contribute to the process of adjustment. The way we interact with people depends to a great extent upon how we perceive them and how we interpret their behavior. The perceptions about people—what we think, what they are like—influence the way we respond to them. If you perceive that a student is hostile, you are unlikely to interact or adjust with him/her. Your behavior in a group is certainly different from the behavior when alone. Group affects an individual's behavior. The mere presence of others affects our performance.

Our social perceptions of others are initially based on the information we obtain about them and in some instances on the attribution (inferences) we make about the causes for their behavior. It is, of course, important to have an accurate knowledge of others before deciding on the kind of possible interactions with them. Our perceptions of other's personalities and feelings guide us in deciding the way we respond to them and what sort of relationships we have with them. Knowledge about others influences our adjustment with them.

GUIDANCE AND COUNSELING

One of the most important areas in education, which has acquired considerable importance and received much attention in recent years is guidance and counseling. Present day nurses have to acquire some specialized knowledge regarding guidance and counseling in order to guide the patients tactfully in this highly competitive world.

Definition

Guidance is the assistance made available by qualified and trained person to an individual of any age, to help him to manage his own life activities, develop his own point of view, make his own decision and carry on his own burden.   *(Crow and Crow—1951)*

In educational context, guidance means assisting students to select courses of study appropriate to their needs and interests, achieve academic excellence to the best possible extent, derive maximum benefit of the institutional resources and facilities, inculcate proper study habits and satisfactorily participate in curricular and extracurricular activities.

Principles of Guidance

Basic aim of guidance is to help the individual to attain his full personal, social, professional, cultural and spiritual development. According to Crow and Crow (1951), there are 14 principles in guidance.

❶ Every aspect of an individual's complex personality patterns constitutes a significant factor of his total display of attitude and behaviors.

❷ Although all human beings are similar in many ways, individual differences must be recognized.

❸ The function of guidance is to help a person:
   a. Formulate and accept stimulating worthwhile, and attainable goals of behavior.
   b. Apply these objectives in conducting his affairs.

❹ Existing social, economic and political unrest is giving rise to many maladjustive factors that require the cooperation of experienced guidance workers.

❺ Guidance is a continuous process.

❻ Guidance is not limited to a few.

❼ Guidance is education, but not all education is guidance.

❽ Generally accepted areas of guidance include concern with the extent to which an individual's physical, mental health interference with his adjustment to home, school and vocational demands.

❾ Guidance is fundamentally the responsibility of parents in the home and teachers in the school.

❿ Specific guidance problems in any age level should be referred to persons trained to deal with particular areas of adjustments.

⓫ Programs of individual evaluation and research should be conducted, and progress and achievement made accessible to guidance workers.

⓬ The guidance program should be flexible in terms of individual and community needs or else it will lose its value.

⓭ Continuous or periodic appraisals should be made.

⓮ Guidance is preventive rather than curative.

Areas of Guidance

Every individual, at sometime or other needs help to become happier, more creative and better adjusted in his family and society. There are several areas, where a student requires assistance. These areas can be classified into education, vocation, personal, social, avocation, health, moral, religion and financial.

Educational Guidance

Educational guidance helps the students to get maximum benefit out of education and solve their problems related to education. The emphasis is on providing assistance to students to perform satisfactorily in their academic work, choose the appropriate course of study, overcome learning difficulties, foster creativity, improve levels of motivation, utilize institutional resources optimally such as library, laboratory, etc.

Vocational Guidance

Vocational guidance is the assistance provided for selection of a vocation and preparation for the same. It is concerned with enabling students to acquire information about career opportunities, career growth and training facilities.

Personal Guidance

Personal guidance refers to the guidance offered to students enabling them to adjust themselves to their environment, so that they become efficient citizens. Adolescent behavior to a great extent depends upon the moods and attitudes of the adolescent. Emotional instability is a characteristic of adolescents and this is often the cause of many of their personal problems. Personal guidance will help them to solve these problems. Severe competition and irrational expectations of the parents also lead to personal problems. Students may find it difficult to follow the lectures, especially when exposed to a new medium of instruction. Difficulty in understanding in turn leads to disliking of teachers and ultimately results in poor achievement. Guidance needs to be provided to such students to enable them to adjust to the situation, which they cannot change.

Social Guidance

Social guidance enables the student to make substantial contributions to the society, assume leadership, confirm to the social norms, work as team members, develop healthy and positive attitudes, appreciate the problems of society, respect the opinions and sentiments of fellow human beings, acquire traits of patience, perseverance and friendship. Its main purpose is to enable the student to become an efficient citizen.

Avocational Guidance

Avocational guidance is the assistance to be provided to students to spend their available leisure time profitably. Activities and programs outside the formal classrooms provide many opportunities for the blossoming of talents of students.

Health Guidance

Health guidance implies the assistance rendered to students for maintaining sound health. Sound health is a prerequisite for participating in curricular and co-curricular activities. This type of guidance focuses on enabling students to appreciate conditions for good health and take steps necessary for ensuring good health, maintaining sound physical and mental health.

Financial Guidance

The function of financial guidance is to help the needy students in determining the financial assistance they need in the light of the expected expenses and to get it from financial organizations after completing the formalities.

COUNSELING

Counseling is a process of enabling the individual to know himself and his present and possible future situations in order that he may make substantial contributions to the society and to solve his own problems through a face to face personal relationship with the counselor.

Definition

Counseling is an accepting, trusting and safe relationship in which clients learn to discuss openly what worries and upsets them, to define precise behavior goals to acquire essential social skills and to develop the courage and self-confidence to implement the desired new behaviors.

(Merle M Ohlsen—1977)

Principles of Counseling

❖ *Respect*: Counselors ability lies in communicating to the client the belief that every person possesses an inherent strength and capacity, the right to choose his own alternatives and make his own decisions.
❖ *Authenticity*: Counselor should have genuineness, honesty and simplicity and avoid superiority feeling.
❖ *Non-possessive warmth*: Demonstration of concern, interest and value for others and a deep concern for the well-being of the other person.
❖ *Non-judgmental attitude*: Avoid bias making assumptions or judgments about the client.
❖ *Accurate understanding of the client*: It includes precise evaluation of the perceptual and cognitive behavior of the individual.
❖ *Recognizing the client's potential*: Recognizing the strengths and abilities of the client.
❖ *Confidentiality*: Maintain confidentiality and develop trust. Avoid revealing client's identity, personal details and other information without consent. Assure confidentiality to the client.

Who Should be Counseled?

The following types of students are in urgent need of counseling:
❖ Students who have a consistent record of under achievement.
❖ Students whose scholastic achievement has dropped suddenly.
❖ Students who find it difficult to participate in the class and extracurricular activities.
❖ Students who use exhibitionism for gaining recognition or attention in class.

❖ Students who find it difficult to adjust to the college or clinical areas.

❖ Students who suddenly decide to drop out of college.

❖ Students who display unusual ability in any direction—intellectual, artistic, musical, etc.

❖ Students who have behavioral problems such as drug addiction, aggressiveness, bullying, stealing, shyness, timidity, etc.

Types of Counseling

Individual Counseling

Individual counseling is a one-to-one helping relationship between the counselor and the counseled. It is focused upon the individual's need for growth and adjustment, problem solving and decision making. This type of counseling requires counselors with the highest level of training and professional skills. In addition, it also requires that they have a certain personality type as well; counseling will be rendered ineffective, unless counselors exhibit such personality traits as understanding, warmth, humanness and positive attitude towards the client.

Group Counseling

Group counseling form of counseling is sometimes successful with clients who have not responded well to individual counseling. This group interaction helps the individual to gain insight into his problems by listening to others discussing their difficulties. Group counseling often not only helps the individual to change, but also enhances his desire and ability to help others faced with distressing life circumstances.

Phases of Counseling

❶ Appointment and establishing relationship
❷ Assessment
❸ Diagnosis
❹ Setting goals
❺ Intervention
❻ Termination and follow-up

Appointment and Establishing Relationship

Appointment with the counselee is fixed according to the convenience of both the counselor and counselee. The counselor should take all possible efforts to establish rapport and build a relationship of confidence, trust and mutual appreciation. This helps the client to express himself without inhibitions and resistance.

Assessment

Assessment phase is concerned with data collection, analyzing the data and clarification of expectations. The counselee is encouraged to talk about his problems and ventilate his feelings, whereas the counselor asks questions, collects information, observes and possibly helps the counselee to clearly state his problem. Counselee also talks about his expectations.

Diagnosis

In diagnosis phase, the counselor diagnoses the problem of the individual and decides the areas of intervention.

Setting Goals

In setting goals phase, the counselor explains to the individual what is possible, i.e. setting goals, which will in turn provide direction to the counselee and counselor. Goals may be of two types—immediate or short-term goals and long-term goals. Short-term goals ultimately lead to the attainment of long-term goals.

Intervention

Interventions are needed to achieve the goals. In this phase, counselor explains to the individual, how the goals can be achieved. The interventions employed will depend upon the technique used by the counselor. The main aspect in this phase includes developing insight and putting it to work. The process of clarifying and gaining insight leads to decision making and planning of courses of action. However, the individual alone is responsible for the decisions he makes, though the counselor may assist in this process by his warmth and understanding.

Termination and Follow-up

Successful termination is an important aspect in counseling. It must be done without destroying the accomplishment gained and should be done in a phased manner covering few sessions. This will prevent the development of a feeling of sense of loss in the counselee. Follow-up appointments, i.e.

planning for the next sessions if needed should also be carried out. The relationship should be planned and the client should be well-prepared for termination. Abrupt breaking of contact should be avoided, as it may have an undesirable influence on the client.

Attributes and Skills Required for a Counselor

- ❖ *Pretraining attributes*: A person who has awareness of her needs, feelings, personal strengths and weaknesses, acts as a good counselor
- ❖ *Good psychological health*
- ❖ *Sensitivity*: A person having the ability to understand an individual acts as a good counselor
- ❖ *Open-mindedness*
- ❖ *Objectivity*
- ❖ *Trustworthiness*: The counselor should be reliable, honest and not hurt others
- ❖ *Approachability*: Counselor should be friendly, have positive attitude about others and approach-able without a feeling of apprehension

Guidelines for Successful Counseling

- ❖ A very careful scheduling of the counseling sessions should be done. Make appointments; this saves time.
- ❖ Provide privacy and maintain confidentiality.
- ❖ Know the client before he comes for the session. Gather data from different sources. This can serve as a framework within which the person's problem can be worked upon.
- ❖ Know your own personality; this prevents your opinions or attitudes from affecting the objectivity of your perception of the client's problems.
- ❖ Be a good listener.

Techniques/Approaches to Counseling

Based on the nature of the counseling process and the role of the counselor, there are three approaches to counseling namely directive, non-directive and eclectic counseling.

Directive or Counselor Centered Counseling

The counselor is active and directs the individual in making decisions and finding solutions to problems. The counselor does not force the individual, but directs the process of thinking of counselee by informing, explaining, interpreting and advising. However, the decision has to be taken by the counselee.

Non-directive or Client-Centered Counseling

In non-directive counseling, counselee is guided to use his own inner resources to solve the problem. In this approach, the counselee plays a predominant role.

Eclectic Counseling

In eclectic counseling, the strategy arises out of the appropriate knowledge of individual behavior and a combination of directive and other approaches. Irrespective of the differences, all approaches should have developmental, preventive and remedial values.

Areas of Counseling

Counseling About Risks

Counseling about risks involves:
- ❖ Giving information about a problem.
- ❖ Providing opportunity to reflect on the impact of the problem on daily life.
- ❖ Helping to work out ways of reducing this impact, or of coming to terms with it.
  Examples include counseling about genetic risk, abuse of alcohol or drugs and about acquired immunodeficiency syndrome (AIDS).

Counseling to Relieve Distress

Counseling to relieve distress is undertaken for clients who are reacting to difficult circumstances. Examples include counseling students, individuals with acute reactions to stress (such as anxiety, depression, insomnia, etc.) and postnatal depression.

Interpersonal Counseling

Interpersonal counseling is focused on change in life events, sources of persistent distress in the family or place of work and current difficulties in relationships.

Marriage Guidance Counseling

Marriage guidance counseling is directed towards helping couples to talk constructively about problems in their relationship, understand each others point of view and to identify positive aspects of the relationship, as well as those causing conflict.

Problem-solving Counseling

In problem-solving counseling, the client is helped to do the following:

- ❖ List problems that are causing distress.
- ❖ Consider courses of action to solve each problem.
- ❖ Select one problem and try out the course of action that appears most practical.
- ❖ Review the results.
- ❖ Choose another problem for solution, if the first action has succeeded.
- ❖ Choose another course of action, if the first has not succeeded.

These steps are carried out in the context of a caring relationship.

Bereavement Counseling

Bereavement counseling focuses on working through the stages of grief (i.e. denial, followed by extreme sadness and finally coming to terms with the loss). It provides an opportunity for emotional release, and advice about the practical problems of living without the deceased person.

Crisis Intervention

Crisis intervention approach originated from the work of Lindemann (1944) and Caplan (1961). It is a form of counseling designed to help individuals to adapt to the immediate effects of severe life events, while acquiring better ways of dealing with future stressful circumstances. This approach is used to treat emotional reactions or disturbed behavior arising in response to crisis situations such as marriage breakdown, rape, unexpected bereavement and natural disasters such as floods, etc. In crisis intervention, the most important aim is that the client should recognize that he has learnt a general method of dealing with stressful conditions, which can be used for solving future problems. Treatment is usually short, but intensive. The client is called on to be active in all steps of the crisis intervention process, including clarifying the problem, verbalizing feelings, identifying goals and options for reaching goals and deciding on a plan.

Purposes of Guidance and Counseling

- ❖ Aiding the individual in the identification of his abilities, aptitudes, interests and attitudes.
- ❖ Assisting the individual to understand, accept and utilize these traits.
- ❖ Helping the individuals to recognize his aspirations in the light of his traits.
- ❖ Providing the individual with opportunities for learning areas of occupation and educational endeavors.
- ❖ Aiding the individual in the development of value senses.
- ❖ Helping the individual in developing his potentials to their optimum, so that he may become the individual he is capable of becoming.
- ❖ Assisting the individual in obtaining experience, which will assist him in the making of free and wise choices.
- ❖ Aiding the individual in becoming more and more self-directive.

Guidance and Counseling in the Hospital

The problems created due to illness vary not only with each individual patient, but also with the different stages of the illness and at different points of the patient's hospital experience. When dealing with sick people, counselor must keep in mind that they are particularly susceptible to strains, stress and conflicts and are often complaining, demanding and fault finding. They may misinterpret what is conveyed to him.

Problems Faced by Sick People

- ❖ *Fear, anxiety and frustration*: Hospitalization brings out fear, anxiety, etc. in the patient. Uncertainty regarding the diagnosis, its implication, strain and tension in facing the unknown future gives rise to feeling of helplessness, bewilderment and insecurity. Counseling helps in reinforcing his feelings of warmth

and importance, which could help to counteract existing anxiety. This can be done through providing reliable and authoritative answers to the questions. Help the patient to accept the reality of the situation himself, so that he neither exaggerates the seriousness of illness nor minimizes its impact on the adjustments he will be compelled to make.

❖ *Reaction to illness*: Feeling of insecurity and helplessness are common reactions to illness. Counseling helps in restoring the patient's sense of self-responsibility and encourages the patient to follow prescribed regimen.

❖ *Counseling of families*: The counseling cannot be confined to the patient, but must be extended to family members as well. Social, economic and emotional problems, which illness creates for the patient have repercussion on the family members as well. Positive values inherent in family living have to be utilized for the members to get adjusted regardless of the degree of incapacity. Help the family members to gear their demands in accordance with the limitations imposed by illness and assist them in utilizing whatever potentialities the patient possesses for active participation in family living.

❖ *Problems at discharge*: During discharge, if the patient carries incapacitating residue of the illness, it is likely to interfere either temporarily or even permanently with normal functioning. Encouraging the patient in planning for his return to normal living is a helpful device in preparing him to assume a greater degree of self-direction. Such help is given by the counselor by assisting with living arrangements, adjustment or the securing of medical follow-up, which is of value not only because these are concrete services, essential for the patients well-being, but also a means of enhancing the patients feeling of importance with the visible proof of interest in his welfare, the patient begins to see himself as a person of worth.

The nurse as a caretaker has a very important role in giving all the psychological support to the patient to solve the problems, cope up with future problems and overcome them. Counseling work in the nursing setting involves using all the skills one has, to make the patient feel at ease and to help him to be healed as much as cured. Counseling is part of the nurse's duty as she carries out total patient care.

Guidance and Counseling in Nursing Education

Guidance and counseling will assist nurses in developing proper attitude, commitment, dedication and other qualities required for a successful nursing practice. Moreover, emerging and re-emerging diseases, technological advancements in patient care evolving of new specialties, especially in the clinical areas, changing role of nurses in health care sector, impact of consumer protection act, etc. underlines the need of a viable guidance and counseling service in all nursing institutes. The need for guidance and counseling in nursing education can be summarized as follows:

❖ To help students adjust with new environment in the nursing institute.

❖ To help in developing qualities required for a successful nursing practice.

❖ To help students in getting adjusted with the clinical environment.

❖ To help students keep in touch with the latest trends in nursing and to reap benefits from the trends.

❖ To help students in developing positive learning habits, especially in skill learning, so that they can retain and transfer the learned lessons in a better way.

❖ To help in the development of appropriate coping strategies in order to deal with stress in a productive manner.

❖ To help nursing students in establishing a proper identity.

❖ To help them develop a positive attitude towards life.

❖ To help them overcome periods of turmoil and confusion.

❖ To help students in developing their leadership qualities.

❖ To motivate them for taking membership in professional organizations after completing their studies.

❖ To help them take advantage of the technological advancements in patient care.

❖ To help them develop readiness for change and face challenges both in personal, as well as professional life.

❖ To help them carry out the responsibilities as a worthwhile health team member.

❖ To help them in proper selection of careers both in India and abroad.

❖ Motivate them to pursue higher education according to their abilities and interest.

❖ To assist the needy students in availing financial assistance from appropriate organizations.

Knowledge of guidance and counseling are necessary for a nurse to become a good non-professional counselor. She also should have a better personality, which will determine her success in counseling.

REVIEW QUESTIONS

Long Essays

1. Define defence mechanisms. Explain any two with examples. (*Mar 2012, Sept 2011*)
2. Define mental health. Discuss the characteristics of a mentally healthy person. (*Mar 2012*)

3. Discuss the role of a nurse in the promotion of mental health. (*Mar 2011*)
4. Explain the different measures that can be taken in the prevention of emotional and mental disturbances. (*Apr 2006, 2004*)

Short Essays

1. Guidance and counseling. (*Mar 2012*)
2. Strategies of promotive and preventive mental health. (*Mar 2012*)
3. Briefly explain the preventive strategies in mental health. (*Sept 2011*)
4. Characteristics of a mentally healthy person. (*Mar 2011, Mar 2009*)
5. Concepts of mental hygiene and mental health. (*Mar 2009*)
6. Explain the steps in the prevention of mental and emotional disturbances. (*Sep 2004*)
7. Role of nurse in preventing mental disturbances. (*Nov 2003*)
8. Community organization for care and rehabilitation for mentally retarded. (*Nov 2003*)

Short Answers

1. Rationalization. (*Mar 2012*)
2. Ego defence mechanism. (*Mar 2012, Mar 2009*)
3. Adjustment. (*Mar 2011*)
4. Mental health. (*Aug 2010*)
5. Sublimation. (*Sept 2009*)

Psychological Assessment and Tests

Psychology has a long tradition of scientific research on human behavior and personality. Through this research, a multitude of psychological assessment scales have been developed to objectively and precisely measure various aspects of psychological functioning and personality characteristics.

Psychological assessment refers to the types of tests that we use to help identify strengths and areas for growth that affect one's emotional, personal and professional development or adjustment. Technical term for psychological testing is psychometrics.

Psychological tests are standard measures devised to assess behavior objectively and used by psychologists to help people make decisions about their lives and understand more about themselves.

TYPES OF PSYCHOLOGICAL TESTS

Psychologists categorize tests in two ways based on how they are constructed and administered and based on skills and abilities they are designed to measure. Classification of psychological tests based on construction and administration:

❶ *Individual and group tests*: Individual tests are designed to be administered, to one person at a time. Group tests are designed to be administered to a large number of people at the same time.

❷ *Speed and power tests*: Speed tests have a fixed time limit at which point everyone taking the test, must stop. Power tests have no time limit, applicants are allowed as much time as needed to complete the test.

❸ *Computer-assisted tests*: It is a means of administering psychological tests to large groups of applicants in which an applicant's response determines the level of difficulty of succeeding items. For example, in computer-assisted testing individual does not have to waste time answering questions below his level of ability. The computer program begins with a question of average difficulty and if the individual answers correctly, it proceeds to questions of greater difficulty. If not it asks less difficult questions.

❹ *Paper-pencil and performance tests*: These tests are in printed form; answers are recorded on a standard answer sheet. Performance tests assess complex skills, such as word processing or mechanical ability for which paper-pencil tests are not appropriate.

CLASSIFICATION OF PSYCHOLOGICAL TESTS

Based on tests of knowledge, skills and abilities psychological tests have been divided into following:

❶ *Achievement tests*: Achievement tests are used in educational or employment settings and they attempt to measure the achieved knowledge such as mathematics or spelling. For example, term ending exams.

❷ *Aptitude tests*: These tests measure specific abilities such as mechanical or clerical skills. These include measurement of perceptual speed and accuracy, attention to detail, the capacity to visualize and

manipulate objects in space, principles of mechanical operation, ability to operate computers. For example, general aptitude test battery (GATB), differential aptitude test (DAT).

❸ *Intelligence tests*: These tests attempt to measure intelligence, i.e. basic ability to understand the world around. For example, Stanford-Binet Scale, Army Alpha Test, Army General Classification Test.

❹ *Interest tests*: These psychological tests are meant to assess a person's interests and preferences; used primarily for career counseling. For example, interest inventory.

❺ *Neuropsychological tests*: These tests measure deficits in cognitive functioning (ability to think, speak, reason, etc.). The deficit in cognitive functioning may result from some sort of brain damage such as stroke or a brain injury. For example, Cambridge Neuropsychological Test Automated Battery (CANTAB), Benton Visual Retention Test, Wechsler Adult Memory Scale (WMS).

❻ *Occupational tests*: They attempt to match interests with the interests of persons in known careers. For example, McQuaig Occupational Test.

❼ *Personality tests*: They attempt to measure basic personality style. For example, Minnesota Multiphasic Personality Inventory (MMPI), Rorschach inkblot test.

❽ *Specific clinical tests*: They attempt to measure specific clinical matters, such as current level of anxiety or depression. For example, Hamilton rating scale for depression, Brief psychiatric rating scale.

DEVELOPMENT OF PSYCHOLOGICAL TESTS

Several steps are involved in development of psychological tests. These include:

❶ *Analysis of the situation*: In the first step detailed analysis of the psychological processes required for successful performance of the task in question is carried out.

❷ *Tentative selection of the test items*: In the second step after the analysis has been made the psychologist selects tests already available or devices tests, which he feels will measure the processes.

❸ *Development of standardized procedures*: Psychological tests are administered and scored in the same way for every individual tested in order to obtain consistent results.

❹ *Administration of the test to a representative group*: In this step the psychologist administers the test to a representative group of subjects to see if they score the way expert judgment or other evidence suggests. In this way psychologists are able to determine the effectiveness of the test.

❺ *Final selection of the test items*: In this process many test items are either discarded or revised, so that they contribute more directly to the overall purpose of the test. This procedure is called item analysis. The final selection of items is based on empirical findings.

❻ *Evaluation of the final test*: Effectiveness of the final test is evaluated in terms of a specified criterion.

CHARACTERISTICS OF PSYCHOLOGICAL TESTS

Carefully developed and researched psychological tests have several characteristics:

❶ *Standardization*: It refers to the consistency or uniformity of the conditions and procedures for administering a test. To achieve standardization, people must be tested under uniform conditions.

❷ *Objectivity*: It refers primarily to the scoring of the test results. The scoring process must be free of subjective judgment or bias on the part of the scores.

❸ *Test norms*: To interpret the results of a psychological test, a frame of reference or point of comparison must be established, so that the performance of one person can be compared with the performance of others. This is accomplished by means of test norms. The distribution of test scores of a large group of people is similar

in nature to the individual being tested. For example, a science graduate applies for a job that requires mechanical skills and achieves a score of 83 on a test of mechanical ability. This score alone tells us nothing about the level of the applicant's skill, but if we compare that score of 83 with the test norms—the distribution of scores on the test from a large group of science graduates—then we can ascribe some meaning to the individual score. If the mean of the test norms is 80 and the standard deviation is 10, we know immediately that an applicant who scores 83 has only an average or moderate amount of mechanical ability. With this comparative information, we can evaluate objectively the applicant's chances of succeeding on the job relative to the other applicants tested.

❹ *Reliability*: It refers to the consistency of a person's scores. For example, a boy takes a cognitive ability test and achieves a mean score of 100 and after one week if we repeat the test and he achieves a mean score of 72, we would describe the test as unreliable because it yields inconsistent measurements.

❺ *Validity*: It refers to the test's accuracy in measuring, what it is supposed to measure. For example, if a test is a valid measure of intelligence, people's scores on that test should be strongly correlated with their grades in school.

PRINCIPLES OF PSYCHOLOGICAL TESTS

❶ Psychological tests should have three components, i.e. the standard, content and the procedure, that make it possible for anybody to administer it anywhere, anytime.

❷ Tests should have norms to compare an individual test score to the score of a known group, who have taken the test.

❸ Test items are of high technical quality prepared by experts, pretested and selected on the basis of difficulty, discriminating power and relationship to a clearly defined rigid set of specifications.

❹ Directions for administrating scores are precisely stated, so that procedures are standard for different users of the test.

❺ A test manual and other accessory materials are provided as a guide for administration, scoring, evaluating its technical qualities and for interpreting and using the results.

USES OF PSYCHOLOGICAL TESTS

❶ It is easier to get information from tests than by clinical interview.

❷ The information from tests is more scientifically consistent than the information from a clinical interview.

❸ They assist in diagnosis. For example, Rorschach Inkblot Test.

❹ They assist in the formulation of psychopathology and identification of areas of stress and conflict. For example, Thematic Apperception Test.

❺ They help to determine the nature of deficits present. Example: Cognitive neuropsychological assessments.

❻ They help in assessing severity of psycho-pathology and response to treatment. For example, Hamilton rating scale for depression, brief psychiatric rating scale.

❼ They help in assessing general characteristics of the individual. Example: assessment of intelligence, assessment of personality. Personality tests help us understand an individual's interpersonal style, basic personality traits and emotional functioning. In addition to clinical measures for things like depression, mood disorders or anxiety, these kinds of tests may also help identify general personality traits such as introversion vs. extroversion; dominance vs. submissiveness, leadership style, etc. These personality factors relate to a wide variety of issues in one's life including school or work performance, marital or family concerns and overall happiness.

❽ These tests are also used in forensic evaluations, litigation, family court issues or criminal charges.

❾ These tests assess level of functioning or disability, help direct treatment and assess treatment outcome.

LIMITATIONS OF PSYCHOLOGICAL TESTS

❶ No psychological test is ever completely valid or reliable, because the human psyche is just too complicated to know anything about it with full confidence. That is why there can be uncertainty about a case even after extensive testing.

❷ Many applicants experience considerable test anxiety.

❸ Negative attitudes toward psychological tests may also lower applicant's motivation to perform well on the tests, which in turn, reduces the predictive validity of the tests.

❹ Administration and interpretation of the test is done only by qualified psychologists.

INTERPRETATION OF PSYCHOLOGICAL TESTS

The integration of test findings into a comprehensive, meaningful report is probably the most difficult aspect of psychological evaluation. Inferences from various tests must be related to one another in terms of clinicians' confidence in them and of a patient's presumed level of awareness that consciousness is being tapped.

Most clinicians follow some general outline in preparing a psychological report, such as test behavior, intellectual functioning, personality functioning (reality testing ability, impulse control, manifestation of depression and guilt, manifestations of major dysfunction, major defenses, overt symptoms, interpersonal conflicts, self-concept, affects), inferred diagnosis, degree of present overt disturbances, prognosis for social recovery, motivation for personality change, primary assets and weaknesses, recommendations and summary.

ROLE OF A NURSE IN PSYCHOLOGICAL ASSESSMENT

❖ Nurses should become familiar with the many standardized psychological tests that are available to enhance each stage of the nursing process.

❖ These tests will help in providing care and provide measurable indicators of treatment outcome. For example, if the nurse is caring for a patient with depression, it would be helpful to use one of the depression rating scales with the patient, at the beginning of care/treatment to establish a baseline profile of the patient's symptoms and help confirm the diagnosis. The nurse might then administer the same scale at various times during the course of treatment to measure the patient's progress.

❖ A nurse should have knowledge about all the psychological tests, which will enable her to clarify the patient's and relative's doubts regarding the psychological tests they have to undergo.

❖ The nurse should reassure the patient about the safety of the tests and confidentiality of the observations of the psychologist. Psychological tests are another source of data for the nurse to use in planning care for the patient.

REVIEW QUESTIONS

Short Essays

1. Characteristics and uses of psychological tests. *(Mar 2012)*
2. Types of psychological tests.
3. Development of psychological tests.
4. Role of nurse in psychological assessment.

Individual Differences

Individuals differ from each other. One individual is never like another in all respects. Each one has his own peculiarities, which presents him as a separate individual from the others.

In psychological terminology, differences between individuals that distinguish or separate them from one another and make one distinct, unique and stand out from the rest are termed as individual differences.

MEANING OF INDIVIDUAL DIFFERENCES

According to 'Dictionary of Education' by Carter B. Good—1959:

❶ Individual differences stand for the variations or deviations among individuals in regard to a single characteristic or a number of characteristics.

❷ Individual differences stand for those differences, which in their totality distinguish one individual from another.

TYPES OF INDIVIDUAL DIFFERENCES

Physical or Physiological Differences

Physical differences among individuals are related to the differences created on account of the differences in terms of physical make up of our bodies. Individuals differ in height, weight, color of skin, color of eyes and hair, size of hands, arms, feet, mouth, nose, waistline, structure and functioning of internal organs, facial expression and mannerisms of speech, walk, hairstyle and other physical characteristics.

Psychological Differences

Psychological make up generates differences among us in terms of varying intellectual potentialities, interests, attitudes, emotions, social and moral development, etc.

Types of Psychological Differences

❶ *Mental differences*: People differ in intellectual ability and capacities like reasoning and thinking, power of imagination, creative expression, concentration, etc.

❷ *Differences in intelligence level*: Intelligence level differs from individual-to-individual. We can classify the individuals from supernormal (IQ above 120) to idiots (IQ from 0–50) on the basis of their intelligence level.

❸ *Differences in attitudes*: Individuals are found to possess varying attitudes towards different people, groups, objects and ideas. Their attitudes may be positive, negative or somewhat indifferent in nature.

❹ *Emotional differences*: The individuals also differ in the manner they express their emotions. Some are emotionally stable and mature, while others are emotionally unstable and immature.

❺ *Differences in motor ability*: There exists a wide difference in motor abilities such as reacting time, speed of action, steadiness, rate of muscular movement and resistance to fatigue, etc. At every age level differences in motor ability are visible. Some people can perform mechanical tasks with ease and comfort, while others even though at

the same level, experience much difficulty in performing similar tasks.

❻ *Differences in interests and aptitudes*: Variations occur among individuals in relation to interests. Some take interest in meeting people; attending social functions, etc. while others prefer solitude and avoid social gatherings. Some have mechanical aptitude, while the others have scholastic, musical or artistic aptitudes.

❼ *Differences in social and moral development*: Some are found to be adjusted properly in the social situations and lead a happy social life. Others are asocial or antisocial. Similarly people are found to differ in respect of ethical and moral sense.

No two individuals are exactly the same. Individual differences in personality and temperament can be observed from the day the child is born.

CAUSES OF INDIVIDUAL DIFFERENCES

Individual differences are also caused by hereditary and environmental factors. A child comes to this world with certain traits, which determine his individual capabilities and thus he differs from others on account of heredity. Also each child is born in a different environment from the other; therefore whatever traits he acquires during his lifetime are usually different from the others.

Heredity

❖ People belong to different hereditary endowments and characteristics. The heredity decides the path of the progress and development of an individual.

❖ Heredity provides the limits of one's growth and development in various dimensions and aspects of one's personality and thus variations in hereditary characteristics cause differences between individuals.

❖ Heredity not only contributes directly towards the differences in individuals in respect of their color of the skin, eyes and shape, composition and working of various internal as well as external bodily organs, but also makes contributions indirectly by creating differences in the individuals in relation to sex, intelligence and other specific abilities.

Environment

❖ The environment is every thing that affects the individual except his genes. It covers all the outside factors that act on the individual, since he begins life.

❖ The first environment for a child is the mother's womb. The fetus gets its nourishment from the blood stream of its mother. The physiological and psychological states of the mother during pregnancy, her habits and interests, all influence the development of the fetus.

❖ After birth the child is exposed to numerous environmental factors such as food, water, climate, physical atmosphere at home, school, village, parents, members of the family, friends, neighbors, teachers, society, mass media, recreation, religious places, etc. These different environmental factors have a desirable impact on the physical, social, emotional, intellectual, moral and aesthetic development of the individual.

❖ The same geographical environment does not guarantee the same physiological effects. If children of common heredity are reared apart in different environments, they will differ considerably from each other.

Differences between the individuals is normally attributable to both heredity and environment, i.e. the hereditary characteristics and traits the individual has, as well as the physical, social, psychological stimulation they receive from their environments. Both hereditary and environmental factors are said to be the sole determinants of the wide individual differences found in human beings. The influence of heredity and environment cannot be clearly demarcated. They interact, so subtly that it is impossible to say, which of these is the strongest factor. So, heredity and environment are complementary and not conflicting factors. Nature and nurture are equally important.

INDIVIDUAL DIFFERENCES IN HEALTH AND ILLNESS

A very important aspect of understanding patients is to recognize and accept the fact of individual difference among patients. No two patients are alike. They are different from each other intellectually, emotionally and socially. The causes for these individual differences are:

❶ Hereditary factors
❷ Culture
❸ Educational level
❹ Socioeconomic status
❺ Age
❻ Occupation
❼ Coping factors
❽ Nature and type of illness, etc.

Due to these Variations

❖ Some patients are cooperative and friendly and react in a cordial manner, while others remain aloof and in some extreme cases, antagonistic.

❖ Some patients appear worried, tense and apprehensive, while others are by nature cheerful and appear to be reasonably contended.

❖ Some patients understand quickly and respond to instructions readily, while others do not follow instructions at all.

❖ Some patients are selfish and demanding asking for attention.

❖ Some patients are very sensitive to pain and discomfort. They remain tense and apprehensive and do not relax easily. Hence they do not cooperate well during their treatment. On other hand some remain calm and show little apprehension. They face the reality boldly.

❖ Some patients express their problems dramatically and are more or less childish and immature. They crave for attention and sympathy from others.

❖ Each of these patients requires special and individualized nursing care. It is only a sympathetic and understanding nurse who can make the necessary adjustments, which meet these individual differences.

NURSING IMPLICATIONS OF INDIVIDUAL DIFFERENCES

❖ Knowledge of individual differences helps the nurse to understand various reactions of patients towards illness. In clinical practice the nurse will observe patients behaving differently. Nurse with the knowledge of individual differences can very well-understand the reason for differences in their reactions towards illness.

❖ This knowledge helps the nurse to provide individualized care to the patients.

❖ In educational set up, understanding of individual differences helps in planning course material and training program. The knowledge of individual differences helps the nurse educators to recognize that all students do not learn in a similar way, some are fast learners, others are slow, some can concentrate for long hours, other require more frequent rest periods, etc.

❖ Similarly all teachers are not alike; some have good expression and ability to explain, while some do not.

❖ Understanding of individual differences of the teachers and the learners can help in matching teaching and learning styles for better academic results.

REVIEW QUESTIONS

Long Essays

1. What is the nature and cause of individual differences? (*May 2007*)
2. Explain heredity and environment and discuss their role in causing individual differences. (*Nov 2003*)

Short Essays

1. Explain the role of environment in causing individual differences. (*Oct 2007*)
2. Nursing implications of individual differences.
3. Describe individual differences in illness—Role of a nurse.

Short Answer

1. Individual differences. (*Apr 2005*)

Glossary

A

Ability

A general term referring to the potential for acquisition of a skill; the term covers intelligence and specific aptitudes.

Abnormal Behavior

Behavior which deviates from what is considered normal; usually refers to maladaptive behavior.

Absolute Threshold

The smallest intensity of a stimulus that must be present for the stimulus to be detected.

Accommodation, Visual

A process by which the lens of the eye varies its focus. In Piaget's theory of cognitive development, it refers to the process by which an infant modifies a pre-existing schema in order to include a novel object or event.

Achievement Motive

An urge to succeed, to perform well or better than others.

Achievement Test

A test designed to determine a person's level of knowledge in a given subject area.

Adaptation

An adjustment in sensory capacity following prolonged exposure to stimuli.

Adolescence

The period of life from puberty to the completion of physical growth.

Alarm Reaction

The first stage of the general adaptation syndrome; consists of prompt responses of the body, many of them mediated by the sympathetic system, which prepare the organism to cope with stressors.

All-or-none Law

Principle that nerve fibers respond completely or not at all.

Altruism

Helping behavior that is beneficial to others, but clearly requires self-sacrifice.

Amnesia

Generally, any loss of memory; often applied to situations in which a person forgets his or her own identity and is unable to recognize familiar people and situations.

Anal Stage

According to Freud, a stage from 12 to 18 months to 3 years of age, in which a child's pleasure is centered on the anus.

Antisocial Personality Disorder

A disorder in which individuals tend to display no regard for the moral and ethical rules of society or the rights of others.

Anxiety

A state of apprehension, tension and worry.

Approach-approach Conflict

Conflict in which a person must choose between two good things.

Approach-avoidance Conflict

Conflict in which the person feels both positively and negatively about the goal.

Aptitude

Specific ability indicative of one's potentiality to get desired future success.

Attention

Concentration of mental activity.

Attitudes

Learned predispositions to respond in a favorable or unfavorable manner to a particular person, behavior, belief or thing.

Attribution

A process by which we attempt to explain the behavior of other people. Attribution theory deals with the rules people use to infer the causes of observed behavior.

Autocratic Leadership

Leadership, in which the leader holds most authority and closely controls choices.

Avoidance-avoidance Conflict

A situation in which an individual is caught between two negative goals; as the individual tries to avoid one goal, he or she is brought closer to the other.

B

Behavior

Anything a person or animal does that can be observed in some way.

Behavior Modification

Change in behavior brought about by operant conditioning techniques.

Beliefs

Cognitions or thoughts about the characteristics of objects.

C

Cannon-Bard Theory of Emotion

A belief that both physiological and emotional arousal are produced simultaneously by the same nerve stimulus.

Case Study

An in-depth, intensive investigation of an individual or small group of people.

Catharsis

A process involving the release of emotional tension through expression of emotion.

Central Nervous System (CNS)

A central nervous system that includes the brain and spinal cord.

Central Traits

Major traits considered in forming impressions of others.

Cerebellum

Part of the brain close to the brainstem, responsible for body balance and coordination of body movements.

Cerebral Cortex

The 'new brain', responsible for the most sophisticated information processing in the brain; contains the lobes.

Cerebrum

Largest part of the brain composed of two cerebral hemispheres, left brain and the right brain.

Character

A judgment of an individual based upon certain qualities usually related to a value system.

Chromosomes

Rod-shaped structures that contain the basic hereditary information.

Chronological Age

Age in years or calendar age.

Classical Conditioning

A type of learning in which a neutral stimulus comes to bring about a response after it is paired with a stimulus that naturally brings about that response.

Clinical Psychology

A branch of psychology concerned with psychological methods of recognizing and treating psychological disorders and research into their causes.

Cognitive Approaches of Motivation

A theory suggesting that motivation is a product of people's thoughts and expectations—their cognitions.

Cognitive Development

The process by which a child's understanding of the world changes as a function of age and experience.

Cognitive Psychology

A branch of psychology that focuses on the study of cognition.

Cognitive-behavioral Approach

An approach used by cognitive therapists that attempts to change the way people think through the use of basic principles of learning.

Cognitive-social Learning Theory

A study of thought processes that underlie learning.

Collective Unconscious

A set of influences we inherit from our own particular ancestors, the whole human race and even animal ancestors from the distant evolutionary past.

Community Psychology

A branch of psychology that focuses on the prevention and minimization of psychological disorders in the community.

Compliance

Conforming behavior that occurs in response to direct social pressure.

Concept

Concept is an idea or a group of ideas used to orgnize events and objects, often arranged in hierarchical order from general to more specific. Such cutegroization of ideas helps people to plan and understand new information.

Conditioned Response (CR)

The learned or acquired response to a stimulus that did not evoke the response originally.

Conditioned Stimulus (CS)

A previously neutral stimulus that comes to elicit a conditioned response through association with an unconditioned stimulus.

Conflict

Conflict means a painful emotional state which results from a tension between opposed and contradictory wishes.

Conformity

A change in behavior or attitude brought about by a desire to follow the beliefs or standards of other people.

Consciousness

The awareness of the sensations, thoughts and feelings being experienced at a given moment.

Continuous Reinforcement Schedule

Reinforcement of behavior every time it occurs.

Control Group

A group that receives no treatment in an experiment.

Convergent Thinking

The ability to produce responses that are based primarily on knowledge and logic.

Coping

Efforts to control, reduce or learn to tolerate the threats that lead to stress.

Counseling

Counseling is a process of enabling the individual to know himself and his present and possible future situations, in order, that he may make substantial contributions to the society and solve his own problems through a face-to-face personal relationship with the counselor.

Creativity

The combining of responses or ideas in a novel way.

Crystallized Intelligence

The accumulation of information, skills and strategies learned through experience that can be applied in problem-solving situations.

D

Decay

The loss of information in memory through its non-use.

Declarative Memory

Memory for factual information: names, faces, dates and the like.

Defence Mechanisms

Strategies that people use to deal with anxiety, which are largely unconscious.

Dendrites

A cluster of fibers at one end of a neuron that receive messages from other neurons.

Dependent Variable

The variable that is measured and is expected to change as a result of changes caused by the experimenter's manipulation.

Developmental Psychology

The branch of psychology that studies the patterns of growth and change occurring throughout life.

Difference Threshold

The smallest level of stimulation required to sense that a change in stimulation has occurred.

Discrimination

Negative behavior towards members of a particular group.

Displacement

A defence mechanism through which a person vents negative feelings against a substituted acceptable object.

Dissociative Amnesia

A disorder in which the person has significant, selective memory loss.

Divergent Thinking

The ability to generate unusual, yet appropriate responses to problems or questions.

Dominant Gene

A gene with the capacity to express itself wholly, to the exclusion of the other member of the gene pair.

Double Approach-avoidance Conflict

A conflict in which the person has both negative and positive feelings about either choice.

Down Syndrome

Severe mental retardation caused by an extra chromosome in a faulty egg at the time of conception.

Drive

Motivational tension or arousal, that energizes behavior in order to fulfill some need.

Drive Theories

Theories of motivation that emphasize the role of internal factors.

E

Eclectic Approach to Therapy

An approach to therapy that uses techniques taken from a variety of treatment methods, rather than just one method.

Ego

The part of the personality that provides a buffer between the id and the outside world.

Egocentric Thought

A way of thinking in which the child views the world entirely from his or her own perspective.

Ego Integrity Versus Despair Stage

According to Erikson, a period from late adulthood until death during which we review our life's accomplishments and failures.

Emotional Intelligence

The set of skills that underlie the accurate assessment, evaluation, expression and regulation of emotions.

Emotions

It is a feeling state involving thoughts, physiological changes and an outward expression or behavior.

Endocrine Gland

A ductless gland, which secretes hormones into the bloodstream.

Episodic Memory

Episodic memory is a category of long-term declarative memory that involves the recollection of specific events, situations and experiences. In addition to the overall memory of the event itself, it also involves memory of the location and time that the event occurred.

Esteem Needs

In Maslow's theory, needs for prestige, success and self-respect; they can be fulfilled after belongingness and love needs are satisfied.

Evolutionary Psychology

The branch of psychology that seeks to identify behavior patterns that are a result of our genetic inheritance from our ancestors.

Experiment

The investigation of the relationship between two (or more) variables by deliberately producing a change in one variable in a situation and observing the effects of that change on other aspects of the situation.

Experimental Bias

Factors that distort the manner in which the independent variable affects the dependent variable in an experiment.

Experimental Group

Any group receiving a treatment in an experiment.

Experimental Manipulation

The change that an experimenter deliberately produces in a situation.

Explicit Memory

Intentional or conscious recollection of information.

Extinction

The decrease in frequency and eventual disappearance, of a previously conditioned response; one of the basic phenomena of learning.

Extrasensory Perception (ESP)

The supposed ability of some people to gain knowledge about the world through avenues other than the sensory channels.

Extrinsic Motivation

Motivation directed towards goals, external to the person.

Extrovert

Jung's term to describe a personality that focuses on social life and the external world instead of its internal experience.

F

Figure-ground Relationship

Perception typified by one feature standing out against a larger background.

Fixation

In psychoanalytic theory, failure of some personality characteristics to advance beyond a particular stage of psychosexual development.

Fixed Interval Schedule

A schedule that provides reinforcement for a response only if a fixed time period has elapsed, making overall rates of response relatively low.

Fixed Ratio Schedule

A schedule whereby reinforcement is given only after a certain number of responses are made.

Fluid Intelligence

Intelligence that reflects information processing capabilities, reasoning and memory.

Forgetting

Apparent loss of information that has been stored in long-term memory (LTM).

Fraternal Twins

Twins who develop from two different fertilized eggs, and who consequently are different in hereditary characteristics as ordinary brothers and sisters. Also called dizygotic (DZ) twins.

Free Association

A psychoanalysis technique in which the patient expresses whatever comes into his mind for revealing his unconscious.

Frustration

Blocking of goal-directed behavior.

Functional Fixedness

The tendency to think of an object only in terms of its typical use.

Functionalism

An early approach to psychology that is concentrated on what the mind does functions of mental activity and the role of behavior in allowing people to adapt to their environments.

Fundamental Attribution Error

A tendency to attribute others behavior to dispositional causes and the tendency to minimize the importance of situational causes.

G

Galvanic Skin Response

A change in electrical resistance of the skin that may occur during many emotions.

General Adaptation Syndrome (GAS)

A theory developed by Selye that suggests that a person's response to stress consists of three stages: alarm, resistance and exhaustion.

Generativity

According to Erikson, to take an interest in guiding the next generation.

Genes

The parts of the chromosomes through which genetic information is transmitted.

Genital Stage

According to Freud, the period from puberty until death, marked by mature sexual behavior (i.e. sexual intercourse).

Gestalt (ge. stalt) Psychology

An approach to psychology that focuses on the organization of perception and thinking in a 'whole' sense, rather than on the individual elements of perception.

Gestalt Laws of Organization

A series of principles that describe how we organize bits and pieces of information into meaningful wholes.

Gestalt Therapy

An approach to therapy that attempts to integrate a client's thoughts, feelings and behavior into a unified whole.

Group Therapy

Therapy in which people discuss problems in a group.

H

Health Psychology

The branch of psychology that investigates the psychological factors related to wellness and illness, including the prevention, diagnosis and treatment of medical problems.

Homeostasis

A state of physiological equilibrium that is maintained by innate and automatic regulatory mechanisms.

Hormones

Chemicals that circulate through the blood and affect the functioning or growth of other parts of the body.

Humanistic Approaches to Personality

The theory that people are basically good and tend to grow to higher levels of functioning.

Hypnosis

A trance like state of heightened susceptibility to the suggestions of others.

I

Id

A concept in Freudian psychology that relates with unconscious, amoral and irresponsible personality. It functions on the pleasure principle and is the reservoir of instincts.

Identification

The process of trying to be like another person as much as possible, imitating that person's behavior and adopting similar beliefs and values.

Identity Versus Role Confusion Stage

It is the fifth stage of Erik Erikson's theory of psychosocial development; occurs during adolescence between the ages of approximately 12 to 18. At this stage, adolescents are in search of an identity to determine one's unique qualities that will lead them to adulthood.

Implicit Memory

Implicit memory also known as unconscious or non-declarative memory is a type of memory in which previous experiences aid in the performance of a talk without conscious awareness of these previous experiences.

Incentive

A kind of reward that reinforces the behavior in its own right.

Incentive Approaches to Motivation

The theory suggesting that motivation stems from the desire to obtain valued external goals or incentives.

Independent Variable

The variable that is manipulated by an experimenter.

Inductive Reasoning

The logical process by which general principles are inferred from particular instances.

Industrial Organizational (I/O) Psychology

The branch of psychology that focuses on work and job-related issues, including productivity, job satisfaction, decision making and consumer behavior.

Industry Versus Inferiority Stage

According to Erikson, the last stage of childhood, during which children (aged 6 to 12 years) either develop positive social interactions with others or feel inadequate and become less sociable.

Infancy

The period of development between the neonatal period and the appearance of useful language; the upper limit is about 18 months.

Integrity

According to Erikson, a state of fulfillment and completeness.

Intellectualization

A defence mechanism in which a person reduces anxiety by thinking of the anxiety producing situation in unemotional or abstract terms.

Intelligence

The ability to learn from experience, think in abstract terms and deal effectively with one's environment.

Intelligence Quotient (IQ)

A measure of intelligence. It is equal to a person's mental age divided by chronological age and multiplied by 100.

Intelligence Tests

Tests devised to identify a person's level of intelligence.

Interference

The phenomenon by which information in memory displaces or blocks out other information, preventing its recall.

Interference Theory of Forgetting

The theory of forgetting holding that we forget things because other knowledge gets in the way.

Intimacy Versus Isolation Stage

According to Erikson, a period during early adulthood that focuses on developing close relationships.

Intrinsic Motivation

Desire to perform an activity for its own sake.

Introspection

A procedure used to study the structure of the mind, in which subjects are asked to describe in detail what they are experiencing when they are exposed to a stimulus.

Introvert

A shy person who usually withdraws and prefers to be alone.

J

James-Lange Theory of Emotion

The theory states that the stimulus first leads to bodily responses and then the awareness of these responses constitutes the experience of emotion.

L

Laissez-Faire Leadership

Leadership in which the leader has poorly defined lines of authority and responsibility often allowing people to do as they please.

Language

Communication in which word symbols are used in various combinations to convey meaning.

Latency Period

According to Freud, the period between the phallic stage and puberty during which children temporarily put aside their sexual interests.

Latent Learning

Learning, in which a new behavior is acquired, but is not demonstrated until reinforcement is provided.

Learned Helplessness

A condition of apathy or helplessness created experimentally by subjecting an organism to unavoidable trauma such as shock, heat or cold.

Learning

Relatively permanent changes in the behavior of the learner brought about by experience or training.

Learning Theory Approach

The theory suggesting that language acquisition follows the principles of reinforcement and conditioning.

Libido

A concept in Freud's psychology denoting the basic sexual drive or instinct responsible for every aspect of a person's behavior.

Life Review

The process in which people in late adulthood examine and evaluate their lives.

Limbic System

A group of closely interconnected structures at the core of the brain that works with the hypothalamus to control the emotions and motivational processes.

Long-term Memory

Memory that stores information on a relatively permanent basis, although it might be difficult to retrieve.

M

Maturation

The changes in behavior of an organism resulting from physiological growth, the blueprints of which are provided by heredity.

Medulla

The part of the hindbrain that regulates breathing, heart rate and blood pressure.

Memory

The process by which we encode, store and retrieve information.

Memory Trace

A physical change in the brain that occurs when new material is learned.

Mental Age

The average age of individuals who achieve a particular level of performance in a test.

Mental Retardation

Having significantly below average intellectual functioning and limitations in at least two areas of adaptive functioning.

Midbrain

Area of the brain that controls auditory and visual responses.

Minnesota Multiphasic Personality Inventory (MMPI)

A pencil and paper version of a psychiatric interview that consists of more than 550 statements concerning attitudes, emotional reactions, physical and psychological symptoms and experiences. Test takers respond to each statement by answering, 'True', 'False' or 'Cannot Say'.

Modeling

A type of imitation in which one individual does what he/she sees his/her model doing.

Morale

A positive group feeling of satisfaction and enthusiasm for a task.

Motivation

The factors that direct and energize the behavior of humans and other organisms.

Motivational Cycle

A cycle including arousal of the motive, goal-directed behavior and satisfaction.

Motor (Efferent) Neurons

Neurons that communicate information from the nervous system to muscles and glands of the body.

Motor Area

The part of the cortex that is largely responsible for the voluntary movement of particular parts of the body.

Multiple Approach-avoidance Conflict

A motivational conflict in which several incompatible positive and negative goals are involved; characteristic of many of life's major decisions.

Myelin Sheath

Specialized cells of fat and protein that wrap themselves around the axon, providing a protective coating.

N

Naturalistic Observation

A psychological method of studying behavior by observing the subjects in their natural settings.

Need

Deprivation caused by a lack of something necessary to survival or well being.

Need for Achievement

A stable, learned characteristic in which satisfaction is obtained by striving for attaining a level of excellence.

Need for Affiliation

An interest in establishing and maintaining relationships with other people.

Need for Power

A tendency to seek impact, control or influence over others, and to be seen as a powerful individual.

Need Reduction

The satisfaction of one's biological or socio-psychological needs.

Negative Reinforcer

An unpleasant stimulus whose removal leads to an increase in the probability that a preceding response will occur again in the future.

Neo-Freudian Psychoanalysts

Psychoanalysts who were trained in traditional Freudian theory but who later rejected some of its major points.

Nerve Fiber

An axon or dendrite of a neuron, many of which together form a nerve, transmitting nerve impulses to and from the central nervous system.

Nervous System

Central control system of the body, which organizes and coordinates the functions of the organism.

Neural Stimulus

A stimulus that, before conditioning, does not naturally bring about the response of interest.

Neurotransmitters

Chemicals that carry messages across the synapse to the dendrite (and sometimes the cell body) of a receiver neuron.

Norm

A rule which guides behavior.

O

Obedience

Conforming behavior in reaction to the commands of others.

Observational Learning

Learning through observing the behavior of another person.

Oedipus Conflict

A child's sexual interest in his or her opposite-sex parent, typically resolved through identification with the same sex parent.

Operant Conditioning

Learning in which a voluntary response is strengthened or weakened, depending on its favorable or unfavorable consequences.

Oral Stage

First stage in Freud's psychoanalytic theory of personality; during first 18 months of life in which intense pleasures are derived from activities that involve the mouth.

P

Paresthesia

A condition in which a person experiences false sensations.

Parasympathetic System

The part of the autonomic nervous system, which tends to be active when we are calm and relaxed; builds up and conserves the body's store of energy.

Perception

A process of organizing environmental stimuli into some meaningful patterns or wholes.

Perceptual Constancy

A tendency to perceive the stimuli in the environment as unchanging, though in reality there may be changes in shape, size or other characteristics.

Peripheral Nervous System

The part of the nervous system that includes the autonomic and somatic subdivisions made up of long axons and dendrites, it branches out from the spinal cord and brain and reaches the extremities of the body.

Personality

The pattern of enduring characteristics that differentiates a person—the patterns of behaviors that make each individual unique.

Personality Disorder

A mental disorder characterized by a set of inflexible, maladaptive personality traits that keep a person away from functioning properly in society.

Personality Inventory

An inventory for self-appraisal, consisting of many statements or questions about personal characteristics and behavior that the person judges to apply or not to apply to him or her.

Persuasion

The act of giving information, which causes a person to do or believe something.

Phallic Stage

According to Freud, a period beginning around age 3 during which a child's interest focuses on the genitals.

Phobias

Intense, irrational fears of specific objects or situations.

Pituitary Gland

The 'master gland,' the major component of the endocrine system, which secrets hormones that control growth.

Pleasure Principle

A principle in Freudian theory emphasizing the immediate gratification regardless of the consequences, a function of the id.

Positive Reinforcer

A stimulus added to the environment that brings about an increase in a preceding response.

Positive Transfer

A type of transfer in which one learning helps facilitate the other learning.

Preconscious

Memories and thoughts of which a person is not aware at a particular time, but which may easily become conscious.

Prejudice

An unjustified attitude, fairly strong, usually in an unfavorable direction and not in line with the facts.

Proactive Interference

Forgetting caused by the prior learning of other material.

Projection

A defense mechanism in which conflict is dealt with ascribing one's own anxiety-provoking motives to someone else; blaming others; prominent in paranoid disorders.

Projective Personality Test

A test in which a person is shown an ambiguous stimulus and asked to describe it or tell a story about it.

Proximity

A principle of perceptual organization stating that nearness or closeness of objects leads the perceiver to perceive them in patterns.

Psychoanalytic Theory

Freud's theory that unconscious forces act as determinants of personality.

Psychodynamic Perspective

The approach based on the belief that behavior is motivated by unconscious inner forces over which the individual has little control.

Psychology

The scientific study of behavior and mental processes.

Psychosexual Stages

The five stages of psychological development as put by Freud in his personality theory.

Psychosocial Development

Development of individuals' interactions and understanding of each other and of their knowledge and understanding of themselves as members of society.

Psychosomatic Illness

A condition in which emotional stress causes physical illness.

Psychotherapy

Treatment in which a trained professional, a therapist, uses psychological techniques to help someone overcome psychological difficulties and disorders, resolve problems in living or bring about personal growth.

Punishment

A stimulus which decreases the probability that a previous behavior will occur again.

R

Rationalization

A defence mechanism through which a person gives false reasons for his behavior.

Reaction Formation

A defence mechanism through which a person strongly expresses the reverse of what he feels.

Recall

The process of remembering without the aid of extra cues.

Recessive Gene

Gene whose hereditary potential is not expressed when it is paired with a dominant gene.

Recognition

The ability to look at several things and select one that has been seen or learned before.

Reflex

Involuntary, unlearned, immediate response to a stimulus.

Regression

A defence mechanism in which a person copes with anxiety by retreating to childish or earlier forms of behavior; often encountered in children and adults faced with frustration and motivational conflict.

Reinforcement

The process of strengthening a response with the help of an appropriate stimulus making it more likely to recur.

Reinforcer

Any stimulus that increases the probability that a preceding behavior will occur again.

Repression

A defense mechanism through which a person unconsciously forgets unpleasant experiences.

Retention

Storage of learned material in memory.

Reticular Activating System (RAS)

Nervous system structure running through the hind-brain and midbrain to the hypothalamus responsible for general arousal of the organism.

Retrograde Amnesia

Forgetting events one was exposed to in the past.

Role

A behavior pattern expected from a person in a certain social position.

Rorschach Test

A test developed by Swiss psychiatrist Hermann Rorschach that consists of showing a series of symmetrical stimuli to people and then asking them to say what the figures represent to them.

S

Schachter-Singer Theory of Emotion

The belief that emotions are determined jointly by a non-specific kind of physiological arousal and its interpretation, based on environmental cues.

Schedules of Reinforcement

The frequency and timing of reinforcement following desired behavior.

Schemas

Organized bodies of information stored in memory that bias the way new information is interpreted, stored and recalled.

Scientific Method

The approach used by psychologists to systematically acquire knowledge and understanding about behavior and other phenomena of interest.

Self-actualization

According to Rogers, a state of self-fulfillment in which people realize their highest potential; the highest need in the hierarchical structure of needs proposed by Maslow, that drives an individual to discover one's self and fulfill one's potential.

Self-concept

The general ideas and feelings that one acquires about himself as a unique individual of special significance.

Self-esteem

Self-esteem often seen as a personality trait is used to describe a person's overall sense of self-worth or personal value. It involves a variety of beliefs about the self, such as the appraisal of one's own appearance, beliefs, emotions and behaviours.

Semantic Memory

Memory for general knowledge and facts about the world, as well as memory for the rules of logic that are used to deduce other facts.

Sensation

The processes by which our sense organs receive information from the environment.

Sensory Memory

The initial, momentary storage of information, lasting only an instant.

Shaping

The process of teaching a complex behavior by rewarding closer and closer approximations to the desired behavior, it is a technique in operant conditioning.

Short-term Memory (STM)

The type of memory helpful in retaining several items of information for about 20 seconds or so even if one gets no chance to rehearse or repeat them.

Skill

The ability to perform a specialized activity well.

Social Motives

Motives, usually learned in a social group, that require the presence or reaction of other people for their satisfaction.

Social Psychology

The study of how people's thoughts, feelings and actions are affected by others.

Somatoform Disorder

A behavioral disorders in which a person shows physical symptoms for which no physical cause can be found.

Somatotyping

Sheldon's system of classifying persons into certain body types according to the degree to which their somatic structure (body build) reflects certain physical characteristics.

Spontaneous Recovery

The recovery of part of the strength of a conditioned response some time after it has been extinguished.

Stereotypes

Generalized beliefs and expectations about social groups and their members.

Stimulus

The physical energy or action, which causes a response from an organism.

Stimulus Discrimination

A concept in the theory of conditioning emphasizing that an organism learns to react to differences in stimuli and to distinguish between them.

Stimulus Generalization

A concept in the theory of conditioning emphasizing that once an organism gets conditioned to respond to a specific stimulus, other, similar stimuli bring the same response.

Stimulus Variability

Innate performance for change in environmental stimuli.

Stress

The response to events that are threatening or challenging.

Structuralism

Wundt's approach, which focuses on the basic elements that form the foundation of thinking, consciousness, emotions and other kinds of mental states and activities.

Sublimation

A defense mechanism through which a person directs unacceptable desires into acceptable behavior.

Superego

According to Freud, the final personality structure to develop; it represents society's standards of right and wrong as handed down by a person's parents, teachers and other important figures.

Suppression

The act of consciously putting aside unacceptable feelings and desires.

Synapse

Fluid-filled space between the axon of one neuron and the receiving dendrite of the next that helps the flow of information through the nervous system.

T

Temperament

The hereditary emotional aspects of one's personality.

Temporal Lobes

Parts of the cerebrum at the sides of the head mainly responsible for hearing.

Thalamus

The egg-shaped part of the forebrain, which relays sensory information and controls sleep and wakefulness.

Thematic Apperception Test (TAT)

A test consisting of a series of ambiguous pictures about which the person is asked to write a story.

Theories

Broad explanations and predictions concerning phenomena of interest.

Thinking

Thinking is the processing of information mentally or cognitively by rearranging the information from the environment and the symbols stored in the past memory.

Thyroid Gland

Endocrine gland located below the larynx that secretes thyroxin, which controls metabolism.

Trait

Particular feature of an individual's personality that seems to stand out and endure over a vide variety of situations.

Trait Theory

A model of personality that seeks to identify the basic traits necessary to describe personality.

Transactional Analysis (TA)

Altering one's state of consciousness by focusing on one's breathing, while excluding all other thoughts.

Transduction

Process by which receptor cells transform physical energy into an impulse that the nervous system can carry.

Transference

In psychoanalysis, the process by which the patient transfers a variety of positive and negative reactions associated with parents and other childhood authority figures, directing these feelings towards the therapist.

Trust Versus Mistrust Stage

According to Erikson, the first stage of psychosocial development, occurring from birth to 18 months of age, during which time infants develop feelings of trust or lack of trust.

Type A Behavior Pattern

A pattern of behavior characterized by competitiveness, impatience, tendency toward frustration and hostility.

Type B Behavior Pattern

A pattern of behavior characterized by cooperation, patience, non-competitiveness and non-aggression.

U

Unconditional Positive Regard

An attitude of acceptance and respect on the part of an observer, no matter what the other person says or does.

Unconditioned Response (UCR)

A response that is natural and needs no training (e.g. salivation at the smell of food).

Unconditioned Stimulus (UCS)

A stimulus that brings about a response without having been learned.

Unconscious

A part of the personality of which a person is not aware and which is a potential determinant of behavior.

V

Variable-interval Schedule

A schedule whereby the time between reinforcements varies around some average rather than being fixed.

Variable-ratio Schedule

A schedule whereby reinforcement occurs after a varying number of reasons rather than after a fixed number.

Variables

Behaviors, events or other characteristics that can change or vary in some way.

Verbal Behavior

The use of spoken or written language in communicating with others.

Visual Acuity

Ability to distinguish fine details in the field of vision.

W

Withdrawal

A defense mechanism through which a person physically avoids unpleasant situations.

Working Memory

Memory that is stored for only a few seconds.

Z

Zygote

A new cell formed by the union of an egg and sperm.

Question Bank

CHAPTER 1
INTRODUCTION TO PSYCHOLOGY

1. Psychology is defined as the scientific study of:
   a. Mental disorders
   b. Various aspects of mental processes
   c. Various aspects of human relationships
   d. Human and animal behavior

2. Which of the following deals with the study of how a person's actions, feelings or thoughts are influenced by others?
   a. Social psychology
   b. Clinical psychology
   c. Educational psychology
   d. Health psychology

3. What is general psychology?
   a. That which deals with fundamental rules and principles of psychology
   b. That which deals with general behavior of people
   c. That which deals with general activities of an organism
   d. That which deals with normal behavior of a person

4. Behavior includes which of the following 'activities'?
   a. Motor
   b. Cognitive
   c. Affective
   d. All of the above

5. Who is the father of psychology?
   a. Sigmund Freud
   b. William James
   c. Ivan Pavlov
   d. Wilhelm Wundt

6. Understanding subject psychology is important for a nurse because:
   a. It helps the nurse to understand herself
   b. It helps the nurse to understand others
   c. It helps the nurse to improve situations by solving problems
   d. All of the above

7. Which of the following is the scientific method of psychology?
   a. Introspection method
   b. Observation method
   c. Experimental method
   d. Interview method

8. What is introspection?
   a. Self-motivation
   b. Self-observation
   c. Self-interest
   d. Self-learning

9. The first step in the scientific method involves:
   a. Replication of procedures
   b. Formulating an explanation
   c. Carrying out research
   d. Identifying questions of interest

10. The purpose of the control group in an experiment is to:
    a. Give a comparison that allows the independent variable to be judged
    b. Prevent the researcher from cheating
    c. Accommodate the extra participants
    d. Assist in the design of the research project

11. Scientists who are most likely to study the relationship between stress levels and an individual's likelihood of contracting a disease are _____ psychologists.

a. Counseling
b. Health
c. Cognitive
d. Developmental

12. Mental experiences operate on different levels of awareness. The level that best portrays one's attitudes, feelings and desires is the:
    a. Conscious
    b. Unconscious
    c. Preconscious
    d. Foreconscious

13. Wundt described psychology as the study of conscious experience, a perspective he called _____.

14. Early psychologists' studied the mind by asking people to describe what they were experiencing when exposed to various stimuli. This procedure is known as _____.

15. The statement, "In order to study human behavior, we must consider the whole of perception rather than its component parts" might be made by a person subscribing to the _____ perspective.

16. Which perspective suggests that abnormal behavior is largely the result of unconscious forces?

17. "Psychologists should worry only about behavior that is directly observable." This statement would most likely be made by a person using which psychological perspective?

18. The group in an experiment that receives no treatment is called the _____ group.

19. ──────── psychology describes the relation of physical environment with behavior.

20. ──────── psychology explains physiological basis of behavior.

▮ KEY

1. d	2. a	3. a	4. d
5. d	6. d	7. c	8. b
9. d	10. a	11. b	12. b
13. Structuralism		14. Introspection	
15. Gestalt		16. Psychodynamic	
17. Behavioral		18. Control	
19. Geo		20. Physiological	

CHAPTER 2
BIOLOGY OF BEHAVIOR

1. Which among the following is the basic unit of the nervous system?
   a. Brain
   b. Neuron
   c. Spinal cord
   d. Axon

2. Which among the following is a part of the neuron that receives messages from other neurons?
   a. Axons
   b. Terminal buttons
   c. Dendrites
   d. Cell bodies

3. A narrow gap that separates the neurons is:
   a. Axon tip
   b. Cell body
   c. Synaptic cleft
   d. None of the above

4. Information is passed from one neuron to another at synapses by:
   a. Cell membrane
   b. Neurotransmitters
   c. Nerve impulses
   d. None of the above

5. The part of the brain that regulates higher levels of cognitive and emotional functions is the:
   a. Cerebellum
   b. Cerebrum
   c. Limbic system
   d. None of the above

6. The brain structure located in the center of the brain, which has a role in emotions is:
   a. Cerebellum
   b. Limbic system
   c. Pituitary
   d. Caudate nucleus

7. The following plays an important role in long-term storage of information:
   a. Hypothalamus
   b. Thalamus
   c. Hippocampus
   d. Amygdala

8. The cerebrum controls:
   a. Cognitive functions
   b. Motor functions

c. Coordination

d. All of the above

9. What controls feeding, drinking, temperature regulation, sexual behavior, fighting or activity level?
   a. Basal ganglia
   b. Hypothalamus
   c. Thalamus
   d. Pituitary gland

10. The goal of physiological psychology is to understand the function of the brain and its relation to:
    a. Communication
    b. Behavior
    c. Biology
    d. Neurotransmitters

11. Which of the following areas of the brain deals with psychological processes like reasoning and memory?
    a. Motor area
    b. Premotor area
    c. Association area
    d. Sensory area

12. Two parts of the autonomic nervous system are:
    a. Brain and spinal cord
    b. Somatic and parasomatic
    c. Anterior and posterior
    d. Sympathetic and parasympathetic

13. Which of the following experiences do not easily reach to awareness?
    a. Conscious
    b. Preconscious
    c. Unconscious
    d. Semiconscious

14. The study of the inheritance of physical and psychological characteristics from ancestors is referred to as:
    a. Biopsychology
    b. Genetics
    c. Chromosomes
    d. Anthropology

15. Another way of stating the nature versus nurture issue is:

a. Heredity versus environment

b. Education versus nutrition

c. Physical versus mental activity

d. Learned versus unlearned behavior

16. After a successful job interview, Mr Abhishek felt relaxed and calm, he stopped sweating and felt hungry, which part of his nervous system was activated?
    a. Sympathetic
    b. Somatic
    c. Parasympathetic
    d. Central

17. How many chromosomes does a zygote contain?
    a. 2
    b. 23
    c. 46
    d. 92

18. Which of the following factors supports the nurture argument?
    a. Hereditary factors
    b Maturation
    c Genetic makeup
    d Environmental factors

19. The central nervous system is composed of the _____ and _____.

20. Each hemisphere controls the _____ side of the body.

21. Non-verbal realms, such as emotions and music, are controlled primarily by the _____ hemisphere of the brain, whereas the _____ hemisphere is more responsible for speaking and reading.

22. The left hemisphere tends to consider information _____, whereas the right hemisphere tends to process information _____.

▇ KEY

1. b	2. c	3. c	4. b
5. b	6. b	7. c	8. d
9. b	10. b	11. c	12. d
13. c	14. b	15. a	16. c
17. c	18. d		

19. Brain, spinal cord   20. Opposite

21. Right, left   22. Sequentially, globally

CHAPTER 3
COGNITIVE PROCESSES

Sensation, Perception and Attention

1. Stimulus operating on our nervous system is termed as:
   a. Sensation
   b. Observation
   c. Attention
   d. Perception

2. Which of the following factors influence an individual's perception?
   a Motives and needs
   b. Learning
   c. Person's mental set
   d. All of the above

3. According to which of the principles, items which are close together in space of time tend to be perceived as belonging together or forming an organized group?
   a. Similarity
   b. Proximity
   c. Good figure
   d. Closure

4. A common type of perceptual error found in a psychotic patient is:
   a. Illusion
   b. Hallucination
   c. Delusion
   d. Thought disorder

5. Concentration of consciousness upon one object rather than upon another is called:
   a. Observation
   b. Sensation
   c. Attention
   d. Perception

6. What is voluntary attention?
   a. It does not demand conscious effort on the subject
   b. It demands the conscious effort on the subject
   c. It demands single act of will
   d. It demands repeated acts of will

7. Certain situations neither demand any conscious effort nor strike to catch our attention but we still attend to it. It is:
   a. Voluntary attention
   b. Involuntary attention
   c. Habitual attention
   d. None of the above

8. A person busy writing an assignment hears a loud sound and immediately attends to it, this is an example of:
   a. Involuntary attention
   b. Voluntary attention
   c. Habitual attention
   d. Partial voluntary attention

9. Solving a mathematics problem is an example of:
   a. Voluntary attention
   b. Involuntary attention
   c. Habitual attention
   d. All of the above

10. The maximum amount of material that can be attended to in one period of attention is called:
    a. Variety of attention
    b. Span of attention
    c. Division of attention
    d. None of the above

11. The time range for visual span of attention is:
    a. 1/100 to 1/5 of a second
    b. 1/200 to 1/10 of a second
    c. 1/300 to 1/15 of a second
    d. 1/400 to 1/20 of a second

12. In visual span of attention at a brief glance how many units can be perceived?
    a. 4 or 5 units
    b. 6 or 7 units
    c. 7 or 8 units
    d. 8 or 9 units

13. Attending to two or more tasks simultaneously is termed as:
    a. Visual span of attention
    b. Auditory span of attention
    c. Division of attention
    d. Variety of attention

14. When we travel in the train we attend to the scenery as well as to the talks of our companions, this is called:
    a. Variety of attention
    b. Subjective factor of attention
    c. Objective factor of attention
    d. Division of attention

15. To achieve our goal we make deliberate effort and focus our conscious upon an object. It is termed as:
    a. Involuntary attention
    b. Voluntary attention
    c. Habitual attention
    d. Partially voluntary and partially involuntary attention
16. Leakage of LPG gas in your house catches your attention. It is an example of:
    a. Involuntary attention
    b. Habitual attention
    c. Voluntary attention
    d. None of the above
17. The attention which makes you wish every time you see the teacher is an example of:
    a. Voluntary attention
    b. Involuntary attention
    c. Habitual attention
    d. None of the above
18. A skillful knitter who can knit and read at the same time have learnt by long practice to knit quite automatically is an example of:
    a. Visual span of attention
    b. Auditory span of attention
    c. Division of attention
    d. Variety of attention
19. _____ is the stimulation of the sense organs; _____ is the sorting out, interpretation, analysis and integration of stimuli by our sense organs.
20. The terms absolute threshold refers to the _____ intensity of a stimulus that must be present for the stimulus to be detected.
21. When a car passes you on the road and appears to shrink as it gets farther away, the phenomenon of _____ permits you to realize that the car is not in fact getting smaller.

◼ KEY

1. a	2. d	3. b	4. b
5. c	6. b	7. c	8. a
9. a	10. b	11. a	12. a
13. c	14. d	15. b	16. a
17. c	18. c	19. Sensation, perception	
20. Smallest		21. Perceptual constancy	

Learning

1. A relatively enduring behavioral change brought about by an experience is called:
   a. Learning
   b. Habituation
   c. Growth
   d. All of the above
2. The process of learning:
   a. Improves adjustment
   b. Improves efficiency
   c. Is continuous
   d. All of the above
3. Which of the following is a factor that is not conducive to learning?
   a. Intelligence
   b. Motivation
   c. Distracting conditions
   d. Good physical health
4. Learning results in:
   a. A more or less permanent change in behavior
   b. Poor control of one's emotions
   c. Frequent motivational conflicts
   d. All of the above
5. Ivan Pavlov proposed the concept of:
   a. Operant conditioning
   b. Classical conditioning
   c. Learning by trial and error
   d. Learning by insight
6. In Pavlov's original experiment, meat was the:
   a. Unconditioned stimulus
   b. Conditioned stimulus
   c. Unconditioned response
   d. Conditioned response
7. You begin to salivate at the sight of a pizza hut sign. When this happens, the sight of the sign is an example of:
   a. Unconditioned stimulus
   b. Discriminative stimulus
   c. Conditioned stimulus
   d. Conditioned response
8. In classical conditioning, the _____ becomes capable of eliciting a response previously triggered by the unconditioned stimulus.
   a. Aversive stimulus
   b. Conditioned stimulus

c. Secondary reinforcer

d. Primary reinforcer

9. Extinction occurs in classical conditioning:
   a. After repeated trials wherein the conditioned stimulus is presented by itself
   b. When the delay between the conditioned stimulus and the unconditioned stimulus is decreased to approximately half a second
   c. When the unconditioned stimulus loses its ability to elicit the unconditioned response
   d. When the conditioned stimulus and the unconditioned stimulus are paired on every trial

10. According to behavioral view of learning:
    a. Human beings can be taught to do anything
    b. Human learning cannot be modified
    c. Human learning is rigid
    d. None of the above

11. BF Skinner proposed the concept of:
    a. Operant conditioning
    b. Classical conditioning
    c. Learning by trial and error
    d. Learning by insight

12. Adding something pleasant is _____ and removing something good is _____
    a. Positive reinforcement; negative reinforcement
    b. Positive reinforcement; punishment by removal
    c. Negative reinforcement; punishment by application
    d. Punishment; reinforcement

13. Someone who offers money in the temple every week is doing so according to a _____ reinforcement schedule.
    a. Fixed-interval
    b. Variable-interval
    c. Fixed-ratio
    d. Variable-ratio

14. Rewards that satisfy a biological need are called:
    a. Negative reinforcers
    b. Positive reinforcers
    c. Secondary reinforcers
    d. Primary reinforcers

15. Prizes in lotteries are given on a:
    a. Variable-interval reinforcement basis
    b. Variable-ratio reinforcement basis
    c. Continuous basis
    d. Fixed-ratio reinforcement basis

16. Trial and error learning was propagated by:
    a. Erikson
    b. Pavlov
    c. Thorndike
    d. Skinner

17. Zero transfer is also known as:
    a. Negative transfer
    b. Neutral transfer
    c. Unilateral transfer
    d. Positive transfer

18. Learning involves changes brought about by experience, whereas _____ describes changes due to biological development.

19. In a _____ reinforcement schedule, behavior is reinforced some of the time, while in a _____ reinforcement schedule, behavior is reinforced all the time.

20. Cognitive-social learning theorists are concerned only with overt behavior, not with its internal cause. True or False ?

21. Bandura's theory of _____ learning states that people learn through watching a _____; another person displaying the behavior of interest.

22. A man wishes to quit smoking. Upon the advice of a psychologist, he begins a program in which he sets goals for his withdrawal, carefully records his progress and rewards himself for not smoking during a certain period of time. What type of program is he following?

■ KEY

1. a	2. d	3. c	4. a
5. b	6. a	7. a	8. b
9. c	10. a	11. a	12. a
13. a	14. d	15. b	16. c
17. b	18. Maturation	19. Partial, continuous	

20. False, cognitive-social learning theorists are primarily concerned with mental processes
21. Observational, model
22. Behavior modification

Memory

1. In psychology, which of the following mental processes provides the basis for all cognitive processes?
   a. Thinking
   b. Learning
   c. Memory
   d. Motivation

2. The first stage of memory is:
   a. Encoding
   b. Storage
   c. Retrieval
   d. Imagination

3. Short-term memory is also known as:
   a. Iconic memory
   b. Working memory
   c. Echoic memory
   d. Sensory memory

4. Long-term memories may last for:
   a. Days
   b. Months
   c. Years
   d. All of the above

5. Memory images or traces are present in the mind in the form of:
   a. Pictures
   b. Engrams
   c. Signals
   d. Diagrams

6. Which of the following type of memory helps an individual to recall something a split second after having perceived it?
   a. Short-term memory
   b. Immediate or sensory memory
   c. Long-term memory
   d. Delayed memory

7. Semantic memory is memory for:
   a. Language and knowledge
   b. Visuospatial orientation
   c. Events occurring in one's life
   d. Events occurring in external world

8. Which of the following is a measure of memory?
   a. Recall or reproduction
   b. Recognition
   c. Repetition
   d. Registration

9. Which of the following components of memory system refers to the transformation of a physical stimulus into a form that human memory accepts?
   a. Encoding
   b. Storage
   c. Retrieval
   d. Recognition

10. Which of the following types of long-term memory deals with individual's personal experiences?
    a. Semantic memory
    b. Episodic memory
    c. Procedural memory
    d. All of the above

11. Which of the following is a center for recent memory?
    a. Temporal lobe
    b. Parietal lobe
    c. Hippocampus
    d. Thalamus

12. Partial or complete loss of memory is called:
    a. Agnosia
    b. Ataxia
    c. Amnesia
    d. Forgetting

13. An amnesia in which there is total failure of memory for events that happened before the trauma that produced the memory impairment is called:
    a. Anterograde amnesia
    b. Retrograde amnesia
    c. Transient amnesia
    d. Functional amnesia

14. Most evidence suggests that memory loss in older adults:
    a. Is not an inevitable part of the aging process
    b. Is genetically preprogrammed
    c. Usually affects all memory functions of the individual
    d. Is caused by senility

15. When new memories interfere in the retrieval of old memory, it is called:
    a. Proactive interference
    b. Saving
    c. Retroactive interference
    d. Implicit memory

16. A professor forgets the names of students who attended her class two semesters ago because she learned the names of all the students this semester. This is an example of the memory problem's called:
    a. Alzheimer disease
    b. Decay
    c. Proactive interference
    d. Retroactive interference
17. Memory for a personal anecdote such as, "How I lost the ring on the morning of my wedding day," would be stored in _____ long-term memory.
    a. Semantic
    b. Episodic
    c. Working
    d. Implicit
18. _____ are organized bodies of information stored in memory that bias the way new information is interpreted, stored and recalled.
19. If, after learning a poem for a test a year ago, you now find yourself unable to recall what you learned, you are experiencing memory _____, caused by non-use.
20. _____ interference occurs when material is difficult to retrieve because of exposure to later material. _____ interference refers to the difficulty in retrieving material due to the interference of previous material.

■ KEY

1. c	2. a	3. b	4. d
5. b	6. b	7. a	8. a
9. a	10. b	11. c	12. c
13. b	14. d	15. c	16. d
17. b	18. Schemas		19. Decay
20. Retroactive, Proactive			

Thinking

1. Thinking is:
   a. Higher mental process
   b. Physical activity
   c. Imagination
   d. None of the above
2. Thinking involves:
   a. Id, ego, superego
   b. Receptors, connectors, effectors

c. Both a and b
d. None of the above
3. In which of the following we use system of symbols to communicate with each other?
   a. Perception
   b. Concepts
   c. Language
   d. Thinking
4. When a symbol stands for a class of objects or events with common properties, it refers to a:
   a. Language
   b. Concept
   c. Emotion
   d. Experiment
5. Which cognitive process is characterized by the use of symbols as representations of objects and events?
   a. Perception
   b. Learning
   c. Thinking
   d. Memory
6. Who among the following psychologists had emphasized the cognitive approach in his research on the development of understanding in the child?
   a. EC Tolman
   b. Jean Piaget
   c. Sigmund Freud
   d. W Kohler
7. Thinking which aims at solving complex problems is:
   a. Perceptual thinking
   b. Reflective thinking
   c. Abstract thinking
   d. Creative thinking
8. You are asked the question, "How many windows are there in your parent's house?" To answer, you visualize the building and take a mental walk around it, counting the windows. In achieving the answer you use a(n):
   a. Mental image
   b. Precursor to perception
   c. Imaginary delusion
   d. Visual non-distractor
9. Being able to generate unusual but appropriate responses to problems or questions is called:

a. The availability heuristic
b. Divergent thinking
c. Cognitive complexity
d. Convergent thinking

10. Higher type of thinking, quite careful, systematic and organized in functioning is termed as:
    a. Concrete thinking
    b. Perceptual thinking
    c. Critical thinking
    d. Thinking

11. Divergent thinking involves:
    a. Logical possibility
    b. Logical recognition
    c. Artistic thinking
    d. Free association

12. A particular kind of set that can point thoughts in the wrong direction is called:
    a. Functional solution
    b. Functional fixedness
    c. Fixedness
    d. Formal thinking

13. Reasoning is the stepwise thinking with:
    a. Imaginations
    b. Purpose or goal
    c. Laws
    d. Both a and b

14. Which of the following is a cognitive activity that controls as well as affects the total behavior and personality?
    a. Concept formation
    b. Reasoning
    c. Problem solving
    d. Thinking

15. During which stage of creative thinking the thinker feels that he has no sight of the solution to his problem?
    a. Preparation
    b. Incubation
    c. Inspiration or illumination
    d. Verification or revision

16. Awareness, understanding, collection of relevant information, formulation of hypotheses, selection of proper solution, verification of solution are steps of:
    a. Problem solving
    b. Creative thinking

c. Reasoning
d. Thinking

17. Following is a method of problem solving in which one is presented with several alternatives among which one must choose:
    a. Algorithms
    b. Heuristics
    c. Decision making
    d. Weighing alternatives

18. Problem solving as a deliberate and serious act, involves the use of:
    a. Novel methods
    b. Consideration of alternatives
    c. Higher thinking
    d. All of the above

19. _____ are categorizations of objects that share common properties.

20. _____ is the term used to describe the sudden "flash" of revelation that often accompanies the solution to a problem.

21. Thinking of an object only in terms of its typical use is known as _____.

22. A broader, related tendency for old problem-solving patterns to persist is known as a _____.

◼ KEY

1. a	2. b	3. c	4. b
5. c	6. b	7. b	8. a
9. b	10. c	11. a	12. b
13. b	14. b	15. b	16. a
17. c	18. d	19. Concepts	
20. Insight	21. Functional fixedness		
22. Mental set			

Intelligence and Aptitude

1. IQ stands for:
   a. International quotient
   b. Intelligence quotient
   c. Intelligent quotient
   d. None of the above

2. The average IQ range is:
   a. 90 – 110
   b. 80 – 90
   c. 70 – 80
   d. Below 70

3. When the mental age and chronological age is same, then IQ is:
   a. 95
   b. 98
   c. 110
   d. 100

4. Intelligence not only helps in better career building, but also encourages in developing better relationship and better health in later life. This is called:
   a. Verbal intelligence
   b. Performance intelligence
   c. Non-verbal intelligence
   d. Emotional intelligence

5. Intelligence is influenced by:
   a. Hereditary factors
   b. Environmental factors
   c. Organic factors
   d. Both hereditary and environmental factors

6. When no language is used in an intelligence test it is called:
   a. Performance test
   b. Non-performance test
   c. Verbal test
   d. Both a and b

7. Which of these is a measure of intelligence that takes into account the individual's chronological age and mental age?
   a. Triarchic intelligence
   b. Crystallized intelligence
   c. Deviation score
   d. Intelligence quotient

8. Mental retardation occurs when the person shows
   a. Dependency on others for basic living needs such as shelter, food or protection
   b. A preference to live in an institution for special needs
   c. Below average cognition with limitations in related skills
   d. Abnormally excessive fantasizing or day-dreaming to an extent that it interferes in daily social interactions with others

9. The most common biological cause of mental retardation is:
   a. Brain starvation of oxygen at birth
   b. Severe car accidents or other injuries
   c. Physical abuse during infancy
   d. Down syndrome

10. Mental retardation is caused due to:
    a. Physical hazards at birth
    b. Accidental head injury
    c. Infection of the brain
    d. All of the above

11. Spearman's (1927) g-factor of intelligence:
    a. Is a hypothesized general factor of mental ability that is measured by IQ tests
    b. Represents an array of many independent factors that generate various mental abilities
    c. Is a quantitative measurement of the degree of cultural bias present in IQ tests
    d. Is calculated as one's level of fluid intelligence minus one's level of crystallized intelligence

12. In which of the following stage creative thinker turns away from the problem:
    a. Preparation
    b. Incubation
    c. Insight
    d. Verification

13. Ability to handle words, numbers, formulae and scientific principles is _____.

14. _____ tests predict a person's ability in a specific area, while _____ tests determine the specific level of knowledge in an area.

15. Some forms of retardation can have a genetic basis and can be passed through families. True or False?

16. People with high intelligence are generally shy and socially withdrawn. True or False ?

17. IQ tests can accurately determine the intelligence of entire group of people. True or False?

18. Intelligence can be seen as a combination of _____ and _____ factors.

19. Lower IQ test scores during late adulthood do not necessarily mean a decrease in intelligence. True or False?

KEY

1. b   2. a   3. d   4. d
5. d   6. a   7. d   8. c
9. d   10. d   11. b   12. b
13. Abstract intelligence
14. Aptitude, achievement
15. True
16. False, the gifted are generally more socially adept than those with lower IQ.
17. False, IQ tests are used to measure individual intelligence. Within any group there are wide variations in individual intelligence
18. Heredity, environmental
19. True

CHAPTER 4
MOTIVATION AND EMOTIONAL PROCESSES

Motivation

1. The forces that govern the initiation and persistence of behavior are called:
   a. Emotions
   b. Motives
   c. Intellectual capacities
   d. Personality attributes

2. Primary drives are those which:
   a. Are based on expectation
   b. Are biologically based
   c. Are satisfied last
   d. Are based on knowledge

3. Motives whose satisfaction is essential for life are called:
   a. Primary motives
   b. Secondary motives
   c. Accessory motives
   d. All of the above

4. An individual who is fighting to climb the career ladder is striving to satisfy his:
   a. Primary motives
   b. Personal motives
   c. Biological motives
   d. Secondary motives

5. A person who joins a variety of social clubs and has a wide variety of friends is likely to be:
   a. High in the need for affiliation
   b. Low in the need for achievement
   c. Low in the need for affiliation
   d. High in the need for solitude

6. A couple attends an anniversary party in hopes that the couple being honored will attend their future party. This motivation is best understood by invoking the:
   a. Drive-reduction theory
   b. Instinctive theory
   c. Incentive theory
   d. Cognitive theory

7. According to Maslow, which of the following is the highest-order need?
   a. Esteem
   b. Physiological
   c. Safety
   d. Belongingness

8. A person who works hard to increase his wealth is satisfying his:
   a. Social motives
   b. Personal motives
   c. Biological motives
   d. None of the above

9. Physical needs, security and safety, belongingness, self-esteem, self realization are:
   a. Needs of the learner
   b. Maslow's hierarchy
   c. Needs of teacher
   d. None of the above

10. The hierarchy of needs according to Abraham Maslow is:
    a. Physiological needs → safety needs → love needs → esteem needs → self-actualization
    b. Safety needs → physiological needs → esteem needs → love needs → self-actualization
    c. Self-actualization → esteem needs → physiological needs → safety needs → love needs
    d. Physiological needs → self-actualization → safety needs → esteem needs → love needs

11. The concept of unconscious motivation is one of the cornerstones of:
    a. Social theory
    b. Psychoanalytic theory
    c. Incentive theory
    d. Humanistic school

12. The body's tendency to maintain a constant internal environment is called:

a. Thermostat
b. Homeostasis
c. Need
d. Aggression

13. Which of the following theories of motivation might be described as the 'push theories of motivation'?
    a. Social learning theory
    b. Drive theories
    c. Incentive theories
    d. Opponent process theory

14. Opposition of one motive by the other motive results in a:
    a. Set
    b. Habit
    c. Conflict
    d. Psychosis

15. A state that results when a motive is blocked can be referred to as a:
    a. Mental conflict
    b. General tension
    c. General stress
    d. None of the above

16. An individual who is unable to choose between a job and higher education is experiencing:
    a. A problem of adaptation
    b. A motivational conflict
    c. A personality problem
    d. A negative emotion

17. _____ are forces that guide a person's behavior in a certain direction.

18. Biologically determined, inborn patterns of behavior are known as _____.

19. By drinking water after running a marathon, a runner tries to keep his or her body at an optimal level of functioning. This process is called _____.

20. According to Maslow, a person with no job, home and friends can become self-actualized. True or False ?

21. Mr Ramu is the type of person who constantly strives for excellence. He feels intense satis-faction when he is able to master a new task. Ramu most likely has a high need for _____.

KEY

1.	b	2.	b	3.	a	4.	b
5.	a	6.	c	7.	a	8.	b
9.	b	10.	a	11.	b	12.	b
13.	b	14.	c	15.	a	16.	b

17. Motives 18. Instincts 19. Homeostasis
20. False, lower-order needs must be fulfilled before self-actualization can occur
21. Achievement

Emotional Processes

1. Emotions are different from feelings because:
   a. They do not occur in normal people
   b. They do no good for one's health
   c. They can cause physiological changes in the body
   d. All of the above

2. The word emotion etymologically means:
   a. To stir up
   b. To test
   c. To express
   d. To cry

3. The general adaptation syndrome (GAS) was described by:
   a. Hans Selye
   b. Hull
   c. Gerald Caplan
   d. Carl Rogers

4. The organ in the body, which triggers GAS is:
   a. Anterior pituitary
   b. Adrenal gland
   c. Liver
   d. Hypothalamus

5. GAS is a response to:
   a. Poor intelligence
   b. Wrong perception
   c. Stress
   d. Poor nutrition

6. The set of reactions occurring as a result of the first stage of GAS can be termed as:
   a. Resistance reaction
   b. Exhaustion reaction
   c. Stress reaction
   d. Fight-or-flight response

7. Who among the following proposed that emotional states are a function of the interaction of cognitive factors and a state of physiological arousal?
   a. William James
   b. S Schachter
   c. A Maslow
   d. Carl Rogers

8. The stages of general adaptation syndrome progress in following stages:
   a. Resistance → exhaustion → alarm
   b. Alarm → exhaustion → resistance
   c. Alarm → resistance → exhaustion
   d. Exhaustion → alarm → resistance

9. In the process of development the individual strives to maintain, protect and enhance the integrity of the self. This is normally accomplished through the use of:
   a. Affective reactions
   b. Withdrawal patterns
   c. Defence mechanism
   d. Strong emotional forces

10. A male college student who is smaller than average and unable to participate in sports becomes the life of the party and a stylish dresser. This is an example of the mechanism of:
   a Rationalization
   b. Sublimation
   c. Compensation
   d. Reaction formation

11. After a horrible day at work, a father comes home and yells at his children for a minor mess. This is an example of:
   a. Repression
   b. Rationalization
   c. Projection
   d. Displacement

12. Sublimation is a defence mechanism that helps the individual to:
   a. Act out in reverse to something already done or thought
   b. Return to an earlier, less mature stage of development
   c. Exclude from the conscious things that are psychologically disturbing
   d. Channel unacceptable sexual desires into socially approved behavior

13. An example of displacement is:
   a. Imaginative activity to escape reality
   b. Ignoring unpleasant aspects of reality
   c. Resisting any demands made by other
   d. Pent up emotions directed to other than the primary source

14. Which of the following activities is aimed at reducing anxiety:
   a. Aerobic exercises
   b. Yoga
   c. Meditation
   d. All of the above

15. The immediate bodily reaction to short-term stress is likely to be:
   a. Aches and pains in diverse locations throughout the body
   b. Arousal in the sympathetic autonomic nervous system
   c. Denial; refusal to confront and accept the stressor's reality
   d. Illness resulting from failure of the immune system

16. Disorders that occur due to severe stress are called _____.

17. _____ is a state of heightened susceptibility to the suggestions of others.

18. _____ is a learned technique for refocusing attention to bring about an altered state of consciousness.

19. Emotions are always accompanied by a cognitive response. True or False ?

20. The _____ theory of emotions states that emotions are a response to instinctive bodily events.

21. According to the _____ theory of emotions, both an emotional response and physiological arousal are produced simultaneously by the same nerve stimulus.

22. What are the six primary emotions that can be identified from facial expressions ?

23. _____ is defined as a response to challenging or threatening events.

▉ KEY

1. c	2. a	3. a	4. d
5. c	6. d	7. b	8. c

9. c   10. c   11. d   12. d
13. d   14. d   15. a
16. Psychophysiological disorders
17. Hypnosis
18. Meditation
19. False, emotions may occur without a cognitive response
20. James-Lange
21. Cannon-Bard
22. Surprise, sadness, happiness, anger, disgust and fear
23. Stress

Attitude

1. A predisposition to respond in a certain way is:
   a. Prejudice
   b. Attitude
   c. Bias
   d. Trait
2. Attitudes are:
   a. Innate
   b. Unlearned
   c. Acquired
   d. Learned
3. Components of attitude are:
   a. Cognitive, affective, conative
   b. Id, ego, superego
   c. Imagination, thinking and reasoning
   d. None of the above
4. Which of the following methods, like most other attitude measurement techniques, relies on the self-report of the respondents?
   a. Physiological measures
   b. Public opinion polling
   c. Interview
   d. Case study
5. Which factors play an important role in development of attitudes?
   a. Heredity
   b. Environment
   c. Health
   d. Illness
6. The procedure which measures the electrical resistance of the skin is:
   a. EMG
   b. GSR
   c. EEG
   d. ECG

7. Measurement of attitudes is carried out by:
   a. Opinion surveys
   b. Self-report methods
   c. Likert's method of summated ratings
   d. All of the above
8. An intuitive attempt to infer the causes of behavior is:
   a. Attitude
   b. Attribution
   c. Will
   d. Character
9. What causes we have to consider to explain behavior?
   a. Situational causes
   b. Dispositional causes
   c. Attitudes
   d. Both a and b

■ KEY

1. b   2. c   3. a   4. b
5. b   6. b   7. d   8. b
9. d

CHAPTER 5
PERSONALITY

1. Personality is unique for every individual because it is the result of the person's:
   a. Intellectual capacity, race and socioeconomic status
   b. Genetic background, placement in family and autoimmunity
   c. Biological constitution, psychological development and cultural setting
   d. Childhood experiences, intellectual capacity and socioeconomic status
2. The relationship that is of extreme importance in the development of personality is that of the:
   a. Peer
   b. Sibling
   c. Parent—child
   d. Heterosexual
3. For an emotional balance the individual always needs:
   a. Family work and play
   b. Financial security and social recognition

c. Biologic satisfaction and social acceptance

d. Individual recognition and group acceptance

4. The family is most important in the emotional development of an individual because it:

   a. Provides support for the young

   b. Gives rewards and punishment

   c. Helps one to learn identity and roles

   d. Gives good educational background

5. Groups are important in the emotional development of the individual because peer group:

   a. Always protects their members

   b. Are easily identified by their members

   c. Go through the same developmental phases

   d. Identify acceptable behavior for their members

6. Problems with dependence versus independence develop during the stage of growth and development known as:

   a. Infancy

   b. Toddler

   c. Preschool

   d. School age

7. The basic emotional task for the toddler is:

   a. Trust

   b. Industry

   c. Identification

   d. Independence

8. _____ originated psychoanalytic theory in the early 1900s.

   a. Erik Erikson

   b. Alfred Adler

   c. Sigmund Freud

   d. Carl Junk

9. According to Freud, which component of personality operates according to the reality principle?

   a. Id

   b. Ego

   c. Superego

   d. Libido

10. Freud argued that exhibiting unusual rigidity or extreme disorderliness may be a sign of fixation at the _____ stage of personality.

    a. Oral

    b. Anal

    c. Phallic

    d. Latency

11. The _____ pushes the person towards greater virtue, while the _____ pushes the person towards thoughtless pleasure-seeking.

    a. Superego; id

    b. Id; ego

    c. Superego; ego

    d. Ego; id

12. During the oedipal stage of growth and development the child:

    a. Loves and hates both parents (ambivalence)

    b. Loves parent of same sex and hates parents of opposite sex

    c. Loves parent of opposite sex and hates parent of same sex

    d. Loves both parents

13. Resolution of the oedipal complex takes place when the child:

    a. Rejects parent of same sex

    b. Introjects behaviors of both parents

    c. Identifies with parent of the same sex

    d. Identifies with parent of the opposite sex

14. An elderly client tells the nurse "I am useless to everyone, even myself". The nurse recognizes that the client has probably failed to accomplish Erikson's developmental task of

    a. Identity vs Role diffusion

    b. Generativity vs Stagnation

    c. Ego integrity vs Despair

    d. Autonomy vs Shame and doubt

15. The ability to tolerate frustration is an example of one of the functions of the:

    a. Id

    b. Ego

    c. Superego

    d. Unconscious

16. The superego is that part of the psyche, which:

    a. Contains the instinctual drives

    b. Is the source of creative energy

    c. Operates on the pleasure principle and demands immediate gratification

    d. Develops from internalizing the concepts of parents and significant others

17. Another term for superego is:

    a. Self

    b. Ideal self

    c. Narcissism

    d. Conscience

18. A person has a mature personality, if the:
    a. Ego responds to the demands of the superego
    b. Society sets demands to which the ego responds
    c. Superego controls the ego
    d. Ego acts as a balance between the pressures of the id and superego

19. Which of the following represents the proper order of personality development according to Freud?
    a. Oral, phallic, latency, anal, genital
    b. Anal, oral, phallic, latency, genital
    c. Oral, anal, phallic, latency, genital
    d. Anal, oral, phallic, genital, latency

20. Ego theory of personality was proposed by:
    a. BF Skinner
    b. Abraham Maslow
    c. Erik Erikson
    d. Sigmund Freud

21. Which approach to personality emphasizes the innate goodness of people and their desire to grow?
    a. Humanistic
    b. Psychoanalytic
    c. Learning
    d. Biological

22. Personality has been described in terms of traits by:
    a. Cattell
    b. GW Allport
    c. Maslow
    d. Karn Horney

23. Which stage of Erikson's psychosocial development theory deals with adolescence?
    a. Ego-integrity vs Despair
    b. Generativity vs Stagnation
    c. Intimacy vs Isolation
    d. Identity vs Role confusion

24. The later childhood stage of Erikson's psychosocial development theory is:
    a. Autonomy vs Shame and doubt
    b. Industry vs Inferiority
    c. Initiative vs Guilt
    d. Trust vs Mistrust

25. _____ are enduring dimensions of personality characteristics along which people differ.

    a. Traits
    b. Quirks
    c. Factors
    d. Profiles

26. According to the _____ approach, the ultimate goal of personality growth is self-actualization.
    a. Neo-Freudian
    b. Psychoanalytic
    c. Psychosocial
    d. Humanistic

27. The tests of personality that best reflect the unconscious are:
    a. Self-administered questionnaires
    b. Rating scales and checklists
    c. Projective techniques
    d. Observation for prolonged periods

28. Classification into endomorphic, mesomorphic and ectomorphic was proposed by:
    a. Hippocrates
    b. Ernst Kretschmer
    c. Sheldon
    d. Jung

29. Classification into introvert and extrovert types was proposed by:
    a. Hippocrates
    b. Ernst Kretschmer
    c. Sheldon
    d. Jung

30. What is an ambiguous stimuli in a Rorschach test?
    a. Visual illusions
    b. Stories without endings
    c. Inkblots
    d. Slightly blurred pictures

31. Which of the following is a similarity between the Rorschach test and the thematic apperception test (TAT)?
    a. Both tests are examples of projective personality tests
    b. Both tests are examples of the learning approach to studying personality
    c. Both tests have evolved from and are similar to the MMPI
    d. Both tests are biological in nature

32. Being impatient, irritable, always in a hurry and working under deadlines are traits associated with:

a. Oral stage fixation
b. Latency stage fixation
c. Type A personality
d. Type B personality

33. Sixteen personality factor questionnaire was developed by _____.
34. Expand TAT.
35. Which type of personality people are more prone to get coronary artery disease ?
36. Expand MMPI.
37. Erikson's theory of _____ development involves a series of eight stages, each of which must be resolved in order for a person to develop optimally.
38. A person shown a picture and asked to make up a story about it would be taking a _____ personality test.
39. _____ therapies assume people should take responsibility for their lives and the decision they make.

■ KEY

1.	c	2.	c	3.	d	4.	c
5.	d	6.	b	7.	d	8.	c
9.	b	10.	b	11.	d	12.	c
13.	c	14.	c	15.	b	16.	d
17.	d	18.	d	19.	c	20.	c
21.	a	22.	b	23.	d	24.	b
25.	a	26.	d	27.	c	28.	b
29.	d	30.	c	31.	a	32.	c

33. Raymond Cattell
34. Thematic Apperception Test
35. Type A
36. Minnesota Multiphasic Personality Inventory
37. Psychosocial
38. Projective   39. Humanistic

CHAPTER 6
DEVELOPMENTAL PSYCHOLOGY

1. Growth implies:
   a. Physical changes in the individual
   b. Quantitative changes in the individual
   c. Changes in structure
   d. All of the above
2. Development refers to:
   a. Qualitative change
   b. Quantitative change
   c. Both a and b
   d. Changes in height and weight
3. Puberty:
   a. Typically begins earlier in boys than in girls
   b. Typically begins later in girls living in affluent homes
   c. Is the period at which maturation of the sexual organs occurs
   d. Is a consequence of heredity and not affected by culture or class
4. Which of the following is continuous?
   a. Growth
   b. Development
   c. Both growth and development
   d. None of the above
5. Which of following factor/factors influence for growth and development?
   a. Heredity
   b. Cultural factors
   c. Environmental factors
   d. All of the above
6. Which of the biological factors influence physical growth?
   a. Family economic status
   b. Intelligence
   c. Endocrine glands
   d. Both b and c
7. Growth and development in any one dimension affects the growth and development in other dimensions too, that is:
   a. Principle of integration
   b. Principle of uniformity
   c. Principle of interaction
   d. Principle of interrelation
8. Which stage of the life is characterized by rapid growth and development?
   a. Infancy
   b. Toddler
   c. Preschooler
   d. Adolescent
9. Which of the following is a psychological need for the infant?
   a. Love
   b. Education
   c. Encouragement
   d. Provision for self-expression

10. Neonatal period refers to:
    a. First 4 weeks after birth
    b. First 12 months after birth
    c. First 1 week after birth
    d. First 2 weeks after birth
11. Which of the following is the infant's main method of communication?
    a. Body movement
    b. Crying
    c. Smiling
    d. Restless movements
12. Which of the following nursing intervention is more appropriate for an infant?
    a. Personal attention such as handling, cuddling, holding
    b. Providing physical security
    c. Praising the child for his cooperation
    d. Providing privacy
13. Which of the following nursing intervention is more appropriate for an adolescent?
    a. Personal attention such as handling, cuddling, holding
    b. Providing physical security
    c. Explaining each procedure with scientific rationale
    d. Using sensory soothing measures
14. Elisabeth Kubler-Ross observed that people facing death move through five stages in the following order:
    a. Denial, anger, bargaining, depression, acceptance
    b. Denial, depression, anger, bargaining, acceptance
    c. Anger, bargaining, denial, depression, acceptance
    d. Bargaining, anger, denial, acceptance, depression
15. Adolescent period starts from onset of puberty and ends with attainment of maturity. True/False?
16. Development of habits, attitudes, manners are called moral development. True/False?
17. Developmental psychologists are interested in the effects of both _____ and _____ on development.

KEY

1. d	2. a	3. c	4. b
5. d	6. c	7. d	8. a
9. a	10. a	11. b	12. a
13. c	14. a	15. True	16. True
17. Heredity, environment			

CHAPTER 7
MENTAL HYGIENE AND MENTAL HEALTH

1. Mental hygiene is:
    a. A general set of principles that promote a healthy personality
    b. A general set of principles that promote a healthy learning
    c. A general set of principles that promote positive emotions
    d. A general set of principles that promote good intellectual capacity
2. Which of the following is the predisposing factor for mental illness?
    a. Genetic make up
    b. Brain damage
    c. Psychological stress
    d. All of the above
3. Basics for a child's good mental health include:
    a. Unconditional love
    b. Minor illness
    c. Immunization
    d. Weaning
4. One of the characteristics of a mentally healthy individual is:
    a. Ability to make adjustments
    b. Ability to control anger
    c. Ability to be courageous
    d. Genuine concern towards others
5. Which of the following is a sign of poor mental health during adolescent period?
    a. Frequent temper tantrums
    b. Hyperactivity
    c. Abuse of drugs or alcohol
    d. Poor grades in school
6. The aim of primary prevention is:
    a. Decreasing the duration of disorder
    b. Reducing the incidence of mental illness
    c. Reducing the impairment of mental illness
    d. Reducing complications of mental illness
7. _____ described levels of prevention specific to psychiatry.

KEY

1. a	2. d	3. a	4. a
5. c	6. b	7. Gerald Caplan	

Personal and Social Adjustment

1. Following are the characteristics of a well-adjusted person, *except*:
   a. Respects self and others
   b. Fault finding attitude
   c. Ability to deal with adverse circumstances
   d. Aware of one's own strengths and weaknesses
2. Which of the following is an indirect method of adjustment?
   a. Increasing trails
   b. Improving efforts
   c. Compromising
   d. Withdrawal
3. Which of following is a characteristic feature of a maladjusted person?
   a. Extreme daydreaming
   b. Respects self and others
   c. Realistic perception of the world
   d. Ability to cooperate with others
4. Which of the following factor contributes to maladjustment during childhood?
   a. Age at maturity
   b. Low socioeconomic status
   c. Sex inappropriateness
   d. Unrealistic levels of aspiration
5. Which of the following factor contributes to maladjustment during old age?
   a. Chronic illness
   b. Unrealistic levels of aspiration
   c. Suppression of creativity
   d. Sex inappropriateness

■ KEY

1. b   2. d   3. a   4. b
5. a

Guidance and Counseling

1. What is guidance?
   a. It helps the individual to manage his own life activities
   b. It helps the individual to solve his medical problems
   c. It helps the individual to control disability
   d. It helps the individual to solve his financial problems
2. The following are the principles of counseling *except*:
   a. Accurate understanding of the patient
   b. Superiority feeling towards patient
   c. Demonstration of concern towards patient
   d. Avoid making biased judgment
3. The following are the principles of guidance program *except*:
   a. It should be flexible
   b. It should be based on individual needs
   c. It should be based on counselor's needs
   d. It is a continuous process
4. Who should be counseled?
   a. Students who have a consistent record of under achievement
   b. Students whose scholastic achievement drops suddenly
   c. Students who have difficulty adjusting to the college
   d. All of the above
5. In which of the following counseling one-to-one helping relationship between the counselor and counseled will occur?
   a. Group counseling
   b. Individual counseling
   c. Directive group counseling
   d. Non-directive group counseling
6. Which of the following is the first step in counseling?
   a. Developing insight into the problem
   b. Collecting data from client
   c. Establishing rapport with the client
   d. Encourage the client to ventilate his problems
7. Following are the skills required for a counselor *except*:
   a. Good psychological health
   b. Approachability
   c. Open-mindedness
   d. Fixed ideas on problem
8. Which of the following guidance is concerned with enabling students to acquire information about career opportunities, career growth and training facilities?
   a. Personal guidance
   b. Social guidance
   c. Educational guidance
   d. Vocational guidance

9. Which of the following guidance is concerned with enabling students to adjust to the situation which they cannot change?
   a. Personal guidance
   b. Social guidance
   c. Educational guidance
   d. Vocational guidance
10. What is the function of financial guidance ?
    a. It helps the student in determining the financial assistance
    b. It helps the student to control financial needs
    c. It provides financial support
    d. None of the above

▪ KEY

1. a	2. b	3. c	4. d
5. b	6. c	7. d	8. d
9. a	10. a		

CHAPTER 8
PSYCHOLOGICAL ASSESSMENT AND TESTS

1. The following are the characteristics of psychological tests *except*:
   a. Standardization
   b. Appropriateness
   c. Reliability
   d. Validity
2. Which of the following is the first step in development of psychological tests?
   a. Analysis of situation
   b. Selection of test items
   c. Administration of test
   d. Evaluation of test
3. Which of the following test is designed to be administered to one person at a time?
   a. Group test
   b. Power test
   c. Paper-pencil test
   d. Individual test
4. Specific abilities are measured by:
   a. Achievement tests
   b. Aptitude tests

c. Intelligence tests
d. Occupational tests
5. Standard measure devices that assess behavior objectively are called:
   a. Factor analysis procedures
   b. Psychological tests
   c. Temperament assessment scales
   d. Behavioral assessment tests
6. _____ is the consistency of a personality test, while _____ is the ability of a test to actually measure what it is designed to measure.
7. _____ are the standards used to compare scores of different people taking the same test.

▪ KEY

1. b	2. a	3. d	4. b
5. b	6. Reliability, validity		
7. Norms			

CHAPTER 9
INDIVIDUAL DIFFERENCES

1. Individual differences means:
   a. Individuals differ from each other
   b. Differences that separate one person from another
   c. Differences that totally distinguish one individual from another
   d. All of the above
2. Which of the following is a physical difference among individuals?
   a. Facial expression
   b. Emotional expression
   c. Attitudinal expression
   d. Moral expression
3. Which of the following is an important factor in determining individual differences?
   a. Family
   b. Culture
   c. Heredity
   d. Socioeconomic status

▪ KEY

1. a	2. a	3. c

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