



1

AN INTRODUCTION TO PSYCHOLOGY

As human beings our curiosity drives us to know the reasons behind various events happening around us. Whenever we meet somebody or see someone doing something we immediately try to understand as to why this person is doing this kind of activity. Similarly we often try to understand our own experiences and behaviors in different situations. The eagerness and curiosity guide us to think as to how people are different from each other in terms of their intellect, aptitude and temperament: Why do they become happy or sad? How do they become friendly or develop antagonistic relationships? How do some people learn anything quickly while others take relatively more time? The answer to all these questions may be given by a novice as well as a person who has learned psychology. The answer of the novice can be guided by common sense but a psychologist can study the reasons behind such activities in a systematic way and can provide scientific answers to these questions which can be tested time and again. In this lesson we will try to understand the nature and scope of psychology in detail.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the nature of psychology and its definition;
- describe the scope of psychology;
- elaborate the basic psychological processes; and
- explain the fields of psychology.

1.1 NATURE OF PSYCHOLOGY AND ITS DEFINITION

In simple words psychology is a systematic and scientific study of mental processes, experiences and behaviors - both overt and covert. The word 'psychology' has its



origin in two Greek words ‘psyche’ and ‘logos’. The word ‘psyche’ in Greek language refers to ‘spirit’ or ‘soul’ and the word ‘logos’ refers to ‘discourse’ or ‘study’. During earlier times it was considered as a discipline which deals with the study of soul. In India the study of such questions was the main concern during Vedic and Upanishadic period. Various aspects of mental processes were analyzed. Subsequently the schools of Yoga, Samkhya, Vedant, Nyaya, Buddhism, and Jainism provided detailed accounts of mind, mental processes and methods to control mind. In modern period it started at Calcutta University in 1916 with establishment of the Department of Psychology.

In the western world, the formal beginning of psychology as an independent discipline goes back to 1879 when Wilhelm Wundt established the first experimental laboratory at the University of Leipzig, in Germany. Since then the growth of psychology has covered a long journey. Today it is one of the very popular subjects among social sciences. It studies all the shades of experiences, mental processes and behaviours. A comprehensive analysis of all these aspects provides a scientific understanding of human nature. In the following sections we will try to understand all the components which collectively define psychology.

(A) Study of experience

Psychologists study a variety of human experiences which are mainly personal or private in nature. They may range from experiences of dream, conscious experiences at different stages of life and experiences when the consciousness is altered through meditation or use of psychedelic drugs. The study of such experiences helps the psychologist to understand the personal world of the individual.

(B) Study of mental processes

Psychology as the study of mental processes tries to investigate the activities happening in the brain which are primarily non physiological in nature. These mental processes include perception, learning, remembering and thinking. These are internal mental activities which are not directly observed but inferred from the behavioural activities of the person. For example, we can say that somebody is thinking if he or she displays certain activities related to finding solution to a mathematical problem assigned to him or her.

(C) Study of behaviour

The range of behaviours studied in psychology is very broad. It includes simple reflexes (e.g. eye blinking), common response patterns such as talking to friends, verbal reports about feelings and internal states and complex behaviours such as handling computers, playing piano and addressing a crowd. These behaviours are either observed directly through naked eyes or are measured through instruments. They are generally exhibited verbally or nonverbally (e.g. facial expression) when an individual reacts to a stimulus in a given situation.

Thus in psychology the main unit of investigation is the individual human being and his or her experiences, mental processes and behaviours.

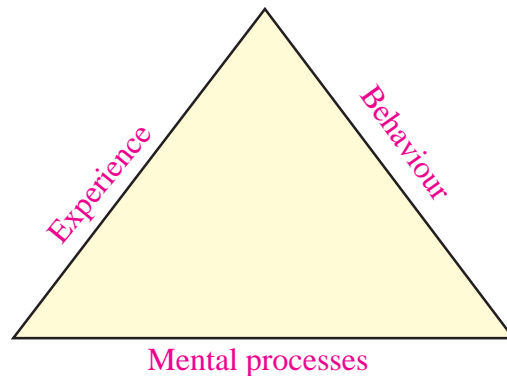


Fig. 1.1: Aspects of the subject matter of psychology



INTEXT QUESTIONS 1.1

1. Fill in the blanks:

- The word 'psychology' has its origin in two Greek words _____ and _____.
- The main unit of investigation in psychology is the individual _____.
- Wilhelm Wundt established the first experimental _____ at the University of Leipzig, in Germany.
- Psychology is the study of _____, _____, _____, and _____.

1.2 SCOPE OF PSYCHOLOGY

From the definition of psychology now it might be clear to you that psychology addresses a variety of issues related to mental and behavioural functioning of an individual. Such a study helps us to develop a basic understanding about human nature and facilitates us to deal with a number of personal and social problems.

The study of human beings starts with the functioning of biological systems especially the nervous system. Under central nervous system psychology studies the functions of various parts of brain which regulate our feelings, emotions and thinking. Within autonomic nervous system the role of hormones and neurotransmitters in determining our behavior is important. In addition psychology studies as to how a given socio-cultural environment interacts with innate biological, intellectual and social attributes of the child and facilitates healthy development of the child.



As a living organism you encounter a lot of sensory input every moment. Your task is not only to process that information but to store and retrieve it when it is required to be used. Attention and perception help to process information. Memory helps us to register, retain and retrieve information, and thinking provides us the ability to manipulate and improve the stored information. Within psychology, all these are studied under the domain of higher mental processes or cognition.

In your life you must have come across many persons who have reached highest level of accomplishment. But such an accomplishment is not attained at once; it is the result of continuous learning in which the individual acquires the necessary skills and competencies through regular practice. Psychology helps us to understand the processes involved in reaching this high level of accomplishment.

In order to understand the purpose behind any kind of behaviour psychologists use the concept of motivation. It primarily focuses on the investment of mental energy and consistency of effort towards achieving the set goals. The various shades of feelings such as anger, fear, love, joy, and sadness which we experience during the course of our life are studied within the realm of emotion.

You will certainly agree that no two individuals are the same in terms of their physical attributes such as height, weight, skin colour or facial features as well as psychological attributes such as intelligence, personality, temperament and interest. An understanding of these and other aspects of individual differences facilitates the psychologist to select right person for the right job and to provide guidance and counseling for various matters of personal as well as professional concern. The understanding of individual differences also helps the psychologist to differentiate between normative (customary, accepted) and abnormal (deviant, unusual) behaviors.

Thus psychology as a discipline has a vast scope. It not only studies human beings across the life span but also tries to explore mental processes and potentials in order to facilitate achieving a better quality of life.

Activity 1

The Power of Positive Thinking: Health and Happiness

By thinking and saying positive thoughts to yourself and others, you can gradually create a positive change in yourself as well as in others. Try this exercise with your friends or family members. Ask your friends as to how many of them are in a 'positive' mood and how many in a 'negative' mood. Then instruct your friends to shake hands with others and genuinely say "I wish you happiness and good health". Again ask your friends about their mood, to see how many report 'positive' and how many 'negative'. Yes, you will be surprised - the number of reported 'positive' moods has gone up.



1.3 BASIC PSYCHOLOGICAL PROCESSES

While studying behaviour it is one of the most important tasks for psychologists to understand the processes which collectively influence a particular behaviour. These psychological processes are

- (A) **Sensation:** It refers to our awareness about various stimuli which we encounter in different modalities such as vision, hearing, touch and taste.
- (B) **Attention:** During attention we selectively focus on a particular stimulus among many stimuli available to us. For instance while listening to a lecture in the classroom we attend to the words pronounced by the teacher and, try to ignore the other stimuli present in the classroom, such as noise made by the fan.
- (C) **Perception:** In the case of perception we process information and make out the meaning of the stimuli available to us. For example, we look at a pen and recognize it as an object used for writing.
- (D) **Learning:** It helps us acquiring new knowledge and skills through experience and practice. The acquired knowledge and skills further bring a relative change in our behavior and facilitate our adjustment in varied settings. For example, we learn language, riding a bicycle and applying mathematical skills to solve various problems. .
- (E) **Memory:** The information we process and learn is registered and stored in the memory system. Memory also helps us to easily retrieve the stored information when it is required for use. For example, writing the answers in the examination after studying for the paper.
- (F) **Thinking:** In the case of thinking we use our stored knowledge to solve various tasks. We logically establish the relationships among various objects in our mind and take rational decision for a given problem. We also evaluate different events of the environment and accordingly form an opinion.



INTEXT QUESTIONS 1.2

1. State whether the following statements are True or False:
 - a. In learning we acquire new skills through training and experience.
 - b. In sensation stimuli are stored in the brain.
 - c. In thinking we use stored knowledge to solve various tasks.
 - d. In attention we attend to all the stimuli present in the environment.



1.4 FIELDS OF PSYCHOLOGY

During its journey of more than a hundred years, psychology as a field of enquiry has grown in many directions. In contemporary times a number of specialized fields with focused area of application have developed. The emergence of different fields in psychology indicates the importance and relevance of these areas in our daily life. In this section we will briefly learn about some of these fields.

Abnormal Psychology: This branch of psychology tries to describe, assess, predict and control those categories of behaviours which are considered as unusual and non-normative. It also deals with various categories of psychological disorders which affect the mental health of the individual. It assesses abnormality in the individual through standardized psycho-diagnostic tools and suggests problem specific treatment.

Cognitive Psychology: It deals with acquisition, storage, transformation and application of information the individual uses to understand and interpret events happening around him/her.

Clinical and Counseling Psychology: Clinical psychology is primarily concerned with diagnosis and treatment of various psychological disorders. A clinical psychologist is trained in psychotherapeutic techniques which are used to treat people suffering from psychological disorders. They are employed in hospitals and clinics dealing with mental health problems. The counseling psychologist deals with mild problems pertaining to adjustment in social and emotional life, and provides specialized services to deal with marital problems, stress oriented problems and career choice.

Educational Psychology: This field of psychology is mainly concerned with academic performance. It studies the role of various factors which influence learning processes in classroom setting. It focuses on assessing the aptitude, skills and intellectual potential of the students and evaluating their performance. An educational psychologist also helps students to overcome learning difficulties.

Environmental Psychology: This field is concerned with the study of interaction between physical environment and human behaviour. It studies the impact of noise, heat, humidity, pollution and crowding on human performance. It also focuses on the impact of physical environment on psychological health of individuals.

Health Psychology: This field focuses on the impact of various psychological factors (e.g. stress) on the onset progress and treatment of illness. It also deals with various life style diseases such as hypertension, coronary heart disease, cancer and diabetes.

Organizational Psychology: This field is concerned with application of psychological principles and models to study the selection and performance of

employees in organizational settings. It also studies the concepts of leadership, motivation, job satisfaction and performance appraisal.

Developmental Psychology: This field is concerned with the study of various physical and psychological factors which influence the systematic changes which the individual experiences across the different stages of life.

Emerging Fields: In addition to the fields mentioned above a number of new areas have emerged. Some of these fields are sports psychology, military psychology, aviation psychology, forensic psychology, peace psychology, neuropsychology, political psychology, feminist psychology and positive psychology.



INTEXT QUESTIONS 1.3

1. Describe any two fields of psychology and indicate their applications.



WHAT YOU HAVE LEARNT

- Psychology is a systematic and scientific study of mental processes, experiences and behaviors - both overt and covert – as they take place in a socio-cultural setting.
- In India the study of soul/consciousness was the main concern during Vedic and Upanishadic period.
- The formal beginning of psychology was in 1879 when Wilhelm Wundt established the first experimental laboratory at the University of Leipzig, in Germany.
- The scope of psychology is wide as it addresses a variety of issues related to mental and behavioral functioning of the individuals.
- Study of psychology helps us to develop a basic understanding about human nature and facilitates dealing with a number of personal and social problems.
- The various psychological processes that are involved in human behavior are sensation, attention, perception, learning, memory, and thinking.
- Psychology has a number of specialized fields of study. Each field helps us understand human behavior in specific domain.



**Notes****TERMINAL QUESTIONS**

1. Define psychology. With the help of examples explain the different components of this definition.
2. Explain the various psychological processes which influence human behavior. Support your answer with relevant examples.
3. Describe four different fields of psychology. Which field of psychology interests you the most? Give reasons.

**ANSWERS TO INTEXT QUESTIONS****1.1**

1. Psyche, logos
2. Human being
3. Laboratory
4. Experiences, mental processes, behaviors

1.2

1. True
2. False
3. True
4. False

1.3 Refer to section 1.4**Hints for Terminal Questions**

1. Refer to section 1.3
2. Refer to section 1.5
3. Refer to section 1.6



2

METHODS OF PSYCHOLOGY

In the last lesson we noted that the interpretation of a psychological phenomenon by a psychologist may differ from that of a novice. A psychologist follows a systematic scientific procedure which has sound theoretical base in order to explain and interpret the phenomenon. Psychology has various methodological ways or approaches to understand and explain psychological phenomena. We will be studying about some of these approaches. In order to obtain responses from individuals a number of psychological tools or instruments are used. The responses taken on those tools constitute the basic data which are analyzed to study human experiences, mental processes and behaviours. In this lesson we will discuss these aspects in detail.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the different approaches to the study of psychological processes;
- describe some important methods used in understanding human behaviour; and
- describe various instruments used in understanding behaviour and psychological processes.

2.1 APPROACHES TO THE STUDY OF PSYCHOLOGICAL PROCESSES

As discussed in the previous lesson psychologists use a variety of approaches to describe, predict and control behaviour and mental processes. The main approaches are briefly described below.

Biological Approach: This approach focuses on **biological structures** and phenomena such as brain, genes, hormones, endocrine system and neurotransmitters in order to understand the dynamics of behaviour. Its main focus is on the role of



different parts of brain in regulating feelings, memories, emotions and other aspects of behaviour. Similarly the impact of **over-secretion or under-secretion** of different kinds of hormones in governing behaviour is studied. Behaviour genetics as one of the subdisciplines studies the genetic determinants of behaviour. Moreover, this approach looks for physiological basis of human behaviour.

Psychoanalytic Approach: The father of psychoanalytic approach Sigmund Freud focused on **unconscious libidinal energy** in describing the present state of the individual. He studied mind in terms of hierarchical arrangements of experiences in the form of different layers of consciousness (e.g. conscious, preconscious, and unconscious). Freud explored the nature and quality of unconscious through analysis of dreams, slips of the tongue, neuroses, psychoses, work of art, and rituals. He assumed that majority of human behaviours are triggered by **unconscious motivation**. Thus to understand the present human behaviour the analysis of unconscious mental contents is considered most important.

Humanistic Approach: Contrary to Freud, the father of humanistic approach Carl Rogers put greater emphasis on **conscious experiences** of the present situation, role of interpersonal experiences across the course of life, and people's capacity to grow toward psychological maturity. This approach basically assumes that a person is an **active and self-actualizing agent** and has a choice in deciding his behaviour. As a part of the self-actualizing process a person seeks to maintain a congruence between self and experience. However, because of past experiences with **conditional positive regard**, he may deny or distort the experiences that threaten one's self-system. Such a self-system can be changed in the therapeutic setting through genuineness, unconditional positive regard, and empathic understating of the client's problem by the therapist.

Behaviorist Approach: The unit of analysis for this approach is **explicit, objective and overt behaviour** and its relationship with environmental stimulation. The father of behaviorism J. B. Watson emphasized on objective analysis of behaviour. He advocated that behaviour is largely governed by the association between **stimulus and response** and the **behaviour can be shaped** in a desired direction by manipulating this association.

Cognitive Approach: The cognitive approach emerged as an alternative to the mechanistic paradigm of behaviourism. This approach mainly focuses on the study of **information processing** capacity of the individual in terms of perception, remembering, thinking, language, reasoning, problem solving and decision making which are called higher mental processes. It proposes that we look out for information in the world and our behaviour depends upon the way we process this information. This approach largely relies on **computational models** and assumes that behaviour and mental processes can best be understood by treating them in terms of information processing.

The above discussed approaches indicate that mental processes, experiences and behaviours can be understood from various vantage points. In fact human behaviour is complex and its varied aspects are to be appreciated in many ways.



INTEXT QUESTION 2.1

1. _____ focuses on the role of different parts of brain in regulating feelings, memories, emotions and other aspects of behaviour.
2. Focus of the _____ is on the information processing capacity of the individual.
3. _____ assumes that the person is active and self-actualizing agent and has a choice in deciding his behaviour.
4. According to the _____ majority of human behaviours are triggered by unconscious motivation.
5. The unit of analysis for the _____ is explicit, objective and overt behaviour and its relationship with environmental stimulation

2.2 METHODS TO UNDERSTAND PSYCHOLOGICAL PROCESSES

In order to understand human behaviour various scientific methods are used. The purpose of study or research is to develop principles and theories, test them and apply for solving different human problems. In this way we develop dependable understanding that helps us in guiding behaviour in various situations. Since human beings are complex living organisms their behaviours are shaped by many factors both intrinsic and extrinsic to him or her.

A psychological research carried out scientifically has the characteristics of **objectivity** which means that such researches are free from any kind of biases. It is **testable** time and again and can be open to all. One can verify its authenticity by following the same method in terms of getting the same result. It has scope for **self-correction**. In other words the researcher corrects his or her understanding if there is some error and goes for revision. The scientific studies have also the characteristic of **replication** which means that the results of the study are consistently verified by similar other studies across different settings.

Thus in psychology a number of methods are used to carry out scientific studies. These methods are discussed below.

Observation: While shopping in the market you must have noticed various activities of the people. When you observe their activities you also think about as to why they





are doing those activities and probably you reach to a conclusion about the causes of such activities. Such a way of knowing about others is called **observation**. However, the meaning of observation goes a little further as compared to discussed above. Observation as a method of enquiry is often understood as a **systematic registering** of events without any deliberate attempt to interfere with variables operating in the event which is being studied.

Some Interesting Facts about Observational Method

Perhaps the most famous informal observations in the history of developmental psychology are the observations made by Jean Piaget on his three children when they were infants. These observations went on to become the empirical foundation for Piaget's developmental theory. You can also observe the developmental patterns of your younger sibling or nephew, to understand the changes in sensori-motor development and other aspects of development.

This method is used in natural as well as laboratory settings. When it is used to study the events happening in natural environment it is called **naturalistic observation** such as observing the behaviour of children on playground. In this case the observer (psychologist) has no control on the extraneous variables. He or she simply records the entire activities and then analyze them. On the contrary in the case of **laboratory observation** the event under study is controlled by the observer. For example, studying the effect of induced stress on task performance.

Observation is also divided into **participant and non-participant types** depending on the role of observer. In the case of **participant observation** the researcher mixes up with the event under study and conducts the study. Where as in the case of **non-participant observation** the researcher maintains an optimum distance and has little impact on the events under study.

One of the most important advantages of observation is that it studies the range of behaviours in the form in which they are happening. However, this method requires more time and effort. It often becomes victim of the biases of researcher.

Activity 1

Method of Observation

To develop an observation tool, you need to establish the indicators for the observation. Indicators are based on what you expect to find in the environment, or process. The second aspect is to consider each of the indicators and measure them for their presence or absence.

A. Now try to use the observational method to collect data:

Make a video recording of any family function, or use a recording that is easily available and study it for non-verbal communication cues. Identify the indicators, such as smiling, shaking hands, the act of Namaste, use of hands

and the like. Count with the help of tallies how many times these cues are used by the people in the video recording. You can prepare a table with various aspects of observable behaviours; this will help you to understand which non-verbal cue is used more in the Indian setting. Also try to find out about gender difference, do men shake hands more than women, do women touch the feet of elders more than men? You can generate many more questions of your choice.

Experimentation: In the case of experiment the experimenter studies the effect of one variable on the other by **deliberately manipulating and controlling one variable**. The variable which is controlled and manipulated by the experimenter is called **independent variable (IV)** and the variable on which the impact of independent variable is studied is known as **dependent variable (DV)**. In a simple experiment two groups are formed. One is experimental group in which participants receive the independent variable. The other is control group in which behaviour is observed without giving the independent variable. By manipulating independent variable the experimenter is in a position to state that change induced in one variable brings change in another variable. Apart from these variables the experimenter has to also simultaneously take care of other variables which are beyond his or her control. Such variables are called **relevant variables** and need to be controlled as they might confound the effect of independent variable.

In experimental studies three kinds of relevant variables are taken into account. These are *organismic variables*, *situational variables* and *sequential variables*. Organismic variables are related to personal characteristics of the participants such as age, sex, and personality features. Situational variables are concerned with the quality of physical environment during the conduct of experiment such as temperature, humidity and noise. Sequential variables are related to the very procedure of conducting the experiment when the participant is required to be tested across several conditions. Hence exposure of the participant to varied conditions may result either in attaining proficiency due to practice effects or in developing fatigue and monotony towards experiment.

Experimenters use following techniques to control the unwanted effect of relevant variables.

- (i) **Elimination:** In this technique extraneous variables are eliminated from the experimental setting.
- (ii) **Making Conditions Constant:** In this technique the extraneous variables which cannot be eliminated are kept constant in order to make their effect same during the entire experiment.
- (iii) **Matching:** Through this technique the relevant variables are equated or held constant across all the conditions of experiment.
- (iv) **Counter Balancing:** This technique is used to minimize the effect of order or sequence. This is usually done by dividing the participants in two groups. On





Notes

first occasion half of the group (Group A) is given task 1 and the other half (Group B) is given task 2. On the second occasion Group A is given task 2 and Group B is given task 1.

- (v) **Random assignment:** In the case of random assignment all the participants have equal chance to be exposed to experimental and control conditions. It removes the systematic differences between groups.

In addition to experiments carried out in controlled setting (laboratory experiment) experiments are also conducted in natural life conditions. They are called **field experiments** and quasi experiments. Like laboratory experiment independent variable is manipulated and participants are assigned to different groups. In quasi experiments independent variable is manipulated in natural setting using naturally occurring groups to form experimental and control groups.

Case Study: You must have seen a doctor asking personal details in addition to the information about the medical problem of the patient or a media person asking so many questions about various aspects of life while taking interview of a popular person. The purpose behind asking these questions is to know more about the person in terms of his experiences, relationships and interaction with others so as to prepare profile of the person. In psychology this method is called case study.

In the field of psychological enquiry case study method has its own importance and relevance. In this method the main unit of analysis is the individual and his experiences across different contexts in life. It focuses on the individual's interactional patterns with significant others as well as his personal experiences across different real life situations. In order to prepare a case history of data are taken from many sources for example his or her family history, educational life, medical history and social life. This method is very popular in clinical psychology and life span developmental psychology.

In order to prepare the case history usually interview, observation and psychological tests are used to obtain information about the individual. The data collected through these techniques are analyzed in detail. A comprehensive profile of the individual is developed which reflects the description of events in his or her life. Case study helps to locate unique experiences of life as well as the various emotional and adjustment problems of the individual.

Though case study gives a detailed and in-depth description of individual's life we cannot make a very conclusive judgment about the individual without further establishing the reliability and validity of such information from various sources such as family members, friends and administration of some standardized psychological measures. Caution should be taken in planning data-collection from the individual and interpretation of the responses given by the individual.

Survey: You might be aware that television news channels or newspapers ask you to send your view through SMS on current issues of national or international importance. While doing this they try to seek the opinion of people on those issues

to communicate their view to the Government as well as to the society. For example they conduct opinion poll during the election as to which political party enjoys support of the majority of the people. Conducting such a study is called survey research. It is one of the popular research methods not only in psychology but also in other disciplines such as sociology, political science, economics and management.

In psychology survey method is generally used to study the pattern of opinions, attitudes, beliefs and values of the people. This method is also used to test the hypothesis about the relationship of variables especially when some incident takes place. For example media tried to analyze the responses of the people across the country after the attack by terrorists on Mumbai. In order to collect the data from people a variety of sources are used such as directly contacting the participants with a set of questions and taking their interview, sending the questionnaire through email or through post and asking them to send SMS by their mobile phones. Thus in survey, research is generally conducted through questionnaire or interview. It can be conducted on a single individual as well as on a group.



INTEXT QUESTIONS 2.2

1. Observation is divided into _____ and _____ observation depending on the role of observer.
2. In an experiment the experimenter studies the effect of one variable on the other by deliberately _____ and _____ one variable.
3. In the case study method the main unit of analysis is the _____ and his experiences across different contexts in life.
4. The variable which is controlled and manipulated by the experimenter is called _____ variable and the variable on which its impact is studied is known as _____ variable.
5. _____ method is generally used to study the pattern of opinions, attitudes, beliefs and values of the people.

2.3 PSYCHOLOGICAL TOOLS

While conducting psychological research a variety of tools are used to collect data and relevant information from the participants. These tools are in the form of paper, instruments or computer software. The administration of these tools helps the psychologist to obtain verbal, written, behavioural or physiological responses. In this section we will discuss some of the psychological tools which are frequently used in conducting research.





Psychological Tests: You must have heard about psychological tests which measure intelligence, aptitude and interest. Development of test is a major area of activity in psychological research. The tests are designed and developed to assess various psychological attributes. They are developed on the basis of a theoretical framework. For example a test of intelligence is developed following a theory of intelligence. These tests are administered to the individual alone or in a group setting. The obtained score of the individual on the test reveals his or her position in relation to others who also respond to the same test. Thus a psychological test provides an **objective assessment** of different qualities and limitations of the individual. A **standardized psychological test** has properties of reliability and validity. **Reliability** of a test refers to its consistency in terms yielding dependable scores. **Validity** of a test reveals the extent to which the test measures what it claims to measure.

Depending on the nature and administration a test can be either **verbal or non-verbal** (*performance*). In a verbal test the responses are taken in oral form. In non-verbal or performance test the responses are taken in the form of performance or certain behaviour. Psychological tests are also categorized as *objective* and *projective*. An **objective test** contains direct items about the psychological construct. The individual has limited freedom to respond to the items of the objective test. A **projective test** uses ambiguous, vague and unstructured stimuli such as pictures, inkblots, drawings, incomplete sentences etc. In this type of test the individual is free to give his/her responses.

Thus a number of tests are used to assess psychological attributes of the individual. The score on the test reveals the extent to which the individual possesses those attributes. Such scores help the psychologist to decide about the future course of action.

Questionnaire: A questionnaire consists of a set of questions to which the individual is required to respond. The items (questions) of the questionnaire can be either in **closed-ended** form or in **open-ended** form. In the case of *closed-ended* item the individual is provided with limited alternative and he or she has to choose only one alternative which reflects his or her view on the item. In *open-ended* items the individual is free to give his or her response the way he or she likes. The instruction as to how to respond to the items of the questionnaire is written on the first page. Data from a large number of individuals can be taken at a time as the questionnaire can be easily administered to a group of people. The items of questionnaire are written in simple and explicit language so that anyone can understand it. All the items tap various aspects of the construct which is measured. The items are often arranged in the sequence from general to specific.

Interview: It is a techniques of data collection in which a **face-to-face interaction occurs** between two persons with a set objectives. The person who conducts interview is called interviewer and the person who give responses is called interviewee. The interviews are also conducted through telephone, internet and video conferencing. The main purpose of interview is to understand various personal characteristics such as attitudes, values, interests and preferences.



Two types of interviews are often used to obtain information. These are **structured interview** and **unstructured interview**. In the case of *structured interview* the questions are already framed with the possible response options. The interviewee is required to respond to the set of framed questions by choosing one option. For example the attribute of friendliness can be measured by giving the option ranging from 'highly friendly', 'often friendly' to 'least friendly'. *Unstructured interview* is a little flexible. It comprises of a variety of open-ended questions and the interviewee gives his or her responses as freely as possible. During the course of interview the interviewer also frames and reframes the questions and facilitates the entire process of interview. Conducting interview to recruit suitable candidates for a particular job is a good example of unstructured interview.

In order to conduct an interview the interviewer should possess certain skills which help him/her to elicit maximum responses from the interviewee. A skilled interviewer easily establishes rapport with the interviewee by relieving his/her anxiety and making him comfortable during the course of interview. He has command over his language which helps him to put even difficult questions in simple and lucid way in order to probe at a deeper level. He has control over his feelings and emotions which does not give any cue to the interviewee during the interview.

In the field of psychology interview is used for recruitment and selection, counseling, marketing and advertising, attitude survey etc.

In this chapter you have learnt about the various approaches that help understand the nature and causes of human behaviour, and about the different methods that help us to gain more knowledge about mental processes.



INTEXT QUESTIONS 2.3

1. A _____ provides an objective assessment of different qualities and limitations of the individual.
2. _____ of a test refers to its consistency in terms yielding the scores from the representative sample for which it has been designed.
3. _____ of a test reveals the extent to which the test measures what it claims to measure.
4. A _____ uses ambiguous, vague and unstructured stimuli such as pictures, inkblots, drawings, incomplete sentences.
5. The items (questions) of the questionnaire can be either in _____ form or in _____ form.

**Notes**

6. Interview as one of the techniques of data collection is often referred as a _____ between two persons with a set objective.
7. In the case of _____ the questions are already framed with the possible options/
8. _____ comprises of a variety of open-ended questions and the interviewee gives his or her responses as freely as possible.

**WHAT YOU HAVE LEARNT**

- There are different approaches to explain, describe, predict and control behaviour and mental processes. The main approaches are Biological, Psychoanalytic, Behaviouristic, Humanistic and Cognitive. Scientific method has the characteristics of being objective, testable, self-correcting and replicable.
- Different methods are used to understand human behaviour. Observational method helps to describe a phenomenon in a laboratory or natural setting. It can be participant or non-participant.
- Experimental method studies the effect of one variable on another variable by manipulating one and controlling other variables.
- Case study focuses on one person. The person is studied in great detail to understand the underlying issues.
- A questionnaire consists of a set of questions, which the respondent answers. It can be an open or closed ended.
- Interview is a face-to-face interaction regarding a given topic. Interview can be structured or unstructured.

**TERMINAL QUESTIONS**

1. Describe three main approaches used by psychologists to understand mental processes. Why do we need so many approaches to understand human behaviour?
2. Describe the characteristics of scientific method. Explain the use of observation for data collection.
3. Discuss the experimental method as a scientific method. Identify the techniques used to control relevant variables.
4. Discuss how psychological tools are used to understand human behaviour and psychological processes.



ANSWERS TO INEXT QUESTIONS

2.1

1. Biological approach
2. Cognitive approach
3. Humanistic approach
4. Psychoanalytic approach
5. Behaviouristic approach

2.2

1. Participant, non-participant
2. Manipulating, controlling
3. Individual
4. Independent, dependent
5. Survey

2.3

1. Psychological tet
2. Reliability
3. Validity
4. Projective test
5. Close-ended, open-ended
6. Face –to-face interaction
7. Structured interview
8. Unstructured interview

Hints for Terminal Questions

1. Refer to section 2.1
2. Refer to section 2.2
3. Refer to section 2.2
4. Refer to section 2.3





INDIVIDUAL DIFFERENCES

It is often said that no two individuals are exact duplicates; they differ from each other in some way or the other. Hence the job of the psychologist is to identify and understand this uniqueness in individuals. Such a similarity or difference between persons reveals individual differences. It happens in our day-to-day life when we see people around us. A question comes to mind; how and why people appear similar or different to each other? For example when we think about their physical appearance, we often ask ourselves why some people have dark or fair complexion, why some people are tall and some are short, why some are thin and why some are very fat. When we think about their psychological characteristics we often come across people who are very talkative or less talkative, some laugh too much whereas others take much time even to smile, some are very friendly whereas some prefer to be alone. The present lesson tries to answer all such queries which can bother us in our everyday life. In psychology, these are called **individual differences** referring to the extent and kind of variations or similarities among people on some of the important psychological aspects such as intelligence, personality, interest, and aptitude. This lesson will also help us understand how to assess such similarities or variations among individuals.



OBJECTIVES

After studying this lesson, you will be able to:

- describe the nature of individual differences;
- understand how to assess individual differences;
- discuss the nature and definition of intelligence and tools to measure it;
- explain the nature and definition of aptitude and tools to measure it;
- explain interest and tools to measure interest; and
- discuss the nature of personality and describe the different techniques used in personality assessment.



3.1 NATURE OF INDIVIDUAL DIFFERENCES

It has been observed that if we collect information about people's characteristics from a large sample and examine the pattern of distribution (as shown in Fig.-3.1) we find that a large majority of the people fall in the middle range while a small proportion lies in extreme categories. For example, most of the people fall in the category of average height and very few are very tall or very short. This holds true for many more characteristics including intelligence and other psychological attributes.

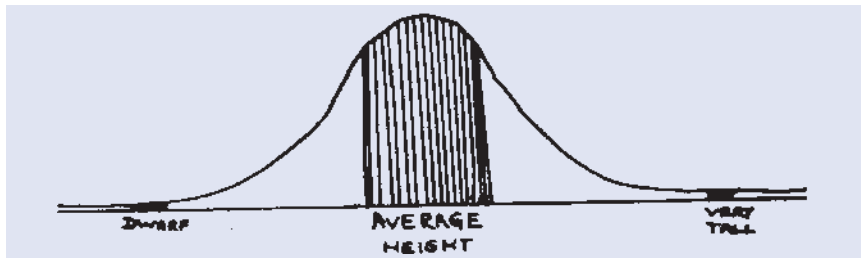


Fig. 3.1 Distribution of height of a large sample of persons

The fact that people are different from each other is a very common observation. The differences in psychological characteristics are often consistent and form a stable pattern. By 'consistent', we mean that people tend to show regularity in their behaviour and their patterns of behaviour do not change very frequently. This consistency and stability in behaviour is unique to every person. People develop their unique traits/ characteristics and patterns of behaviour due to their genetic make up and the environment in which they are brought up. Once we know these differences systematically we can utilize the capabilities of people efficiently for their healthy development. Knowing about the specific characteristics of a person is necessary in order to extend support and utilize his or her potential to optimal level.

Individual differences occur due to interaction of genetic and environmental factors. We inherit certain characteristics from our parents through genetic codes. The phenotype or the expressed forms of our characteristics depend on contributions of the socio-cultural environment. This is the reason why we are not exactly like our parents and our parents not exactly like our grandparents. We do share similarities with our parents in respect of many physical attributes like height, colour of eyes, shape of nose etc. We also inherit certain cognitive, emotional and other characteristics from our parents like intellectual competence, love for sport, creativity etc. However, our own characteristics develop largely by the support from the environment which we inhabit.

The environment is responsible as how we are reared, the kind of atmosphere at house, whether it is liberal or strict, the type of education that we get, what we learn from people, around us, books, cultural practices, peers, teachers and media. All these aspects refer to 'environment' which help in developing our potentials.



Environment, by providing models and other opportunities, helps us develop many traits and skills. Our inheritance alone cannot decide what we become but our environment also contributes. We know the example of Dr. Babasaheb Ambedkar, who was born in a very poor family but, with the right education and environment, became a great lawyer and also designed the Constitution of India. The latest and most well known example would be of our former President Dr. A.P.J. Abdul Kalam. You can also remember many such examples, who did not become great because of inheritance but because of the environment. Now you know that our genetic codes vary. At the same time, surrounding environment also differs from person to person. It sets limits or defines a range by offering different opportunities. That is why the pattern of development of each of us is different from others. It makes us think why we are similar in certain ways and different in others.

**INTEXT QUESTIONS 3.1**

1. Explain the term 'individual differences'.

3.2 ASSESSING INDIVIDUAL DIFFERENCES

Psychological assessment refers to the use of specific procedures for evaluating personal qualities, behaviours and abilities of individuals. These procedures describe people by specifying how they are different from or similar to other individuals. Such assessments are frequently done by most of us when we make judgments such as 'nice', 'good', 'bad', 'attractive', 'ugly', 'genius' and 'idiot' etc. Such judgments can be erroneous many times. Scientific psychology tries to systematize these procedures so that assessment can be made with minimum error and maximum accuracy. Psychologists have developed 'tests' to assess these characteristics. A psychological test is a structured technique used to generate a carefully selected sample of behaviour.

In order to be useful for the purpose of drawing inferences about the person being tested, it is necessary that the test should be reliable, valid and standardized. A test is reliable if it measures a given characteristic consistently. For instance, if you assess something the scores on separate occasions should be more or less similar. Thus a person, if found to be of average intelligence on one occasion should also appear of average intelligence if tested after two weeks. If a test tells two different values while assessing the object on two occasions then it will be called unreliable. A test of intelligence can be called reliable only when a person scores high or low consistently on both the occasions. A good test is found to have high reliability.

The validity of a test refers to the degree to which it assesses what it intends to assess. A valid test of personality gives a measure of a person's personality and predicts behaviour in situations where that aspect of personality is pertinent.

Finally, in order to be useful, an assessment tool should be standardized. Standardization involves establishing the procedure of administration of a test to all persons in the same way under the same conditions. It also involves establishing group norms so that an individual's score can be compared with those of others in a defined group. It is very important because a test score is only a relative score. It does not provide an absolute value as found in physical measurement. Standardization ensures uniformity and objectivity in administration and makes the results interpretable.

Psychologists have developed tests to measure different human characteristics. In schools, we use achievement tests which measure what people have learnt. Psychologists frequently use tests of ability and personality. The tests of ability tell what an individual can do when he or she is at his/her best. Ability tests measure capacity as potential rather than achievement. Tests of intelligence and aptitude come under this category. Aptitude refers to the ability to learn a particular kind of skill required in a specific situation. Personality tests measure the characteristic ways of thinking, feeling or behaving.



INTEXT QUESTIONS 3.2

1. Define psychological assessment. Explain the need for psychological assessment.

2. Discuss in brief the main properties of a psychological test.

3.3 NATURE OF INTELLIGENCE AND ITS ASSESSMENT

You often come across the term intelligence in everyday life. We generally use this term whenever we find somebody doing something very good which goes beyond our expectation. Intelligence is one of the psychological terms used quite frequently in various settings (e.g. school). Who can be called 'Intelligent'? The one who gets highest marks in exams? That person who earns many educational degrees? Is the doctor more intelligent, or the engineer or the lawyer or the artist? One may answer these questions in different ways depending on the meaning of intelligence. Intelligence is much more than getting degrees. Intelligence refers to "multifaceted abilities of people". It gets expressed in many ways. It comes in many forms. Some people are good in studies, some are good in repairing machines, some are good in acting and some are great in sports. People are very good in one subject and average in some other. The most important thing is that 'intelligence' is 'functional'. It is 'used' to do something and to achieve something.





In psychology, the term intelligence has been defined in many ways. One of the earliest definitions of intelligence was given by Binet and Simon in 1905 who defined it as the “*ability to judge well, to understand well, and to reason well*”. One of the most popular definitions of intelligence was given by Wechsler who defined it as “*the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment*”.

Gardner defined intelligence as “*the ability or skill to solve problems or to fashion products which are valued within one or more cultural settings*”. He used the term ‘Multiple Intelligences’ and advocated that there are eight types of intelligences such as *Linguistic, Logical-mathematical, Spatial, Musical, Bodily-kinaesthetic, Interpersonal, Intrapersonal, and Naturalistic*.

Though the first attempt to measure intelligence was made by Sir Francis Galton a more systematic approach was developed by Alfred Binet, a French Psychologist. In 1905, Binet gave the concept of Mental Age (MA) which refers to an individual’s level of mental development relative to the environment in which he/she lives. The term Intelligence Quotient (IQ) was first devised by William Stern, a German psychologist, in 1912. IQ is defined as mental age divided by chronological age, and multiplied by 100: ($IQ = MA/CA \times 100$). For example if the mental of a child is 12 and his/her Chronological age is 8 then the IQ of the child would be 150. The intelligence test developed by Binet was revised subsequently and in 1916 the test was given the name of Stanford - Binet test of intelligence. One of the most popular and widely used tests of intelligence is Wechsler Scales of Intelligence. These scales have been designed for individuals of different age groups such as Wechsler Adult Intelligence Scale (WAIS) for adults and Wechsler Intelligence Scale for Children (WISC) for children between the age of 6 and 16 years.

Intelligence tests are of two kinds Individual test and Group test. An individual test of intelligence can be administered to a single individual at a given time whereas a group test is administered to more than one individual at a time. On the basis of nature of items, intelligence tests are Verbal, Non-verbal, and Performance Tests. A verbal test requires understanding of written words. Hence it can be administered to literate individuals only. In non-verbal test, pictures or illustrations are used as item of the test. Performance tests are made up of certain concrete tasks. Both non-verbal and performance tests can be administered to literate and illiterate individuals.



INTEXT QUESTIONS 3.3

1. What do you understand by the term intelligence?

2. What is IQ?



3.4 APTITUDES AND INTERESTS, AND THEIR ASSESSMENT

You may have come across people who are very proficient in one task but not that much in another task. Some of your friends may be very good in mathematics but very poor in social science. Such people possess special abilities or characteristics in a particular field but relatively low in other field. In psychology, this is called aptitude. An aptitude is a combination of characteristics that indicates an individual's capacity to acquire some specific knowledge or skill, after training. These qualities can be harnessed by appropriate training. In other words, if a person does not have the special abilities required to become a musician, such as discrimination between pitch, tone, rhythm, and other aspects of musical sensitivity, he/she would not be a good musician, even after sufficient training.

There are salient differences between intelligence, aptitude, and achievement. Intelligence relates to the ability of a person to do certain thing at a given time. Aptitude refers to the potential ability of an individual to perform a task, which generally consists of a combination of abilities. Achievement involves performance at any given point of time in a particular subject (e.g. mathematics) with which you have been made familiar.

Aptitude tests are used for predicting success in a vocation such as clerical aptitude, mechanical aptitude, musical aptitude, typing aptitude, etc. Each of these tests usually contains a number of sub-tests. Several multiple aptitude test batteries have been developed to assess aptitude, such as Differential Aptitude Test (DAT), the General Aptitude Test Battery (GATB), and the Armed Services Vocational Aptitude Battery (ASVAB).

Psychologists have constructed a number of tests to measure interest for children and adults. There are vocational interest tests which help identify the interest of a person in particular vocational areas. There are also general interest inventories. Vocational interest tests are paper-pencil tests that assess a person's interest and match them with success in various occupations.



INTEXT QUESTIONS 3.4

1. Define aptitude.

2. What do you understand by aptitude batteries?

3.5 NATURE OF PERSONALITY

We all use the term 'personality' in day-to-day life. In psychology personality is thought as a person's unique and relatively stable behaviour pattern which remains consistent across situations and over a period of time.



Notes

The term personality has been defined in diverse ways. Allport in 1937 gave a very popular definition of personality which is still referred to by scholars. According to him “*personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment*”.

Psychologists have approached personality from different perspectives. Each of these perspectives explains some aspects of personality. Now let us study in brief about some of these perspectives:

- I) **The trait perspective** tries to describe personality in terms of various traits. Some times the traits are grouped into clusters. These clusters are called “types”. For instance introversion and extraversion are two types of personality traits.
- II) **The psychodynamic perspective** calls attention to the unconscious needs and conflicts as well as the influence of earlier stages of development on our lives. Sigmund Freud, a noted psychologist, provided the core concepts for this perspective.
- III) **The socio-cultural perspective** highlights the importance of the social and cultural environment. In view of this theory, our personality and behaviour patterns are acquired through interaction with others and adoption of social and cultural norms.
- IV) **The humanistic perspective** emphasizes the enormous potential for freedom and growth present in each one of us. It is a view which is optimistic and emphasizes-on positive aspects of life and potentialities.



INTEXT QUESTIONS 3.5

1. Define personality. Describe any two perspectives on personality?

3.6 TECHNIQUES OF PERSONALITY ASSESSMENT

In the field of personality assessment the major focus is on the study of the nature and intensity of various characteristics, which are generally reflected through the behaviour of the individual in a given situation. Personality assessment measures are classified into three categories.

- A. Objective or Self report measures of personality.
- B. Projective or Indirect measures of personality.
- C. Situational measures of personality.



A. Objective or Self-Report Measures of Personality

In measures of this kind, the person is asked to report about himself/herself on a set of statements organized in the form of a questionnaire or inventory. The nature of the statement can be either closed ended or open ended. In the case of closed ended statements, rating scales or optional answers are given whereas in the case of open-ended statements, the person is free to describe himself or herself. A number of tests have been developed to assess different trait domains of personality. Some of the self-report measures of personality, which are widely used to assess personality, are being discussed below.

- (i) **Neuroticism, Extraversion, Openness- Personality Inventory-Revised (NEO-PI-R):** This test is currently one of the most popular personality assessment tools being used across the world. This test has been developed by Costa and McCrae (1992) and is based on Five-Factor Model of Personality. The test has been developed based on longitudinal studies over 15 years. It provides scores on five major dimensions of personality. These five dimensions and facets are as follows: Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness.
- (ii) **Sixteen Personality Factor Questionnaire (16 PF):** This test was originally developed by Raymond B. Cattell, Karen Cattell and Heather E. P. Cattell in 1949. Since then, the test has undergone four revisions in 1956, 1962, 1967-69, and 1988-93. Currently the fifth edition developed by Conn & Rieke (1994) is in practice. This test is popularly known as 16 PF and is used for age group of 16 and above. It yields scores on 16 primary traits such as social boldness, dominance, vigilance, emotional stability and rule consciousness. It also measures five global factors, which are Extraversion, Anxiety, Tough-Mindedness, Independence and Self-control.
- (iii) **In India a number of self-** report measures of personality have been developed. Some of these modified versions are Bell Adjustment Inventory by Mohsim and Hussain, Maslow Security-Insecurity Inventory by Singh and Jamuar, Maudsley Personality Inventory of Eysenck in Hindi by Singh and Jodhpur Multiphasic Personality Inventory by Joshi and Malik, amongst others.

B. Projective or Indirect Measures of Personality

Projective or indirect measures of personality are widely used personality assessment tools. Unlike the self-report measures where the individual is provided with structured test stimuli, in projective tests the individual has to respond to unstructured or ambiguous stimuli. The basic assumption behind using unstructured test stimuli in projective tests is that the individual projects his/her latent or unconscious feelings, needs, emotions, motives etc. on to the ambiguous stimulus. The responses of the individual in the form of projection reflect the nature of his/her personality.

**Notes**

Some popular Projective Technique are Rorschach Ink Blot Test, Thematic Apperception Test and Rotter Incomplete Sentences Blank.

C. Situational or Observation Measures of Personality.

Another technique to assess personality is to observe the behaviour of the individual in purposefully designed situation. Such tests are more effective in the assessment of leadership, dominance, responsibility, extraversion-introversion etc. One of the first situational tests was developed by Hartshorne, May, and their associates (1928, 1929, 1930) for the Character Education Enquiry (CEE). This test measures traits like altruism, honesty and self-control. However, situational measures of personality came into light during World War II when the United State Office of Strategic Services (OSS) used situational tests for selection of military personnel for critical overseas assignments. One of the variants of this test is Situational Stress Test in which the individual has to react to various stressful, frustrating, or emotionally disruptive situations where his helpers are obstructive and uncooperative.

**INTEXT QUESTIONS 3.6**

1. What is a self-report measure of personality?

2. Discuss the use of projective technique in measuring personality.

3. What do you understand by situational or observational measure of personality?

**WHAT YOU HAVE LEARNT**

- The study of individual differences focuses on the extent and kind of variations or similarities among people on some of the important psychological aspects such as intelligence, personality, interest, and aptitude.
- Individual differences occur due to interaction of genetic and environmental factors. The differences in psychological characteristics are often consistent and form a stable pattern. This consistency and stability in behaviour is unique to every person.
- Psychological assessment refers to the use of specific procedures for evaluating personal qualities, behaviours and abilities of individuals. These procedures describe people by specifying how they are different from or similar to other individuals.
- A test should be reliable, valid and standardized. A test is reliable if it measures a given characteristic consistently. The validity of a test refers to the degree to

which it assesses what it intends to assess. Standardization involves establishing the procedure of administration of a test to all persons in the same way under the same conditions.

- Intelligence refers to “multifaceted abilities of people”. In psychology the term intelligence has been defined in many ways. Binet and Simon in 1905 defined it as the “ability to judge well, to understand well, and to reason well”.
- One of the most popular definitions of intelligence was given by Wechsler in 1939. He defined intelligence as “the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment”.
- Gardner used the term ‘Multiple Intelligences and advocated that there are eight types of intelligences such as Linguistic, Logical-mathematical, Spatial, Musical, Bodily-kinaesthetic, Interpersonal, Intrapersonal, and Naturalistic.
- The first systematic effort to assess intelligence was made in 1905 by Alfred Binet, a French psychologist, who gave the concept of Mental Age (MA).
- The term Intelligence Quotient (IQ) was at first devised by William Stern, a German Psychologist, in 1912. IQ is defined as mental age divided by chronological age, and multiplied by 100. $IQ = MA/CA \times 100$.
- There are several Intelligence Scales developed by Wechsler such as Wechsler Adult Intelligence Scale (WAIS) for adults.
- There are salient differences between intelligence, aptitude, and achievement. Intelligence refers to the ability of a person to do a certain thing at a given time. Aptitude refers to the potential ability of the individual to learn to perform a task. Achievement involves performance at any given point of time in a particular subject (e.g. mathematics) with which you have been made familiar.
- Aptitude tests are used for prediction of success in various kinds of vocations such as clerical aptitude, mechanical aptitude, musical aptitude, typing aptitude, etc. Several multiple aptitude test batteries have been developed to assess aptitude. The most widely used is Differential Aptitude Test (DAT).
- Personality refers to a person’s unique and relatively stable behaviour patterns which remain consistent across situations and over a period of time. Allport defined personality as the “dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment”.
- Psychologists have approached personality from different perspectives. These viewpoints can be grouped in to four major types: Psychodynamic perspective, Socio-cultural perspective, Humanistic perspective, and Trait perspective.
- Personality measures are classified into three categories: Self report measures, Projective measures, and Situational measures.



**Notes****TERMINAL QUESTIONS**

1. What do you understand by the term “individual differences”?
2. Define Intelligence. Name any two Intelligence Tests.
3. Explain the differences between Intelligence, Aptitude and Achievement.
4. Identify the major perspectives towards the understanding of personality.

**ANSWERS TO INTEXT QUESTIONS****3.1**

1. Extent and kind of variations or similarities among people on psychological characteristics. They occur due to interaction of genetic and environmental factors.

3.2

1. Use of specific procedures employed in evaluating personal qualities, behaviours and abilities of individuals.
2. Reliability, validity, standardization.

3.3

1. Aggregate or global capacity of the individual to act purposefully, to think rationally and deal effectively with the environment.
2. Intelligence quotient is mental age divided by chronological age multiplied by 100
$$IQ = \frac{MA}{CA} \times 100$$

3.4

1. Combination of characteristics that indicates an individual’s capacity to acquire some specific skill or knowledge after training.
2. Are developed to assess aptitude eg. Differential Aptitude Test (DAT) and General Aptitude Test Battery (GATB)

3.5

1. Person’s unique and relatively stable behaviour pattern which remains consistent across situations and over a period of time. Trait perspective, biological perspective, psychodynamic perspective, socio-cultural perspective, humanistic perspective (any two).

3.6

1. Person is asked to report about himself / herself on a set of statements.
2. Individual has to respond to unstructured or ambiguous stimuli. The responses in the form of projection reflect the nature of his/her personality.
3. Behaviour of individual is observed in purposefully designed situations.

Hints for Terminal Questions

1. Refer to section 3.1
2. Refer to sections 3.2 & 3.3
3. Refer to section 3.4
4. Refer to section 3.5



**4****LEARNING**

You must have observed a young human baby. If you wave your hands in front of the eyes of a new born you will see that the child automatically closes her eyes. A human baby is born with simple reflexes and when grown as an adult the individual becomes capable of performing many complex behaviours. This happens because of learning. The process of learning is continuous and goes on throughout life. From simple behaviours, like switching on the light, or picking up a book from the table to complex behaviours like driving a car or piloting a spaceship, all become reality only due to learning.

Learning empowers a person by making him/her what one is not and wants to become. All children are born with limited capacity of reflexes but it is only through learning that people become great scientists like Homi Bhabha, Vikram Sarabhai, leaders like Mahatma Gandhi and Pandit Nehru or any one whom you may admire. Without learning one is handicapped. People realize their potentials through learning and become what they dream. This lesson will help us understand the process of learning and its types.

**OBJECTIVES**

After studying this lesson, you will be able to:

- explain the process of learning and its definition;
- describe the nature of classical and operant types of conditioning;
- explain learning by observation; and
- explain concept learning, skill learning and transfer of training.

4.1 LEARNING

Most of our behaviours are acquired through the process of learning. Learning may be defined as a relatively durable change in behaviour due to experience. Thus, if the change

in behaviour is temporary, or due to instinct or maturation, it is not learning. The key feature of learning is experience. Any change in behavior in the absence of practice or experience does not qualify as learning. For example the maturational changes in the child, like crawling, standing and walking at certain ages are not included in learning. Similarly, illness and drug induced temporary changes are not due to learning. To qualify as learning, a change in behaviour must be relatively enduring.

Interestingly enough learning is not directly observable. It is often inferred from changes in the external behaviour. It is apparent in terms of improvement in the performance. You may recollect your own early childhood experiences when you were required to learn alphabets. In the beginning we make more errors. However, when we start practicing the errors decrease and a time comes when the behaviour becomes flawless. The decrement in the number of errors with increase in practice clearly indicates that learning is taking place.

How Do We Learn?

Learning helps us adapt to the surrounding environment. After living in a particular socio-cultural environment for some time, we learn the norms of the society and all that is expected of us and become responsible citizen and members of family and work organization. All this is possible on account of learning. We use learning to acquire various types of skills. But the crucial question is how do we learn?

Psychologists, on the basis of studies on human beings and on animals, have tried to explain the process of learning. They have identified some procedures that are used in the acquisition of simple as well as complex responses. The two basic types of learning are classical conditioning and operant or instrumental conditioning. In addition, we have observational learning, verbal learning, concept learning, and skill learning. Let us briefly consider some of the important types of learning.

(i) Classical Conditioning : Learning through Association

Classical conditioning is also known as Pavlovian conditioning because it was discovered by a Russian scientist Ivan P. Pavlov who was interested in studying stimulus-response relationship. He worked with dogs. The animal was harnessed and food was presented to the dog by a laboratory assistant. Pavlov realized that the salivary response had been learned by the dog. He proceeded to study this type of learning in detail. (See Fig. 4.1)

Pavlov presented to the dog a series of trials in which a tone (buzzer) was paired with food (biologically important stimulus). The learning trials consisted of pairing the tone, (Conditioned Stimulus or CS) with food (Unconditioned Stimulus or UCS). The tone presented was rather short (e.g., 10 secs) and the time interval between the tone and presentation of food, was between 2 to 3 minutes.



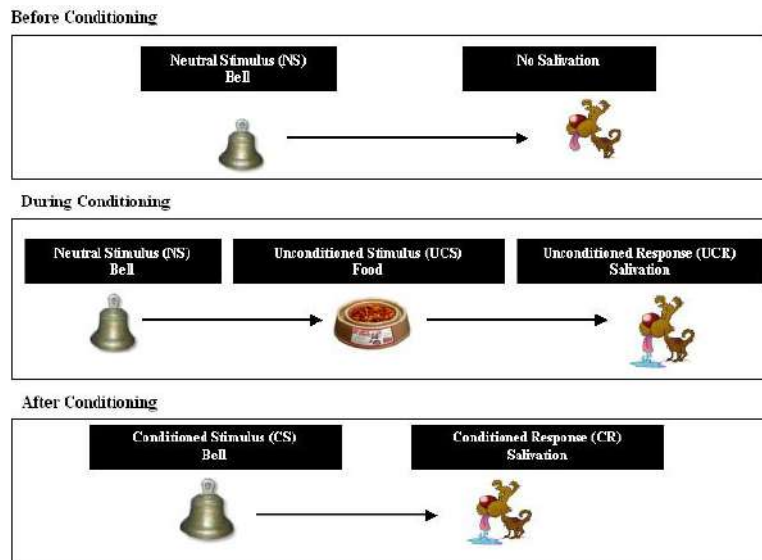


Fig. 4.1: Classical Conditioning

During the initial trials the dog salivated when the food was presented. Secretion of saliva to food is a natural response and, therefore, the saliva is called Unconditioned Response (UR). Later, the buzzer was presented first. It was followed by food. After some pairing trials of buzzer and food, the dog started salivation at the ringing of buzzer alone. The buzzer is called Conditioned Stimulus (CS) because the dog has been conditioned to salivate at the presentation of the buzzer itself. The secretion of saliva on the presentation of buzzer is called Conditioned Response (CR). The steps of conditioning process are shown in Fig. 4.2.

Procedure	Response
Before conditioning	
Food (UCS) →	Salivation (UCR)
Buzzer (CS) →	Orienting Response
During conditioning (Acquisition phase)	
Food + Buzzer (UCS) (CS) →	Salivation (CR)
(Repeated pairing of the UCS and CS)	
After conditioning	
Buzzer (CS) →	Salivation (CR)
UCS = Unconditioned Stimulus; CS = Conditioned Stimulus; UCR = Unconditioned Response; CR = Conditioned Response	

Figure 4.2: The process of classical conditioning.

Learning

It can be observed from Fig. 4.2 that originally the sound of the buzzer (CS) elicits only an orienting response (alerting response) and elicits salivation when the food is consistently presented in close association with the buzzes. Immediately after the buzzer is rung, the animal elicits salivation. This is called **acquisition**.

It has been found that if the buzzer (CS) is presented on each trial but the food (US) is not presented, **extinction** will take place. That is, the buzzer will no more elicit saliva (CR) and if it is continued for some time extinction will take place.

It has also been found that if a gap of some duration occurs after extinction and if the buzzer (CS) is again presented without food (US) the dog will salivate (produce CR) for a few trials. This recovery of CR after extinction is called **spontaneous recovery**.

(ii) Operant Conditioning : Modification of Behaviour through Reinforcement

If a child completes the home work she is praised (rewarded) by the parents and the child learns to perform the task. If the child breaks a plate, he/she is scolded (punished) and she will learn not to repeat the behaviour. This is called Operant Conditioning or instrumental conditioning. In other words, we learn to perform behaviours that produce positive outcomes and avoid behaviours that yield negative outcomes.

We may define operant conditioning as a process through which organisms learn to repeat behaviours that produce positive outcomes or avoid or escape from the negative outcomes. **B.F. Skinner** is considered as the most influential psychologist advocating the role of operant conditioning in learning. He developed an experimental chamber (called Skinner Box) to study learning process in rats. (see Fig. 4.3)

The chamber included a lever attached to the front wall. Pressing the lever is the response to be learned. The hungry rat is placed in the chamber and it starts doing random activity in it. After some time, the rat accidentally presses the lever and a pellet of food drops automatically in the plate and the rat eats it. After eating the pallet the rat again starts activity in the chamber. After some activity it again presses the lever and gets pellet (a reward). Gradually the random activity changes to more specific activity around the lever. Finally, the rat learns that pressing the lever results in dropping of the food, a satisfying outcome. In other words the pressing of lever by the rat is instrumental in providing food (reinforcement). The response (pressing the lever) is reinforced and the behaviour is acquired or learned. The pressing of lever by the rat is instrumental in getting the food, a satisfying consequence (positive reinforcement) and that is why this type of learning is also called

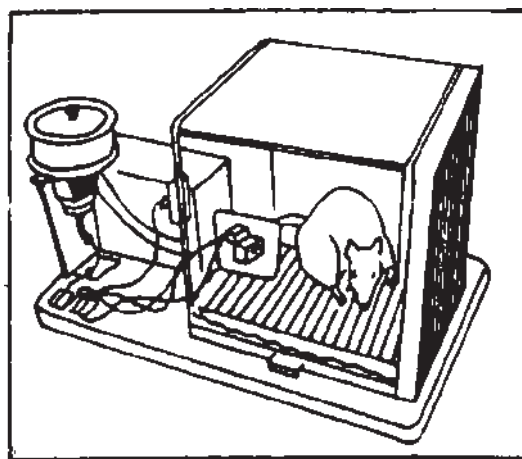


Fig. 4.3: Skinner Box

MODULE - II

Basic Psychological Processes



Notes



instrumental learning. It is also called operant conditioning because the behaviour of rat or any organism is a kind of operation on the environment.



INTEXT QUESTION 4.1

Fill in the blanks with appropriate words.

1. Learning is a permanent change in
2. Pavlovian conditioning is known as conditioning.
3. advocated the role of operant conditioning.
4. Operant conditioning is also called learning.

4.2 REINFORCEMENT AND OBSERVATIONAL LEARNING

Much of the human learning could be explained with the help of operant conditioning method. For example, parents and other authorities attempt to discourage aggressive behaviours by punishing them and reward for good behaviours. The role of reinforcement is very crucial in operant conditioning. It can be positive or negative. Let us understand these two types of reinforcement.

Positive Reinforcement : Reinforcement is any operation or action that increases the rate of response. In Skinner's experiment the rat responded by pressing the lever and obtained food. This is called positive reinforcement. So, a positive reinforcement or reward (e.g., food, sexual pleasure, etc.) is the operation that increases the strength of a specific behaviour. Positive reinforcement is any stimulus that strengthens a response that precedes it (e.g., lever pressing is reinforced by food).

Negative Reinforcement : Another quite different way of increasing the rate of response is through negative reinforcement. Suppose that in the Skinner Box the rat receives electric shock to the feet every second. When the rat presses the lever, the shock is removed for 10 secs. This increases the rate of response. This procedure is called negative reinforcement which involves application of an aversive stimulus (e.g. heat, electric shock, scudding etc.). The word "negative" refers to the nature of the reinforcer (aversive stimulus). It is a "reinforcement" because it increases the rate of response. This procedure is called "escape" learning because the rat can escape the shock if it presses the lever. Another kind of negative reinforcement can result in conditioning called "avoidance" learning where the rat can avoid the shock by pressing the lever. In escape or avoidance learning the reinforcer is negative and the organism learns to escape or avoid its presence.



Schedules of Reinforcement

How do we reinforce the correct responses? It could be by using continuous or partial reinforcement. In the case of continuous reinforcement, every correct response is reinforced. For example, when the rat presses the lever every time it gets a food pellet (reinforcement). Alternatively, the responses are reinforced partially or intermittently (some times only). The continuous reinforcement is useful for establishing or strengthening new behaviours. The partial reinforcement, on the other hand, is more powerful in maintaining the acquired behaviours.

Observational Learning : Modelling

Observational learning is the third major way we learn. Acquiring new skills by observing the behaviour of others is very common. It is a part of everyday life. Observational learning depends on the existence of appropriate model in one's environment. That is, the child picks up behaviour while the appropriate model is performing an activity. For example, young people learn aggression through watching the actions of others (models). Television programmes and movies provide much of the learning to the young people. When children watch violence on TV they tend to learn such behaviours. We learn various social roles through observational learning. However, observational learning is a complex process, far more complex than mere imitation. Children acquire information and learn skills through observational learning but do not put it into immediate use. People, particularly youngsters, can often be influenced in positive ways when they have appropriate role models.



INTEXT QUESTION 4.2

State whether the following statements are True or False:

1. Positive reinforcement is any action that reduces the rate of response.
2. The aversive response is called as escape learning.
3. Reinforcement can be partial or continuous.
4. Partial reinforcement does not help in maintaining behaviour.
5. Observational learning depends on the existence of appropriate model.

4.3 SOME OTHER TYPES OF LEARNING

Till now we have read about learning and conditioning. Now we will read briefly about the other types of learning.



Verbal Learning

You are reading this lesson and trying to understand the concept of learning. This is possible because of verbal learning. You have learned language. People in different parts of the world learn different languages. The process of learning language is called verbal learning. If you recollect your younger days you will notice that you started with identifying alphabets, then moved to words and finally sentences. When you learn a foreign language you use pairs of words. Psychologists study how various procedures like serial learning and paired associates learning are used.

Concept Learning

This is about developing categories of objects and events. It is very important in our life that we should discriminate between things on the basis of some criterion. For example, the terms 'boys', 'girls', 'fruits' and 'furniture' refer to concepts. A concept involves a variety of objects clubbed together. Use of categories or class names helps us to communicate and perform different activities. The concepts may be natural or artificial. They may be as abstract and concrete. Love, freedom and democracy are examples of abstract concepts. Cow, table, boy, girl, orange and rose are examples of concrete concepts. While learning a concept we make one response to all the stimuli belonging to that category. Thus we refer to all kinds of tables as table or all boys as boy. In fact all kinds of higher learning necessarily involves concept learning. Concepts help us to reduce the complexity of our world. In lesson 7 you will read more about concept formation.

Skill Learning

An important area of learning involves acquiring various types of skills like riding a bicycle, writing, car driving, piloting an air craft, leading a group and motivating others etc. All of these involve skills. Those who are able to learn these and other skills get opportunities in life. Once the skill is acquired one may over learn it. It may become automatic and one is able to perform it with ease and comfort. As a result people perform tasks spontaneously and can perform more than one task at a time (e.g. talking to a person and car driving).

4.4 TRANSFER OF TRAINING

It is interesting to note that learning of one task does not remain confined to that specific task only. That learning is used in other situations also. A person's ability to utilize knowledge, skills and any kind of learning is highly appreciated. If a child learns to multiply or divide she can use the process not only in the class but also in the market place or at home if it is required. Transfer of training refers to the process of using earlier learning in a new situation. It is positive if the first learning helps the second learning. It can be negative if the first learning interferes with the second learning. It can be zero if the first learning neither helps nor interferes with the second learning.

Learning

Learning transforms a person in many ways and occurs throughout one's life. Good learners utilize each and every opportunity as an occasion for learning. The methods or types of learning mentioned earlier provide only some basic ideas about learning. The changes that take place in personality, attitude and interest are also consequences of certain types of learning. They take place in complex ways. As learning progresses your ability to learn also develops. If you learn you become a better person, flexible in approach and competent enough to appreciate the reality.

Some Tips for Better Study Habits

Studying of a topic can be facilitated if you realize that effort and motivation both are important. In order to gain more while preparing a topic or studying some thing you need to attend to the following points.

Study at a Specific Place: You must study in a quiet, well-lighted area free of disturbance. If possible, you should also have at least one place where you only study. Do nothing else at the spot: Keep magazines, radios, friends, and other distractions out of that area. In this way, studying will become strongly linked with one specific place. Once there, you'll find it relatively easy to get started.

Organize Your Study through Spaced Sessions: It is quite reasonable to review intensely before an exam. However, if you are actually learning some topic for the first time you are asking for trouble. It has been found that spaced practice is a more efficient way to study. It involves a large number of relatively short study sessions, rather than one or two long ones (called massed practice).

Use Memory Aids: Psychologists have found many techniques useful for improving memory. Most of them link new information to certain ideas or images that are easy to remember.

Try to Test Yourself: When studying you can arrange to take several practice tests before the real one in examination. In other words, studying should indicate self-testing by use of flash cards, learning checks, a study guide or questions you ask yourself.

Over Learning: It has been found that many students *underprepare* for exams, and most *overestimate* how well they will do in exams. A solution to both problems is overlearning. To overlearn, you should continue studying beyond bare mastery of a topic. This means that you need to give yourself time for extra study and review after you think you are prepared for a test.

Avoid procrastination: A tendency to procrastinate is almost universal. Procrastinators put off work until the last moment. They work only under pressure, skip classes and give false reasons for late work. This has negative effect on learning and performance. Use of a formal time schedule and setting up specific goals may help to study more effectively.

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INTEXT QUESTIONS 4.3

1. What are the main types of learning?

2. What is transfer of training?



WHAT YOU HAVE LEARNT

- Learning may be defined as a relatively durable change in behaviour due to experience. If the change in behaviour is temporary, or due to instinct or maturation, it is not learning.
- Learning helps us adapt to our environment.
- The two basic types of learning are classical conditioning and operant conditioning or instrumental learning.
- Classical conditioning involves pairing of a neutral stimulus and a natural stimulus (CS and UCS) leading to formation of association between neutral stimulus and response.
- Operant conditioning is a process through which organisms learn to repeat behaviours that produce positive outcomes or avoid or escape from the negative outcomes.
- Skinner defined reinforcement as any operation or action that increases the rate of response.
- In escape or avoidance learning the reinforcer is negative and the organism learns to escape or avoid its presence.
- In the case of continuous reinforcement, every correct response is reinforced.
- The process of learning language is called verbal learning.
- An important area of learning involves acquiring skills like riding a bicycle, writing, car driving, piloting an air craft, leading a group, motivating others etc.
- Observational learning is also used in acquiring new skills by observing the behaviour of others.
- Transfer of training refers to the process of using earlier learning in a new situation. It is positive if the first learning helps the second learning.
- Learning transforms a person in many ways and occurs throughout one's life. Good learners utilize each and every opportunity as an occasion for learning.



TERMINAL QUESTIONS

1. What is learning? Give an example?
2. Describe the process of classical conditioning.
3. What are the main types of reinforcement? What is the role of reinforcement in operant conditioning?
4. Give examples of observational learning and skill learning.
5. What is the significance of transfer of training?



ANSWERS TO INTEXT QUESTIONS

4.1

1. relatively, behaviour
2. classical
3. B.F. Skinner
4. Instrumental

4.2

1. False
2. True
3. True
4. False
5. True

4.3

1. Skill learning, verbal learning and concept learning.
2. Transfer of training refers to the process of using earlier learning in a new situation.

Hints for Terminal Questions

1. Refer to section 4.1
2. Refer to section 4.1
3. Refer to section 4.2
4. Refer to section 4.3
5. Refer to section 4.4





SENSORY PROCESSES: ATTENTION AND PERCEPTION

The purpose of describing sensory receptors, attention and perception is to familiarize you with the way our sense organs collect information and how it is processed by our brain. We have five sense organs through which we acquire information. These include eye, ear, skin, nose and tongue. We have mainly two functions of our senses: survival and sensuality. If we could not see any colors or the beauty of flowers or the pictures on our television or the traffic lights, our life would become dull and risky. Colors do not really exist “out there” in objects rather our world of colour is a product of sensory and perceptual processes of brain. We derive sensual pleasure in breathing fresh air enjoying tasty food, good music or feeling relaxed by gently touching a cat or dog. Our senses do more than just making contact with our external world. They add to happiness, variety and satisfaction in life. Sensation is a process by which neutral impulses are created by stimulation of sensory neurons that results in awareness of conditions inside or outside the body. Perception refers to the elaboration and interpretation of these sensory experiences. It is governed with our past and present experiences. With the help of this lesson you will learn how we derive a world of reality from the information that we receive from our sense organs.



OBJECTIVES

After studying this lesson, you will be able to:

- understand various senses and the sense organs;
- know the qualities that are common to all senses;
- understand the factors in attention; and
- identify some other senses beyond these five senses.



5.1 SENSATION

Sensation can be explained as the process by which one form of energy is converted into another form. For example light is converted into neural impulses by which we code sensory events in our system that can be processed by our brain. The sensory systems process information reaching to the brain. The motor systems process information going out of the brain to muscles and glands. Sometimes your parents switch on the T.V. and adjust the volume of sound that they can hear. Suppose you adjust it to a volume which you are able to detect but your mother says that she is unable to hear and asks you to increase the volume. If your mother asks you to stop after some point that means that difference of adjustment has been noticed by your mother. This minimal amount of change of volume between two stimuli that is being recognized by your mother is called a “difference threshold”. Background of a stimulus also affects our sensation. For example stars are present in the sky in day time and at night but are visible only after sunset or at nighttime because they can not be detected due to intense background of the daylight sun.

We all are also guided by factors of expectations and experiences. Experience of sensation is not simply a yes/no, present/absent mechanism. For example you are expecting a very close friend of yours to visit your home at 4 p.m. At 4 p.m. that friend reaches your house and pushes the doorbell button. Other members of your house do not notice it but you are able to notice that sound. It is primarily because of your expectation that you notice this second clearly while others do not notice it. The minimum amount of physical energy needed to produce a sensory experience is called “absolute threshold”.

We have several sense organs. The table below describes them

Table 5.1: Fundamental human senses

Sense	Stimulus	Sense organ	Sensation
sight	light waves	eye	colors, patterns, textures
hearing	sound waves	ear	noise, tones, music
skin sensations	external touch	skin	touch, cold, warmth, pain
smell	volatile materials	nose	odors
taste	soluble materials	tongue	sweet, salty, bitter

Let us look briefly at each of the senses.

- **Vision:** Vision is extremely important for all of us. Humans and animals with good vision have advantage in each and everything in life. We experience vision with the help of our eyes which function like a camera. The eye gathers and focuses light like a camera. Sir Isaac Newton, who in the seventeenth century discovered the laws of



motion and gravity, also discovered that when white light passes through a prism it separates into a rainbow of color – the visible spectrum.

- **Color blindness:** Not everyone sees colors in the same way. Some people are born with a color deficiency. Color blindness is the partial or total inability to distinguish colors. Most color blind people have trouble in distinguishing red from green.
- **Hearing:** Hearing is equally important for our daily life. It is a principal sensory modality for human communication. Sounds are created when actions cause objects to vibrate. When vibrating objects push the molecules of medium back and forth we can experience sound. Frequency refers to the number of cycles a wave completes in a given amount of time. It is usually expressed in cycles per second (CPS) or hertz (Hz). Sound cannot travel in a true vacuum (such as outer-space) because there is no medium there to move or vibrate.
- **Pitch :** Pitch is the highness or lowness of a sound determined by the sound's frequency. High frequencies produce high pitch and low frequencies produce low pitch.
- **Loudness:** The loudness or physical intensity of a sound is determined by its amplitude. Sound waves with large amplitudes are experienced as loud and those with small amplitudes as soft. Loudness of sound is measured in units called decibels (dB).
- **Timbre:** The quality of a sound wave's complexity is its timbre. The sounds that we call noise contain many frequencies that are not systematically related to each other.
- **Sense of bodily orientation (vestibular sense)**
It is the sense of bodily orientation with respect to gravity, especially how our heads are positioned, whether straight leaning, reclining or upside down. The vestibular sense also tells us when we are moving or how our motion is changing.
- **Sense of bodily position and the movement of body parts (Kinesthetic sense)**
Kinesthetic sense is the sense of body position and the movement of body parts relative to each other. It is a sense that provides sensory feedback about motor activities of our body, for example how the hand moves to pick up the telephone when it rings.
- **Sense of smell (olfaction)**
The sense of smell involves a sequence of bio-chemical activities that triggers neural impulses. Once activated these neural impulses convey odor information to the brain.
- **Sense of taste (gustation)**
The taste receptor cells are gathered in the taste buds on the upper side of the tongue. The experience of sweetness or saltiness is affected by these taste buds. There are only four true or primary taste qualities: sweet, sour, bitter and saline. Taste sensitivity develops in infancy but decreases in old age. Taste receptors can be damaged by

Sensory Processes: Attention and Perception

excessive use of alcohol, smoking, acids or hot foods but they are also replaced every few days and a permanent loss of taste is extremely rare.

- **Skin senses:** Our skin contains nerve endings that are stimulated by contact with external objects and it produces sensations of cold, warmth or pressure. The sensitivity to pressure is maximum on face, tongue and hands and it is less on our backs. Touch plays an important role in human relations and emotions.
- **Sense of pain:** Pain is the body's response to stimulation from noxious stimuli. Acute pain is reaction to sharp or sudden stimulation. The pain one feels in everyday life is also related to psycho-social and cultural habits. What "pain" a person experiences depend upon the meaning one attaches to pain and also on attention one receives from near and dear ones.



INTEXT QUESTIONS 5.1

1. Discuss the role of vision and hearing in our lives.

2. Briefly explain the concept of 'threshold'.

5.2 PERCEPTION

In the last section we dealt with sensation, the process of bringing information into the brain. This section is about perception, or how we use sensations into meaningful patterns. As we encounter a variety of events in our daily lives, the brain actively selects, organizes and integrates sensory information to create a picture of the world. Some of our perceptions are native or inborn and many other perceptions are a result of our past experiences.

Sensation is the stage where neural activity codes the information about nature of stimulation. Perception is the next stage in which an internal representation of an object is formed. This representation provides a working description of perceiver's external environment. Perception involves synthesis of simple sensory features into percept of an object that can be recognized.

This helps in identification and recognition, and meaning is assigned to the percepts. Perception and recognition are combined processes that do not act separately. For example a circular object may be a cricket ball or orange.

Stages of perception: The physical object in the world is called the distal stimulus (distant from the observer) and the optical image on the retina is called the proximal stimulus

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(proximate or near to observer). The major task of perception is to determine the distal stimulus based on information of proximal stimulus – to know what the world out there is “really like” using one’s imagination of mind.

There is more to perceiving which includes physical properties such as shape or size and past experiences.

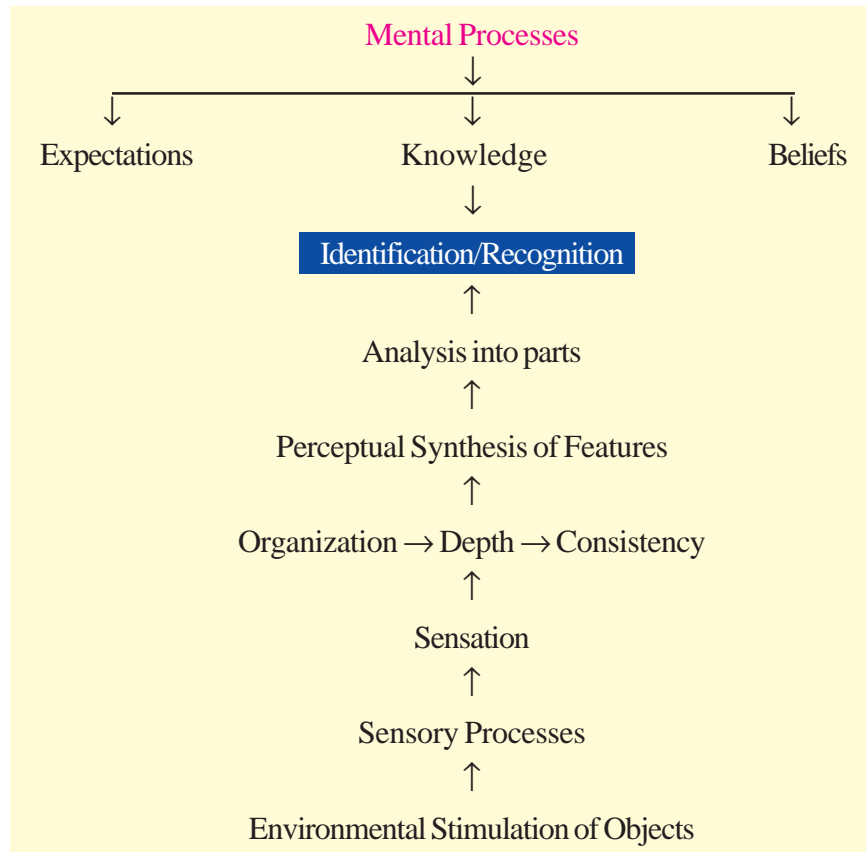


Fig. 5.1: *The Process of Perception*



INTEXT QUESTIONS 5.2

1. Explain the concept of perception.

2. Describe the process of perception.

5.3 PERCEPTUAL ORGANIZATION

Perception is an organized process. The most common form of perceptual organization is called figure ground organization in which sensations are grouped into objects or figures



that stand out on a plainer background. Look at Figure 5.2. Do you see a nose or two faces?

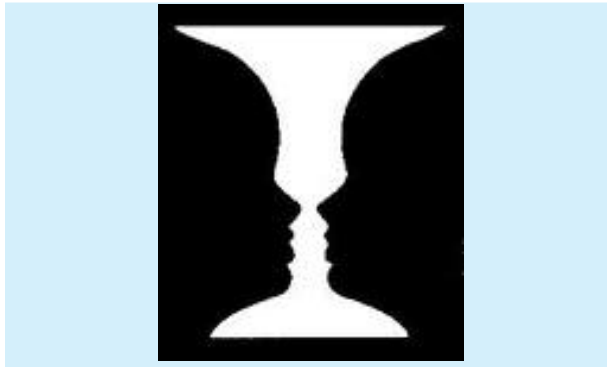


Fig. 5.2: Reversible Figure and Ground Organisation

Reversible goblet is a favourite demonstration of a figure-ground reversal. Note that either the light portion or the dark portion can be perceived as a figure against a background.

A. Laws of Perceptual Grouping

The factors which determine perceptual grouping are:-

- (a) **Proximity:** All other factors being equal, stimuli that are near one another tend to be grouped together. For example, if four stand near one another and a fifth 10 feet away, the adjacent four will be seen as a group and the distant fifth as an outsider. Events that are close in time and space are also perceived together.
- (b) **Similarity:** Stimuli that are similar in size, shape or color tend to be grouped together.
- (c) **Continuity:** Perception tends toward simplicity and continuity. Even if there are dots in a circular fashion, the person will see them as a complete circle.
- (d) **Closure:** It is the tendency to complete a figure that is incomplete but has a consistent overall form.
- (e) **Common region:** Stimuli that are found within a common area tend to be seen as a group.

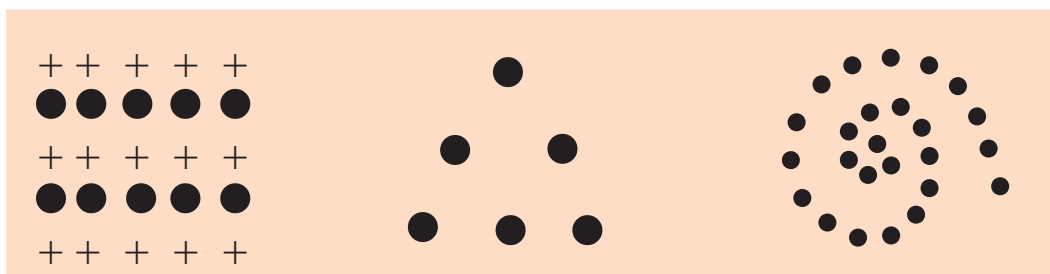


Fig. 5.3: Laws of Perceptual Grouping



Notes

B. Perceptual Constancy

Perception of an object's shape, size or brightness remains the same even though its image on the retina has changed. This is called perceptual constancy and is found in all senses, though most examples given here are of vision.

If the perceived size of an object remains the same, even though the size of its image on the retina changes it is called size constancy.

In shape constancy the shape of an object remains stable even though the shape of its retina image changes.

Brightness constancy refers to the fact that the brightness of objects appears to stay the same as lighting conditions change.

C. Depth Perception

It is the ability to see three-dimensional space and to accurately judge distances. Without depth perception you can't ride on a motorcycle, or drive a car, catch a ball, thread a needle or simply walk around a room. The world would look like a flat surface. The ability of depth perception is partly innate and partly learned.

Depth cues are features of environment and messages from the body that supply information about distance and space. The cues which work with just one eye are called monocular cues and those which require two eyes are called binocular cues. Binocular cues are the most basic source of depth perception that is caused due to retina disparity (a discrepancy in the images that reach the right and left eyes). A person with one eye will have very limited depth perception.

Pictorial cues for depth are features found in paintings, drawings and photographs that impart information about space, depth and distance. This influence causes apparent perception of things which are not there. For example, if you stand between two railway tracks, they appear to meet at the horizon, even though they actually remain parallel.

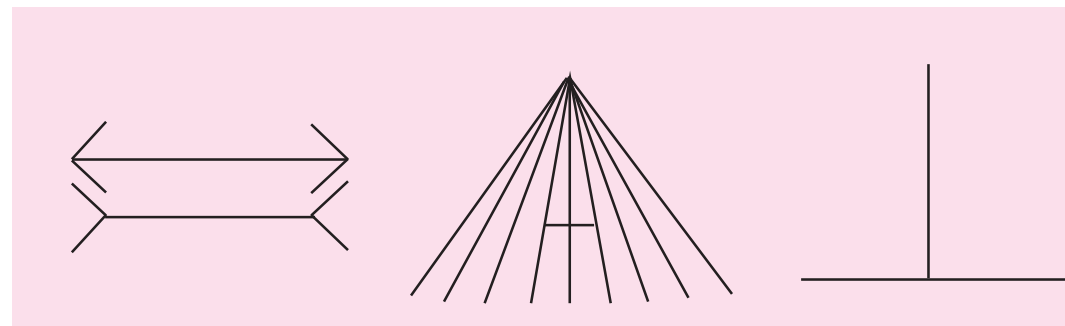


Figure 5.4: Three powerful illusions. In drawing A, known as the Muller-Lyer illusion, the bottom line looks longer than the top line. Actually, they are equal in length. In drawing B, the Ponzo illusion, the top horizontal line looks longer; again, both lines are equal. In drawing C, known as the horizontal-vertical illusion, the vertical line looks longer, check with a ruler to see that it's not!

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Illusions are distorted perception of stimuli that exist, whereas hallucination is perception of objects or events that have no external reality. An example of illusion is the Muller-Lyer illusion in which horizontal line with outgoing arrow-heads appears shorter than the line with inward arrows.



INTEXT QUESTIONS 5.3

1. Describe various determinants of perceptual organization.

2. What do you understand by the term perceptual constancy?

3. Discuss depth perception with help of an example.

5.4 ATTENTION

Attention: Have you ever noticed that while doing both, driving and talking on your mobile you may not pay attention to driving. Or when you are studying and loud music is on in the neighbourhood you lose attention on your studies. ‘Divided attention’ can lead to accidents when people are driving and watching some other objects.

‘Selective attention’ is a process in which we give priority to a particular incoming sensory message. Attention has broadly three possible functions: (a) as a sensory filter (b) as a response selection and (c) as a gateway to consciousness.

Determinants of Attention

- **Physical factors:** All other things being equal, physical factors like repetition, contrast, shape, size, brightness and contrast do affect our attention. A good packaging or bright light attracts us. That is why all big companies invest a lot on packaging their products in an attractive manner. Similarly an advertisement which is published on a regular basis in newspapers and electronic media catches the attention of customers more easily than non-advertised products.
- **Motives and attention:** Motives also play a role in shaping our perception. For example, if you are hungry food-related words are more likely to gain your attention than non-food words. Advertisers and propagandists take advantage of two motives that are very common in our society: anxiety and sex. Many products such as toothpastes, food products even automotives highlight the health concern to catch the attention of

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customers. On the other hand items of fashionable products play on the desire to be attractive. The political parties cash on appeals to fear to make their voice heard by the public at large.



INTEST QUESTIONS 5.4

1. Discuss the concept of Attention?

2. Identify the various determinants of attention.

5.5 EXTRA SENSORY PERCEPTION

Extra sensory perception is the ability to perceive objects or events in ways that cannot be explained by known sensory capacities.

Parapsychology is the study of extra sensory perception phenomena. Events that seem to lie outside the region of accepted scientific laws are called psi-phenomena. An example of extrasensory perception when a person intuitively ‘feels’ that his brother who is in another city is not well. Another example could be when you just ‘know’ that an earthquake is going to happen in your city.

Clairvoyance: It is the ability to perceive events or gain information in ways that appear unaffected by distance or normal barriers. Telepathy or perception of another person’s thoughts or the ability to read someone else’s mind.

Pre-cognition: The ability to predict or perceive accurately future events.

Psycho-kinesis: The ability to exert influence over inanimate objects by will-power (mind over matter). Some rare persons are able to move objects only through concentration but without touching them.

A few psychologists strongly believe in extrasensory perception but the majority does not subscribe to it.

5.6 APPLICATIONS OF PERCEPTION IN EVERYDAY LIFE

There are several ways in which knowledge of the process of sensation, perception and attention can be used in everyday life.

- **Eyewitness:** You may be aware that eyewitness testimony is key to decisions in the judiciary. Not only do advocates and police officers lay strong emphasis on eye witness

testimony, but they have a strong belief that it is usually correct. But psychologists in large numbers are of the opinion that eyewitness errors are very common in perception. In fact impressions formed when a person is surprised, stressed or threatened are especially prone to distortion. Therefore it would be advisable for the investigative agencies and jurors to gather more evidence instead of solely relying on eyewitness while coming to a conclusion.

- **Perceptual awareness and positive psychology:** Do some people perceive things more accurately than others? Humanistic psychologists believe that some people perceive themselves and others with unusual accuracy. Habituation is when we stop paying attention to familiar stimuli. When a stimulus is repeated without change our response to it habituates or decreases. It seems that creative people attend to stimuli, even those that are repeated.
- **The value of paying attention:** We have this general tendency to generalize without paying attention to the diversity of possibilities. Perceptual clarity requires rigorous effort of paying more and more attention. Breaking perceptual habits and interrupting habituation can lead to good results. If you begin to question your own perceptions by bringing another interpretation to the same reality you can get marvelous outcomes in your activities.



WHAT YOU HAVE LEARNT

- Sensation is the process by which neural impulses are created by stimulation or sensory neurons that results in awareness of conditions inside or outside our body.
- There are five main senses: sight, hearing, touch, smell and taste. In addition we also have vestibular sense and kinesthetic sense.
- Perception is the process through which an internal representation of an object is formed. It involves synthesis of simple sensations, and assigning meaning to the whole.
- Principles of perceptual organization include nearness, similarity, continuity and closure and help identify the figure against the background.
- Depth perception is the ability to judge distance and perceive three dimensional space. It involves monocular and binocular cues.
- Perceptual constancy refers to the fact that we interpret a familiar object as having the same size, shape or color even if the sensations point otherwise.
- Attention is the ability to focus our senses on a particular object. It involves selectivity and is influenced both by physical and psychological factors.
- Extra-sensory perception is the ability to perceive events or objects in ways that cannot be explained by known sensory capacities.



**Notes**

- Knowledge of perceptual psychology helps in everyday life and in learning how to improve our attention and perception.

**TERMINAL QUESTIONS**

1. Describe the importance of perception in our daily life.
2. Define perception and also discuss principles of perceptual organization.
3. Discuss the concept of depth perception and perceptual constancy.
4. What do you understand by Extra-sensory perception?
5. Describe the various applications of perception.

**ANSWERS TO INTEXT QUESTIONS****5.1**

1. Vision is extremely important. We experience vision with the help of our eyes which are like a camera.
2. The minimum amount of change between two stimuli that can be recognised is called “difference threshold”.

The minimum amount of physical energy needed to produce a sensory experience is called “absolute threshold”.

5.2

1. Perception is when an internal representation of an object that was earlier sensed is formed.
2. When we sense an object, we sensation is in the form of the organisation, depth and consistency of stimulus. Perceptual processes then analyse this into parts and mental process help us identify the stimulus.

5.3

1. Factors which determine perceptual organisation are figure ground organisation, perceptual consistency and depth perception.
2. Perception of an object’s shape, size or brightness remains the same even though its image on the retina has changed. This is called perceptual consistency.
3. Depth perception is the ability to see three dimensional space and judge distances. For example depth perception helps us drive a motorcycle or a car and helps us catch a ball.

5.4

1. Attention is the process by which we notice stimuli. Selective attention is a process in which we give priority to a particular sensory message.
2. The determinants of attention are physical factors and motives.

Hints for Terminal Questions

1. Refer to unit 5.1
2. Refer to unit 5.2
3. Refer to unit 5.3
4. Refer to unit 5.5
5. Refer to unit 5.6





6

MEMORY

If you are asked to tell the name of your favourite actor, actress or singer, it won't take more than a second to come out with the answer. In the same way we all remember our childhood friends, interesting incidents relating to them, our family members, relatives and so many other things. Have you ever wondered how we remember all these things, and do not forget them over long periods? All this is possible because of memory.

The human memory has immense potential. You must be knowing that before the Vedas were scripted, the oral tradition existed which means that the immense wealth of knowledge was passed on from one generation to another by the oral tradition. This was totally dependent on our memory. Memory is crucial in our life because it helps building bridges in the flow of experiences and allows us to have a sense of continuity. In this lesson we will study about this dynamic system which we call memory.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the nature of memory;
- differentiate between the stages of memory;
- describe forgetting; and
- list some strategies for enhancing memory.

6.1 MEMORY AND FORGETTING

Psychologists consider memory and learning to be different processes, though both are closely related. While, learning refers to the acquisition of new behaviours through experience, memory refers to the process of storing the outcomes of learning in the form of information that can be retrieved when required. In this lesson you will learn



about memory and forgetting. You can very easily understand the significance of memory by visualizing a situation about a person who has lost his memory. He will lose his identity and cannot connect various experiences, events, and people. Such a person will lead a miserable life. This happens in brain damaged people or in old age when people develop some kind of memory loss, as in Alzheimer’s disease.

Memory refers to the set of processes involved in storing information. This specific process is termed as retention. Memory can be defined as a perceptually active mental system that receives, encodes, modifies, and retrieves information. We can not directly observe the process of memory. It can be studied indirectly by measuring retention. Three basic methods of measuring retention are : Recall, Recognition, and Relearning. Let us briefly discuss these methods.

Measuring Retention: Recognition, Recall and Relearning

When you are not able to remember someone’s name but you know that you have seen his/her face before, this is the process of **recognition**. In this process you are checking the stimulus (face) with your memory content to find a match. In the same manner when one tries to remember a name without a face in front, it is called **recall**. Recall is a process of using a general stimulus and finding the information about it from memory. When you are given a question in an exam you use the process of recall. When you answer multiple choice items, you are asked to match the information with the provided pieces of information. You have to identify and match it with the information which is already stored in your memory. Recognition is easier than recall. **Relearning** is the method of learning the material another time. It usually takes less time than original learning.

6.2 STAGES OF MEMORY

Psychologists have discovered that memory is not a single or unitary system. It has more than one distinct system. In other words, there are more than one type of memory. According to the most acceptable model of memory, there are three major systems of memory : Sensory Memory; Short-Term Memory (STM), and Long-Term Memory (LTM). Information moves successively through these three systems if attention is given to the material. If attention (focused awareness) is not given, information does not move further into the system.

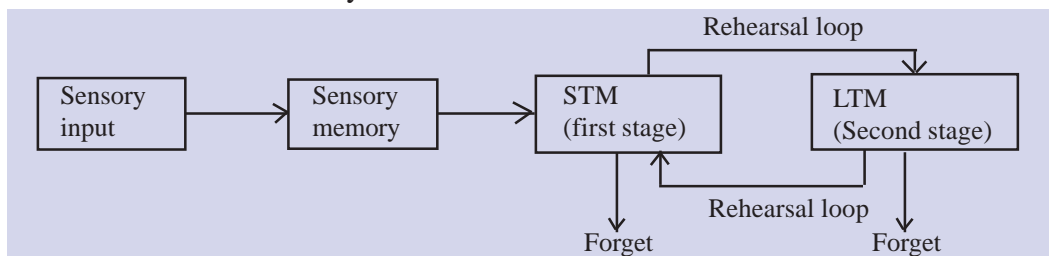


Fig. 6.1: Stages of Memory



Notes

Sensory Memory : Hold any object about 12 inches in front of you. Look at it steadily for a while. Close your eyes and notice how long the clear image of that object lasts. A clear visual image of any object will last in sensory memory for about half a second after the stimulus is removed. Sensory memory holds representations of sensory input for very brief periods of time, depending upon the modality involved. There are different sensory registers for each of the senses.

Short-Term Memory (STM) : Look up for a moment and note what attracts your visual attention. Try to identify the sounds and sensations that you are experiencing now. What have you identified is the content of short-term memory or STM. It holds relatively small amounts of information for brief periods of time, usually 30 seconds or less. This is the memory system we use when we look up the phone number and dial it. If we are connected on the first instance the telephone number is forgotten. However, if we get the line engaged for some time, we keep on dialing the number and through repeated dialing rehearsal of the telephone number we push it to the long-term memory (LTM) storage.

However, it has been found that short-term storage is more than a passive “holding area” (e.g. holding a telephone number). On the contrary, it involves active processing of information. This finding has led psychologists to use the term working memory. It means that something active goes on during the short-term memory. Attempt Activity 1 to understand the working of STM.

Activity 1

Working of Short Term Memory (STM) Read out aloud the following sequence of numbers to a friend and ask him/her to immediately write in the order the numbers that were spoken out aloud. After each set read the next set of numbers and so on. Note that the series begins with three digits and increases by one digit each time.

4	2	8							
1	4	6	3						
5	7	4	9	2					
6	0	8	1	3	5				
1	8	4	7	9	2	6			
3	5	0	1	7	4	2	9		
2	7	3	9	6	8	1	4	5	

How many digits can your friend recall?

Probably, your friend will recall up to 7 (± 2) digits.

STM has a limited capacity to hold information. In general it holds about 5 to 9 units (the “magic number” 7 ± 2) of information at one go. If the number of units goes higher, new information displaces or writes over the existing units. Thus in the example given earlier it is easy to remember a telephone number consisting of 7 to 9



digits. If more information is added we lose at least part of the phone number. However, this limitation in capacity can be effectively expanded by a process known as *chunking* i.e. several units of meaningful information are packed into one chunk. For example the number 194720021941 (12 digits) can easily be remembered if the 12 digits are chunked into three units 1947, 2002, 1941, all referring to calendar years.

Long – Term Memory (LTM) : It refers to the memory system for the retention of large amounts of information for long periods of time. It is the memory system that permits us to remember events that happened many years ago, yesterday, last year, and so on. It is the long-term memory that allows us to remember factual information making it possible for us to learn different subjects, appear for examinations and communicate with others. It brings continuity and meaning to our life.

When we pay attention to a piece of information and engage in active rehearsal the material is stored in the long-term memory (LTM). Information in the sensory memory enters short-term memory when it becomes the focus of our attention. If we do not pay attention to the incoming sensory information, the material fades and quickly disappears. We tend to pay attention to certain information and not to the other. Paying attention to certain aspects of our world is what we call. “selective attention”. The information from STM is often rehearsed by us. This rehearsal helps the transfer of that information from STM to LTM.

Activity 2

How Long Term Memory (LTM) works.

Ask the same friend, without looking at the written digits, to recall the four-digit number (1462). Even if you were to prompt your friend by saying that the number starts with ‘1’, it is highly doubtful that your friend will be able to recall even these four - digits.

Do you know as to why this happens? Because there was no rehearsal and therefore the four-digit number was not stored in the LTM.

Table 6.1: Nature of three systems of memory

Characteristics	Sensory Memory	Short-term Memory	Long-term Memory
Duration	Iconic about ½ sec Echoic about 2 sec	20 seconds	Life time
Capacity	Large	7 ± 2	Unlimited
Forgetting	Trace decay	Decay, interference and displacement	Interference, Decay Lack of Cues
Encoding	Sensory (visual) (auditory)	Phonological or visual-semantic	Semantic and sensory
Retrieval	Parallel search	Serial exhaustive search	Parallel distributed search



INTEXT QUESTIONS 6.1

1. What is recall?

2. List the different stages of memory.

6.3 TYPES OF MEMORY

In recent years psychologists have conceptualized memory into four types as given below:

Semantic : This deals with knowledge, meaning and generalized experiences. What ever we remember from books and information about world events and meanings of words are included in it.

Episodic : It refers to the experiences which are personal to an individual. You do so many things in a day. They are your unique experiences. Memory of such experiences is accessible by you only. They are part of your episodic memory.

Procedural : This deals with memory for actions or ways of doing certain things or performing certain activities.

Meta Memory : It is memory for your memory. We not only remember things but also remember that we can remember. People may be good or poor in understanding their own memories.

6.4 FORGETTING

It is a common experience that sometimes we are unable to remember information that we need at a particular time. We find that on some occasions this lets us down as we are unable to remember the information that we require desperately. During examinations we are unable to remember or retrieve what we had learned. This is what we call forgetting. Why does this occur? Many explanations have been offered to explain this kind of loss. Let us briefly consider some theories to explain the causes of forgetting.

- (i) **Decay :** Some psychologists think that it is due to gradual fading of memory traces or decay that happens with lapse of time. This does not explain why certain memories fade forever while others seem to be well preserved. Passing of time cannot, therefore, be considered as the main cause of forgetting. You can see that in Table 6.1



- (ii) **Interference** : A more useful explanation is found in the view called **interference theory**. It argues that memories are lost because of what happens to them during the period when we retain them. Thus inhibition or interference by subsequently learned material becomes the major cause of forgetting. There are two types of such interference – **Retroactive interference** and **Proactive interference**. Retroactive interference (acting back wards) occurs, when the current information interferes with what has been retained earlier. For example, you learn Punjabi language on Monday and Bengali on Tuesday. During a Punjabi test taken on Wednesday interference is expected from the learning of Bengali words. Forgetting may also occur due to (acting forwards) proactive interference. This is a situation in which earlier information in the memory interferes with the current information. Suppose you have been driving a scooter with gears. Now, you have a new scooter which has no gears (automatic drive). You will tend to change the gears in the new scooter and this habit can persist for long. Proactive interference thus explains one's inability to acquire new knowledge or habit because of the powerful interference from old habits.
- (iii) **Level of Processing** : While learning some material we may attend to it in detail and process at a deeper level or neglect it and attend at a surface level. This may be a cause of forgetting.

Activity 3

Effect of Delay and Interference on STM.

Ask a friend to remember a sequence of three consonant letters, such as, FJQ, while counting backwards from a given number, such as 462. After the three consonant letters have been said and your friend has counted backwards for about 15-20 seconds, ask him/her to recall the three consonant letters, that is, FJQ. Does your friend will find it difficult because the counting task prevents him/her from rehearsing the letters and allows the memory trace to decay. Now give more three consonant letters (WCT, QRB) and ask the friend to count backwards (743, 947). You are likely to note that now your friend has greater difficulty in remembering the letters! Yes, this is due to proactive inhibition.

6.5 STRATEGIES FOR ENHANCING MEMORY

How good is your memory? We all would like to improve our memories so that we can retain more facts and information. This is possible with little effort and almost anyone can improve his or her memory. Here are some tips to enhance one's memory.

1. **Deep Processing** : If you want to learn something and wish to enter information into long-term memory, you have to think about it. You need to consider its meaning and examine its relationship to information you already have. Careful planning, considering the meaning of information, and relating it to existing knowledge is helpful in learning it and remembering it later. The retention of material is dependent directly upon the depth at which it has been processed. Deeper level in terms of meaning is very important. Second, the depth of



Notes

processing also refers to the rehearsal of material to be remembered. Greater the rehearsal, more the chances of recalling the material later.

2. **Attending carefully :** If you want to learn something well and ensure its retention in long-term memory you have to put in conscious effort to attend to it carefully.
3. **Minimize interference :** You have learned that interference is a major cause of forgetting and you should try to reduce it as much as possible. In general, the more similar the materials to be learned, the more likely they will produce interference. Thus, you should arrange your studies so that you don't study similar subjects one right after the other. For example, if you have to study two languages, study them on different days.
4. **Distributed practice :** While learning some material it is beneficial to learn it using distributed practice in which there is a gap between trials. Take rest after a period of study. If the chapter is lengthy, divide it into two or three parts and learn a part in one go. After mastering one part then go to the second and so on. Do not try to cram all the information you want to memorize at once.
5. **Using memory aids :** People use various cues, indicators and signs to connect events. This often facilitates remembering. You can use visual imagery to remember objects and places. For example, if you visit a new place, you can remember the location by remembering several associated objects and places. You may remember the place to be close to a cinema hall, in front of a signal post and so on.
6. **Shorthand codes :** You can develop your own shorthand codes to memorize long list of items. You can use the first letter of each word or item and construct a unique "word". For example, to remember the seven constituents of light we use VIBGYOR; where V stands for Violet, I for Indigo, B for Blue, G for Green, Y for Yellow, O for Orange and R for Red. During the school days. We used to forget the order of Mughal emperors in history subject. We developed a shorthand code : BHAJSA" where B stands for Babar, H for Humayun, A for Akbar, J for Jahangir, S for Shahjahan and A for Aurangzeb. It helped remembering the names in order.

You can use the tips in Figure 6.2 to help you memorize your course material

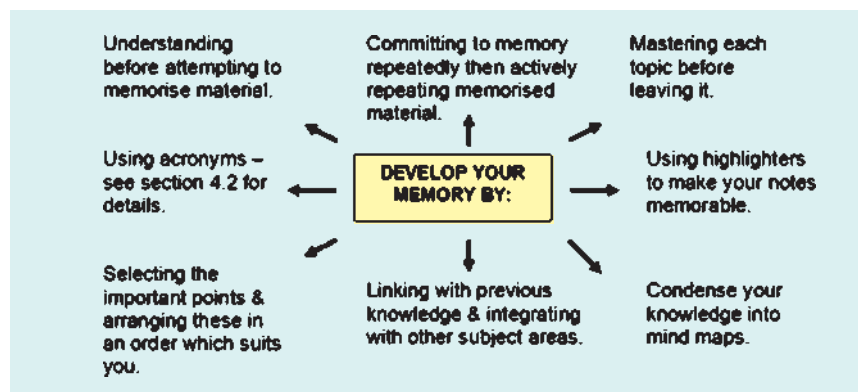


Fig. 6.2: Tips to memorize course material



6.6 REPRESSION : FORGETTING PAINFUL EVENTS

The events and experiences that are threatening or painful are eliminated from our consciousness. This is called repression. Freud believed that the repressed memories are pushed into hidden recesses of the unconscious mind. Such repressed memories may cause many psychological problems for the individual. Amnesia refers to a loss of memory due to illness, injury, drug abuse or other causes.



INTEXT QUESTIONS 6.2

1. Make a list of the major types of memory.

2. State any two causes of forgetting.



WHAT YOU HAVE LEARNT

- Memory refers to the set of processes involved in storing information and the specific process is termed as retention.
- Three basic methods of measuring retention are : Recall, Recognition, and Relearning.
- Sensory memory holds representations of sensory input for brief periods of time, depending upon the modality involved.
- Short – term memory or STM holds relatively small amounts of information for brief periods of time, usually 30 seconds or less.
- **Long – Term Memory** is a memory system for the retention of large amount of information for long periods of time.
- Forgetting is loss of memory or failure to recall. It is caused by several factors including decay, level of processing and depression.
- Memory can be enhanced with the help of mnemonic strategies



TERMINAL QUESTIONS

1. Describe briefly the three stage model of memory.



2. Describe the properties of short term memory.
3. List the main causes of forgetting.

**ANSWERS TO INTEXT QUESTIONS****6.1**

1. Recall is a process of using a general stimulus and finding the information that is in the memory.
2. Sensory memory, short term memory, long term memory

6.2

1. Semantic, Episodic, Procedural and Meta memory.
2. Decay, Interference, Level of processing

Hints for Terminal Questions

1. Refer to section 6.2
2. Refer to section 6.2
3. Refer to section 6.4



7

THINKING AND PROBLEM SOLVING

Have you ever thought about how you have acquired knowledge about all that you know today? It may instantly come to your mind that your teachers have taught you about this, your parents made you learn all these things, or you read about all these in books. In all these situations you have learnt something to build your knowledge base. Thus the process of knowing or of acquiring knowledge is called cognition. The process of acquiring knowledge is facilitated by cognitive processes such as attention, thinking, remembering, and reasoning. These cognitive processes are controlled and regulated by higher center of the brain, the cerebral cortex. The cognitive processes are very much specific to human beings and are guided by concepts, facts, propositions, rules, and memories. All these cognitive activities are governed by thinking. Hence, in this chapter you will learn about what is thinking, stages of problem solving, stages of creative thinking, and processes involved in making decisions.



OBJECTIVES

After studying this lesson, you will be able to:

- understand the nature of thinking;
- describe various stages of problem solving;
- explain creativity and its role in life; and
- explain the process of decision making.

7.1 THE NATURE OF THINKING

Thinking is perhaps one aspect of our mental activity which continues even when we are asleep. The difference between what is thinking and what is not thinking is just our awareness about the particular thinking process. Hence thinking is a complex mental process which involves manipulation of information. Such information is



collected through our senses (such as vision, hearing, smelling etc) from the environment, as well as the information which is stored in our memory because of our encounter with many events and situations in the past. Thinking is a **constructive process** in the sense that it helps us to form a new representation of any object or event by transforming available information. It involves a number of mental activities, such as inferring, abstracting, reasoning, imagining, judging, problem solving, and creative thinking. Such activities take place in our mind and can be inferred from our behaviours. Thinking is usually initiated by a problem and goes through a sequence of steps such as judging, abstracting, inferring, reasoning, imagining, and remembering. These steps are often directed towards solution of the problem. The example given below will help you to understand this in a better way.

In order to reach your new school on time suppose you are trying to find out the shortest route from your home to your new school. Your choice will be guided by many factors such as condition of the road, the density of traffic during your school time, safety while walking on the road etc. Finally you take a decision about the best possible shortest route after considering all these factors. Thus, a simple problem like this also requires thinking. The solution to this problem emerges after processing information that is available to us from the environment and our past experience. Thinking relies on a variety of mental structures such as **concepts** and **reasoning**. We will briefly learn about these mental structures.

Concepts: Concepts are one of the key elements of thinking. Concepts represent objects, activities, ideas, or living organisms. They also represent **properties** (such as “sour” or “brave”), **abstractions** (such as “anger” or “fear”), and **relations** (such as “smaller than” or “more intelligent than”). Concepts are mental structures which allow us to **organize knowledge** in systematic ways. We cannot observe them directly, but we can infer them from behaviour.

We as human beings have the capacity to abstract the essential characteristics of objects, events or whatever we perceive. For example, when we see a Potato we categorize it as ‘vegetable’, and when we see a towel we categorize it as ‘cloth’. Whenever we encounter a new stimulus we tend to treat it as a member of a familiar or remembered category and take the same action toward it and give it the same label.

Reasoning: Reasoning is also one of the key aspects of thinking. It is a process that involves inference. Reasoning is used in logical thinking and problem solving. It is goal directed, and the conclusions or judgments are drawn from a set of facts. In reasoning, information from the environment and the stored information in the mind are used following certain rules. There are two types of reasoning: deductive and inductive. In **deductive reasoning** we try to deduce or draw conclusion from a set of initial assertions or premises; where as in **inductive reasoning** we start from available evidence to generate a conclusion about the likelihood of something. Most cases of scientific reasoning are inductive in nature. Scientists and even lay people consider a number of instances and try to determine what general rule covers them all. For

example, the person is a priest, because he is wearing plain cloth, prays and eats simple food.



INTEXT QUESTIONS 7.1

1. What is thinking?

2. What are the different mental components of thinking?

7.2 PROBLEM SOLVING

Problem solving is part and parcel of our daily life. Every day we solve a number of problems ranging from simple to complex. Some problems take little time where as some take much time to solve. We look for alternative solutions if do not get the right kind of resources to solve the problem in hand. In the case of solving any type of problem our thinking becomes directed and focused and we try to use all the resources, both internal (mind) and external (support and help of others) to arrive at the right and appropriate decision. For example if you want to score good marks in an exam, you study hard, take the help of teachers, friends, and parents and finally you score good marks. Thus problem solving is directed thinking focused towards dealing with a specific problem. This thinking has three elements: the **problem**, the **goal**, and the **steps to reach the goal**. There are two methods which are used prominently in problem solving. These are- “**Means-end-analysis**” and “**Algorithms**”. In the case of Means-end-analysis a specific step-by-step procedure is followed for solving certain types of problems. In the case of ‘**heuristics**’ the individual is free to go for any kind of possible rules or ideas to reach the solution. It is also called rule of thumb.

Problem Solving and Mental Set: Sometimes we use a particular strategy/technique to solve a problem but we may or may not succeed in our effort to solve the problem. This creates a set to approach future problems that are encountered by a person. The set continues even if the problem is different. Despite this, we use the same strategy/technique when ever we come across the same problem and again fail to reach the solution. Such phenomenon in problem solving is called mental set. A mental set is a tendency on the part of an individual to respond to a new problem in the same manner that he or she has used earlier to solve a problem. Previous success with a particular rule produces a kind of mental rigidity/fixedness/set, which hinders the process of generating new ideas to solve a new problem. A mental set inhibits or affects the quality of our mental activities. However, in solving our real life problems we often rely on past learning and experience with similar or related problems.





In Activity 1 You may not be able to solve the problem, because of the mental set that one has to keep the lines within the grid of nine dots. By going outside the boundaries, you will succeed.



INTEXT QUESTIONS 7.2

1. Define problem solving. Discuss the two types of problem solving.

2. Discuss the role of mental set in problem solving.

7.3 CREATIVITY AND ITS ROLE IN LIFE

Do you know whatever you see around you, the things which you use for work in everyday life, the transport you use for commuting from one place to another etc are all the products of human thinking? Creativity is a particular kind of thinking which involves reaching out to the solution of a problem in a unique and novel way which was nonexistent earlier. Creativity is the mother of all inventions and discoveries in the world. Unlike routine solutions to the problems, creative solutions are novel, original, and unique, that others have not thought of before. The creative solutions or productions are sudden or spontaneous and are the outcome of a lot of work and preparation already done consciously and unconsciously. The sudden appearance of new ideas is called insight. The creative thinker can be any more such as an artist, musician, writer, scientist or sports person.

Stages of Creative Thinking: Graham Wallas, one of the leading psychologists of early twentieth century stated that there are five stages of creative thinking. These are *Preparation, incubation, illumination, evaluation, and revision*. We briefly discuss these five steps of creative thinking in the subsequent section.

1. **Preparation:** This is the first stage in which the thinker formulates the problem and collects facts and materials necessary for the solution. He/she finds that the problem cannot be solved after days, weeks, or months of concentrated effort. Unable to solve the problem the thinker deliberately or involuntarily turns away from the problem, initiating stage two i.e. incubation. At this stage of problem solving, it is important to overcome negative consequences of mental set and any kind of mental set or bias.
2. **Incubation:** This is a stage of no solution and involves a number of emotional and cognitive complexities. However, the negative effects of mental set, functional fixedness, and other ideas that interfere with the solution tend to fade. Perhaps, fatigue and too much of concern with the problem also mount up during this

Thinking and Problem Solving

period. Further, the unconscious thought processes involved in creative thinking are at work during this stage.

- 3. Illumination:** In this stage a potential solution to the problem seems to be realized as if from nowhere. It is about having the insight about the possible solution. Illumination occurs with its “aha” experience when a sudden idea or solution appears into consciousness.
- 4. Evaluation:** In this stage the obtained solution is verified or tested to see if it works. Frequently, the insight may turn out to be unsatisfactory, and may need some modification in the strategy of approaching the problem.
- 5. Revision:** Revision is required in the case a solution which is not satisfactory.

It has been found that creative people are generally talented (e.g. artists, musicians, mathematicians etc.), and have specific abilities. Creative people have been found to have some specific personality characteristics such as they are independent in their judgments, self-assertive, dominant, impulsive, prefer complexity, etc.



INTEXT QUESTIONS 7.3

1. What is creativity? What are the possible characteristics of a creative person?

2. Discuss in brief the stages of creative thinking.

7.4 DECISION MAKING

We make several decisions in our day-to-day life, such as decisions pertaining to our personal life, social life, education, career etc. When we take a decision which gives us success whereas our faulty decisions do not yield the desired result. Decision making is also related with another term ‘judgment’. Let us discuss these two aspects of thinking separately.

Decision Making: Decision-making is a kind of problem solving in which we select an appropriate alternative out of a number of alternatives available to us. For example, you have the option to choose between History and Psychology courses in your eleventh grade. You attend classes in both the subjects to decide upon the course to choose. Suppose you find that the contents of psychology are relevant, interesting and new and the teacher is intelligent, friendly, knowledgeable, and having good verbal ability; all qualities that you value in a teacher. So, on the basis of judgment about the subject and qualities of the teacher you decide to choose the psychology course.

MODULE - II

Basic Psychological Processes



Notes



Judgment: Judgment is a process of forming opinions, arriving at conclusions, and making critical evaluations about objects, events and people on the basis of available information. The process of judgment is often automatic and spontaneous. It does not require any prompting. Some judgmental choices are habitual like need for going for a morning walk before getting ready. Judgments involve evaluating information about the world (objects, events, persons, etc.), while decisions require making choices.



INTEXT QUESTIONS 7.4

1. What is the difference between decision making and judgment? Discuss in brief.



WHAT YOU HAVE LEARNT

- The process of knowing or acquiring knowledge is called cognition. The process of acquiring knowledge is facilitated by processes such as attention, thinking, remembering, and reasoning. These cognitive processes are controlled and regulated by higher center of the brain, the cerebral cortex.
- Thinking is a complex mental process which involves manipulation of information. Such information is collect through our senses (such as vision, hearing, smelling etc) from the environment, or is based on information which is stored in our memory because of our encounter with many events and situations in the past.
- Thinking is a constructive process in the sense that it helps us to form a new representation of any object or event by transforming available information. It involves a number of mental activities, such as inferring, abstracting, reasoning, imagining, judging, problem solving, and creative thinking.
- Concepts are one of the key elements of thinking. Concepts are mental structures which allow us to organize knowledge in systematic ways. We cannot observe them directly, but we can infer them from behaviour.
- Reasoning is another key aspects of thinking. It is a process that involves inference. Reasoning is used in logical thinking and problem solving. It is goal directed, and the conclusions or judgments are drawn from a set of facts.
- There are two types of reasoning: deductive and inductive. In *deductive reasoning* we try to deduce or draw conclusion from a set of initial assertions or premises; where as in *inductive reasoning* we start from available evidence to generate a conclusion about the likelihood of something.

Thinking and Problem Solving

- Problem solving is directed thinking focused towards dealing with a specific problem. It has three elements: the problem, the goal, and the steps to reach the goal.
- A mental set is a tendency on the part of an individual to respond to a new problem in the same manner that he or she has used earlier to solve a problem. Previous success with a particular rule produces a kind of mental rigidity/ fixedness/set, which hinders the process of generating new ideas to solve a new problem.
- Creativity is a particular kind of thinking which involves reaching out to the solution of a problem in a unique and novel way which was nonexistent earlier. Creativity is the mother of all inventions and discoveries in the world. Creative solutions are novel, original, and unique that others have not thought of before.
- There are five stages of creative thinking. These are *Preparation, incubation, illumination, evaluation, and revision*.
- Decision- making is a kind of problem solving in which we select an appropriate alternative out of a number of alternatives available to us. Judgment is a process of forming opinions, arriving at conclusion, and making critical evaluations about objects, events and people on the basis of available information.



TERMINAL QUESTIONS

1. Give any 2 examples each for (a) Concepts (b) Reasoning (c) Problem solving.
2. Identify any 5 creative persons who are famous in India.
3. Explain the concept of decision-making and its importance in daily life.



ANSWERS TO INTEXT QUESTIONS

7.1

1. Complex mental process involving manipulation of information.
2. Concepts and reasoning

7.2

1. Directed thinking focussed towards dealing with a specific problem Means-and - analysis and Algorithms
2. Mental set inhibits the quality of mental activities.

7.3

1. Thinking which involves reaching out to solutions in a unique and novel way

MODULE - II

Basic Psychological Processes



Notes

MODULE - II

Basic Psychological Processes



Notes

Thinking and Problem Solving

which was nonexistent earlier. Creative persons can be self-assertive, dominant, impulsive, may prefer complexity etc.

2. Preparation, incubation, illumination, evaluation revision.

7.4

1. Decision making is a kind of problem solving. Judgement is a process of forming opinions, arriving at conclusions and making critical evaluations.

Hints for Terminal Questions

1. Refer to section 7.1 & 7.2
2. Refer to section 7.3
3. Refer to section 7.4



8

MOTIVATION AND EMOTION

Have you noticed how each one of us is busy in one or the other activities? We try our best to achieve certain goals; and, if some difficulty comes in the way we feel frustrated. These statements show that our daily life is influenced by our needs such as hunger, thirst, achievement, affiliation etc. Not only that, we also feel happy, sad, angry or violent. The former aspects refer to motivation and the latter refer to different types of emotions. This lesson explains the relevance of motivation and emotions in human life. Motivation helps in answering the question: why do people seek to do certain things?. This helps us understand why people differ in terms of their behaviour. Emotions play an equally important role in everything we do, affecting our relationships with others and health. Both concepts are important because they help us understand the reasons for the various activities we indulge in and help determine the unique personality of each person.

**OBJECTIVES**

After studying this lesson, you will be able to:

- define the concepts of motives and needs;
- understand goal directed behaviour;
- describe the different aspects of emotions; and
- explain the role of emotions in organizing behaviour.

8.1 NATURE OF MOTIVATION

Have you wondered as to – ‘Why does your father/mother go to work everyday?’ ‘Why do you study for long hours?’ ‘Why do you like to play with your friends?’ or ‘Why does your mother stay up the whole night and care for you when you are feeling unwell?’

Each of these questions has an answer as there is a reason or motive behind each



type of activity mentioned. Working, studying, playing and caring are some important activities which are considered purposeful. **Motives**, wants, needs, interests and desires help explain our movement towards the chosen goals. A need or motive directs us to act or behave in a particular way towards a certain goal. Thus you study for long hours to achieve good results and your mother looks after you because of the affection and concern she has for you as her child.

A. The Concept of Motivation

Motivation plays an important role in directing human behaviour. There are several characteristics of motivation. First, it pushes us to reach the goals we have set for ourselves. In order to reach our goals we need to be **aroused** or **feel active**. Too little arousal will make us feel dull and relaxed, whereas, too much arousal may make us withdraw from our goal. Hence we must be motivated to maintain a balanced **or optimum level of arousal**. Second, people are motivated to behave in certain ways because of the pleasing and pleasant properties of external stimuli, such as, money, good grades, food, which motivate the person to act in a purposeful/focussed manner. Third, motivation is the result of the person's thoughts and expectations. It can be of two types: **intrinsic motivation** that comes from within the person, based on personal enjoyment of any task, and **extrinsic motivation** which is based on external rewards such as money, pay and grades. You will find that sometimes we work hard and produce high quality work when motivation is intrinsic rather than extrinsic. On the other hand, we are also influenced by the external rewards. In life, both types of motivation are important. Finally, motivational needs are ordered such that basic needs such as hunger and thirst are satisfied first and then other higher-needs, such as need for achievement and power are fulfilled. Let us now learn about the hierarchy of needs.

B. The Hierarchy of Needs

According to psychologist **Abraham Maslow**, there are several levels of needs that each person must strive to meet before he or she can achieve the highest level of personal fulfilment. Thus, a person must be able to fulfil the **primary (biological) needs** at the lowest level, as indicated in Figure 1. Once these needs are met then **safety** becomes important, followed by **need to belong** and **to love and be loved**. The desire to belong to groups such as family, friends, and religious groups makes us feel loved and accepted by others. If we succeed in satisfying the mentioned needs then we feel the need to have **self esteem, confidence, and feeling of self-worth**. Next come **cognitive needs** which include need for **knowledge and understanding**, followed by need for **order and beauty**. Finally a person moves towards reaching the full potential called **self-actualization**. Such a person has the qualities of **self awareness**, is **socially responsive**, and is open to the **challenges of life**. This type of organization of needs is called a **hierarchy**, or ranking in a series.



Figure 8.1: Maslow's hierarchy of needs

As life goes on people gain wisdom and knowledge of how to handle situations, thus they move up the ladder or hierarchy. A person may move up and down the hierarchy depending upon the situation he or she finds himself in. This hierarchy may not hold true for different cultures. It has been found that in countries like Sweden and Norway quality of life is very important and social needs are more sought after than self-actualization. In some cultures security needs are more dominant than self-actualization making job security more important than job satisfaction.

C. Primary Needs

'Need' refers to a lack of something that is necessary for us. We feel hungry when our blood sugar level is low, thus we need to eat food to satisfy our hunger. Motives or needs are characterized in terms of **primary** and **secondary** needs or motives.

Important **primary needs** are **biological needs** such as hunger, thirst, oxygen, rest, sleep, temperature regulation, warmth, shelter, excretion, and sex. These needs have to be satisfied for us to stay alive. Needs such as hunger and sleep are cyclical in nature or are repetitive. Thus we need to eat and sleep regularly. Attempt Activity 1 to understand the effects of not eating or sleeping for a long time.



Notes

Activity 1**Primary Needs**

- a) *Effect of lack of sleep on performance. Try to keep awake for a long period of time, for example for about 16 hours. Now list your experience on two aspects: i) how long you take to learn a lesson and ii) your feelings at this point of time.*
- b) *Effect of not eating for a long period of time. Try not to eat for a long period, for example, 8 hours. List your experience in terms of how you feel. Rate your feelings on a five point scale in terms of: i) extent of low feeling, ii) level of irritation and annoyance. Also try to concentrate on reading a new lesson. Are you able to read the lesson? If not, why is this so?*

The starting point of many biological needs is an imbalance in the physiological conditions of our body. Our body tries to maintain a state of balance called **homeostasis**. This balance is crucial. There must be enough water content in our body, body temperature must not be high or too low, glucose levels must be adequate and so on. Without maintaining this balance we would not be able to function properly in our daily life activities. Can you recall when you or a family member suffered from high fever and had to rest in bed for a few days? A state of balance must be maintained within our body to carry out our daily activities.

Why do we eat or feel hungry? There are several factors involved in the hunger need. Stomach contractions or ‘hunger pangs’ indicate that the stomach is empty and low levels of glucose and protein in the blood make us hungry. In addition, the smell, taste or appearance of food may lead to a desire to eat. When you reach home the smell of your favourite dish makes you feel hungry! Many factors work together to make us feel hungry. It is interesting that you can go hungry for long periods but not without water. We feel thirsty because we lose water content due to perspiration, breathing and urination.

Influence of Culture and Environment on Primary Needs

Do you know that our biological needs, such as hunger, are influenced by environmental factors? Often we are likely to feel hungry because of a number of reasons rather than due to low glucose levels in the blood. Environmental factors that have an effect on hunger and eating are:

- Learned liking and habits, for example, a person who enjoys having pizza will want to eat it even if not hungry.
- Stress can lead to eating, for example, examination stress makes some students eat more than is required.
- External cues, such as when it is dinner time or your mother calls out for dinner you are likely to feel hungry. The smell and attractive appearance of food may also make you feel hungry.

- Dietary restraints, if the doctor has advised a patient to avoid sweet foods there may be an increased desire to eat sweets.

D. Secondary Needs

Secondary needs lead to **psychological or social motives**. They are called social motives because they are learned in social groups, particularly the family. As children grow up and interact with others they acquire certain needs which can be fulfilled in a group setting. For example, achievement motivation is acquired by children through their parents, role models and socio-cultural influences. Some common social motives are:

Achievement: To strive for success and excellence, carry out difficult tasks.

Affiliation: To seek and enjoy the company of others, to make friends.

Power: To strive for impact on others, to influence, control and persuade others.

Nurturance: To help and take care of others such as children, elderly or sick persons.

Aggression: To fight, forcefully overcome opposition, to hurt and ridicule.

Exploration: To seek a variety of stimulation, to explore novel things.

The type and strength of social motives differ from person to person. For example, you may have high needs for achievement and affiliation, whereas your friend could have a moderate need for achievement and a low need for affiliation. Or, you could have a high need for affiliation and your friend a high need for exploration.

Mother Teresa's concern for the poor, sick and helpless made her open the Missionaries of Charity in 1950. It provides food for the needy and runs schools, hospitals, orphanages, youth counselling centres, and, homes for lepers and the dying. Mother Teresa's work has touched the lives of thousands of people. Her concern for others makes her high on need for nurturance. Do read the poem written by Mother Teresa as shown on www.youtube.com.



Nelson Mandela dedicated himself to the struggle of African people and was imprisoned for 27 years before he achieved freedom for his people. In fact he did not want personal freedom but fought for the setting free of common people. He was influenced by Mahatma Gandhi's way of thinking. For him it is important to live in peace and harmony and have equal opportunities for all people. Nelson Mandela was able to achieve difficult goals and his commitment helped him accomplish his purpose in life. Watch the video on www.youtube.com 'Making Poverty History – Nelson Mandela' and 'First Nelson Mandela Interview'





Notes

We can also classify needs into three basic types: **existence needs** that include all primary needs that are essential for survival; **relatedness needs** include safety, belongingness, esteem and other social relationships needs; and, **growth needs** include those aspects that help people to develop their full potential. It is important to understand that biological and psychological needs do not work in isolation. They influence each other and determine human behaviour.



INTEXT QUESTIONS 8.1

1. Explain the concept of motivation.

2. Differentiate between primary and secondary motives.

3. Describe Maslow’s hierarchy of needs.

4. Discuss the role of culture and environment in our needs and motives.

Quiz 1

1. The process by which a person moves towards fulfilment of wants is called:
a. need b. incentive c. motivation d. goal
2. Secondary needs are acquired through
a. biological needs b. social interaction c. intrinsic procession d. innate needs
3. According to Maslow the most basic needs are:
a. safety b. cognitive c. love d. biological
4. Reema gets Rs. 20 for every good grade she obtains in school. Reema is receiving:
a. intrinsic motivation b. extrinsic motivation c. primary need d. growth need
5. Ashok has a high need for because he likes to study and investigate new things.
a. love b. nurturance c. exploration d. achievement



8.2 NATURE OF EMOTIONS

Each one of us has experienced strong feelings that are associated with pleasant or negative experiences. Examples of emotion are feeling happy when enjoying a movie, or getting embarrassed when we break a neighbour’s beautiful vase, or sadness after an argument with our best friend. Emotions influence our everyday behaviour.

A. Functions of Emotions

Emotions play several important functions in our lives.

- **Emotions prepare us for action:** When you see a person with a gun coming towards you, the emotion of fear and the accompanying bodily changes will help you run away from the situation.
- **Emotions help arrange our activities and future behaviour in some order:** Emotions help us to gather information and increase our chances of making the right response in the future. When a person threatens us we will try to avoid meeting that person out of fear. Positive emotions can act as reinforcement such as, wanting to repeat an action which brought us praise and joy.
- **Emotions help us interact effectively with others:** When we show our emotions other people watching them may come to be familiar with our way of behaving and know how we are likely to act again in the future. Similarly, others’ emotional expressions help us understand how to behave with them.

Activity 2

In column A are some situations which we all go through. In column B are emotions we might experience in these situations. Try and match column A to column B.

A	B
(i) You had fight with your best friend	(i) Surprise, excitement
(ii) You are about to go for an interview / exam	(ii) Fear, nervousness
(iii) You and your family are going for a picnic	(iii) Sorrow, sadness
(iv) You are about to receive the results of an exam that you do not think you did well on.	(iv) Disgust
(v) You have received an unexpected gift	(v) Scared, nervousness
(vi) You see a man chewing pan/tobacco and spitting on the road	(vi) Excitement, happiness



Notes



Fig. 8.2: Emotional Expressions

B. Components of Emotions

Emotion has three basic components or parts:

1. **Physiological changes:** when a person feels an emotion certain changes take place in our body such as increase in heart rate, blood pressure, pupil size is increased, perspiration takes place, breathing is faster and the mouth may become dry. Think about the last time when you went to the examination centre to write your exam or when you were angry at your younger brother. You may have experienced these bodily changes.
2. **Behavioural changes and emotional expression** refer to the outward and noticeable signs of what a person is feeling. These include facial expressions, bodily postures, and gestures with the hand, running away, smiling, frowning, and slumping in a chair. The six primary emotions in facial expressions are: fear, anger, sadness, surprise, disgust and happiness. This means that these emotions are easily recognized in people from all over the world.
3. **Emotional Feelings:** Emotion also includes the personal/individual feeling. We can **label the emotion** felt as: happy, sad, angry, disgusted and so on. Labelling



of a feeling is shaped by **past experiences** and the **culture** one belongs to. On seeing a person with a stick in his/her hand we may run away or prepare ourselves to fight, whereas, if a well known singer is in your neighbourhood you will go to the place to hear him sing your favourite songs.

Cognition or understanding of the situation is the most important part of emotional experiences. Some psychologists feel that we think and then feel, while others believe that our emotional reactions are so fast that thinking about the situation does not arise. Attempt Activity 3 to check which explanation is correct according to you? Human emotions involve so many things, past experience, culture, individual differences therefore at times we may first act and then think about it, whereas in other situations we can first think before reacting.

Activity 3

Emotion and Thinking

Think and answer: when you suddenly see a dog snarling near by do you first run away or do you first think 'What should I do?' and then decide to run? Make a list of other situations where you are likely to first react and other situations where you are likely to first think and assess the situation and then you will respond.

Most of the times we feel a **mixture of emotions**. For example, when a person wins a lottery she may show the emotions of shock, disbelief, surprise and joy. We are also familiar with each other's feelings and know what it means to him or her. Hence you know when your friend is happy to receive a gift and sad when you have had an argument with her. However your **experience of emotions** of joy and fear is different from your friend's. Going for a walk may provide you with pleasure whereas for your friend a hug from her mother gives the feeling of pleasure. The meaning a feeling has for you or your friend is influenced by past experiences and memories.

Activity 4

There are many ways by which we describe our feelings. Prepare a list of the various emotions people feel. Make your own list of emotions. Also ask your family members and friends. You will realize that the list is very long for human emotions have a wide range.

C. Emotions and Culture

Do people in all cultures express their emotions similarly? Yes, research indicates that the six basic emotions are expressed universally. Therefore, Indians, Americans, Germans or Japanese express joy and fear in the same basic way. Each primary emotion is associated with a unique set of facial and muscular movements.



Notes

Yet you must understand that the behaviour of people from various countries is different from your behaviour. Japanese tend to show very little emotional display as compared to Italians. Why does this difference in display exist if there are basic universal emotions? The answer is that as we grow up we come into contact with family members and others. The social experiences lead to the development of **display rules** which are approved way of showing of emotions. These rules are learnt during childhood and this learning becomes noticeable in the expression of emotions. Can you recall any instance when you have received a gift that you do not like? Have you not thanked profusely with a smile ‘pasted on your face’? This is known as ‘making of emotion’. Interestingly there may have been instances when you have been able to note the difference between a made up smile and a true smile.



INTEXT QUESTIONS 8.2

1. State the functions of emotions in our lives.

2. With the help of examples identify the components of emotions.

3. State how display rules are influenced by culture.

Quiz 2

State whether the following statements are true or false:

1. Emotions prepare us for action. T/F
2. When a person feels an emotion no bodily changes take place. T/F
3. Emotional expression is only shown through facial expressions. T/F
4. Labelling of emotions is influenced by past experience and the culture one belongs to. T/F
5. Display rules are approved ways that are noticeable in the expression of emotion. T/F

8.3 ROLE OF EMOTION AND MOTIVATION IN HUMAN BEHAVIOUR

Can you imagine a situation when you are about to appear for an important examination or are going to receive a prize for securing the first position in class and you do not feel anything? Or, you are walking alone down a dark street at midnight and someone is following you and again you are not feeling anything? Absence of not being motivated to do something and absence of feelings is likely to make us act in a robotic fashion.

We have tried to understand motivation and emotions as two distinct concepts. In real life both are closely related and connected and separating the two concepts is a difficult task. In this unit you have learned that along with motivation we also feel our experiences. In the examples provided above the act of studying long hours and the experience of success provides you with a sense of achievement and happiness. The emotional feelings of love and affection your parents have towards you also motivate them to care for you. The death of a loved one brings on the emotion of sadness whereas we experience anger at being treated unfairly. Emotions not only motivate us, they also indicate the reason for motivation. They play an important role in our lives.

Hence your motivation is also accompanied by emotions. Any situation that brings about a strong emotion is likely to motivate you to either repeat it or to avoid it. Thus both motivation and emotion are forces that push us towards action. Primary needs like hunger, thirst and sleep and secondary needs like achievement, power or approval are accompanied by emotional reactions of satisfaction, joy and pride. It can be said that:

- Both motivation and emotion move, activate and help control and plan human behaviour.
- The feeling part of emotion has a motivational component. It helps us to get what we want and to avoid what we do not want in life.
- Emotions can serve as motives. For example, a frightened child may cry out for help and seek comfort and security from a loved one, such as, a mother or father.



WHAT YOU HAVE LEARNT

- Motivation is a want or need that helps us move towards our goal. It moves us to act or behave in a particular way.
- Motives and needs are characterized in terms of primary motives (biological) and secondary (psychological) motives. Primary needs are due physiological imbalance while secondary needs are influenced by social experiences of the individual.
- According to the hierarchy model, biological needs must be fulfilled before psychological needs.
- Emotions play three important functions: prepare us for action, organize our behaviour and future, and, interact effectively with others.
- Emotions have three interrelated components: physiological changes, behavioural and emotional expression and subjective feelings.
- Basic emotions and their expressions are universal in nature yet culture provides guidelines towards how and when to show emotions.



**Notes**

- Motivation and emotion together activate and organize our life. Motivation leads to emotional experience and this further motivates (reinforces) a person to act.

**TERMINAL QUESTIONS**

1. Write three examples of motivated action. Now identify the important characteristics of motivation.
2. Identify the important components of Maslow's hierarchy of needs. Which motives are satisfied first? Provide reasons as to why this is so.
3. With suitable examples describe the role of motivation and emotion in organizing our behaviour.

Activities/Exercises

1. Interview a person who has achieved prominence in his or her field. For example, the president of a company, a sports person, a dancer or a physically challenged person. Ask the person about his/her life – starting from childhood to the current position, incidents that influenced them, the various challenges and how they were overcome. Prepare a case study.
2. Collect a number of magazines, and newspapers. Cut photographs which show different facial expressions. Make a collage of these photographs to understand the different emotions in human life.
3. Interview a dancer or theatre person. Ask the person about different emotional expressions and how they are used to communicate specific emotions. Try to note how the body posture, gestures, and facial expressions communicate emotions.

**ANSWERS TO INTEXT QUESTIONS**

8.1 Refer to Section 8.1

Quiz 1

1. c
2. b
3. d
4. b
5. c

8.2 Refer to Section 8.2

Quiz 2

1. T
2. F
3. F
4. T
5. T

Hints for Terminal Questions

1. Refer to section 8.1
2. Refer to section 8.1
3. Refer to section 8.3

Web Sites

The following websites will help you to further understand motivation and emotions.

1. <http://thesituationist.files.wordpress.com/2007/10/emotions.jpg>

Types of emotions: (a) In this site robots have been used to depict different types of emotions. Study in detail how each part of the face (forehead, eyebrows, size of eye pupil, etc.)

- (b) https://sfari.org/image/image_gallery?img_id=136061&t=1241787803666

Whereas in this site humans have been used to show six different emotions. Can you identify them?

- (c) <http://www.scribd.com/doc/12910868/Paul-Ekman-Emotions-Revealed-Recognizing-Faces-and-Feelings-to-Improve-Communication-and-Emotional-Life>

This E-book by Paul Ekman has a number of photographs which you can observe to understand different types and display of emotions. On page 236 in the appendix there is a test 'Reading Faces' consisting of 14 photographs that you can attempt . At the end of the e-book answers with explanations are also provided .



**9**

NATURE AND DETERMINANTS OF DEVELOPMENT

One of the most important features of all living beings is change. The changes are most striking when we see the transition in human life spanning from conception to death. The journey from an unborn baby to an adult and then on to an old person is very fascinating. Even a casual observation of the human lives around you will make it clear that several changes happen each day in our bodies and psychological functioning. Some changes are noticeable while some can not be immediately or clearly observed. Some of these changes are determined more by hereditary or genetic factors, while some depend more on environmental and cultural factors. Different cultures hold different goals for development and use different strategies to bring up children. In order to help individuals develop in the best way possible, it is important to understand the nature and process of development throughout the life-span.



OBJECTIVES

After studying this lesson, you will be able to:

- describe the nature of development and distinguish it from other related concepts;
- describe the important domains and stages of human development;
- identify major genetic and environmental influences on human development; and
- learn about the effects of environmental factors on pre-natal as well as post-natal development.

9.1 NATURE OF DEVELOPMENT

In this section, we will try to understand what is meant by the term “development”, distinguish it from other related concepts, and identify its main characteristics.



A. The Concept of “Development”

The term “development” is generally used to refer to the dynamic process by which an individual grows and changes throughout its life-span. It is often thought of as the process of qualitative change taking place from conception to death. In this way development is a broad term and deals with all areas including physical, motor, cognitive, physiological, social, emotional and personality. It should be noted that developments in all these areas are inter-related. For example, a 13 year-old girl undergoes physical and biological changes in her body and such changes are in turn related to her mental, social and emotional development.

Life begins at conception when mother’s ovum fertilized by the father’s sperm and a new organism is created. From that point till death an individual keeps on changing. Such changes are not random but orderly and generally follow a pattern. It may be noted that the developmental changes are not always incremental or evolutionary. They may also involve a decline in the functioning called “involution”. A child loses milk teeth in the process of development while an old person may show decay in memory and physical functioning. Development, therefore, is best viewed as a gain-loss relationship in which newer and different kinds of changes take place. Older behavior patterns may lose their salience while new ones may emerge.

Development is shaped by the joint influences of both nature and nurture in a cultural context. Nature refers to the hereditary contribution a child receives from parents at the time of conception. Genetics determines several aspects of a person’s physical structure and functioning as well as some psychological characteristics to a certain extent. Nurture refers to the influences of the complex physical and social ecology in which we develop and grow. Various aspects of the child’s ecology (e.g. physical facilities, social institutions and rituals, and school) influence the developmental outcomes in important ways.

B. Key Developmental Concepts

The term “**development**” is often used interchangeably with “**growth**” and “**maturation**”, but these terms need to be carefully distinguished.

“**Growth**” generally refers to the quantitative additions or changes in the organic structure. For instance as we become older, the body size, height, weight, proportion of parts of our body change in measurable ways. Also, the vocabulary increases. “**Development**” on the other hand, is a broader term which often includes growth, but is used more to refer to functional and qualitative changes in cognitive ability, perceptual ability, personality and emotional development and so on.

“**Maturation**” is a term that refers to the natural unfolding of changes with increasing age, e.g. hormonal changes as the individual reaches puberty. An example of this



Notes

can be seen in breast development which is influenced by release of estrogen when a girl reaches adolescence. Maturation refers to the changes which are primarily biological in nature and occur due to our genetic programme. Our biological structure follows a predetermined course of changes with time. This can be seen in the development of teeth during childhood. Changes in body proportions with age provide an example of such predetermined universal trends. The size of the head is roughly half of the whole body at birth, but the proportion keeps decreasing until adulthood, when it is less than one-fourth of the whole body. Therefore, maturational changes in our body are primarily due to the ageing process rather than learning or other factors such as illness or injury.

It must be noted that changes in behavior also occur due to “**learning**”. Learning takes place as a result of a person’s interaction with the environment. Maturation provides the raw material and sets the stage for learning to occur. Taking the case of learning to read, the child needs to be biologically ready. The eyes need to develop proper focusing ability before a child can learn to read. Therefore, maturation and learning jointly bring about changes in a person’s behaviour.

“**Evolution**” is a term that refers to species-specific changes. Evolutionary changes happen very gradually and are passed on from one generation to the other so that the species is better equipped for survival. The evolution from apes to human beings took place over a period of about 14 million years. Changes that occur at the level of species are called **phylogenetic** and those that occur at the level of individual are called **ontogenetic**. The term evolution is also used to describe the incremental changes that take place in the course of development.

C. Characteristics of Development

We can now summarize the characteristic features of development to help us distinguish it from other kinds of changes.

- Development is a **life-long process**, spanning from conception till death.
- Developmental changes are often **systematic, progressive and orderly**. They usually follow a pattern, proceeding from general to specific, and from simple to complex and integrated levels of functioning.
- Development is **multi-directional**, i.e. some areas may show a sharp increase while other areas may show a decline. Developmental changes usually involve an increase in maturity towards higher levels of functioning, e.g. increase in vocabulary’s size and complexity. But it may also involve a decrease or loss, such as in bone density or memory in old age.
- Moreover the rate of growth and development is **not always constant**. ‘Plateaus’ are often seen in the pattern of development, indicating periods of no apparent improvement.



- Developmental changes can be **quantitative**, e.g. increase in height with age, or **qualitative**, e.g. formation of moral values.
- Development is both **continuous** as well as **discontinuous** process. Some changes may occur very rapidly and be overtly visible, such as appearance of the first tooth, while some changes may not be sharp enough to be observed easily in day-to-day functioning, such as understanding of grammar.
- Developmental changes are **relatively stable**. The temporary changes due to weather, fatigue or other chance factors will not qualify as development.
- Developmental changes are **multi-dimensional** and inter-related. They may happen together in many areas at a time, or can occur one at a time. During adolescence there are rapid changes in the body as well as in emotional, social and cognitive functioning.
- Development is highly **plastic or flexible**. This means that the same person may suddenly show greater improvement in a particular area than expected from the past rate of development. An enriched environment can produce unexpected changes in the physical strength, or in memory and intelligence levels.
- Development is **contextual**. It is influenced by historical, environmental and socio-cultural factors. The loss of a parent, an accident, a war, an earthquake and child-rearing customs are examples of factors which may influence development.
- There are considerable **individual differences** in the rate or tempo of developmental changes. These differences could be due to hereditary factors or environmental influences. Some children can be very precocious for their age, while some children show developmental delays. For example, though an average child begins to speak 3 word sentences around 3 years of age, there will be some children who have mastered this much before 2 years, while there will be some who are not able to speak full sentences even by 4 years. Moreover, there will be some children who are not able to speak even beyond the upper limit of the range.



INTEXT QUESTIONS 9.1

1. Write True/False against each statement:
 - a. Development refers to both quantitative and qualitative changes. T/F
 - b. Development follows a constant rate. T/F
 - c. The study of development does not cover old age. T/F
 - d. A person may show increase in some aspects and show decline in other aspects at the same time T/F
 - e. Enrichment of the environment can produce dramatic changes. T/F



Notes

2. Write short answers to the following questions:

a. Explain the concept of development.

b. State any 3 major characteristics of human development.

9.2 DOMAINS OF DEVELOPMENT

As we have noted development is an inclusive term that incorporates changes in several areas. These areas or domains deal with 3 broad categories:

- 1. Physical and motor development:** It refers to changes in body-size and structure, functioning of various body systems, brain development, perceptual and motor development.
- 2. Cognitive development:** It refers to the development of cognitive and intellectual processes, including memory, attention, intelligence, academic knowledge, problem solving, imagination and creativity. It also includes development of language.
- 3. Socio-emotional development:** It refers to how we develop relationships with other people, and how our emotions emerge and change as we grow older. It includes emotional communication and self-control, understanding of self and others, interpersonal skills, personality, and emergence of friendship and moral reasoning.

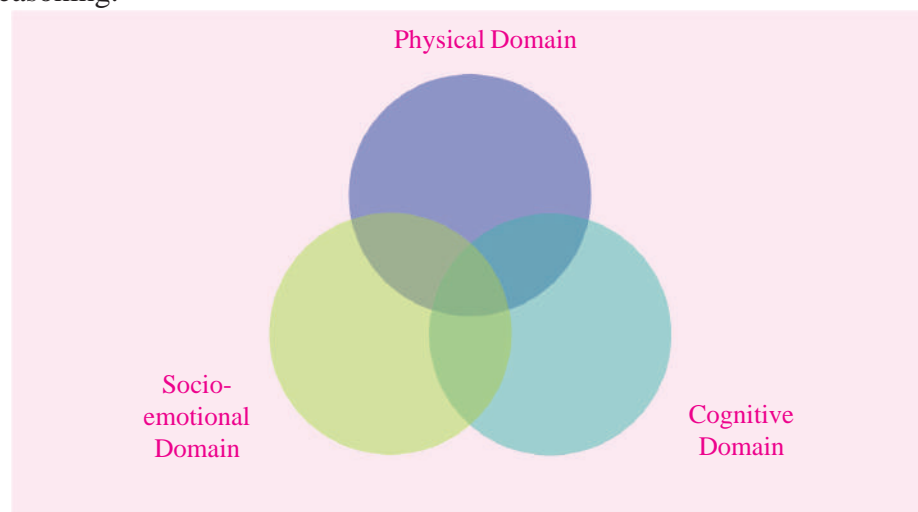


Fig. 9.1: *Inter-relatedness of the domains of development*

These domains or areas are inter-related and combine in a holistic manner to make a person's developmental pattern unique. Each domain influences and is influenced by others. As a baby develops physically, several motor skills are acquired. As the

Nature and Determinants of Development

baby becomes capable of grasping, reaching, sitting, crawling, standing and walking, he/she is able to better explore the environment, resulting in further cognitive development. Improved thinking and understanding helps formation of better social relations as well as emotional expression and comprehension. On the whole, each domain helps the child move towards enriched experiences, learning and overall development.



INTEXT QUESTIONS 9.2

1. Fill in the blanks in the following statements:
 - a. Improvement in memory and language indicates development in the _____ domain.
 - b. Interpersonal relationships fall in the _____ domain.
 - c. Changes in size and structure of the body fall in the _____ domain of development.
 - d. _____ broad domains of development can be categorized for the sake of convenience.

9.3 STAGES OF DEVELOPMENT

Even though development is a continuous process, some theorists believe that various stages can be identified for the sake of locating major shifts and determining the developmental tasks. This helps in monitoring the pace of developmental changes. It must be pointed out that there is no sharp dividing line between them. Each stage has certain characteristic features and prepares the ground for the next stage. Some theorists have suggested stages in specific areas of development. For instance Piaget who identified stages of cognitive development and Freud who suggested stages of psycho-sexual development. These theories are explained in other lessons.

A. Developmental Stages: A Life Span Perspective

Most psychologists identify the following stages of development:

- **Prenatal period** (from conception to birth) : In this period, the single-celled organism changes into a human baby within the womb.
- **Infancy and toddlerhood (birth-2 years)**: Rapid changes in the body and brain help several sensory, motor, social and cognitive capacities to emerge.
- **Early childhood: (2-6 years)**: Motor skills are refined, language develops, ties are formed with peers, and the child learns through play.

MODULE - III

Human Development



Notes



Notes

- **Middle childhood (6-11 years):** These are the school years when the child acquires literacy skills, thought processes are refined, friendships emerge and self-concept is formed.
- **Adolescence (11-20 years):** This period is marked by puberty which signals the onset of rapid physical and hormonal changes, emergence of abstract thinking, sexual maturity, stronger peer ties, sense of self and autonomy from parental control.
- **Early adulthood (20-40 years):** This is the stage of life when the youngster leaves home for the sake of education, or to find a career, and to form intimate relationships leading to marriage and having children.
- **Middle adulthood (40-60 years):** At this stage the person is at the peak of his/her career. There is a need to help children begin independent lives, and to look after own parents who are aging.
- **Late adulthood (60 years till death):** This period is marked by retirement from work, decrease in stamina and physical health, bonding with grand-children, and dealing with impending old age and death of self and spouse.



Fig. 9.2: Stages of human development

Though the stages of development are universally recognized, the exact age range is arbitrary and depends on cultural factors. In some cultures, for example, there is no distinct phase of adolescence with the stress associated with it. One simply moves from childhood to adulthood. The concept of old age is undergoing a change with enhanced medical, health and cosmetic facilities. Life-span expectancy has also increased and reached to 65 years in India.

B. Life Stages : An Indigenous View

Ancient texts also view the human life-span in terms of stages. Life is seen as a process of evolution in four stages known as **Ashramas**, which literally means a dwelling place. There are four main Ashramas:



- **Brahmacharya:** During this period the major task is learning while living as a student under the guidance of a Guru, with emphasis on discipline and simple living.
- **Grihastha:** In this phase of life an individual has to work and take on the responsibility of raising and maintaining a family within the social context.
- **Vanaprastha:** It is a period of seclusion after one has raised the family and completed the duties towards it. It requires severe discipline and austerity and sharing responsibilities with the younger people.
- **Sanyasa:** It is the final stage of life when one needs to achieve complete detachment from worldly objects, freedom from desire, and move towards ultimate self-knowledge and renunciation from the world.

These stages or ashramas are based on the principle that a human being should grow, participate and discharge worldly duties and contribute to the progress and welfare of society and move towards liberation and spiritual growth. It is desired that the older persons should give way to the younger generation. In this scheme one lives in a web of obligations to society as well as environment including all living beings such as animals and trees. It emphasizes co-existence with this whole living world rather than being a consumer and exploiting the environment for personal gains.

C. Developmental Tasks

Each developmental stage is characterized by a dominant feature or a leading characteristic which determines its uniqueness. For example, a child is expected to go to school and study while an adult is expected to work and raise a family. Certain characteristics stand out more prominently than others and each period is called a stage. People learn certain behavior patterns and skills more easily and successfully at certain stages and this becomes a social expectation. For example, a child is supposed to be able to go independently to school in middle childhood. Such social expectations of a particular age common to all persons constitute “developmental tasks”. If a person is able to master the developmental task of a particular stage, he or she is considered to have successfully moved on to the next stage of development.



INTEXT QUESTIONS 9.3

1. Write True or False after each statement:
 - a. Developmental stages have a fixed age range.
 - b. Prenatal period extends from birth to conception.
 - c. Adolescence is marked by rapid physical and psychological changes.



- d. There are four stages in the Hindu view of development.
 - e. The Hindu concept of development encourages staying away from the family.
 - f. Developmental tasks are social expectations of a particular age group.
2. Write short answers to the following questions:
- a. State the major stages of development as described in ancient Hindu texts.
-
- b. What do you understand by the term “developmental tasks”?
-

9.4 INFLUENCES ON DEVELOPMENT

It is important to understand the factors that determine the course of development. Each one of us is a product of genetic factors and environmental influences. The role of maturation and learning has already been described briefly in an earlier section. Let us now look at the contributions of heredity and environment in some detail.

A. Genetic Influences

At the time of conception, the ovum of the mother and the sperm cell of the father unite to form a new cell. The small particles in the nucleus of the cell are called **chromosomes**. The chromosomes exist in pairs. The human cell has 46 chromosomes arranged in 23 pairs. One member from each pair comes from the mother and the other one from the father. Chromosomes store and transmit genetic information. The genes, which are the actual trait carriers, are found in very large numbers in each chromosome.

The fertilized zygote brings together various combinations of chromosomes. In this way, different genes are transferred from each child of the same set of parents. Due to this reason each child bears greater similarity to his or her blood relatives than to anyone else. At the same time there are also many differences amongst blood relatives.

B. Genotypes and Phenotypes

Genetic transmission is a complex process. Most characteristics that we observe in human beings are combinations of a large number of genes. Innumerable permutations and combinations of genes are responsible for the large differences in physical and psychological characteristics.

Only identical or monozygotic twins have exactly the same set of chromosomes and genes as they are formed by duplication of a single zygote. Most twins are fraternal or di-zygotic, who develop from two separate zygotes. These fraternal twins may resemble each other like brother and sister, but they will also be different from one another in many ways.

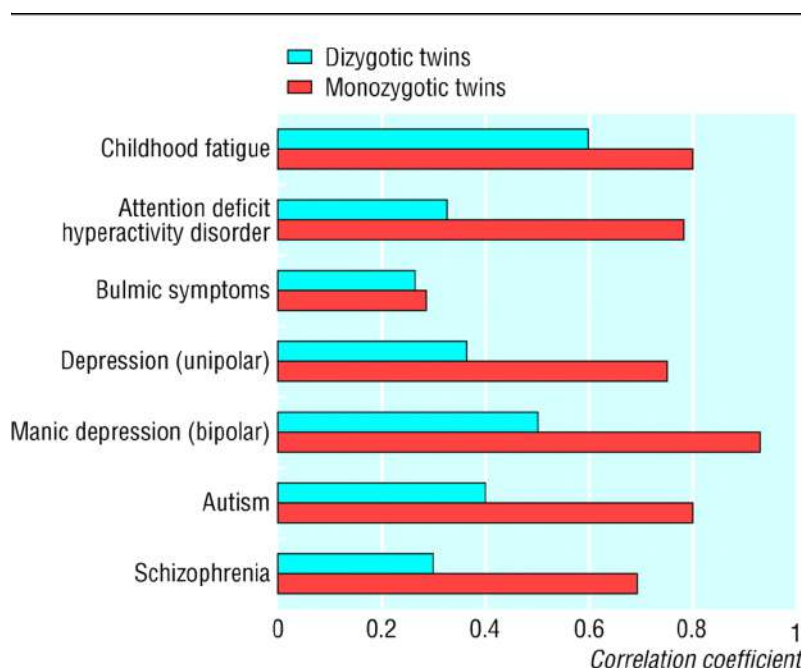


Fig. 3: Differences between Mono-zygotic and Di-zygotic twins

Genes can be **dominant** or **recessive**. It is a known fact that there is more color blindness or lack of sensitivity to certain colors among males than females. A grandmother and mother can transmit this condition to the male child without being color blind themselves. This is because in the male this disorder is dominant, whereas in female it is recessive. The genes form pairs. If both genes in a pair are dominant, the individual will display the specific trait (e.g. color blindness). If one gene is dominant and the other recessive, the dominant will prevail. The recessive gene will be passed on and may show up in a later generation.

The dominant gene, therefore, is the one responsible for a particular trait to show up in a person. The characteristics which show up and are displayed e.g. eye color, are called **phenotypes**. The recessive gene does not show up as a trait, unless paired with another gene just like it. The characteristics that are carried genetically as recessive genes but are not displayed are called **genotypes**.

Genotype, therefore, refers to the actual genetic material or a person’s genetic heritage while **phenotype** refers to the individual’s physical and behavioral characteristics which are determined by both genetic and environmental factors.

C. Environmental Influences

Nature refers to what a child has inherited genetically from her parents, while the influence of environment on the development of the child is referred to as nurture.



Notes

To understand the development of a person, we have to study the complex interaction between nature and nurture or heredity and environment.

Environmental influences are important both at the prenatal and postnatal stages of human development. At the prenatal stage, when a fetus is in the mother’s womb, internal or external harmful agents, such as certain legal or illegal drugs, alcohol, lead and pollutants can harm the unborn baby’s development. The mother’s nutrition, diseases and emotional stress can also affect the development of the fetus.

After birth, several types of environmental factors operate to influence the development of the child. The **ecological systems theory** of development views environmental factors organized as concentric circles of systems.

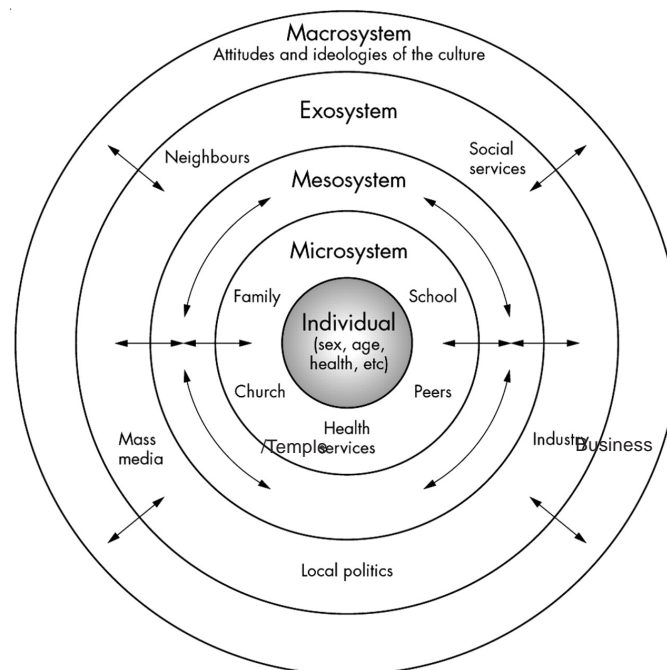


Fig. 4: Ecological systems influencing human development

The **micro-system** is the immediate environment at home and interactions between them and the child’s own characteristics. The **meso-system** consists of the relationships between family members and school and neighborhood. The **exo-system** refers to the influences of indirect agencies such as work-place of the parents or community services. The macro-system is the outermost layer which includes cultural values, laws and customs. The systems are ever-changing and dynamic. There is also a **chronosystem** which refers to the time dimension. As the child grows, there are changes within each system, and also changes due to the child’s interaction with the environment. On the whole, in ecological systems theory, children are both products and producers of their environments, in a network of interdependent effects.

Nature and Determinants of Development

The present view of development gives importance to both nature and nurture. Heredity and environment are inseparably interwoven, each affecting the impact of the other on the child. Development therefore has certain universal features, as well as features unique to the individual. It is important to understand the role of heredity, but more fruitful to understand how the environment can be improved, so as to help the child develop in the best possible way within the limits set by heredity.

An understanding of the principles and determinants of development helps us in several ways:

1. It helps us to know what to expect of the individual's capability at a particular age.
2. It gives information on when to provide opportunities and stimulation for optimal development.
3. It helps to parents, teachers and others who work with children, to prepare them for the physical and psychological changes that are to take place.
4. It helps us to be prepared for changes in our bodies and personalities as we grow older.
5. It helps us to understand that it is possible to facilitate the process of development by providing an enriched environment.



INTEXT QUESTIONS 9.4

1. Fill in the blanks in the following statements:
 - a. Heredity is determined at the time of _____.
 - b. There are ___ pairs of chromosomes in a human cell.
 - c. Genes can be _____ or _____.
 - d. Characteristics that are carried in the genetic code but not displayed are called _____.
 - e. In the ecological systems theory, the layer which consists of cultural values, laws and customs is called the _____.
 - f. External agents that can harm the unborn baby in the womb are called _____.
2. Write short answers to the following questions:
 - a. Explain the terms 'genotype' and 'phenotype'.

MODULE - III

Human Development



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Notes

b. Briefly explain the main features of the ecological systems theory of development.



WHAT YOU HAVE LEARNT

- Development refers to the process by which the individual grows and changes during its life-span, from conception to death.
- Development is systematic, orderly, progressive, multi-dimensional, multi-directional, plastic and contextual.
- The major domains of development are physical, cognitive and socio-emotional.
- Stages of development can be categorised for the sake of convenience, ranging from prenatal stage to late adulthood or old age.
- Each stage is characterized by certain developmental tasks which are social expectations for a given age group.
- Hereditary factors are determined at the time of conception and genetic information is carried by genes and chromosomes.
- Genotypes refer to the characteristics which are carried genetically but not displayed.
- Phenotypes refer to those characteristics which are displayed.
- Environmental factors influence both prenatal and post-natal development.
- External harmful agents can cause damage to the fetus in the mother's womb.
- Maternal disease, nutrition and stress can influence fetal development.
- The ecological systems theory proposes several sub-systems in the growing child's environment which can influence development.
- Both nature and nurture jointly influence development.



TERMINAL QUESTIONS

1. Differentiate between the terms “development”, “growth”, “maturation” and “evolution”.
2. Describe the major domains of development.
3. Identify the major stages of human development.
4. Discuss the relative importance of nature and nurture in development.



ANSWERS TO INTEXT QUESTIONS

9.1

1. a. true
b. False
c. False
d. True
e. True
2. a. Refer to section 9.1.1
b. Refer to 9.1.3

9.2

- a. cognitive
- b. socio-emotional
- c. physical
- d. three

9.3

1. a. False
b. False
c. True
d. True
e. False
f. True
2. a. Refer to Section 9.3.2
b. Refer to Section 9.3.3

9.4

1. a. conception
b. 23
c. dominant, recessive
d. genotypes



MODULE - III

Human Development



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- e. macrosystem
- f. teratogens
- 2. a. Refer to section 9.4.2
- b. Refer to section 9.4.3

Hints for Terminal Questions

- 1. Refer to section 9.1.2
- 2. Refer to section 9.2
- 3. Refer to section 9.3.1
- 4. Refer to section 9.4

Nature and Determinants of Development



10

CHILDHOOD

Childhood is a beautiful phase of life for most of us. It is a period associated with play, fantasy, and innocence. It is the crucial phase in life and involves important aspects of growth and development which are critical for the entire life span.

The childhood period can be further classified into four sub-stages:

- (a) **Infancy** (birth to 2 years),
- (b) **Early childhood** (2 to 6 years),
- (c) **Middle childhood** (6 to 11 years), and
- (d) **Adolescence** (12 to 19 years).

Infancy provides the foundation for all areas of development. It is a period marked by extremely rapid physical growth and development of sensori-motor skills. Infancy is also important for cognitive, language and socio-emotional development. This stage has already been discussed. Adolescence will be taken up in the next lesson.

In this lesson, we will try to understand how various aspects of development such as physical, motor, cognitive, social and personality development proceed during childhood. We will also study the socialization process during childhood in the cultural context.

**OBJECTIVES**

After studying this lesson, you will be able to:

- describe physical and motor development in childhood;
- understand cognitive development during childhood;
- explain socio-emotional and personality development in childhood; and
- understand the process of socialization within the cultural context.



10.1 PHYSICAL AND MOTOR DEVELOPMENT IN CHILDHOOD

While physical growth is extremely rapid during infancy, it is comparatively slower in childhood. As the child's body size, height and weight increase, there are also changes in muscular and skeletal structure. This leads to development of several motor skills in childhood. The studies have shown certain universal trends in both physical and motor development.

The sequence of physical and motor development is fairly uniform across different cultures. Yet there are large **individual differences**. One child may walk at 10 months, while another may walk only at 24 months. The major milestones of physical and motor development in infancy and childhood are given in Table 10.1

Table 10.1: Milestones of Physical and Motor Development

Lifting chin up while lying on stomach	1 month
Lifting head and chest	2 months
Rolling over	4 months
Picking up objects with palm without sitting with support	5 months
Finer use of thumb and fingers	7 months
Sitting alone (without support)	8 months
Standing with support (holding on to furniture)	8-9 months
Crawling	9 months
Standing independently	9-10 months
Taking few steps without holding on and walking holding on	12-13 months
Grasping objects with thumb and forefingers	13-14 months
Walking alone	15 months
Running and climbing stairs	2 years
Walking on tip toe	2½ years
Riding a tricycle	3 years
Throwing ball over head, walking down stairs with one foot to a step	4 years
Copying a complex figures	6 years

Understanding of physical and motor development is extremely important as it provides the basis for the development of child's personality, social and emotional development. It helps establish emotional bonding between the child and the mother figure. It also helps mastery over the child's own body and movements.



A. Gross and Fine Motor Development

Motor development is usually classified into ‘gross motor’ and ‘fine motor’ categories. **Gross motor development** refers to control over large muscle groups that enable the child to get around, e.g. crawling, standing and walking. They usually involve the limbs or the whole body. **Fine motor development** refers to control over smaller muscle movements e.g. grasping, pinching etc. Fine motor skills are necessary to engage in smaller, more precise movements, generally using the hands and fingers. Fine motor skills are different than gross motor skills which require less precision to perform the daily tasks.

Table 10.2: Gross and Fine Motor Development Milestones

Child’s age	Activities involving Fine Motor Skills
0 and 3 months	Holding an object
3 and 6 months	Trying to reach out for objects, putting things in mouth
6 months and 1 year	Trying to hold food, using hand and fingers to play games
1 year and 1-1/2years	Scribble on paper, trying to play throw and catch with the ball
1-1/2 and 2 years	Drawing lines with pencil, using a spoon to eat food with little help
2 and 3 years	Brushing teeth and buttons cloths with help
3 and 5 years	Builds using building blocks, uses a pencil to draw, turn pages of a book
5 and 7 years	Draws various shapes very easily, brushes and combs without support, cuts shapes very clearly

10.1. 3 Physical and Motor Development in Early Childhood (2-6 years)

Early childhood covers the period from 2 to 6 years. It is also known as the preschool stage. The child who has become mobile is now able to widen the sphere of activities beyond the immediate family. Through interaction with the wider society and the environment the child learns the rules of appropriate social behavior of and develops mental abilities which prepare him/her for formal education and schooling. Most infants appear to be quite clumsy in their physical and motor activities. But gradually their locomotion skills become refined and graceful. Body balance while walking and running improves noticeably. A 3-year-old can run in a straight line and jump smoothly without falling down. A 4-year-old can skip, jump on one foot and catch a large ball thrown from a distance.



Notes

Development of Fine Motor Skills during Childhood

- **2-3 years:** Undresses self and assists with dressing, Copies a circle and a cross, Strings four large beads, Turns a single page, Snips with scissors on a line, Buttons/unbuttons large buttons.
- **3-5 years:** Copies a square, Prints own name – tripod pencil grasp, Ties shoelaces, Cuts on line continuously, Prints some capital letters.
- **5-7 years:** Copies a triangle, Cuts out simple shapes, Copies first name, Prints numerals 1 to 5, Color within lines, Pastes and glues appropriately

Between 2 and 3 years, young children stop “toddling,” and develop a smoother gait. They also develop the ability to run, jump, and hop. They can participate in throwing and catching games with larger balls.

Children who are 3 to 4 years old can climb up stairs using a method of bringing both feet together on each step before proceeding to the next step. However, they may still need some assistance to prevent fall as they are likely to be unsteady in this new skill. Children of this age can jump and hop higher as their leg muscles grow stronger.

During this period, children become better at catching and throwing, can hit a stationary ball with a bat, learn to ride a tricycle, and can kick a ball placed directly in front of their bodies. They can create things with their hands, such as building towers out of blocks, molding clay into rough shapes, and scribbling with a crayon. Children of this age often begin showing a preference for using one hand more often than the other, which is the beginning of becoming left or right-handed.

Between 3 and 4 years, children improve in eating food themselves and can use utensils like forks and spoons. They can now hold a crayon or pencil by the writing hand rather than just grasping it with the fist. They can also make twisting motion with their hands, useful for opening door knobs or twisting lids to open jars. Most children are toilet trained by 4 years of age.

As children reach the age of schooling, the rate of physical growth becomes slower until puberty when there is a rapid ‘growth spurt’.

By the age of six, the child is physically capable of coordinated actions which require body balance. Small muscle coordination required for fine motor activities, such as putting on shirt buttons or copying a simple figure, improves quite dramatically during the early childhood years. Children can also complete other self-care tasks beyond dressing and undressing, such as brushing their teeth and combing their hair. Children of this age can also independently feed themselves without an adult’s immediate supervision or help.

During 5 to 6 years of age, young children continue to refine the earlier skills. They can run faster and can start to ride bicycle with training wheels for added stability. In addition, they can step sideways. Children of this age begin mastering new forms of physical play such as the jungle gym, and begin to use the see-saw, slide, and swing on their own.

Development in Middle Childhood (6-11years)

During this period physical growth becomes more gradual and rate of overt change becomes slower until puberty at about 11-13 years when there is again a rapid 'growth spurt'. There are changes in height, weight and muscular strength and swiftness. During this period, there are large gender differences. Girls are slightly shorter than boys during 6 to 8 years but then the trend reverses. Girls start putting on weight. A 10 year old girl may look taller and heavier than a boy of the same age. The growth spurt for boys comes later than for girls.

During this period, children achieve greater control over large and small muscle groups. They keep getting stronger, faster and attain better motor co-ordination. School children are energetic and enjoy all types of outdoor games. Increase in cognitive capacity also helps them learn the rules of new games.

The 6-7 year-old children can copy complex figures such as a diamond, color patterns and figures and assemble tools and model toys. They also become more skillful in games requiring skillful eye-hand coordination such as throwing, catching and hitting targets. They continue to refine fine motor skills and build upon earlier skills.



INTEXT QUESTIONS 10.1

Write short answers to the following questions:

1. Give names of any 3 gross motor skills developed in childhood.

2. Give names of any 3 fine motor skills developed in childhood.

10.2 COGNITIVE DEVELOPMENT

Cognitive development refers to the way children learn and process information. It includes improvement in attention, perception, language, thinking, memory and reasoning.





According to Piaget’s cognitive developmental theory, our thoughts and reasoning are part of adaptation. Cognitive development follows a definite sequence of stages. Piaget described four major stages of cognitive development:

- Sensori-motor stage (Birth- 2 years)
- Pre-operational stage (2-7 years)
- Concrete operational stage (7-11 years)
- Formal operational stage (11+ years)

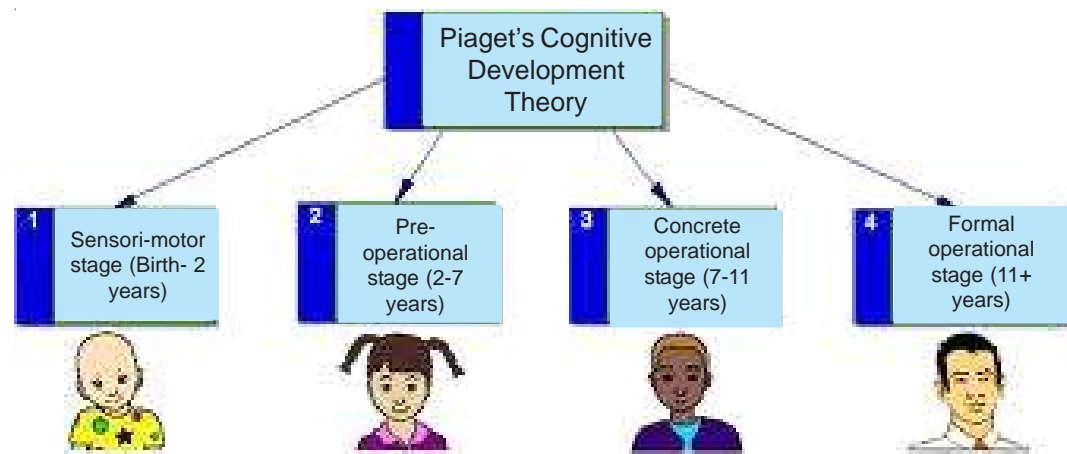


Fig 10.1: Piaget’s Cognitive Development Theory

The following section takes a look at cognitive development through childhood as indicated by Piaget’s theory.

Cognitive Development in Early Childhood (2 to 6 years)

During this period children become increasingly proficient in using symbols such as words and images to represent a variety of objects, situations and events. By the time children enter school they have a reasonably good vocabulary. In fact, children are very receptive at learning language when they are exposed to multiple languages in different contexts. They often grow up as bilingual or multilingual children. They have better understanding of language compared to monolingual children who use only one language.

Capacity for sustained attention improves during the early childhood. A 3-year-old child may persist on a task such as coloring with crayons, playing with toys or watching television for not more than 15-20 minutes at a stretch. By contrast, a 6-year-old can be found to be working on an interesting task for an hour or more. Children also become more selective in their attention. As a result their perceptual skills also improve.



Thinking becomes more logical and capacity to remember and process information also improves. Through interaction with the environment the child learns the rules of appropriate social behavior which prepare him/her for schooling.

Early childhood, from 2 to 6 years, is the phase when the child progresses through the **Pre-operational stage**. There are 2 sub-stages of the Pre-operational Stage:

a) **Symbolic Function (2 to 4 years)**

b) **Intuitive Thought (4 to 7 years)**

During the Symbolic Function sub-stage, children can create mental images of objects and store them in their minds for later use. For example, such a child can draw a picture of or pretend to play with a puppy that is no longer present there.

Children can talk about people who are traveling, or who live somewhere else. They can also talk about or draw places they visited, as well as create new scenes and creatures from their imagination. Children can also use their mental images of things to role-play in games.

Piaget also believed that pre operational children have a style of thinking characterized by **Egocentrism**, or the inability to see the world from someone else's point of view. According to Piaget, children with egocentrism explain situations from their own perspective and understanding.

The next sub-stage in Piaget's Preoperational cognitive development stage is the **Intuitive Thought sub-stage**, which spans ages 4-7 years. Children in this sub-stage of development learn by asking questions such as, "Why?" and "How come?" Piaget labeled this "intuitive thought" because he believed that children at this stage tend to be so certain of their knowledge and understanding that they are unaware of how they gained this knowledge in the first place. These children show "**Centration**". They focus on one characteristic of object and base their decisions or judgment on that only.

During early childhood, children's ability to understand, process, and to produce **language** also improves rapidly. There is a 'language explosion' between 3 and 6 years. At age 3, their spoken vocabularies consist of roughly 900 words. By age 6, spoken vocabularies expand dramatically to anywhere between 8,000 and 14,000 words.

As children move beyond using two word sentences, they start to learn and understand grammar rules. Beyond growing their vocabularies, young children start expanding their ability to use different forms of words (e.g., irregular verbs such as "She brought" rather than "She brang")? They also begin to form more complex sentences.

B. Cognitive Development in Middle Childhood

Children at the middle childhood level are full of curiosity and are keen to explore the environment. Memory and conceptual knowledge improve, facilitating logical



Notes

thinking beyond the immediate situation. Children can also engage in aesthetic activities such as music, art and dance and develop hobbies of their own.

In Piaget's theory, characteristics of the **Concrete Operational Stage** during middle childhood are as follows:

- Understanding of logical principles.
- Improvement in spatial reasoning.
- Logical thinking limited to real and concrete situations.

In middle childhood years, **language development** proceeds in many ways. More than just learning new words, children are acquiring more adult definitions of the words they know. They create relationships among words, understand synonyms and antonyms, and understand how prefixes and suffixes affect word meaning.



INTEXT QUESTIONS 10.2

1. Write short answers to the following questions:
 - a. List any 3 major features of the pre-operational stage.

 - b. Describe any 3 major achievements of the concrete operational stage.

10.3 SOCIO-EMOTIONAL AND PERSONALITY
DEVELOPMENT

Infancy is a period when basic emotions are established, and the child progresses in both emotional expression as well as recognition of emotions in others. During early childhood, children typically start to develop self-conscious emotions like shame and guilt as they start evaluating themselves, instead of simply reacting to caregivers' or other adults' evaluations.

As children become increasingly self-aware, more effective at communicating, and better at understanding the thoughts and feelings of others, their social skills improve. They become skilled at modifying and expressing their emotions to fit different social situations. For example, one child may feel angry, but he/she knows that having a tantrum at school is inappropriate. Another child learns that acting pleasant and happy, even though she is actually feeling shy, is a better way to meet people in a birthday party when she does not know many of the other children. Changing or



controlling one's emotions in social situations is an important skill that allows children to fit in with groups and helps in creating interpersonal relationships.

Another emotional capacity that develops during early childhood is empathy, which is an important component of positive social behavior. As with other emotions, the development of empathy depends on cognitive and language development.

Learning how to appropriately express and deal with anger, aggression, and fear is a valuable life and social skill. Young children often need plenty of guidance and positive discipline in order to learn how to control their anger. Parents and caregivers not only directly teach ways of controlling emotions, but also indirectly influence children's behaviour by acting as role models.

As infants grow, they begin to mature in their ability to interact with others socially. A child's main developmental task is to create bonds and connect with primary caregivers. In contrast, young children branch out and began to create other social relationships. When interacting with other children of their age, such as peers at day care or preschool, they engage in parallel play in which they play beside each other without truly interacting with each other.

Young children begin to play more cooperatively. In cooperative play, they engage in the common activity in a small group. Often, these first forms of cooperative play include pretend or symbolic play. As they continue to develop socially with peers, they often enter a stage of rough and tumble play which includes running, racing, climbing, or competitive games. This is the stage when social skills such as learning to take turns and follow simple group rules and norms are practiced.

B. Middle Childhood

During this period children show fast change in social relationships. They use social comparison to distinguish themselves from others. They start seeing things from other's perspective. A child begins to weigh self-worth and increasingly compares himself/herself with peers.

Children are now able to understand emotions of pride and shame and can experience more than one emotion in a given situation. They can suppress or conceal emotions more effectively and use self-acquired strategies to cope. In this period, children internalize or begin to control their values and feelings from within. They start making judgments at this age that impact moral development.

Gender differences are observed during middle childhood. Girls may attach greater importance to good interpersonal relationships and the family while boys may emphasize the importance of social prestige.

A prevalent problem among children of this age group is of bullying. Researchers have found that bullies display certain characteristics, such as being intrusive, having



demanding but unresponsive parents. Victims are often depressed and have lower self-esteem.



Fig 10.2: Girls at play

In middle childhood, self-concept changes from a focus on observable characteristics and typical behavior and emotions to an emphasis on personality traits, positive and negative characteristics, and social comparisons. The child begins to see his or her own strengths and limitations. This helps the move towards achievement of an identity.



INTEXT QUESTIONS 10.3

1. Fill in the blanks in the following statements:
 - a. The development of empathy depends on _____ and _____ development.
 - b. Girls in middle childhood attach more importance to good _____ relations while boys give more importance to own social _____.
 - c. A child who is liked by some but disliked by other peers is called _____.
 - d. When two children are playing without interaction, it is called _____ play.
 - e. An internal determiner of emotional development is the child's _____.

10.4 SOCIALIZATION

The process of acquiring norms, values and beliefs, which are considered significant in a society, is called socialization. It is the process of transmitting cultural values, preferences and patterns of behavior to children. This is done by various processes,



institutions and people. Socialization involves regulating children's behavior and disciplining their undesirable or inappropriate behavioral tendencies.

Parents, families, children's peer groups, schools, religious institutions and mass media such as television are some important agents of socialization. They influence the process of child rearing directly as well as indirectly and reinforce culturally appropriate modes of thought and behaviour.

Early childhood is a crucial period of development because during this period children learn a great deal about the norms, conventions and practices in their families, society and culture. They acquire language and learn the fundamentals of culture. The primary socializing agents during this period are the family members.

Middle childhood is the time when influence of peers and school becomes prominent, though family context remains important. The effect of media such as television and computers is undeniable. This is the time when social stereotypes and prejudices are most likely to develop.

Much research has been done on the impact of **parenting styles** on the socialization of the child. There are 4 main types of parenting styles:

1. **Authoritarian style:** demanding, controlling, insensitive parenting
2. **Permissive style:** indulgent, non-demanding parenting
3. **Authoritative style:** firm, consistent parenting, reasons given for discipline.

Neglectful or uninvolved style disinterested uncaring, low control and communication.

Besides family, peers, media and school, there are other factors which influence the socialization process. Ethnicity and socio-economic status of the parents makes an impact on the child's development directly and indirectly. Ethnicity is linked to family size, structure, education, income, composition, extended networks.



Fig 10.3: Children from low SES home



Fig 10.4: Child in high SES family



INTEXT QUESTIONS 10.4

1. Give brief answers to the following questions.
 - a. What do you understand by the term 'Socialization'?

- b. State the major types of parenting styles.



WHAT YOU HAVE LEARNT

- Physical development continues during early and middle childhood, but the rate is slower than in infancy.
- There are gender differences in physical growth as girls tend to have a growth spurt earlier than boys during middle childhood.
- Gross motor development is rapid during early childhood.
- During middle childhood, children continue to develop gross and fine motor skills, while there is marked improvement in muscular control and eye-hand coordination.
- In early childhood the child is in the pre-operational stage of cognitive development.
- In middle childhood, the child reaches the concrete operational stage, when conservation, transformation, seriation and logical thinking are acquired, but the child still finds it difficult to deal with abstract concepts.
- Emotional development in childhood involves the development of self-conscious emotions, and better self-regulation in emotional expression.

Childhood

- Social development progresses during childhood from parallel play to co-operative play. In middle childhood, the focus shifts gradually from family to peers and school.
- Peer acceptance is an important determiner of a child's self-esteem and adjustment.
- Socialization is the process of acquiring behaviors, norms, values and beliefs, which are considered significant in a society.
- Parenting style influences the socialization process and personality development of the child.
- Cultural and social factors influence parenting style and attitudes towards child rearing, and hence the socialization process.



TERMINAL QUESTIONS

- a. Discuss the major features of physical development in early childhood
- b. Describe the major features of motor development in middle childhood.
- c. Discuss the main differences between the pre-operational stage and concrete stage of Piaget's theory.
- d. Explain the major features of emotional development in early childhood.
- e. Discuss how cultural factors influence the process of socialization in childhood.



ANSWERS TO INTEXT QUESTIONS

10.1

1. a. Crawling, standing, walking
b. grasping, pinching, holding pencil

10.2

1. a. Craete mental images, store it, talk about events, people create new scenes from imagination
b. understanding logical principles improvement in spatial reasoning language development

10.3

1. a. cognitive, language
b. interpersonal, prestige

MODULE - III

Human Development



Notes

**Notes**

- c. controversial
- d. parallel
- e. temperament

10.4

1. a. Acquiring norms values, beliefs, Regulation discipline of undesirable behaviour, agents of socialization.
- b. Authoritarian, permissive, authoritative and neglectful.

Hints for Terminal Questions

- a. Refer to unit 10.1.3
- b. Refer to unit 10.1.4
- c. Refer to unit 10.2.1 and unit 10.2.2.
- d. Refer to unit 10.3.1
- e. Refer to unit 10.4



11

ADOLESCENCE AND ITS CHALLENGES

Human life completes its journey through various stages and one of the most vital stages is adolescence. Adolescence is the period of transition from childhood to adulthood and plays a decisive role in the formation of prosocial/antisocial adult. All of us undergo this stage which poses many challenges and is full of excitement. At the same time it demands adjustment on many fronts.

When we come to this world we are completely dependent upon others and learn gradually to be independent. In India, the adolescents do most of the work themselves but the final decision regarding various domains of life is taken by their parents. For example, an adolescent wishes to enjoy movies but parents may force him/her to complete study first. Parents claim that they have more practical knowledge and experience and tend to treat adolescents like children.

This lesson shall help you understand the nature of adolescence and its challenges and major tasks faced by the adolescents, the influences that shape their personality and some of the important problems faced by the adolescents.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the nature of adolescence as a developmental stage;
- enlist the developmental tasks encountered during adolescence;
- explain the physical development during adolescenc; and
- discuss gender roles and describe the phenomenon of generation gap.



11.1 CONCEPT OF ADOLESCENCE

Adolescence is a period of transition when the individual changes- physically and psychologically-from a child to an adult. It is a period when rapid physiological and psychological changes demand for new social roles to take place. The adolescents, due to these changes often face a number of crises and dilemmas. It is the period when the child moves from dependency to autonomy. It demands significant adjustment to the physical and social changes.

The adolescence period in the **Indian** social system comes under **Brahmacharya (apprenticeship)**. This is the first *ashram* (stage of life) of development stages. In this stage, the child learns the basic skills in relation to his future role as a responsible adult.

It is a fact that all living beings pass through specific stages or phases of development. Erikson believed that each stage of life is marked by a specific crisis or conflict between competing tendencies. Only if individuals negotiate each of these hurdles successfully they can develop in a normal and healthy manner. During this phase adolescents must integrate various roles into a consistent self- identity. If they fail to do so, they may experience confusion over who they are.

11.2 THE ADOLESCENT TRANSITION PERIOD

Indeed adolescence represents one of the greatest of these periods of crisis. In fact it is the stage of stress, strain and storm. It brings many ambiguities in life. During this phase one really does not know where he or she stands. It is believed that this uncertainty about one's role causes many conflicts.

It is a well-known fact that delinquency rates soar during the period of adolescence, that suicides become increasingly prevalent, that drug and alcohol addiction may have their beginning, and that much general happiness exists. Adolescence is also a period when satisfactory heterosexual adjustments are facilitated or hindered, when career is planned and philosophies of life are molded.

11.3 ADOLESCENCE : BIOLOGICAL OR SOCIAL?

Adolescence is both **biological** and **social** in nature. The beginning of adolescence is marked by biological changes in girls and boys. As a matter of fact, just before puberty there occurs what is known as pre-adolescent growth spurt. It takes place in girls mostly during the age of nine to twelve years, and in boys between eleven and fourteen years of age. During this period, and following shortly thereafter, the **secondary sexual characteristics** emerge. In girls there is typically rounding out of the hips, breast development, appearance of pubic hair, and menstruation. In boys, some of the secondary sexual characteristics that mark the beginning of adolescence

are appearance of pubic hair, facial hair, and change of voice. These changes are biologically induced.

Adolescence for both girls and boys is marked largely by social changes. Such factors as when an adolescent leaves home, gets a job and can vote determine when his or her transition from childhood to adulthood is accomplished. The length of this period is thus primarily a social phenomenon.

The problems adolescents face during the long period of growing up have both biological and social roots. Physical changes and deviation can create many problems. Society also creates problems for adolescents. Adolescents in western societies behave differently than adolescents in eastern societies owing to varying social norms expectations and family structure.

Activity 1

Learning by doing

List some issues on which you and your friends feel uneasy because you are not free to do your job independently due to your parents' interference. Discuss with elders whether we can manage some negotiations to minimize the conflict with parents.

11.4 FACTORS DETERMINING THE PATTERN OF TRANSITION

Optimal development in adolescence depends on successful accomplishment of the developmental tasks in infancy and childhood. How easy it will be for the adolescent to make the transition into adulthood will depend partly upon the individual, partly on environmental aids or obstructions, and partly on their experiences. Let us examine some of these factors:

Speed of transition: The changes during adolescence take place at very fast pace. During no other period does the individual undergo such a sudden and drastic change in such a short time period and at no other age is he less prepared to cope with the problems that this change brings.

Length of transition: Those who mature rapidly (in term of physical growth), find adjustment especially difficult. They are expected to behave like adults simply because they look like adults. On the other hand, a prolonged adolescence also brings problems. The adolescent gets into the habit of being dependent, and this, is difficult to overcome later.

Discontinuities in training: Much of the stress and strain during adolescence is due to the discontinuities in training. For example, the assumption of responsibility during adolescence is difficult because the child has so far been trained to be dependent and submissive.





Degree of dependency: How dependent the young adolescent will be is determined mainly by the kind of training he/she received during childhood. Parents often foster dependency because they feel that adolescents are not ready to assume responsibility for their own behaviours.

Ambiguous status: In the societies like India, a child is expected to follow the footsteps of his/her parents. This gives him/her a pattern of behaviour to imitate. In open society, by contrast, it is assumed that every individual should be free to choose his/her own course of self- development.

Conflicting demands: The adolescent is often confronted with conflicting demands from parents, teachers, peers and the community.

Degree of realism: When the adolescent begins to look like an adult, (s)he is permitted an added degree of freedom. If (s)he feels is not ready, either physically or psychologically, to play the adult role, (s)he feels dissatisfied.

Motivation: The adolescent goes through a period of wondering how he or she will meet the new problems the life presents. He or she would like to grow up but being unsure of the ability to cope with the challenges of adulthood. So long as this feeling of insecurity exists, there will be little motivation to make the transition in adulthood.

As the barriers to growing up are lowered or removed by parents, teachers, and society, the adolescent can move smoothly in the direction of reaching the goal of adulthood, and motivation to make the transition is normally increased.



INTEXT QUESTIONS 11.1

1. Explain the factors that determine pattern of adolescent transition.

2. Define adolescence. Identify the various challenges faced by an adolescent.

11.5 DEVELOPMENTAL TASKS

The term “developmental task”, refers to those problems that individuals typically face at different periods during their life. An infant or a small child must master the complexities of learning to walk, learning to talk, and controlling the elimination of waste products of the body. In middle childhood such skills as learning to play games and learning to read become of major importance.

So for as adolescents are concerned, the developmental tasks present the vital

problems which must be met and solved during the transition from childhood to adulthood. These problems are not entirely unique to the adolescent period, but they are ones upon which the adolescent must work if he eventually expects to achieve a successful adult role.

Developmental Tasks for Adolescents

Havinghurst has listed the following tasks.

- Achieving new and more mature relations with age mates of both sexes.
- Achieving a masculine or feminine social role.
- Accepting one's physique and using the body effectively.
- Achieving emotional independence of parents and other adults.
- Achieving assurance of economic independence.
- Selecting and preparing for an occupation.
- Preparing for marriage and family life.
- Developing intellectual skills and concepts necessary for civic competence.
- Desiring and achieving socially responsible behaviour.
- Acquiring a set of values and an ethical system as a guide to behaviour.



INTEXT QUESTIONS 11.2

1. Developmental tasks of adolescent's include:
 - a. preparing for marriage and family
 - b. crawling and creeping
 - c. reflecting childish behaviours
 - d. None of the above
2. How many developmental tasks were described by Robert Havinghurst?
 - a. 10
 - b. 6
 - c. 9
 - d. 8

Adolescence is a long period, and many young adolescents have little motivation to master the developmental tasks for their age. In the later period, however, they realise that adulthood is rapidly approaching. This provides them the necessary motivation





to prepare for their new status. As a result, they make greater strides toward the goal of maturity than they did during early adolescence.

Successful achievement of the developmental tasks for one period in life leads to success with later tasks, while failure leads not only to personal unhappiness and disappointment but also to difficulties with later tasks.

Regardless of whether the adolescent has successfully mastered the developmental tasks of adolescence, he/she is, in most “advanced” cultures, automatically given the status of adult when he/she reaches the age of legal maturity. This is in direct contrast to more simple cultures where young people must demonstrate adult status to their elders, in “puberty rites,” privileges, and the responsibilities.

11.6 PHYSICAL DEVELOPMENT

Adolescence is fundamentally a period of physical and physiological changes. The young person’s reactions to physical changes may range from pride and pleasant expectation to bewilderment and fear. When adolescents evaluate each other, especially when they consider qualities they like in a manner of the opposite sex, “good looks” are often mentioned. In particular they dominate in descriptions of girls than of boys but other physical characteristics such as body build, height and the like are often noted when boys are being “sized up”.

One of the most characteristic features of adolescence is the increase in size i.e. in height and weight. However, the beginning of adolescence, known as pubescence, brings with it abrupt and psychologically significant physical changes. While many of these physical changes, such as growth in height and deepening of the voices are obvious and commonly known, others are hidden or less obvious but nonetheless significant.

Surge in Growth

Toward the end of childhood, usually girls at about ten or eleven and boys at twelve or thirteen, show a period of rapid growth in height and weight (general bodily growth). This acceleration of growth is closely linked to the increased hormonal output of the pituitary gland, which serves not only as the catalyst to produce growth but also as the controller of other glands (i.e. adrenals, gonads, and thyroid) that determine both tissue growth and function.

The rapid growth continues for a period of about three or four years, with the greatest increment in growth coming at an average age of 12.6 years for girls and 14.8 years for boys. During this period it is not uncommon for a child to grow as much as six to eight inches in height and to gain 18 to 22 kilograms in a year’s time.



For a variety of reasons, physical development in this period is characterized by asynchronization that brings concerns to adolescents and their parents and teachers. Skeletal and muscular development is more rapid than learning required for making use of the new muscle mass and motor habits. The body requires new learning. Bodily proportions also undergo changes. The facial features alter, because the growth of the lower part of the face lags behind the growth of the upper part. Legs, proportionally, usually grow more rapidly than the body stem, and hands and feet anticipate by several years the total body size of their owners.

General bodily growth is paralleled by physiological changes such as cardiovascular and respiratory growth and changes in metabolism and in general movement toward the adult states.

Skeletal Muscles: Muscles attached to bones, which bring about various types of body movement like the limb movements.

Puberty and Sexual Development

Following closely on the heels of accelerated growth, the pituitary gland directs the adrenal cortex and the gonads into more activity. Prior to this time, virtually equal amount of androgenic (male) and estrogenic (female) hormones are produced for both sexes by the adrenal cortex on the direction of anterior pituitary gland. Now an increased amount of hormonal production differentiates the sexes; the males producing more androgens, the females more estrogens.

Sex Hormones are substances secreted by the gonads for reproductive functions and determination of secondary sex characteristics; e.g. estrogen in the female and testosterone in male. Testosterone is the male sex hormone responsible for the development of the male secondary sexual characteristics as they become sexually mature, while in the female body, this role is played by estrogen.

Moreover, the genital and sex-appropriate tissues become more sensitive to these sex specific hormones. The dawn of these changes is reflected in boys by beginning of the enlargement of the testes. There follows in each sex a series of physical changes whose appearance is highly predictable and whose sequence is unalterable. In girls the enlargement of breast is followed by the growth of pubic hair, the menarche and axillary hair. In boys, after the initial enlargement of the testes, there occurs pubic hair, axillary hair, voice changes, and beard, in that order.

Thus, by observing adolescents, it is fairly easy to determine the point in pubescence that they have reached. The observable secondary sex characteristics, such as development of axillary hair and voice change are secondary to the primary sex changes. Primary sex characteristics include reproductive organs whose maturity is signaled by the menarche in the girl and by the first ejaculation in the boy.



Strength, Skill and Fitness

Physical development as mentioned above presents only the gross picture of the changes that occur in adolescence. Even more significant, perhaps, are the growth patterns of strength and skills. The post-pubescent boy, even though he may be of the same chronological age as his friends who have not yet entered pubescence, will almost certainly be stronger and will likely have greater agility, motor coordination, and bodily skills. He will, of course, rapidly overtake girls, whose strength already has increased about a year earlier and who briefly challenged him. You would like to know what forces account for this development. First, it is clear that the accelerated production of male hormone (androgens) brings with it added muscular strength. Second, the nature of skeletal growth, increased shoulder breadth, bigger chest cavity, and finally, the greater lung size, heart size, and increased blood pressure are all favourable conditions for greater physical strength.

While many of these same changes occur among girls, their physical strength increases at a slower rate, and, of course, never equals that of males. There are two reasons for this superiority: (a) biologically, the male is favoured by larger shoulder breadth, a bigger chest cavity, and better leg leverage; (b) culturally, girls receive little encouragement for the development of strength. In fact they are encouraged in the opposite direction—to be weak and dependent, or at least to pretend that they are.

Along with increases in strength come the development of motor coordination, reaction speed, and perceptual-motor skills. In an appraisal of physical development, one important consideration has to do with what is optimal. Height-weight charts are based on the average, but may, when a large segment of youth is overweight, lead to faulty conclusions. What is average is certainly not optimal.



INTEXT QUESTIONS 11.3

1. Explain how adolescence is a period of rapid physical growth and sexual development.
-

11.7 GENDER ROLES

Gender is a much more complex term. It relates to a given society's beliefs about the traits and behaviours supposedly characteristic of males and females. 'Gender roles' refer to the expectations concerning the roles males and females should perform and the ways they should behave. Such expectations come into play as soon as a child is born.



The beliefs about gender roles continue to influence us and our behaviour throughout life. Children's recognition that they belong to one sex or the other called '**gender identity**' is established quite early in one's life by the age of three or four. At this time, however, they are uncertain as to whether they will always be a boy or a girl. It is not until they are about six or seven that children acquire '**gender consistency**'—the understanding that even if they adopted the clothing, hair style, and behaviour associated with the other sex they would still retain their current sexual identity.



INTEXT QUESTIONS 11.4

1. Explain the meaning of gender role.



WHAT YOU HAVE LEARNT

- Adolescence is the period of transition between childhood to adulthood and it plays a decisive role in relation to the formation of prosocial/antisocial adult.
- Optimal development in adolescence depends on successful accomplishment of the developmental tasks in infancy and childhood.
- Adolescence is fundamentally a period of physical and physiological change. The most important single feature of adolescent development consists of the changes that take place in the young person's body.
- Toward the end of childhood, girls at about ten or eleven and boys at twelve or thirteen begin a period of rapid growth in height and weight.
- Gender role refers to expectations concerning the roles male and females should adopt and the ways they should behave.



TERMINAL QUESTIONS

1. What are the primary and secondary characteristics during adolescence?
2. What are the developmental tasks of adolescents?
3. Give a detailed account of major challenges faced during adolescence.

**ANSWERS TO INTEXT QUESTIONS****11.1**

1. Period of transition, rapid physical and psychological changes, New social roles, independence, faces conflicts.

11.2

1. d
2. a

11.3

1. Speed and length of transition, training, dependency, status, demands, degree of realism, motivation.
2. Surge in growth, height and weight, skeletal and muscular growth, sex hormones, sexual development, sex hormones, strength and skill.

11.4

1. Society's beliefs about behaviours characteristic of males and females. Gender consistency and behaviour of males and females.

Hints for Terminal Questions

1. Refer to section 11.3
2. Refer to section 11.6
3. Refer to section 11.5



12

ADULTHOOD AND AGEING

What is it like to grow old? What changes occur as people grow older? What does it mean to say that some one is old? These are some of the questions which come to our mind when we see or meet an aged person. We find that our parents do not behave as we do. The kind of images which normally come to our mind when we hear the word ‘adult and aging’ are responsibility, stability, forgetfulness and some times poor health. We view the older years as a stage in life when people become more dependent on others. Are these stereotypes or myths?

When we look into our society today we notice that the segment of older population is growing. It has been estimated that by the year 2021 a major portion of the world’s population will be in the category of the aged people. Becoming adult and growing old is a biological process, but many other developments also take place along with it. You will study about these changes in this lesson. This lesson will also help you understand the value of the aged people in the society and relating to them in a better way.



OBJECTIVES

After studying this lesson you will be able to:

- explain the characteristics of the period of adulthood and old age;
- describe the key developmental changes during adulthood;
- describe the problems of ageing and coping with it; and
- appreciate the concerns of ageing and aged people.

12.1 THE ADULTHOOD STAGE

We are often told by our elders to act according to our age. Have you ever wondered what this means? There seem to be certain normative expectations about how



individuals of a certain age should act. The period of adulthood is marked by society's expectations of performing one's duty as an adult. Some special roles and relationships like family and career are the major milestones of adulthood. The spurt of growth during adolescence stabilizes by adulthood and the individual looks forward to more concrete roles in the society. Our capabilities and behaviours continue to change as we grow older not only because of the biological growth but also because of our knowledge and the way we interact with environment. In the Indian tradition the period of adulthood refers to Grihastha Ashram. During this stage an individual enters the social life and accepts responsibilities of family, marriage and entering into one's career. The stage of adulthood has the following sub periods: (1) Young adulthood (20s to 30s), (2) Middle adulthood (40s to 50s) and (3) Later adulthood (60s and above.). Let us understand the various characteristics of each of these sub periods.

Young Adulthood

During this period one sees himself or herself as an autonomous and independent adult. The individual becomes financially less dependent on the parental family. A major developmental task during this period is the choice of a career. Young men and women tend to settle down in a career of their choice. In addition a young adult tries to settle down and start the family life. They are also concerned about various social issues and forming close relationships with one's professional peers and members of community. The duties of a person demand two-fold responsibilities which are towards oneself as well as the society.

The stage of young adulthood is characterized by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship. Unemployment and marital discord are two typical crisis conditions during early adulthood. According to Erikson this period is characterized by a crisis of 'intimacy versus isolation'. The young adults must develop the ability to form deep intimate relationships with others, particularly in marriage. Otherwise, they can become socially and emotionally isolated. Most young adults develop a dream of future accomplishments or a vision of what they want to achieve as a life goal. Such dreams motivate young adults towards goal directed efforts. Occupational and marital choices and gaining social and economic independence are some major tasks of early adulthood. Very often, during the early thirties individuals make a reappraisal of their choices and seek to make specific changes in their career choice and social relations. These experiences are described as "age thirty transition".

Characteristics of Young Adulthood

- Choice of a career.
- Starting a family life.

Adulthood and Ageing

- Forming close relationships with peers.
- Concerns about society.

Do It Yourself

Meet two adults, a male and a female. Ask them to describe their roles and responsibilities. Record their descriptions and your own description. Compare and discuss with your peers and tutor.



INTEXT QUESTIONS 12.1

1. Identify the characteristics of young adulthood.

12.2 ADULTHOOD OR MIDDLE AGE

From the period of twenties and thirties, the individual arrives at middle age in the forties and fifties. Middle age is characterized by competence, maturity, responsibility and stability. This is the time when one wants to enjoy the success of job, satisfaction derived from the family and social life. People look forward to the success of their children. Attention gets more focused on health, the future of children, aging parents, the use of leisure time and plans for old age. For women, menopause occurs between the age of forty-five and fifty. Menopause is supposed to be accompanied by some distressing physical and psychological symptoms in women. During this period men show greater concern towards health, strength, power and sexual potency.

Middle age is also viewed as a period of creativity and significant contribution to society. It is found that the best works of scientists, writers and artists are produced during the late forties and early fifties. Erikson characterizes middle adulthood as a phase of crisis involving generativity versus self-absorption. Unless a person makes this a period of meaningful contribution he/she may become preoccupied with selfish needs and desires. The middle age transition is also a period of turbulence. People start viewing themselves as older and become conscious of their mortality which often leads to emotional instability. They also engage in taking stock of their lives to assess the extent to which they have realized their dreams. Such re-assessments often lead to occupational changes and changes in marital relationships such as divorce. For most people who are employed in regular jobs, the end of the middle adulthood years involves the task of coming to terms with possible retirement from work life and the associated readjustments in life.

Characteristics of Middle Adulthood

- Competence, maturity, responsibility and stability.
- Attention focused on children.

MODULE - III

Human Development



Notes



- Plans for old age.
- Occurrence of menopause in women.

Old Age

Later adulthood or the period of old age begins around the age of sixty. During this stage most individuals lose their jobs as they retire from active service. They begin to fear about their physical and psychological health. In our society, the elderly are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion and spirituality. Many of the elderly people lose their spouses and suffer from emotional insecurity. However, this may not be true of everybody. Many people at the age of sixty or above remain very healthy and active in life. The life style including exercise, diet, and regular health check up helps people enjoy a meaningful and active life during old age.

Aging, however, is also a psychological phenomenon. There are numerous examples of writers, statesmen, professors and yogis who lead a productive and active life during old age. So it is important to note that old age can be a much happier and fuller time. Mental or physical decline does not necessarily have to occur. Persons can remain vigorous, active and dignified until their eighties or even nineties. This is quite possible if they take adequate care of themselves right from their middle age years. In fact, the older persons have vast reservoir of knowledge, experience and wisdom on which the community can draw upon.



INTEXT QUESTIONS 12.2

1. Describe any two characteristics of middle adulthood.

12.3 PHYSICAL AND COGNITIVE CHANGES DURING ADULTHOOD AND OLD AGE

In the present day society, with increasing health consciousness, both men and women want to be physically and mentally fit. With advancing age certain inevitable and universal changes such as chemical changes in cells or gradual loss of adaptive reserve capacity take place. There are also certain cognitive changes taking place from middle adulthood onwards. These changes are slow and gradual. Normally people see aging as a period of physical and mental health decline. These changes



are mainly physical and cognitive in nature. Let us try to understand these changes.

(a) Physical Changes: It has been found that the body organs of most persons show a 0.8 to 1 percent decline per year in the functional ability after the age of 30 years. Part of this decline is normal, some are disease-related and some caused by factors such as stress, occupational status, nutritional status and many other environmental factors. The major physical changes associated with aging are described as external changes, internal changes and changes in the sensory capacities and cognitive abilities. Let us understand these changes.

1) External Changes: This refers to the symptoms of growing old that can be seen in an individual. With many individuals the symptoms of aging can be seen as graying hair, aging skin shift in posture and appearance of wrinkles and other changes.

Key to Longer and Healthier Life

- (a) Eat healthy diet.
- (b) Exercise regularly.
- (c) Reduce stress level.
- (d) Don't smoke or drink alcohol and other drugs.
- (e) Cultivate certain positive qualities.
- (f) Engage with activities of social welfare.
- (g) Develop spirituality and faith.

2) Internal Changes: These changes refer to the symptoms of growing old that are not visible. These include changes in the respiratory system, gastrointestinal system, cardiovascular system, and central nervous system.

Some Great Achievers of late adulthood

- Mahatma Gandhi led India's struggle of freedom at the age of 77.
- Baba Amte
- Ramakrishna Paramhans
- Mother Teresa

3) Changes in Sensory Capacities: With advancing age, there is gradual slow down in the sensory abilities. As you know we communicate with the outer world through our senses. Losing in any of the senses can have profound psychological and social consequences.



Cognitive Changes: Cognition refers to the process by which information is acquired, stored, and used. During adulthood and aging various aspects of cognition like memory, learning, attention and speed of performance get adversely affected. The aged people often report forgetfulness, difficulty in learning new techniques and acquiring skills. Their concentration and responsiveness to environmental stimulus decreases. Dementia and Alzheimer and important diseases of old age. In general people become more vulnerable during old age.

12.4 COPING WITH THE PROBLEMS DURING OLD AGE

You must be wondering whether the process of ageing can be stopped or can anyone remain young throughout? We have noted that ageing is a biological process. This process gets affected by many other things such as stress, tension, habit, undisciplined life, ill health work habits etc. Leading a disciplined life means giving the body enough time to rest, proper work habits, less tension, proper nutrition and spirituality. It seems that aging can be delayed but no one can escape it. One must not deny and accept one's age and act in a realistic but optimistic manner. Different people adopt different coping strategies to meet their life challenges. Some of the effective coping strategies are as follows:

- (1) Develop an attitude of flexibility so that one may adapt to the pressures and problems of old age.
- (2) Recognize that one has to explore new ways of coping with life events.
- (3) Greater use of information seeking and problem solving strategies rather than withdrawing or isolating.
- (4) Increasing self-confidence, self-reliance, developing healthy attitudes about one's strengths and weaknesses.
- (5) Learning and maintaining effective coping skills and adopting an active approach towards the environment.

Use of the above styles of coping can be effective in making healthy adjustments during old age.

Aging and Social Support

Enlarging social network is another means of coping with life problems. Participating in various group activities such as joining clubs. Certain organizations for informal social interaction are found very helpful for the aged. Building a social network of people of their own age group in neighbourhood or elsewhere provides them with greater opportunity to share their life circumstances and find emotional expressions

for their existing problems. Through such social networks, one can get an unconditional expression of approval, share secrets, provide new experiences to each other, and develop trusting relationships.

Involvement in grand parenting helps elderly satisfy many of their personal and emotional needs. Grand parents can serve as important role models. Older people find these roles emotionally self-fulfilling and tend to derive self-satisfaction through achievement of their grand children.

12.5 IMPORTANCE OF THE AGED PEOPLE IN THE SOCIETY

अभिवादनं गीलस्य नित्यं वृद्धोपसेविनः ।

चत्वारि तस्य वर्धन्ते आयुर्विद्याय गोबलम् ।

“Those who greet elders and do service to them, they grow in all four dimensions such as longevity, knowledge, fame and strength”.

One of the reasons for the growth of the Indian society is its multigenerational structure which means staying of many generations together in one family. This phenomenon is expressed in the form of joint family system. Aged people have been always considered as individuals with a vast repertoire of knowledge and experience. Staying with them and respecting them helps not only in personal growth but facilitates multidimensional growth of a person.

Today many of the problems seen in the society are due to breakdown in the family system. Young couples prefer to stay alone to seek independence and doing away with the restrictions. But the repercussion of this system is largely being felt on the younger generation. The elders in the family have always been a medium of cultural transmission. Can you forget the stories told to you by your grand parents and their morals? The cultural traditions followed in our country have been passed from generation to generation. With the emerging nuclear family system, the younger generation is becoming deprived of this rich cultural transmission. It has been found that emotional expressions and values in young generation have also been affected by the absence of elders in the family.



INTEXT QUESTIONS 12.3

State whether the following statements are true or false:

1. The body organs show a decline of 0.8 to 1 percent after the age of 30. T/F
2. Gradual changes in sensory abilities take place with ageing. T/F





Notes

3. One must not accept one's age and become younger. T/F
4. Developing healthy attitudes do not help in coping with age. T/F
5. Aged people should be considered as treasure of the society. T/F

**WHAT YOU HAVE LEARNT**

- Some special roles and relationships like family and career are the major milestones of adulthood.
- Our capabilities and behaviours continue to change as we grow older not only because of the biological growth process but also because of our understanding and the way we interact with the environment.
- The stage of young adulthood is characterized by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship.
- Middle age is also viewed as a period of creativity and significant contribution to society.
- In our society, the elderly are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion and spirituality; however it may not be true.
- The major physical changes associated with ageing are described as external, and internal changes and changes in sensory capacities.
- Leading a disciplined life means giving the body enough time to rest, proper work habit, less tensions, proper nutrition and spirituality. This may help in coping with the problems of old age.
- Aged people have been always considered as individuals with a vast repertoire of knowledge and experience.

**TERMINAL QUESTIONS**

1. Describe the key to longer and healthier life.
2. What attitude is helpful to meet out the pressures and problems of old age?
3. What is the main cause of today's problems in the society?
4. How can one remain healthy during old age?



ANSWERS TO INTEXT QUESTIONS

12.2

1. Autonomous, independent, choice of career, new tasks and challenges, intimate relationships.

12.2

1. (a) Competence
(b) Attention on children
(c) Plans for old age
(d) Occurrence of menopause
2. By exercise, proper diet and regular health checkup

12.3

1. True
2. True
3. False
4. False
5. True

Hints for Terminal Questions

1. Refer to section 12.3
2. Refer to section 12.4
3. Refer to section 12.5
4. Refer to section 12.3



CURRICULUM

PSYCHOLOGY

Secondary Level Course (222)

RATIONALE

The study of psychology deals with important aspects of human behaviour and mental processes. The study of psychology is significant to one's personal growth and development and for facilitating the process of social development. The way we think, feel and behave with the people and world around us influence our adjustment. A course in psychology at the Secondary level will help the learners understand themselves and their place in society and realize their potentials.

OBJECTIVES

The course is designed to enable the learner:

- Understand the basic concepts of psychology and their application.
- Relate oneself positively to family, neighborhood and society.
- Behave responsibly and in a value based manner.
- Learn to live a purposeful life of health and happiness.

MODULES

Module I	Foundations of Psychology	15
Module II	Basic Psychological Processes	15
Module III	Human Development	15
Module IV	Social Psychological Processes	15
Module V	Health and Well Being	15
Module VI	Work Life and Environmental Concerns	15
Module VII	Yoga : A Way of life	10
	Maximum Marks	100

Module I: Foundations of Psychology**Marks: 15****Approach**

This module helps students understand the nature of psychology and the range of behaviours and mental processes which constitute its subject matter. It would also help them to understand the methods and some important fields of psychological applications.

Contents**Lesson 1 – An Introduction to Psychology**

- The nature of psychology and its definitions
- Scope of psychology
- Basic psychological processes
- Fields of psychology

Lesson 2 – Methods of Psychology

- Approaches to the study of psychological processes
- Methods to understand psychological processes
- Psychological Tools

Lesson 3 – Individual Differences

- Nature of individual differences
- Assessing individual differences
- Nature of Intelligence and its assessment
- Aptitudes and interests, and their assessment
- Nature of personality
- Techniques of personality assessment

Module II: Basic Psychological Processes**Marks: 15****Approach**

This module familiarises the learners with the concepts and processes involved in knowing the world. It helps to understand the basic ideas involved in acquiring knowledge and retaining it for further use. This module will also describe the processes of perception and the way we become aware of the world and think. It also tries to provide an understanding of the ways we feel and appreciate our inner world

Contents**Lesson 4 – Learning**

- Learning
- Reinforcement and observational learning
- Some other types of learning
- Transfer of training

Lesson 5 – Sensory Processes: Attention and Perception

- Sensation
- Perception
- Perceptual organisation
- Attention
- Extra sensory perception
- Applications of perception in everyday life

Lesson 6 – Memory

- Memory and Forgetting
- Stages of Memory
- Types of memory

- Forgetting
- Strategies for enhancing memory
- Repression: Forgetting painful events

Lesson 7 – Thinking and Problem Solving

- The nature of thinking
- Problem solving
- Creating and its role in life
- Decision making

Lesson 8 – Motivation and Emotion

- Nature of motivation
- Nature of emotion
- Role of emotion and motivation in human behaviour

Module III: Human Development

Marks: 15

Approach

This module aims at describing the processes, characteristics and stages of human development and explaining the influence of biological factors and socio-cultural context on human development.

Contents

Lesson 9 – Nature Determinants of Development

- Nature of development
- Domains of development
- Stages of development
- Influence on development

Lesson 10 – Childhood

- Physical and motor development in Childhood

- Cognitive development
- Socio-emotional and personality development
- Socialisation

Lesson 11 – Adolescence and its Challenges

- Concept of Adolescence
- The adolescent transition period
- Adolescence: Biological or social?
- Factors determining the pattern of transition
- Development tasks
- Physical development
- Gender roles

Lesson 12 – Adulthood and Aging

- The adulthood stage
- Adulthood or middle age
- Physical and cognitive changes during adulthood and old ages
- Coping with the problems during old ages
- Importance of the aged people in the society

Module IV: Social Psychological Processes

Marks : 15

Approach

This module aims at describing the influence of social institutions. It helps to understand how people behave in groups and also explains the formation of human beliefs, attitudes and values. The module will also explain the process of communication and familiarise the learners with some major social problems.

Contents

Lesson 13 – Groups and Leadership

- Importance of groups in our life
- Characteristics of group
- Group dynamics
- Difference between ‘Us’ and ‘Them’
- Formal and informal groups
- Group development
- Leadership
- Qualities of leader
- Theories of a leadership

Lesson 14 – Communication

- Understanding the meaning of communication
- Elements of communication
- Types of communication
- Effective communication
- Features of effective communication
- Non-verbal communication in Indian context
- Role and impact of media

Lesson 15 – Attitudes, Beliefs and Social Cognition

- Nature of attitude
- Formation and change of attitudes
- Relationship between attitudes and behaviour
- Beliefs and behaviour
- Social cognition

Lesson 16 – Social and Educational Problems

- Poverty
- Some other social problems
- School dropouts, stagnation and wastage

Module V: Health and Well Being

Marks: 15

Approach

This module aims at developing an understanding about the concepts of happiness and well being. It describes the obstacles in the pursuit of happiness and psychological processes to overcome them. It also explains the concepts of health, hygiene and describe practices for positive mental health.

Contents

Lesson 17 – Happiness and Wellbeing

- Concepts of happiness and well being
- Self actualization and mature personality
- Recognizing strengths of self Actualized individuals
- Developing positive emotions
- Self efficacy and compassion

Lesson 18 – Mental Disorders and their Treatment

- Stress as a source of disturbed mental health
- Types of conflicts and frustations
- Types of mental disorders
- Psychotherapeutic process
- Process of coping with stress

Lesson 19 – Mental Health and Hygiene

- Concept of mental health and hygiene

- Mental health, mental ill-health and mental illness
- Indicators/signs of poor mental health
- Behaviours which sustain good health
- Strategies for time management

Module VI: Work Life and Environmental Concerns

Marks : 15

Approach

This module aims at developing an appreciation of the concerns for vocational life and understanding of the challenges of world of work. It also explains the relevance of individual differences for job requirements, notions of work motivation. The relationship between human being and environment, causes and remedies of environmental stress are also described.

Contents

Lesson 20 – Aptitude, Interest and Job Requirements

- Aptitude
- Interest
- Ability
- Mental age and I.Q.
- Importance and relationship among aptitude, interest and ability
- Analysing and communicating job requirements

Lesson 21 – Preparation for the Vocational Role

- Meaning of vocational role

- Need for preparation for right vocation
- Special training
- Concepts of career, vocations and occupation
- General requirements for a vocation
- Vocational choice emerging perspective

Lesson 22 – The World of Organization

- Organization as a system
- Organizational climate
- Interpersonal relationship at work
- Productivity and excellence at work
- Strategies for developing productivity at work

Lesson 23 – Environmental Stress

- Environmental stress
- Pollution issues
- Sustainable development

Module VII: Yoga: A Way of Living

Marks: 10

Approach

This module tries to develop an appreciation among the learners about Yoga as a way of life being practised from ancient times. The module also explains the relevance of Yoga in the various stages of our life. It would also provide guidelines to the learners for facing various stresses and tensions in life and for self development.

Contents

Lesson 24 – Healthy Mind in Healthy Body

- What is Yoga

Curriculum

- Different types of yoga
- Yoga to keep fit
- Pranayam
- Meditation

Lesson 25 – Self-development and Yoga

- Self-development through Yoga
- Applications of Yoga in different walks of life
- How Yoga shapes our attitudes, thinking and behaviour?
- Yoga for motivation and excellence: (Competence) in action
- Patanjali on 'Mind': Its nature, functions and states
- The eight-fold path of Yoga

Lesson 26 – Nurturing the Whole Being: An Indian perspective

- Wholistic Personality: An ideal view
- Theory of Trigunas
- Theory of panch koshas (Five Sheaths of existence)
- Development of Koshas
- Sri Aurobindo on levels of consciousness

Lesson 27 – Controlling and Disciplining the Mind

- Importance of controlling and regulating the mind
- Jeevan Vigyan
- Preksha Dhyana
- Art of Living
- Transcendental meditation
- Vipassana

Feed back on Lessons 1-12

-First Fold

Third Fold

Fourth Fold

Feed back on Questions

Lesson No.	Lesson Name	Interest Questions		Terminal Questions	
		Useful	Not useful	Easy	Diff.
1.					V.diff.
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

-Second Fold

Final Fold and seal

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7

THINKING AND PROBLEM SOLVING

Have you ever thought about how you have acquired knowledge about all that you know today? It may instantly come to your mind that your teachers have taught you about this, your parents made you learn all these things, or you read about all these in books. In all these situations you have learnt something to build your knowledge base. Thus the process of knowing or of acquiring knowledge is called cognition. The process of acquiring knowledge is facilitated by cognitive processes such as attention, thinking, remembering, and reasoning. These cognitive processes are controlled and regulated by higher center of the brain, the cerebral cortex. The cognitive processes are very much specific to human beings and are guided by concepts, facts, propositions, rules, and memories. All these cognitive activities are governed by thinking. Hence, in this chapter you will learn about what is thinking, stages of problem solving, stages of creative thinking, and processes involved in making decisions.



OBJECTIVES

After studying this lesson, you will be able to:

- understand the nature of thinking;
- describe various stages of problem solving;
- explain creativity and its role in life; and
- explain the process of decision making.

7.1 THE NATURE OF THINKING

Thinking is perhaps one aspect of our mental activity which continues even when we are asleep. The difference between what is thinking and what is not thinking is just our awareness about the particular thinking process. Hence thinking is a complex mental process which involves manipulation of information. Such information is



collected through our senses (such as vision, hearing, smelling etc) from the environment, as well as the information which is stored in our memory because of our encounter with many events and situations in the past. Thinking is a **constructive process** in the sense that it helps us to form a new representation of any object or event by transforming available information. It involves a number of mental activities, such as inferring, abstracting, reasoning, imagining, judging, problem solving, and creative thinking. Such activities take place in our mind and can be inferred from our behaviours. Thinking is usually initiated by a problem and goes through a sequence of steps such as judging, abstracting, inferring, reasoning, imagining, and remembering. These steps are often directed towards solution of the problem. The example given below will help you to understand this in a better way.

In order to reach your new school on time suppose you are trying to find out the shortest route from your home to your new school. Your choice will be guided by many factors such as condition of the road, the density of traffic during your school time, safety while walking on the road etc. Finally you take a decision about the best possible shortest route after considering all these factors. Thus, a simple problem like this also requires thinking. The solution to this problem emerges after processing information that is available to us from the environment and our past experience. Thinking relies on a variety of mental structures such as **concepts** and **reasoning**. We will briefly learn about these mental structures.

Concepts: Concepts are one of the key elements of thinking. Concepts represent objects, activities, ideas, or living organisms. They also represent **properties** (such as “sour” or “brave”), **abstractions** (such as “anger” or “fear”), and **relations** (such as “smaller than” or “more intelligent than”). Concepts are mental structures which allow us to **organize knowledge** in systematic ways. We cannot observe them directly, but we can infer them from behaviour.

We as human beings have the capacity to abstract the essential characteristics of objects, events or whatever we perceive. For example, when we see a Potato we categorize it as ‘vegetable’, and when we see a towel we categorize it as ‘cloth’. Whenever we encounter a new stimulus we tend to treat it as a member of a familiar or remembered category and take the same action toward it and give it the same label.

Reasoning: Reasoning is also one of the key aspects of thinking. It is a process that involves inference. Reasoning is used in logical thinking and problem solving. It is goal directed, and the conclusions or judgments are drawn from a set of facts. In reasoning, information from the environment and the stored information in the mind are used following certain rules. There are two types of reasoning: deductive and inductive. In **deductive reasoning** we try to deduce or draw conclusion from a set of initial assertions or premises; where as in **inductive reasoning** we start from available evidence to generate a conclusion about the likelihood of something. Most cases of scientific reasoning are inductive in nature. Scientists and even lay people consider a number of instances and try to determine what general rule covers them all. For

example, the person is a priest, because he is wearing plain cloth, prays and eats simple food.



INTEXT QUESTIONS 7.1

1. What is thinking?

2. What are the different mental components of thinking?

7.2 PROBLEM SOLVING

Problem solving is part and parcel of our daily life. Every day we solve a number of problems ranging from simple to complex. Some problems take little time where as some take much time to solve. We look for alternative solutions if do not get the right kind of resources to solve the problem in hand. In the case of solving any type of problem our thinking becomes directed and focused and we try to use all the resources, both internal (mind) and external (support and help of others) to arrive at the right and appropriate decision. For example if you want to score good marks in an exam, you study hard, take the help of teachers, friends, and parents and finally you score good marks. Thus problem solving is directed thinking focused towards dealing with a specific problem. This thinking has three elements: the **problem**, the **goal**, and the **steps to reach the goal**. There are two methods which are used prominently in problem solving. These are- “**Means-end-analysis**” and “**Algorithms**”. In the case of Means-end-analysis a specific step-by-step procedure is followed for solving certain types of problems. In the case of ‘**heuristics**’ the individual is free to go for any kind of possible rules or ideas to reach the solution. It is also called rule of thumb.

Problem Solving and Mental Set: Sometimes we use a particular strategy/technique to solve a problem but we may or may not succeed in our effort to solve the problem. This creates a set to approach future problems that are encountered by a person. The set continues even if the problem is different. Despite this, we use the same strategy/technique when ever we come across the same problem and again fail to reach the solution. Such phenomenon in problem solving is called mental set. A mental set is a tendency on the part of an individual to respond to a new problem in the same manner that he or she has used earlier to solve a problem. Previous success with a particular rule produces a kind of mental rigidity/fixedness/set, which hinders the process of generating new ideas to solve a new problem. A mental set inhibits or affects the quality of our mental activities. However, in solving our real life problems we often rely on past learning and experience with similar or related problems.





In Activity 1 You may not be able to solve the problem, because of the mental set that one has to keep the lines within the grid of nine dots. By going outside the boundaries, you will succeed.



INTEXT QUESTIONS 7.2

1. Define problem solving. Discuss the two types of problem solving.

2. Discuss the role of mental set in problem solving.

7.3 CREATIVITY AND ITS ROLE IN LIFE

Do you know whatever you see around you, the things which you use for work in everyday life, the transport you use for commuting from one place to another etc are all the products of human thinking? Creativity is a particular kind of thinking which involves reaching out to the solution of a problem in a unique and novel way which was nonexistent earlier. Creativity is the mother of all inventions and discoveries in the world. Unlike routine solutions to the problems, creative solutions are novel, original, and unique, that others have not thought of before. The creative solutions or productions are sudden or spontaneous and are the outcome of a lot of work and preparation already done consciously and unconsciously. The sudden appearance of new ideas is called insight. The creative thinker can be any more such as an artist, musician, writer, scientist or sports person.

Stages of Creative Thinking: Graham Wallas, one of the leading psychologists of early twentieth century stated that there are five stages of creative thinking. These are *Preparation, incubation, illumination, evaluation, and revision*. We briefly discuss these five steps of creative thinking in the subsequent section.

1. **Preparation:** This is the first stage in which the thinker formulates the problem and collects facts and materials necessary for the solution. He/she finds that the problem cannot be solved after days, weeks, or months of concentrated effort. Unable to solve the problem the thinker deliberately or involuntarily turns away from the problem, initiating stage two i.e. incubation. At this stage of problem solving, it is important to overcome negative consequences of mental set and any kind of mental set or bias.
2. **Incubation:** This is a stage of no solution and involves a number of emotional and cognitive complexities. However, the negative effects of mental set, functional fixedness, and other ideas that interfere with the solution tend to fade. Perhaps, fatigue and too much of concern with the problem also mount up during this

Thinking and Problem Solving

period. Further, the unconscious thought processes involved in creative thinking are at work during this stage.

- 3. Illumination:** In this stage a potential solution to the problem seems to be realized as if from nowhere. It is about having the insight about the possible solution. Illumination occurs with its “aha” experience when a sudden idea or solution appears into consciousness.
- 4. Evaluation:** In this stage the obtained solution is verified or tested to see if it works. Frequently, the insight may turn out to be unsatisfactory, and may need some modification in the strategy of approaching the problem.
- 5. Revision:** Revision is required in the case a solution which is not satisfactory.

It has been found that creative people are generally talented (e.g. artists, musicians, mathematicians etc.), and have specific abilities. Creative people have been found to have some specific personality characteristics such as they are independent in their judgments, self-assertive, dominant, impulsive, prefer complexity, etc.



INTEXT QUESTIONS 7.3

1. What is creativity? What are the possible characteristics of a creative person?

2. Discuss in brief the stages of creative thinking.

7.4 DECISION MAKING

We make several decisions in our day-to-day life, such as decisions pertaining to our personal life, social life, education, career etc. When we take a decision which gives us success whereas our faulty decisions do not yield the desired result. Decision making is also related with another term ‘judgment’. Let us discuss these two aspects of thinking separately.

Decision Making: Decision-making is a kind of problem solving in which we select an appropriate alternative out of a number of alternatives available to us. For example, you have the option to choose between History and Psychology courses in your eleventh grade. You attend classes in both the subjects to decide upon the course to choose. Suppose you find that the contents of psychology are relevant, interesting and new and the teacher is intelligent, friendly, knowledgeable, and having good verbal ability; all qualities that you value in a teacher. So, on the basis of judgment about the subject and qualities of the teacher you decide to choose the psychology course.

MODULE - II

Basic Psychological Processes



Notes



Judgment: Judgment is a process of forming opinions, arriving at conclusions, and making critical evaluations about objects, events and people on the basis of available information. The process of judgment is often automatic and spontaneous. It does not require any prompting. Some judgmental choices are habitual like need for going for a morning walk before getting ready. Judgments involve evaluating information about the world (objects, events, persons, etc.), while decisions require making choices.



INTEXT QUESTIONS 7.4

1. What is the difference between decision making and judgment? Discuss in brief.



WHAT YOU HAVE LEARNT

- The process of knowing or acquiring knowledge is called cognition. The process of acquiring knowledge is facilitated by processes such as attention, thinking, remembering, and reasoning. These cognitive processes are controlled and regulated by higher center of the brain, the cerebral cortex.
- Thinking is a complex mental process which involves manipulation of information. Such information is collect through our senses (such as vision, hearing, smelling etc) from the environment, or is based on information which is stored in our memory because of our encounter with many events and situations in the past.
- Thinking is a constructive process in the sense that it helps us to form a new representation of any object or event by transforming available information. It involves a number of mental activities, such as inferring, abstracting, reasoning, imagining, judging, problem solving, and creative thinking.
- Concepts are one of the key elements of thinking. Concepts are mental structures which allow us to organize knowledge in systematic ways. We cannot observe them directly, but we can infer them from behaviour.
- Reasoning is another key aspects of thinking. It is a process that involves inference. Reasoning is used in logical thinking and problem solving. It is goal directed, and the conclusions or judgments are drawn from a set of facts.
- There are two types of reasoning: deductive and inductive. In *deductive reasoning* we try to deduce or draw conclusion from a set of initial assertions or premises; where as in *inductive reasoning* we start from available evidence to generate a conclusion about the likelihood of something.

Thinking and Problem Solving

- Problem solving is directed thinking focused towards dealing with a specific problem. It has three elements: the problem, the goal, and the steps to reach the goal.
- A mental set is a tendency on the part of an individual to respond to a new problem in the same manner that he or she has used earlier to solve a problem. Previous success with a particular rule produces a kind of mental rigidity/ fixedness/set, which hinders the process of generating new ideas to solve a new problem.
- Creativity is a particular kind of thinking which involves reaching out to the solution of a problem in a unique and novel way which was nonexistent earlier. Creativity is the mother of all inventions and discoveries in the world. Creative solutions are novel, original, and unique that others have not thought of before.
- There are five stages of creative thinking. These are *Preparation, incubation, illumination, evaluation, and revision*.
- Decision- making is a kind of problem solving in which we select an appropriate alternative out of a number of alternatives available to us. Judgment is a process of forming opinions, arriving at conclusion, and making critical evaluations about objects, events and people on the basis of available information.



TERMINAL QUESTIONS

1. Give any 2 examples each for (a) Concepts (b) Reasoning (c) Problem solving.
2. Identify any 5 creative persons who are famous in India.
3. Explain the concept of decision-making and its importance in daily life.



ANSWERS TO INTEXT QUESTIONS

7.1

1. Complex mental process involving manipulation of information.
2. Concepts and reasoning

7.2

1. Directed thinking focussed towards dealing with a specific problem Means-and - analysis and Algorithms
2. Mental set inhibits the quality of mental activities.

7.3

1. Thinking which involves reaching out to solutions in a unique and novel way

MODULE - II

Basic Psychological Processes



Notes

MODULE - II

Basic Psychological Processes



Notes

Thinking and Problem Solving

which was nonexistent earlier. Creative persons can be self-assertive, dominant, impulsive, may prefer complexity etc.

2. Preparation, incubation, illumination, evaluation revision.

7.4

1. Decision making is a kind of problem solving. Judgement is a process of forming opinions, arriving at conclusions and making critical evaluations.

Hints for Terminal Questions

1. Refer to section 7.1 & 7.2
2. Refer to section 7.3
3. Refer to section 7.4



8

MOTIVATION AND EMOTION

Have you noticed how each one of us is busy in one or the other activities? We try our best to achieve certain goals; and, if some difficulty comes in the way we feel frustrated. These statements show that our daily life is influenced by our needs such as hunger, thirst, achievement, affiliation etc. Not only that, we also feel happy, sad, angry or violent. The former aspects refer to motivation and the latter refer to different types of emotions. This lesson explains the relevance of motivation and emotions in human life. Motivation helps in answering the question: why do people seek to do certain things?. This helps us understand why people differ in terms of their behaviour. Emotions play an equally important role in everything we do, affecting our relationships with others and health. Both concepts are important because they help us understand the reasons for the various activities we indulge in and help determine the unique personality of each person.

**OBJECTIVES**

After studying this lesson, you will be able to:

- define the concepts of motives and needs;
- understand goal directed behaviour;
- describe the different aspects of emotions; and
- explain the role of emotions in organizing behaviour.

8.1 NATURE OF MOTIVATION

Have you wondered as to – ‘Why does your father/mother go to work everyday?’ ‘Why do you study for long hours?’ ‘Why do you like to play with your friends?’ or ‘Why does your mother stay up the whole night and care for you when you are feeling unwell?’

Each of these questions has an answer as there is a reason or motive behind each



type of activity mentioned. Working, studying, playing and caring are some important activities which are considered purposeful. **Motives**, wants, needs, interests and desires help explain our movement towards the chosen goals. A need or motive directs us to act or behave in a particular way towards a certain goal. Thus you study for long hours to achieve good results and your mother looks after you because of the affection and concern she has for you as her child.

A. The Concept of Motivation

Motivation plays an important role in directing human behaviour. There are several characteristics of motivation. First, it pushes us to reach the goals we have set for ourselves. In order to reach our goals we need to be **aroused** or **feel active**. Too little arousal will make us feel dull and relaxed, whereas, too much arousal may make us withdraw from our goal. Hence we must be motivated to maintain a balanced **or optimum level of arousal**. Second, people are motivated to behave in certain ways because of the pleasing and pleasant properties of external stimuli, such as, money, good grades, food, which motivate the person to act in a purposeful/focussed manner. Third, motivation is the result of the person's thoughts and expectations. It can be of two types: **intrinsic motivation** that comes from within the person, based on personal enjoyment of any task, and **extrinsic motivation** which is based on external rewards such as money, pay and grades. You will find that sometimes we work hard and produce high quality work when motivation is intrinsic rather than extrinsic. On the other hand, we are also influenced by the external rewards. In life, both types of motivation are important. Finally, motivational needs are ordered such that basic needs such as hunger and thirst are satisfied first and then other higher-needs, such as need for achievement and power are fulfilled. Let us now learn about the hierarchy of needs.

B. The Hierarchy of Needs

According to psychologist **Abraham Maslow**, there are several levels of needs that each person must strive to meet before he or she can achieve the highest level of personal fulfilment. Thus, a person must be able to fulfil the **primary (biological) needs** at the lowest level, as indicated in Figure 1. Once these needs are met then **safety** becomes important, followed by **need to belong** and **to love and be loved**. The desire to belong to groups such as family, friends, and religious groups makes us feel loved and accepted by others. If we succeed in satisfying the mentioned needs then we feel the need to have **self esteem, confidence, and feeling of self-worth**. Next come **cognitive needs** which include need for **knowledge and understanding**, followed by need for **order** and **beauty**. Finally a person moves towards reaching the full potential called **self-actualization**. Such a person has the qualities of **self awareness**, is **socially responsive**, and is open to the **challenges of life**. This type of organization of needs is called a **hierarchy**, or ranking in a series.



Figure 8.1: Maslow's hierarchy of needs

As life goes on people gain wisdom and knowledge of how to handle situations, thus they move up the ladder or hierarchy. A person may move up and down the hierarchy depending upon the situation he or she finds himself in. This hierarchy may not hold true for different cultures. It has been found that in countries like Sweden and Norway quality of life is very important and social needs are more sought after than self-actualization. In some cultures security needs are more dominant than self-actualization making job security more important than job satisfaction.

C. Primary Needs

‘Need’ refers to a lack of something that is necessary for us. We feel hungry when our blood sugar level is low, thus we need to eat food to satisfy our hunger. Motives or needs are characterized in terms of **primary** and **secondary** needs or motives.

Important **primary needs** are **biological needs** such as hunger, thirst, oxygen, rest, sleep, temperature regulation, warmth, shelter, excretion, and sex. These needs have to be satisfied for us to stay alive. Needs such as hunger and sleep are cyclical in nature or are repetitive. Thus we need to eat and sleep regularly. Attempt Activity 1 to understand the effects of not eating or sleeping for a long time.



Notes

Activity 1**Primary Needs**

- a) *Effect of lack of sleep on performance. Try to keep awake for a long period of time, for example for about 16 hours. Now list your experience on two aspects: i) how long you take to learn a lesson and ii) your feelings at this point of time.*
- b) *Effect of not eating for a long period of time. Try not to eat for a long period, for example, 8 hours. List your experience in terms of how you feel. Rate your feelings on a five point scale in terms of: i) extent of low feeling, ii) level of irritation and annoyance. Also try to concentrate on reading a new lesson. Are you able to read the lesson? If not, why is this so?*

The starting point of many biological needs is an imbalance in the physiological conditions of our body. Our body tries to maintain a state of balance called **homeostasis**. This balance is crucial. There must be enough water content in our body, body temperature must not be high or too low, glucose levels must be adequate and so on. Without maintaining this balance we would not be able to function properly in our daily life activities. Can you recall when you or a family member suffered from high fever and had to rest in bed for a few days? A state of balance must be maintained within our body to carry out our daily activities.

Why do we eat or feel hungry? There are several factors involved in the hunger need. Stomach contractions or ‘hunger pangs’ indicate that the stomach is empty and low levels of glucose and protein in the blood make us hungry. In addition, the smell, taste or appearance of food may lead to a desire to eat. When you reach home the smell of your favourite dish makes you feel hungry! Many factors work together to make us feel hungry. It is interesting that you can go hungry for long periods but not without water. We feel thirsty because we lose water content due to perspiration, breathing and urination.

Influence of Culture and Environment on Primary Needs

Do you know that our biological needs, such as hunger, are influenced by environmental factors? Often we are likely to feel hungry because of a number of reasons rather than due to low glucose levels in the blood. Environmental factors that have an effect on hunger and eating are:

- Learned liking and habits, for example, a person who enjoys having pizza will want to eat it even if not hungry.
- Stress can lead to eating, for example, examination stress makes some students eat more than is required.
- External cues, such as when it is dinner time or your mother calls out for dinner you are likely to feel hungry. The smell and attractive appearance of food may also make you feel hungry.

- Dietary restraints, if the doctor has advised a patient to avoid sweet foods there may be an increased desire to eat sweets.

D. Secondary Needs

Secondary needs lead to **psychological or social motives**. They are called social motives because they are learned in social groups, particularly the family. As children grow up and interact with others they acquire certain needs which can be fulfilled in a group setting. For example, achievement motivation is acquired by children through their parents, role models and socio-cultural influences. Some common social motives are:

Achievement: To strive for success and excellence, carry out difficult tasks.

Affiliation: To seek and enjoy the company of others, to make friends.

Power: To strive for impact on others, to influence, control and persuade others.

Nurturance: To help and take care of others such as children, elderly or sick persons.

Aggression: To fight, forcefully overcome opposition, to hurt and ridicule.

Exploration: To seek a variety of stimulation, to explore novel things.

The type and strength of social motives differ from person to person. For example, you may have high needs for achievement and affiliation, whereas your friend could have a moderate need for achievement and a low need for affiliation. Or, you could have a high need for affiliation and your friend a high need for exploration.

Mother Teresa's concern for the poor, sick and helpless made her open the Missionaries of Charity in 1950. It provides food for the needy and runs schools, hospitals, orphanages, youth counselling centres, and, homes for lepers and the dying. Mother Teresa's work has touched the lives of thousands of people. Her concern for others makes her high on need for nurturance. Do read the poem written by Mother Teresa as shown on www.youtube.com.



Nelson Mandela dedicated himself to the struggle of African people and was imprisoned for 27 years before he achieved freedom for his people. In fact he did not want personal freedom but fought for the setting free of common people. He was influenced by Mahatma Gandhi's way of thinking. For him it is important to live in peace and harmony and have equal opportunities for all people. Nelson Mandela was able to achieve difficult goals and his commitment helped him accomplish his purpose in life. Watch the video on www.youtube.com 'Making Poverty History – Nelson Mandela' and 'First Nelson Mandela Interview'





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We can also classify needs into three basic types: **existence needs** that include all primary needs that are essential for survival; **relatedness needs** include safety, belongingness, esteem and other social relationships needs; and, **growth needs** include those aspects that help people to develop their full potential. It is important to understand that biological and psychological needs do not work in isolation. They influence each other and determine human behaviour.



INTEXT QUESTIONS 8.1

1. Explain the concept of motivation.

2. Differentiate between primary and secondary motives.

3. Describe Maslow’s hierarchy of needs.

4. Discuss the role of culture and environment in our needs and motives.

Quiz 1

1. The process by which a person moves towards fulfilment of wants is called:
a. need b. incentive c. motivation d. goal
2. Secondary needs are acquired through
a. biological needs b. social interaction c. intrinsic procession d. innate needs
3. According to Maslow the most basic needs are:
a. safety b. cognitive c. love d. biological
4. Reema gets Rs. 20 for every good grade she obtains in school. Reema is receiving:
a. intrinsic motivation b. extrinsic motivation c. primary need d. growth need
5. Ashok has a high need for because he likes to study and investigate new things.
a. love b. nurturance c. exploration d. achievement



8.2 NATURE OF EMOTIONS

Each one of us has experienced strong feelings that are associated with pleasant or negative experiences. Examples of emotion are feeling happy when enjoying a movie, or getting embarrassed when we break a neighbour’s beautiful vase, or sadness after an argument with our best friend. Emotions influence our everyday behaviour.

A. Functions of Emotions

Emotions play several important functions in our lives.

- **Emotions prepare us for action:** When you see a person with a gun coming towards you, the emotion of fear and the accompanying bodily changes will help you run away from the situation.
- **Emotions help arrange our activities and future behaviour in some order:** Emotions help us to gather information and increase our chances of making the right response in the future. When a person threatens us we will try to avoid meeting that person out of fear. Positive emotions can act as reinforcement such as, wanting to repeat an action which brought us praise and joy.
- **Emotions help us interact effectively with others:** When we show our emotions other people watching them may come to be familiar with our way of behaving and know how we are likely to act again in the future. Similarly, others’ emotional expressions help us understand how to behave with them.

Activity 2

In column A are some situations which we all go through. In column B are emotions we might experience in these situations. Try and match column A to column B.

A	B
(i) You had fight with your best friend	(i) Surprise, excitement
(ii) You are about to go for an interview / exam	(ii) Fear, nervousness
(iii) You and your family are going for a picnic	(iii) Sorrow, sadness
(iv) You are about to receive the results of an exam that you do not think you did well on.	(iv) Disgust
(v) You have received an unexpected gift	(v) Scared, nervousness
(vi) You see a man chewing pan/tobacco and spitting on the road	(vi) Excitement, happiness



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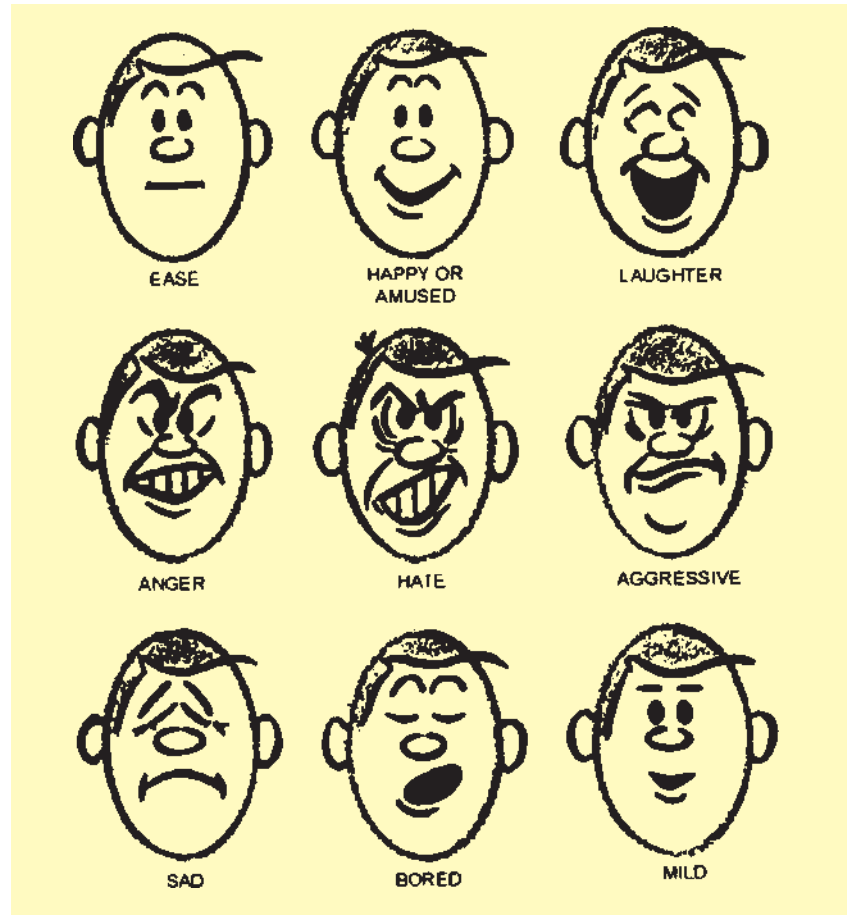


Fig. 8.2: Emotional Expressions

B. Components of Emotions

Emotion has three basic components or parts:

1. **Physiological changes:** when a person feels an emotion certain changes take place in our body such as increase in heart rate, blood pressure, pupil size is increased, perspiration takes place, breathing is faster and the mouth may become dry. Think about the last time when you went to the examination centre to write your exam or when you were angry at your younger brother. You may have experienced these bodily changes.
2. **Behavioural changes and emotional expression** refer to the outward and noticeable signs of what a person is feeling. These include facial expressions, bodily postures, and gestures with the hand, running away, smiling, frowning, and slumping in a chair. The six primary emotions in facial expressions are: fear, anger, sadness, surprise, disgust and happiness. This means that these emotions are easily recognized in people from all over the world.
3. **Emotional Feelings:** Emotion also includes the personal/individual feeling. We can **label the emotion** felt as: happy, sad, angry, disgusted and so on. Labelling



of a feeling is shaped by **past experiences** and the **culture** one belongs to. On seeing a person with a stick in his/her hand we may run away or prepare ourselves to fight, whereas, if a well known singer is in your neighbourhood you will go to the place to hear him sing your favourite songs.

Cognition or understanding of the situation is the most important part of emotional experiences. Some psychologists feel that we think and then feel, while others believe that our emotional reactions are so fast that thinking about the situation does not arise. Attempt Activity 3 to check which explanation is correct according to you? Human emotions involve so many things, past experience, culture, individual differences therefore at times we may first act and then think about it, whereas in other situations we can first think before reacting.

Activity 3

Emotion and Thinking

Think and answer: when you suddenly see a dog snarling near by do you first run away or do you first think 'What should I do?' and then decide to run? Make a list of other situations where you are likely to first react and other situations where you are likely to first think and assess the situation and then you will respond.

Most of the times we feel a **mixture of emotions**. For example, when a person wins a lottery she may show the emotions of shock, disbelief, surprise and joy. We are also familiar with each other's feelings and know what it means to him or her. Hence you know when your friend is happy to receive a gift and sad when you have had an argument with her. However your **experience of emotions** of joy and fear is different from your friend's. Going for a walk may provide you with pleasure whereas for your friend a hug from her mother gives the feeling of pleasure. The meaning a feeling has for you or your friend is influenced by past experiences and memories.

Activity 4

There are many ways by which we describe our feelings. Prepare a list of the various emotions people feel. Make your own list of emotions. Also ask your family members and friends. You will realize that the list is very long for human emotions have a wide range.

C. Emotions and Culture

Do people in all cultures express their emotions similarly? Yes, research indicates that the six basic emotions are expressed universally. Therefore, Indians, Americans, Germans or Japanese express joy and fear in the same basic way. Each primary emotion is associated with a unique set of facial and muscular movements.



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Yet you must understand that the behaviour of people from various countries is different from your behaviour. Japanese tend to show very little emotional display as compared to Italians. Why does this difference in display exist if there are basic universal emotions? The answer is that as we grow up we come into contact with family members and others. The social experiences lead to the development of **display rules** which are approved way of showing of emotions. These rules are learnt during childhood and this learning becomes noticeable in the expression of emotions. Can you recall any instance when you have received a gift that you do not like? Have you not thanked profusely with a smile ‘pasted on your face’? This is known as ‘making of emotion’. Interestingly there may have been instances when you have been able to note the difference between a made up smile and a true smile.



INTEXT QUESTIONS 8.2

1. State the functions of emotions in our lives.

2. With the help of examples identify the components of emotions.

3. State how display rules are influenced by culture.

Quiz 2

State whether the following statements are true or false:

1. Emotions prepare us for action. T/F
2. When a person feels an emotion no bodily changes take place. T/F
3. Emotional expression is only shown through facial expressions. T/F
4. Labelling of emotions is influenced by past experience and the culture one belongs to. T/F
5. Display rules are approved ways that are noticeable in the expression of emotion. T/F

8.3 ROLE OF EMOTION AND MOTIVATION IN HUMAN BEHAVIOUR

Can you imagine a situation when you are about to appear for an important examination or are going to receive a prize for securing the first position in class and you do not feel anything? Or, you are walking alone down a dark street at midnight and someone is following you and again you are not feeling anything? Absence of not being motivated to do something and absence of feelings is likely to make us act in a robotic fashion.

We have tried to understand motivation and emotions as two distinct concepts. In real life both are closely related and connected and separating the two concepts is a difficult task. In this unit you have learned that along with motivation we also feel our experiences. In the examples provided above the act of studying long hours and the experience of success provides you with a sense of achievement and happiness. The emotional feelings of love and affection your parents have towards you also motivate them to care for you. The death of a loved one brings on the emotion of sadness whereas we experience anger at being treated unfairly. Emotions not only motivate us, they also indicate the reason for motivation. They play an important role in our lives.

Hence your motivation is also accompanied by emotions. Any situation that brings about a strong emotion is likely to motivate you to either repeat it or to avoid it. Thus both motivation and emotion are forces that push us towards action. Primary needs like hunger, thirst and sleep and secondary needs like achievement, power or approval are accompanied by emotional reactions of satisfaction, joy and pride. It can be said that:

- Both motivation and emotion move, activate and help control and plan human behaviour.
- The feeling part of emotion has a motivational component. It helps us to get what we want and to avoid what we do not want in life.
- Emotions can serve as motives. For example, a frightened child may cry out for help and seek comfort and security from a loved one, such as, a mother or father.



WHAT YOU HAVE LEARNT

- Motivation is a want or need that helps us move towards our goal. It moves us to act or behave in a particular way.
- Motives and needs are characterized in terms of primary motives (biological) and secondary (psychological) motives. Primary needs are due physiological imbalance while secondary needs are influenced by social experiences of the individual.
- According to the hierarchy model, biological needs must be fulfilled before psychological needs.
- Emotions play three important functions: prepare us for action, organize our behaviour and future, and, interact effectively with others.
- Emotions have three interrelated components: physiological changes, behavioural and emotional expression and subjective feelings.
- Basic emotions and their expressions are universal in nature yet culture provides guidelines towards how and when to show emotions.



**Notes**

- Motivation and emotion together activate and organize our life. Motivation leads to emotional experience and this further motivates (reinforces) a person to act.

**TERMINAL QUESTIONS**

1. Write three examples of motivated action. Now identify the important characteristics of motivation.
2. Identify the important components of Maslow's hierarchy of needs. Which motives are satisfied first? Provide reasons as to why this is so.
3. With suitable examples describe the role of motivation and emotion in organizing our behaviour.

Activities/Exercises

1. Interview a person who has achieved prominence in his or her field. For example, the president of a company, a sports person, a dancer or a physically challenged person. Ask the person about his/her life – starting from childhood to the current position, incidents that influenced them, the various challenges and how they were overcome. Prepare a case study.
2. Collect a number of magazines, and newspapers. Cut photographs which show different facial expressions. Make a collage of these photographs to understand the different emotions in human life.
3. Interview a dancer or theatre person. Ask the person about different emotional expressions and how they are used to communicate specific emotions. Try to note how the body posture, gestures, and facial expressions communicate emotions.

**ANSWERS TO INTEXT QUESTIONS**

8.1 Refer to Section 8.1

Quiz 1

1. c
2. b
3. d
4. b
5. c

8.2 Refer to Section 8.2

Quiz 2

1. T
2. F
3. F
4. T
5. T

Hints for Terminal Questions

1. Refer to section 8.1
2. Refer to section 8.1
3. Refer to section 8.3

Web Sites

The following websites will help you to further understand motivation and emotions.

1. <http://thesituationist.files.wordpress.com/2007/10/emotions.jpg>

Types of emotions: (a) In this site robots have been used to depict different types of emotions. Study in detail how each part of the face (forehead, eyebrows, size of eye pupil, etc.)

- (b) https://sfari.org/image/image_gallery?img_id=136061&t=1241787803666

Whereas in this site humans have been used to show six different emotions. Can you identify them?

- (c) <http://www.scribd.com/doc/12910868/Paul-Ekman-Emotions-Revealed-Recognizing-Faces-and-Feelings-to-Improve-Communication-and-Emotional-Life>

This E-book by Paul Ekman has a number of photographs which you can observe to understand different types and display of emotions. On page 236 in the appendix there is a test 'Reading Faces' consisting of 14 photographs that you can attempt . At the end of the e-book answers with explanations are also provided .



**9**

NATURE AND DETERMINANTS OF DEVELOPMENT

One of the most important features of all living beings is change. The changes are most striking when we see the transition in human life spanning from conception to death. The journey from an unborn baby to an adult and then on to an old person is very fascinating. Even a casual observation of the human lives around you will make it clear that several changes happen each day in our bodies and psychological functioning. Some changes are noticeable while some can not be immediately or clearly observed. Some of these changes are determined more by hereditary or genetic factors, while some depend more on environmental and cultural factors. Different cultures hold different goals for development and use different strategies to bring up children. In order to help individuals develop in the best way possible, it is important to understand the nature and process of development throughout the life-span.



OBJECTIVES

After studying this lesson, you will be able to:

- describe the nature of development and distinguish it from other related concepts;
- describe the important domains and stages of human development;
- identify major genetic and environmental influences on human development; and
- learn about the effects of environmental factors on pre-natal as well as post-natal development.

9.1 NATURE OF DEVELOPMENT

In this section, we will try to understand what is meant by the term “development”, distinguish it from other related concepts, and identify its main characteristics.



A. The Concept of “Development”

The term “development” is generally used to refer to the dynamic process by which an individual grows and changes throughout its life-span. It is often thought of as the process of qualitative change taking place from conception to death. In this way development is a broad term and deals with all areas including physical, motor, cognitive, physiological, social, emotional and personality. It should be noted that developments in all these areas are inter-related. For example, a 13 year-old girl undergoes physical and biological changes in her body and such changes are in turn related to her mental, social and emotional development.

Life begins at conception when mother’s ovum fertilized by the father’s sperm and a new organism is created. From that point till death an individual keeps on changing. Such changes are not random but orderly and generally follow a pattern. It may be noted that the developmental changes are not always incremental or evolutionary. They may also involve a decline in the functioning called “involution”. A child loses milk teeth in the process of development while an old person may show decay in memory and physical functioning. Development, therefore, is best viewed as a gain-loss relationship in which newer and different kinds of changes take place. Older behavior patterns may lose their salience while new ones may emerge.

Development is shaped by the joint influences of both nature and nurture in a cultural context. Nature refers to the hereditary contribution a child receives from parents at the time of conception. Genetics determines several aspects of a person’s physical structure and functioning as well as some psychological characteristics to a certain extent. Nurture refers to the influences of the complex physical and social ecology in which we develop and grow. Various aspects of the child’s ecology (e.g. physical facilities, social institutions and rituals, and school) influence the developmental outcomes in important ways.

B. Key Developmental Concepts

The term “**development**” is often used interchangeably with “**growth**” and “**maturation**”, but these terms need to be carefully distinguished.

“**Growth**” generally refers to the quantitative additions or changes in the organic structure. For instance as we become older, the body size, height, weight, proportion of parts of our body change in measurable ways. Also, the vocabulary increases. “**Development**” on the other hand, is a broader term which often includes growth, but is used more to refer to functional and qualitative changes in cognitive ability, perceptual ability, personality and emotional development and so on.

“**Maturation**” is a term that refers to the natural unfolding of changes with increasing age, e.g. hormonal changes as the individual reaches puberty. An example of this



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can be seen in breast development which is influenced by release of estrogen when a girl reaches adolescence. Maturation refers to the changes which are primarily biological in nature and occur due to our genetic programme. Our biological structure follows a predetermined course of changes with time. This can be seen in the development of teeth during childhood. Changes in body proportions with age provide an example of such predetermined universal trends. The size of the head is roughly half of the whole body at birth, but the proportion keeps decreasing until adulthood, when it is less than one-fourth of the whole body. Therefore, maturational changes in our body are primarily due to the ageing process rather than learning or other factors such as illness or injury.

It must be noted that changes in behavior also occur due to “**learning**”. Learning takes place as a result of a person’s interaction with the environment. Maturation provides the raw material and sets the stage for learning to occur. Taking the case of learning to read, the child needs to be biologically ready. The eyes need to develop proper focusing ability before a child can learn to read. Therefore, maturation and learning jointly bring about changes in a person’s behaviour.

“**Evolution**” is a term that refers to species-specific changes. Evolutionary changes happen very gradually and are passed on from one generation to the other so that the species is better equipped for survival. The evolution from apes to human beings took place over a period of about 14 million years. Changes that occur at the level of species are called **phylogenetic** and those that occur at the level of individual are called **ontogenetic**. The term evolution is also used to describe the incremental changes that take place in the course of development.

C. Characteristics of Development

We can now summarize the characteristic features of development to help us distinguish it from other kinds of changes.

- Development is a **life-long process**, spanning from conception till death.
- Developmental changes are often **systematic, progressive and orderly**. They usually follow a pattern, proceeding from general to specific, and from simple to complex and integrated levels of functioning.
- Development is **multi-directional**, i.e. some areas may show a sharp increase while other areas may show a decline. Developmental changes usually involve an increase in maturity towards higher levels of functioning, e.g. increase in vocabulary’s size and complexity. But it may also involve a decrease or loss, such as in bone density or memory in old age.
- Moreover the rate of growth and development is **not always constant**. ‘Plateaus’ are often seen in the pattern of development, indicating periods of no apparent improvement.

Nature and Determinants of Development

- Developmental changes can be **quantitative**, e.g. increase in height with age, or **qualitative**, e.g. formation of moral values.
- Development is both **continuous** as well as **discontinuous** process. Some changes may occur very rapidly and be overtly visible, such as appearance of the first tooth, while some changes may not be sharp enough to be observed easily in day-to-day functioning, such as understanding of grammar.
- Developmental changes are **relatively stable**. The temporary changes due to weather, fatigue or other chance factors will not qualify as development.
- Developmental changes are **multi-dimensional** and inter-related. They may happen together in many areas at a time, or can occur one at a time. During adolescence there are rapid changes in the body as well as in emotional, social and cognitive functioning.
- Development is highly **plastic or flexible**. This means that the same person may suddenly show greater improvement in a particular area than expected from the past rate of development. An enriched environment can produce unexpected changes in the physical strength, or in memory and intelligence levels.
- Development is **contextual**. It is influenced by historical, environmental and socio-cultural factors. The loss of a parent, an accident, a war, an earthquake and child-rearing customs are examples of factors which may influence development.
- There are considerable **individual differences** in the rate or tempo of developmental changes. These differences could be due to hereditary factors or environmental influences. Some children can be very precocious for their age, while some children show developmental delays. For example, though an average child begins to speak 3 word sentences around 3 years of age, there will be some children who have mastered this much before 2 years, while there will be some who are not able to speak full sentences even by 4 years. Moreover, there will be some children who are not able to speak even beyond the upper limit of the range.



INTEXT QUESTIONS 9.1

1. Write True/False against each statement:
 - a. Development refers to both quantitative and qualitative changes. T/F
 - b. Development follows a constant rate. T/F
 - c. The study of development does not cover old age. T/F
 - d. A person may show increase in some aspects and show decline in other aspects at the same time T/F
 - e. Enrichment of the environment can produce dramatic changes. T/F

MODULE - III

Human Development



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2. Write short answers to the following questions:

a. Explain the concept of development.

b. State any 3 major characteristics of human development.

9.2 DOMAINS OF DEVELOPMENT

As we have noted development is an inclusive term that incorporates changes in several areas. These areas or domains deal with 3 broad categories:

- 1. Physical and motor development:** It refers to changes in body-size and structure, functioning of various body systems, brain development, perceptual and motor development.
- 2. Cognitive development:** It refers to the development of cognitive and intellectual processes, including memory, attention, intelligence, academic knowledge, problem solving, imagination and creativity. It also includes development of language.
- 3. Socio-emotional development:** It refers to how we develop relationships with other people, and how our emotions emerge and change as we grow older. It includes emotional communication and self-control, understanding of self and others, interpersonal skills, personality, and emergence of friendship and moral reasoning.

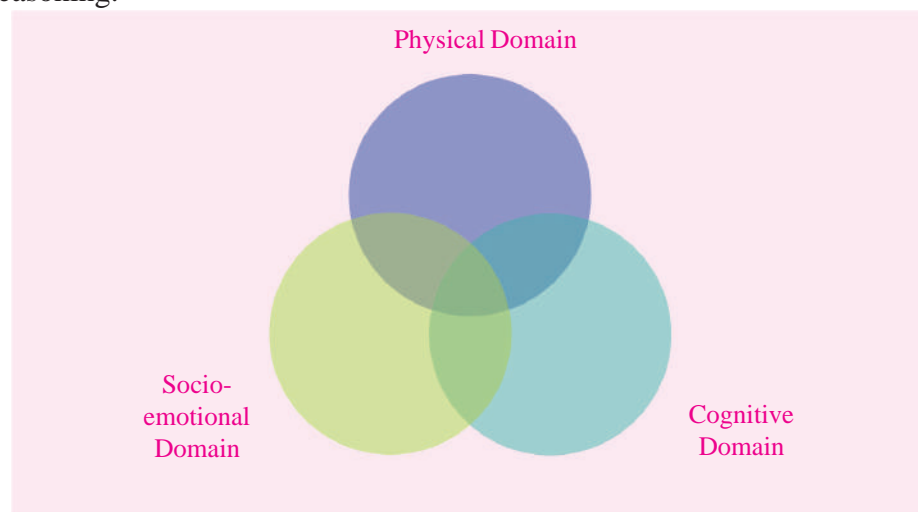


Fig. 9.1: *Inter-relatedness of the domains of development*

These domains or areas are inter-related and combine in a holistic manner to make a person's developmental pattern unique. Each domain influences and is influenced by others. As a baby develops physically, several motor skills are acquired. As the

Nature and Determinants of Development

baby becomes capable of grasping, reaching, sitting, crawling, standing and walking, he/she is able to better explore the environment, resulting in further cognitive development. Improved thinking and understanding helps formation of better social relations as well as emotional expression and comprehension. On the whole, each domain helps the child move towards enriched experiences, learning and overall development.



INTEXT QUESTIONS 9.2

1. Fill in the blanks in the following statements:
 - a. Improvement in memory and language indicates development in the _____ domain.
 - b. Interpersonal relationships fall in the _____ domain.
 - c. Changes in size and structure of the body fall in the _____ domain of development.
 - d. _____ broad domains of development can be categorized for the sake of convenience.

9.3 STAGES OF DEVELOPMENT

Even though development is a continuous process, some theorists believe that various stages can be identified for the sake of locating major shifts and determining the developmental tasks. This helps in monitoring the pace of developmental changes. It must be pointed out that there is no sharp dividing line between them. Each stage has certain characteristic features and prepares the ground for the next stage. Some theorists have suggested stages in specific areas of development. For instance Piaget who identified stages of cognitive development and Freud who suggested stages of psycho-sexual development. These theories are explained in other lessons.

A. Developmental Stages: A Life Span Perspective

Most psychologists identify the following stages of development:

- **Prenatal period** (from conception to birth) : In this period, the single-celled organism changes into a human baby within the womb.
- **Infancy and toddlerhood (birth-2 years)**: Rapid changes in the body and brain help several sensory, motor, social and cognitive capacities to emerge.
- **Early childhood: (2-6 years)**: Motor skills are refined, language develops, ties are formed with peers, and the child learns through play.

MODULE - III

Human Development



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- **Middle childhood (6-11 years):** These are the school years when the child acquires literacy skills, thought processes are refined, friendships emerge and self-concept is formed.
- **Adolescence (11-20 years):** This period is marked by puberty which signals the onset of rapid physical and hormonal changes, emergence of abstract thinking, sexual maturity, stronger peer ties, sense of self and autonomy from parental control.
- **Early adulthood (20-40 years):** This is the stage of life when the youngster leaves home for the sake of education, or to find a career, and to form intimate relationships leading to marriage and having children.
- **Middle adulthood (40-60 years):** At this stage the person is at the peak of his/her career. There is a need to help children begin independent lives, and to look after own parents who are aging.
- **Late adulthood (60 years till death):** This period is marked by retirement from work, decrease in stamina and physical health, bonding with grand-children, and dealing with impending old age and death of self and spouse.



Fig. 9.2: Stages of human development

Though the stages of development are universally recognized, the exact age range is arbitrary and depends on cultural factors. In some cultures, for example, there is no distinct phase of adolescence with the stress associated with it. One simply moves from childhood to adulthood. The concept of old age is undergoing a change with enhanced medical, health and cosmetic facilities. Life-span expectancy has also increased and reached to 65 years in India.

B. Life Stages : An Indigenous View

Ancient texts also view the human life-span in terms of stages. Life is seen as a process of evolution in four stages known as **Ashramas**, which literally means a dwelling place. There are four main Ashramas:

- **Brahmacharya:** During this period the major task is learning while living as a student under the guidance of a Guru, with emphasis on discipline and simple living.
- **Grihastha:** In this phase of life an individual has to work and take on the responsibility of raising and maintaining a family within the social context.
- **Vanaprastha:** It is a period of seclusion after one has raised the family and completed the duties towards it. It requires severe discipline and austerity and sharing responsibilities with the younger people.
- **Sanyasa:** It is the final stage of life when one needs to achieve complete detachment from worldly objects, freedom from desire, and move towards ultimate self-knowledge and renunciation from the world.

These stages or ashramas are based on the principle that a human being should grow, participate and discharge worldly duties and contribute to the progress and welfare of society and move towards liberation and spiritual growth. It is desired that the older persons should give way to the younger generation. In this scheme one lives in a web of obligations to society as well as environment including all living beings such as animals and trees. It emphasizes co-existence with this whole living world rather than being a consumer and exploiting the environment for personal gains.

C. Developmental Tasks

Each developmental stage is characterized by a dominant feature or a leading characteristic which determines its uniqueness. For example, a child is expected to go to school and study while an adult is expected to work and raise a family. Certain characteristics stand out more prominently than others and each period is called a stage. People learn certain behavior patterns and skills more easily and successfully at certain stages and this becomes a social expectation. For example, a child is supposed to be able to go independently to school in middle childhood. Such social expectations of a particular age common to all persons constitute “developmental tasks”. If a person is able to master the developmental task of a particular stage, he or she is considered to have successfully moved on to the next stage of development.



INTEXT QUESTIONS 9.3

1. Write True or False after each statement:
 - a. Developmental stages have a fixed age range.
 - b. Prenatal period extends from birth to conception.
 - c. Adolescence is marked by rapid physical and psychological changes.





- d. There are four stages in the Hindu view of development.
 - e. The Hindu concept of development encourages staying away from the family.
 - f. Developmental tasks are social expectations of a particular age group.
2. Write short answers to the following questions:
- a. State the major stages of development as described in ancient Hindu texts.
-
- b. What do you understand by the term “developmental tasks”?
-

9.4 INFLUENCES ON DEVELOPMENT

It is important to understand the factors that determine the course of development. Each one of us is a product of genetic factors and environmental influences. The role of maturation and learning has already been described briefly in an earlier section. Let us now look at the contributions of heredity and environment in some detail.

A. Genetic Influences

At the time of conception, the ovum of the mother and the sperm cell of the father unite to form a new cell. The small particles in the nucleus of the cell are called **chromosomes**. The chromosomes exist in pairs. The human cell has 46 chromosomes arranged in 23 pairs. One member from each pair comes from the mother and the other one from the father. Chromosomes store and transmit genetic information. The genes, which are the actual trait carriers, are found in very large numbers in each chromosome.

The fertilized zygote brings together various combinations of chromosomes. In this way, different genes are transferred from each child of the same set of parents. Due to this reason each child bears greater similarity to his or her blood relatives than to anyone else. At the same time there are also many differences amongst blood relatives.

B. Genotypes and Phenotypes

Genetic transmission is a complex process. Most characteristics that we observe in human beings are combinations of a large number of genes. Innumerable permutations and combinations of genes are responsible for the large differences in physical and psychological characteristics.

Only identical or monozygotic twins have exactly the same set of chromosomes and genes as they are formed by duplication of a single zygote. Most twins are fraternal or di-zygotic, who develop from two separate zygotes. These fraternal twins may resemble each other like brother and sister, but they will also be different from one another in many ways.

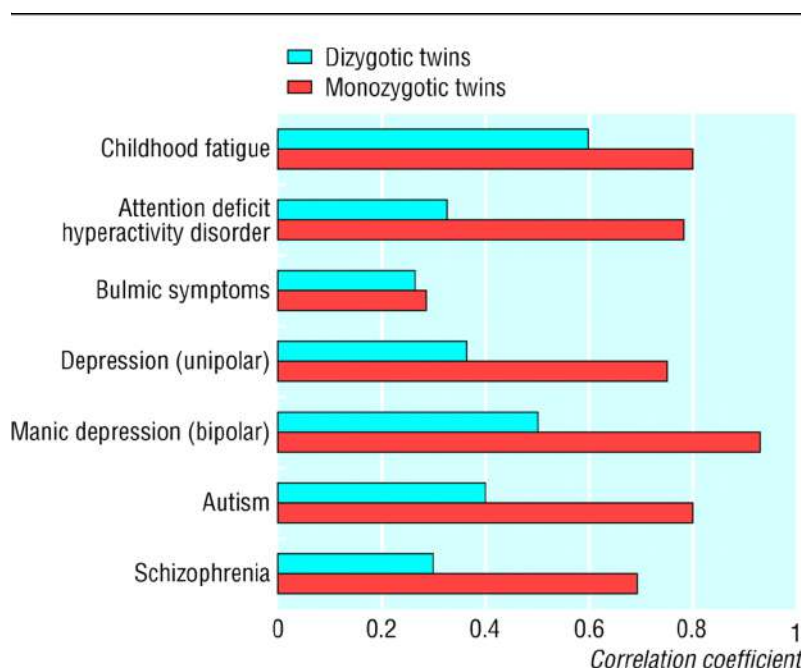


Fig. 3: Differences between Mono-zygotic and Di-zygotic twins

Genes can be **dominant** or **recessive**. It is a known fact that there is more color blindness or lack of sensitivity to certain colors among males than females. A grandmother and mother can transmit this condition to the male child without being color blind themselves. This is because in the male this disorder is dominant, whereas in female it is recessive. The genes form pairs. If both genes in a pair are dominant, the individual will display the specific trait (e.g. color blindness). If one gene is dominant and the other recessive, the dominant will prevail. The recessive gene will be passed on and may show up in a later generation.

The dominant gene, therefore, is the one responsible for a particular trait to show up in a person. The characteristics which show up and are displayed e.g. eye color, are called **phenotypes**. The recessive gene does not show up as a trait, unless paired with another gene just like it. The characteristics that are carried genetically as recessive genes but are not displayed are called **genotypes**.

Genotype, therefore, refers to the actual genetic material or a person’s genetic heritage while **phenotype** refers to the individual’s physical and behavioral characteristics which are determined by both genetic and environmental factors.

C. Environmental Influences

Nature refers to what a child has inherited genetically from her parents, while the influence of environment on the development of the child is referred to as nurture.



Notes

To understand the development of a person, we have to study the complex interaction between nature and nurture or heredity and environment.

Environmental influences are important both at the prenatal and postnatal stages of human development. At the prenatal stage, when a fetus is in the mother's womb, internal or external harmful agents, such as certain legal or illegal drugs, alcohol, lead and pollutants can harm the unborn baby's development. The mother's nutrition, diseases and emotional stress can also affect the development of the fetus.

After birth, several types of environmental factors operate to influence the development of the child. The **ecological systems theory** of development views environmental factors organized as concentric circles of systems.

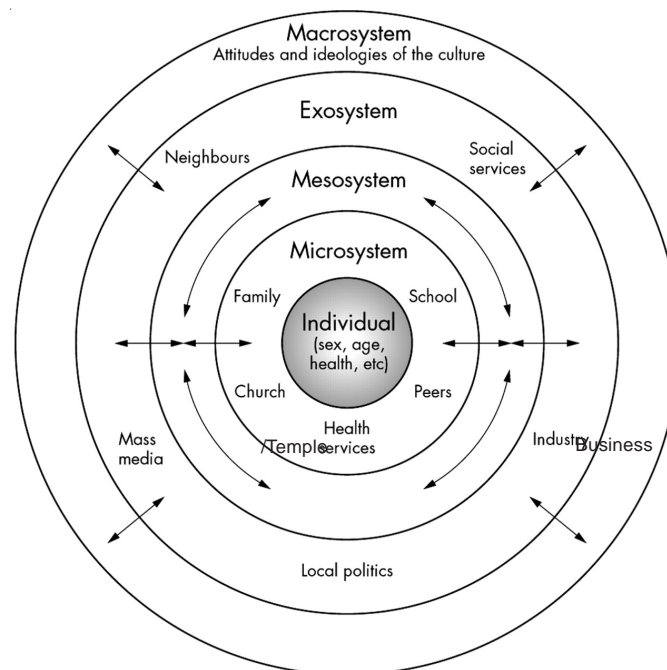


Fig. 4: Ecological systems influencing human development

The **micro-system** is the immediate environment at home and interactions between them and the child's own characteristics. The **meso-system** consists of the relationships between family members and school and neighborhood. The **exo-system** refers to the influences of indirect agencies such as work-place of the parents or community services. The macro-system is the outermost layer which includes cultural values, laws and customs. The systems are ever-changing and dynamic. There is also a **chronosystem** which refers to the time dimension. As the child grows, there are changes within each system, and also changes due to the child's interaction with the environment. On the whole, in ecological systems theory, children are both products and producers of their environments, in a network of interdependent effects.

Nature and Determinants of Development

The present view of development gives importance to both nature and nurture. Heredity and environment are inseparably interwoven, each affecting the impact of the other on the child. Development therefore has certain universal features, as well as features unique to the individual. It is important to understand the role of heredity, but more fruitful to understand how the environment can be improved, so as to help the child develop in the best possible way within the limits set by heredity.

An understanding of the principles and determinants of development helps us in several ways:

1. It helps us to know what to expect of the individual's capability at a particular age.
2. It gives information on when to provide opportunities and stimulation for optimal development.
3. It helps to parents, teachers and others who work with children, to prepare them for the physical and psychological changes that are to take place.
4. It helps us to be prepared for changes in our bodies and personalities as we grow older.
5. It helps us to understand that it is possible to facilitate the process of development by providing an enriched environment.



INTEXT QUESTIONS 9.4

1. Fill in the blanks in the following statements:
 - a. Heredity is determined at the time of _____.
 - b. There are ___ pairs of chromosomes in a human cell.
 - c. Genes can be _____ or _____.
 - d. Characteristics that are carried in the genetic code but not displayed are called _____.
 - e. In the ecological systems theory, the layer which consists of cultural values, laws and customs is called the _____.
 - f. External agents that can harm the unborn baby in the womb are called _____.
2. Write short answers to the following questions:
 - a. Explain the terms 'genotype' and 'phenotype'.

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Human Development



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Notes

- b. Briefly explain the main features of the ecological systems theory of development.



WHAT YOU HAVE LEARNT

- Development refers to the process by which the individual grows and changes during its life-span, from conception to death.
- Development is systematic, orderly, progressive, multi-dimensional, multi-directional, plastic and contextual.
- The major domains of development are physical, cognitive and socio-emotional.
- Stages of development can be categorised for the sake of convenience, ranging from prenatal stage to late adulthood or old age.
- Each stage is characterized by certain developmental tasks which are social expectations for a given age group.
- Hereditary factors are determined at the time of conception and genetic information is carried by genes and chromosomes.
- Genotypes refer to the characteristics which are carried genetically but not displayed.
- Phenotypes refer to those characteristics which are displayed.
- Environmental factors influence both prenatal and post-natal development.
- External harmful agents can cause damage to the fetus in the mother’s womb.
- Maternal disease, nutrition and stress can influence fetal development.
- The ecological systems theory proposes several sub-systems in the growing child’s environment which can influence development.
- Both nature and nurture jointly influence development.



TERMINAL QUESTIONS

1. Differentiate between the terms “development”, “growth”, “maturation” and “evolution”.
2. Describe the major domains of development.
3. Identify the major stages of human development.
4. Discuss the relative importance of nature and nurture in development.



ANSWERS TO INTEXT QUESTIONS

9.1

1. a. true
b. False
c. False
d. True
e. True
2. a. Refer to section 9.1.1
b. Refer to 9.1.3

9.2

- a. cognitive
- b. socio-emotional
- c. physical
- d. three

9.3

1. a. False
b. False
c. True
d. True
e. False
f. True
2. a. Refer to Section 9.3.2
b. Refer to Section 9.3.3

9.4

1. a. conception
b. 23
c. dominant, recessive
d. genotypes



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Human Development



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- e. macrosystem
- f. teratogens
- 2. a. Refer to section 9.4.2
- b. Refer to section 9.4.3

Hints for Terminal Questions

- 1. Refer to section 9.1.2
- 2. Refer to section 9.2
- 3. Refer to section 9.3.1
- 4. Refer to section 9.4

Nature and Determinants of Development



10

CHILDHOOD

Childhood is a beautiful phase of life for most of us. It is a period associated with play, fantasy, and innocence. It is the crucial phase in life and involves important aspects of growth and development which are critical for the entire life span.

The childhood period can be further classified into four sub-stages:

- (a) **Infancy** (birth to 2 years),
- (b) **Early childhood** (2 to 6 years),
- (c) **Middle childhood** (6 to 11 years), and
- (d) **Adolescence** (12 to 19 years).

Infancy provides the foundation for all areas of development. It is a period marked by extremely rapid physical growth and development of sensori-motor skills. Infancy is also important for cognitive, language and socio-emotional development. This stage has already been discussed. Adolescence will be taken up in the next lesson.

In this lesson, we will try to understand how various aspects of development such as physical, motor, cognitive, social and personality development proceed during childhood. We will also study the socialization process during childhood in the cultural context.

**OBJECTIVES**

After studying this lesson, you will be able to:

- describe physical and motor development in childhood;
- understand cognitive development during childhood;
- explain socio-emotional and personality development in childhood; and
- understand the process of socialization within the cultural context.



10.1 PHYSICAL AND MOTOR DEVELOPMENT IN CHILDHOOD

While physical growth is extremely rapid during infancy, it is comparatively slower in childhood. As the child's body size, height and weight increase, there are also changes in muscular and skeletal structure. This leads to development of several motor skills in childhood. The studies have shown certain universal trends in both physical and motor development.

The sequence of physical and motor development is fairly uniform across different cultures. Yet there are large **individual differences**. One child may walk at 10 months, while another may walk only at 24 months. The major milestones of physical and motor development in infancy and childhood are given in Table 10.1

Table 10.1: Milestones of Physical and Motor Development

Lifting chin up while lying on stomach	1 month
Lifting head and chest	2 months
Rolling over	4 months
Picking up objects with palm without sitting with support	5 months
Finer use of thumb and fingers	7 months
Sitting alone (without support)	8 months
Standing with support (holding on to furniture)	8-9 months
Crawling	9 months
Standing independently	9-10 months
Taking few steps without holding on and walking holding on	12-13 months
Grasping objects with thumb and forefingers	13-14 months
Walking alone	15 months
Running and climbing stairs	2 years
Walking on tip toe	2½ years
Riding a tricycle	3 years
Throwing ball over head, walking down stairs with one foot to a step	4 years
Copying a complex figures	6 years

Understanding of physical and motor development is extremely important as it provides the basis for the development of child's personality, social and emotional development. It helps establish emotional bonding between the child and the mother figure. It also helps mastery over the child's own body and movements.



A. Gross and Fine Motor Development

Motor development is usually classified into ‘gross motor’ and ‘fine motor’ categories. **Gross motor development** refers to control over large muscle groups that enable the child to get around, e.g. crawling, standing and walking. They usually involve the limbs or the whole body. **Fine motor development** refers to control over smaller muscle movements e.g. grasping, pinching etc. Fine motor skills are necessary to engage in smaller, more precise movements, generally using the hands and fingers. Fine motor skills are different than gross motor skills which require less precision to perform the daily tasks.

Table 10.2: Gross and Fine Motor Development Milestones

Child’s age	Activities involving Fine Motor Skills
0 and 3 months	Holding an object
3 and 6 months	Trying to reach out for objects, putting things in mouth
6 months and 1 year	Trying to hold food, using hand and fingers to play games
1 year and 1-1/2years	Scribble on paper, trying to play throw and catch with the ball
1-1/2 and 2 years	Drawing lines with pencil, using a spoon to eat food with little help
2 and 3 years	Brushing teeth and buttons cloths with help
3 and 5 years	Builds using building blocks, uses a pencil to draw, turn pages of a book
5 and 7 years	Draws various shapes very easily, brushes and combs without support, cuts shapes very clearly

10.1. 3 Physical and Motor Development in Early Childhood (2-6 years)

Early childhood covers the period from 2 to 6 years. It is also known as the preschool stage. The child who has become mobile is now able to widen the sphere of activities beyond the immediate family. Through interaction with the wider society and the environment the child learns the rules of appropriate social behavior of and develops mental abilities which prepare him/her for formal education and schooling. Most infants appear to be quite clumsy in their physical and motor activities. But gradually their locomotion skills become refined and graceful. Body balance while walking and running improves noticeably. A 3-year-old can run in a straight line and jump smoothly without falling down. A 4-year-old can skip, jump on one foot and catch a large ball thrown from a distance.



Notes

Development of Fine Motor Skills during Childhood

- **2-3 years:** Undresses self and assists with dressing, Copies a circle and a cross, Strings four large beads, Turns a single page, Snips with scissors on a line, Buttons/unbuttons large buttons.
- **3-5 years:** Copies a square, Prints own name – tripod pencil grasp, Ties shoelaces, Cuts on line continuously, Prints some capital letters.
- **5-7 years:** Copies a triangle, Cuts out simple shapes, Copies first name, Prints numerals 1 to 5, Color within lines, Pastes and glues appropriately

Between 2 and 3 years, young children stop “toddling,” and develop a smoother gait. They also develop the ability to run, jump, and hop. They can participate in throwing and catching games with larger balls.

Children who are 3 to 4 years old can climb up stairs using a method of bringing both feet together on each step before proceeding to the next step. However, they may still need some assistance to prevent fall as they are likely to be unsteady in this new skill. Children of this age can jump and hop higher as their leg muscles grow stronger.

During this period, children become better at catching and throwing, can hit a stationary ball with a bat, learn to ride a tricycle, and can kick a ball placed directly in front of their bodies. They can create things with their hands, such as building towers out of blocks, molding clay into rough shapes, and scribbling with a crayon. Children of this age often begin showing a preference for using one hand more often than the other, which is the beginning of becoming left or right-handed.

Between 3 and 4 years, children improve in eating food themselves and can use utensils like forks and spoons. They can now hold a crayon or pencil by the writing hand rather than just grasping it with the fist. They can also make twisting motion with their hands, useful for opening door knobs or twisting lids to open jars. Most children are toilet trained by 4 years of age.

As children reach the age of schooling, the rate of physical growth becomes slower until puberty when there is a rapid ‘growth spurt’.

By the age of six, the child is physically capable of coordinated actions which require body balance. Small muscle coordination required for fine motor activities, such as putting on shirt buttons or copying a simple figure, improves quite dramatically during the early childhood years. Children can also complete other self-care tasks beyond dressing and undressing, such as brushing their teeth and combing their hair. Children of this age can also independently feed themselves without an adult’s immediate supervision or help.

During 5 to 6 years of age, young children continue to refine the earlier skills. They can run faster and can start to ride bicycle with training wheels for added stability. In addition, they can step sideways. Children of this age begin mastering new forms of physical play such as the jungle gym, and begin to use the see-saw, slide, and swing on their own.

Development in Middle Childhood (6-11years)

During this period physical growth becomes more gradual and rate of overt change becomes slower until puberty at about 11-13 years when there is again a rapid 'growth spurt'. There are changes in height, weight and muscular strength and swiftness. During this period, there are large gender differences. Girls are slightly shorter than boys during 6 to 8 years but then the trend reverses. Girls start putting on weight. A 10 year old girl may look taller and heavier than a boy of the same age. The growth spurt for boys comes later than for girls.

During this period, children achieve greater control over large and small muscle groups. They keep getting stronger, faster and attain better motor co-ordination. School children are energetic and enjoy all types of outdoor games. Increase in cognitive capacity also helps them learn the rules of new games.

The 6-7 year-old children can copy complex figures such as a diamond, color patterns and figures and assemble tools and model toys. They also become more skillful in games requiring skillful eye-hand coordination such as throwing, catching and hitting targets. They continue to refine fine motor skills and build upon earlier skills.



INTEXT QUESTIONS 10.1

Write short answers to the following questions:

1. Give names of any 3 gross motor skills developed in childhood.

2. Give names of any 3 fine motor skills developed in childhood.

10.2 COGNITIVE DEVELOPMENT

Cognitive development refers to the way children learn and process information. It includes improvement in attention, perception, language, thinking, memory and reasoning.





According to Piaget's cognitive developmental theory, our thoughts and reasoning are part of adaptation. Cognitive development follows a definite sequence of stages. Piaget described four major stages of cognitive development:

- Sensory-motor stage (Birth- 2 years)
- Pre-operational stage (2-7 years)
- Concrete operational stage (7-11 years)
- Formal operational stage (11+ years)

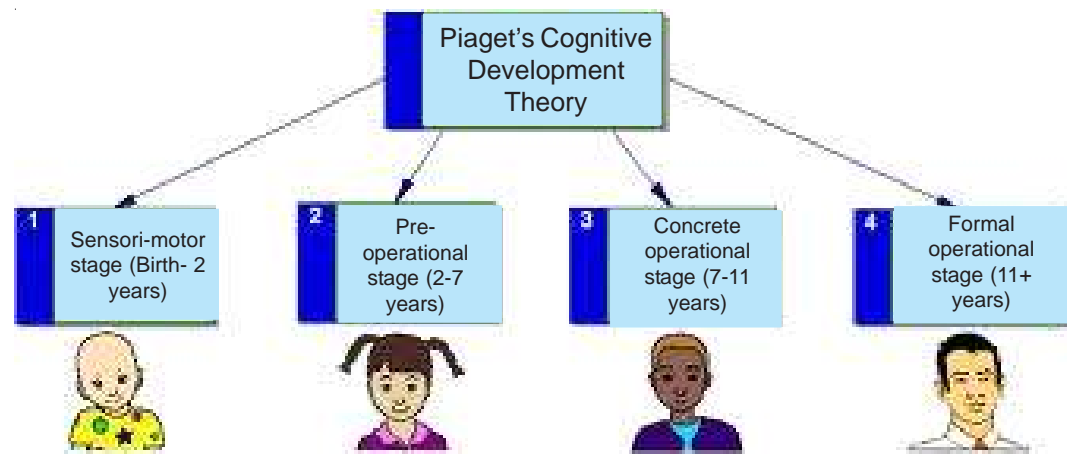


Fig 10.1: *Piaget's Cognitive Development Theory*

The following section takes a look at cognitive development through childhood as indicated by Piaget's theory.

Cognitive Development in Early Childhood (2 to 6 years)

During this period children become increasingly proficient in using symbols such as words and images to represent a variety of objects, situations and events. By the time children enter school they have a reasonably good vocabulary. In fact, children are very receptive at learning language when they are exposed to multiple languages in different contexts. They often grow up as bilingual or multilingual children. They have better understanding of language compared to monolingual children who use only one language.

Capacity for sustained attention improves during the early childhood. A 3-year-old child may persist on a task such as coloring with crayons, playing with toys or watching television for not more than 15-20 minutes at a stretch. By contrast, a 6-year-old can be found to be working on an interesting task for an hour or more. Children also become more selective in their attention. As a result their perceptual skills also improve.



Thinking becomes more logical and capacity to remember and process information also improves. Through interaction with the environment the child learns the rules of appropriate social behavior which prepare him/her for schooling.

Early childhood, from 2 to 6 years, is the phase when the child progresses through the **Pre-operational stage**. There are 2 sub-stages of the Pre-operational Stage:

a) **Symbolic Function (2 to 4 years)**

b) **Intuitive Thought (4 to 7 years)**

During the Symbolic Function sub-stage, children can create mental images of objects and store them in their minds for later use. For example, such a child can draw a picture of or pretend to play with a puppy that is no longer present there.

Children can talk about people who are traveling, or who live somewhere else. They can also talk about or draw places they visited, as well as create new scenes and creatures from their imagination. Children can also use their mental images of things to role-play in games.

Piaget also believed that pre operational children have a style of thinking characterized by **Egocentrism**, or the inability to see the world from someone else's point of view. According to Piaget, children with egocentrism explain situations from their own perspective and understanding.

The next sub-stage in Piaget's Preoperational cognitive development stage is the **Intuitive Thought sub-stage**, which spans ages 4-7 years. Children in this sub-stage of development learn by asking questions such as, "Why?" and "How come?" Piaget labeled this "intuitive thought" because he believed that children at this stage tend to be so certain of their knowledge and understanding that they are unaware of how they gained this knowledge in the first place. These children show "**Centration**". They focus on one characteristic of object and base their decisions or judgment on that only.

During early childhood, children's ability to understand, process, and to produce **language** also improves rapidly. There is a 'language explosion' between 3 and 6 years. At age 3, their spoken vocabularies consist of roughly 900 words. By age 6, spoken vocabularies expand dramatically to anywhere between 8,000 and 14,000 words.

As children move beyond using two word sentences, they start to learn and understand grammar rules. Beyond growing their vocabularies, young children start expanding their ability to use different forms of words (e.g., irregular verbs such as "She brought" rather than "She brang")? They also begin to form more complex sentences.

B. Cognitive Development in Middle Childhood

Children at the middle childhood level are full of curiosity and are keen to explore the environment. Memory and conceptual knowledge improve, facilitating logical



Notes

thinking beyond the immediate situation. Children can also engage in aesthetic activities such as music, art and dance and develop hobbies of their own.

In Piaget's theory, characteristics of the **Concrete Operational Stage** during middle childhood are as follows:

- Understanding of logical principles.
- Improvement in spatial reasoning.
- Logical thinking limited to real and concrete situations.

In middle childhood years, **language development** proceeds in many ways. More than just learning new words, children are acquiring more adult definitions of the words they know. They create relationships among words, understand synonyms and antonyms, and understand how prefixes and suffixes affect word meaning.



INTEXT QUESTIONS 10.2

1. Write short answers to the following questions:
 - a. List any 3 major features of the pre-operational stage.

 - b. Describe any 3 major achievements of the concrete operational stage.
-

10.3 SOCIO-EMOTIONAL AND PERSONALITY
DEVELOPMENT

Infancy is a period when basic emotions are established, and the child progresses in both emotional expression as well as recognition of emotions in others. During early childhood, children typically start to develop self-conscious emotions like shame and guilt as they start evaluating themselves, instead of simply reacting to caregivers' or other adults' evaluations.

As children become increasingly self-aware, more effective at communicating, and better at understanding the thoughts and feelings of others, their social skills improve. They become skilled at modifying and expressing their emotions to fit different social situations. For example, one child may feel angry, but he/she knows that having a tantrum at school is inappropriate. Another child learns that acting pleasant and happy, even though she is actually feeling shy, is a better way to meet people in a birthday party when she does not know many of the other children. Changing or



controlling one's emotions in social situations is an important skill that allows children to fit in with groups and helps in creating interpersonal relationships.

Another emotional capacity that develops during early childhood is empathy, which is an important component of positive social behavior. As with other emotions, the development of empathy depends on cognitive and language development.

Learning how to appropriately express and deal with anger, aggression, and fear is a valuable life and social skill. Young children often need plenty of guidance and positive discipline in order to learn how to control their anger. Parents and caregivers not only directly teach ways of controlling emotions, but also indirectly influence children's behaviour by acting as role models.

As infants grow, they begin to mature in their ability to interact with others socially. A child's main developmental task is to create bonds and connect with primary caregivers. In contrast, young children branch out and began to create other social relationships. When interacting with other children of their age, such as peers at day care or preschool, they engage in parallel play in which they play beside each other without truly interacting with each other.

Young children begin to play more cooperatively. In cooperative play, they engage in the common activity in a small group. Often, these first forms of cooperative play include pretend or symbolic play. As they continue to develop socially with peers, they often enter a stage of rough and tumble play which includes running, racing, climbing, or competitive games. This is the stage when social skills such as learning to take turns and follow simple group rules and norms are practiced.

B. Middle Childhood

During this period children show fast change in social relationships. They use social comparison to distinguish themselves from others. They start seeing things from other's perspective. A child begins to weigh self-worth and increasingly compares himself/herself with peers.

Children are now able to understand emotions of pride and shame and can experience more than one emotion in a given situation. They can suppress or conceal emotions more effectively and use self-acquired strategies to cope. In this period, children internalize or begin to control their values and feelings from within. They start making judgments at this age that impact moral development.

Gender differences are observed during middle childhood. Girls may attach greater importance to good interpersonal relationships and the family while boys may emphasize the importance of social prestige.

A prevalent problem among children of this age group is of bullying. Researchers have found that bullies display certain characteristics, such as being intrusive, having



demanding but unresponsive parents. Victims are often depressed and have lower self-esteem.



Fig 10.2: *Girls at play*

In middle childhood, self-concept changes from a focus on observable characteristics and typical behavior and emotions to an emphasis on personality traits, positive and negative characteristics, and social comparisons. The child begins to see his or her own strengths and limitations. This helps the move towards achievement of an identity.



INTEXT QUESTIONS 10.3

1. Fill in the blanks in the following statements:
 - a. The development of empathy depends on _____ and _____ development.
 - b. Girls in middle childhood attach more importance to good _____ relations while boys give more importance to own social _____.
 - c. A child who is liked by some but disliked by other peers is called _____.
 - d. When two children are playing without interaction, it is called _____ play.
 - e. An internal determiner of emotional development is the child's _____.

10.4 SOCIALIZATION

The process of acquiring norms, values and beliefs, which are considered significant in a society, is called socialization. It is the process of transmitting cultural values, preferences and patterns of behavior to children. This is done by various processes,



institutions and people. Socialization involves regulating children's behavior and disciplining their undesirable or inappropriate behavioral tendencies.

Parents, families, children's peer groups, schools, religious institutions and mass media such as television are some important agents of socialization. They influence the process of child rearing directly as well as indirectly and reinforce culturally appropriate modes of thought and behaviour.

Early childhood is a crucial period of development because during this period children learn a great deal about the norms, conventions and practices in their families, society and culture. They acquire language and learn the fundamentals of culture. The primary socializing agents during this period are the family members.

Middle childhood is the time when influence of peers and school becomes prominent, though family context remains important. The effect of media such as television and computers is undeniable. This is the time when social stereotypes and prejudices are most likely to develop.

Much research has been done on the impact of **parenting styles** on the socialization of the child. There are 4 main types of parenting styles:

1. **Authoritarian style:** demanding, controlling, insensitive parenting
2. **Permissive style:** indulgent, non-demanding parenting
3. **Authoritative style:** firm, consistent parenting, reasons given for discipline.

Neglectful or uninvolved style disinterested uncaring, low control and communication.

Besides family, peers, media and school, there are other factors which influence the socialization process. Ethnicity and socio-economic status of the parents makes an impact on the child's development directly and indirectly. Ethnicity is linked to family size, structure, education, income, composition, extended networks.



Fig 10.3: Children from low SES home



Fig 10.4: Child in high SES family



INTEXT QUESTIONS 10.4

1. Give brief answers to the following questions.
 - a. What do you understand by the term 'Socialization'?

- b. State the major types of parenting styles.



WHAT YOU HAVE LEARNT

- Physical development continues during early and middle childhood, but the rate is slower than in infancy.
- There are gender differences in physical growth as girls tend to have a growth spurt earlier than boys during middle childhood.
- Gross motor development is rapid during early childhood.
- During middle childhood, children continue to develop gross and fine motor skills, while there is marked improvement in muscular control and eye-hand co-ordination.
- In early childhood the child is in the pre-operational stage of cognitive development.
- In middle childhood, the child reaches the concrete operational stage, when conservation, transformation, seriation and logical thinking are acquired, but the child still finds it difficult to deal with abstract concepts.
- Emotional development in childhood involves the development of self-conscious emotions, and better self-regulation in emotional expression.

Childhood

- Social development progresses during childhood from parallel play to co-operative play. In middle childhood, the focus shifts gradually from family to peers and school.
- Peer acceptance is an important determiner of a child's self-esteem and adjustment.
- Socialization is the process of acquiring behaviors, norms, values and beliefs, which are considered significant in a society.
- Parenting style influences the socialization process and personality development of the child.
- Cultural and social factors influence parenting style and attitudes towards child rearing, and hence the socialization process.



TERMINAL QUESTIONS

- a. Discuss the major features of physical development in early childhood
- b. Describe the major features of motor development in middle childhood.
- c. Discuss the main differences between the pre-operational stage and concrete stage of Piaget's theory.
- d. Explain the major features of emotional development in early childhood.
- e. Discuss how cultural factors influence the process of socialization in childhood.



ANSWERS TO INTEXT QUESTIONS

10.1

1. a. Crawling, standing, walking
b. grasping, pinching, holding pencil

10.2

1. a. Craete mental images, store it, talk about events, people create new scenes from imagination
b. understanding logical principles improvement in spatial reasoning language development

10.3

1. a. cognitive, language
b. interpersonal, prestige

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Notes

**Notes**

- c. controversial
- d. parallel
- e. temperament

10.4

1. a. Acquiring norms values, beliefs, Regulation discipline of undesirable behaviour, agents of socialization.
- b. Authoritarian, permissive, authoritative and neglectful.

Hints for Terminal Questions

- a. Refer to unit 10.1.3
- b. Refer to unit 10.1.4
- c. Refer to unit 10.2.1 and unit 10.2.2.
- d. Refer to unit 10.3.1
- e. Refer to unit 10.4



11

ADOLESCENCE AND ITS CHALLENGES

Human life completes its journey through various stages and one of the most vital stages is adolescence. Adolescence is the period of transition from childhood to adulthood and plays a decisive role in the formation of prosocial/antisocial adult. All of us undergo this stage which poses many challenges and is full of excitement. At the same time it demands adjustment on many fronts.

When we come to this world we are completely dependent upon others and learn gradually to be independent. In India, the adolescents do most of the work themselves but the final decision regarding various domains of life is taken by their parents. For example, an adolescent wishes to enjoy movies but parents may force him/her to complete study first. Parents claim that they have more practical knowledge and experience and tend to treat adolescents like children.

This lesson shall help you understand the nature of adolescence and its challenges and major tasks faced by the adolescents, the influences that shape their personality and some of the important problems faced by the adolescents.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the nature of adolescence as a developmental stage;
- enlist the developmental tasks encountered during adolescence;
- explain the physical development during adolescenc; and
- discuss gender roles and describe the phenomenon of generation gap.



11.1 CONCEPT OF ADOLESCENCE

Adolescence is a period of transition when the individual changes- physically and psychologically-from a child to an adult. It is a period when rapid physiological and psychological changes demand for new social roles to take place. The adolescents, due to these changes often face a number of crises and dilemmas. It is the period when the child moves from dependency to autonomy. It demands significant adjustment to the physical and social changes.

The adolescence period in the **Indian** social system comes under **Brahmacharya (apprenticeship)**. This is the first *ashram* (stage of life) of development stages. In this stage, the child learns the basic skills in relation to his future role as a responsible adult.

It is a fact that all living beings pass through specific stages or phases of development. Erikson believed that each stage of life is marked by a specific crisis or conflict between competing tendencies. Only if individuals negotiate each of these hurdles successfully they can develop in a normal and healthy manner. During this phase adolescents must integrate various roles into a consistent self- identity. If they fail to do so, they may experience confusion over who they are.

11.2 THE ADOLESCENT TRANSITION PERIOD

Indeed adolescence represents one of the greatest of these periods of crisis. In fact it is the stage of stress, strain and storm. It brings many ambiguities in life. During this phase one really does not know where he or she stands. It is believed that this uncertainty about one's role causes many conflicts.

It is a well-known fact that delinquency rates soar during the period of adolescence, that suicides become increasingly prevalent, that drug and alcohol addiction may have their beginning, and that much general happiness exists. Adolescence is also a period when satisfactory heterosexual adjustments are facilitated or hindered, when career is planned and philosophies of life are molded.

11.3 ADOLESCENCE : BIOLOGICAL OR SOCIAL?

Adolescence is both **biological** and **social** in nature. The beginning of adolescence is marked by biological changes in girls and boys. As a matter of fact, just before puberty there occurs what is known as pre-adolescent growth spurt. It takes place in girls mostly during the age of nine to twelve years, and in boys between eleven and fourteen years of age. During this period, and following shortly thereafter, the **secondary sexual characteristics** emerge. In girls there is typically rounding out of the hips, breast development, appearance of pubic hair, and menstruation. In boys, some of the secondary sexual characteristics that mark the beginning of adolescence

are appearance of pubic hair, facial hair, and change of voice. These changes are biologically induced.

Adolescence for both girls and boys is marked largely by social changes. Such factors as when an adolescent leaves home, gets a job and can vote determine when his or her transition from childhood to adulthood is accomplished. The length of this period is thus primarily a social phenomenon.

The problems adolescents face during the long period of growing up have both biological and social roots. Physical changes and deviation can create many problems. Society also creates problems for adolescents. Adolescents in western societies behave differently than adolescents in eastern societies owing to varying social norms expectations and family structure.

Activity 1

Learning by doing

List some issues on which you and your friends feel uneasy because you are not free to do your job independently due to your parents' interference. Discuss with elders whether we can manage some negotiations to minimize the conflict with parents.

11.4 FACTORS DETERMINING THE PATTERN OF TRANSITION

Optimal development in adolescence depends on successful accomplishment of the developmental tasks in infancy and childhood. How easy it will be for the adolescent to make the transition into adulthood will depend partly upon the individual, partly on environmental aids or obstructions, and partly on their experiences. Let us examine some of these factors:

Speed of transition: The changes during adolescence take place at very fast pace. During no other period does the individual undergo such a sudden and drastic change in such a short time period and at no other age is he less prepared to cope with the problems that this change brings.

Length of transition: Those who mature rapidly (in term of physical growth), find adjustment especially difficult. They are expected to behave like adults simply because they look like adults. On the other hand, a prolonged adolescence also brings problems. The adolescent gets into the habit of being dependent, and this, is difficult to overcome later.

Discontinuities in training: Much of the stress and strain during adolescence is due to the discontinuities in training. For example, the assumption of responsibility during adolescence is difficult because the child has so far been trained to be dependent and submissive.





Degree of dependency: How dependent the young adolescent will be is determined mainly by the kind of training he/she received during childhood. Parents often foster dependency because they feel that adolescents are not ready to assume responsibility for their own behaviours.

Ambiguous status: In the societies like India, a child is expected to follow the footsteps of his/her parents. This gives him/her a pattern of behaviour to imitate. In open society, by contrast, it is assumed that every individual should be free to choose his/her own course of self- development.

Conflicting demands: The adolescent is often confronted with conflicting demands from parents, teachers, peers and the community.

Degree of realism: When the adolescent begins to look like an adult, (s)he is permitted an added degree of freedom. If (s)he feels is not ready, either physically or psychologically, to play the adult role, (s)he feels dissatisfied.

Motivation: The adolescent goes through a period of wondering how he or she will meet the new problems the life presents. He or she would like to grow up but being unsure of the ability to cope with the challenges of adulthood. So long as this feeling of insecurity exists, there will be little motivation to make the transition in adulthood.

As the barriers to growing up are lowered or removed by parents, teachers, and society, the adolescent can move smoothly in the direction of reaching the goal of adulthood, and motivation to make the transition is normally increased.



INTEXT QUESTIONS 11.1

1. Explain the factors that determine pattern of adolescent transition.

2. Define adolescence. Identify the various challenges faced by an adolescent.

11.5 DEVELOPMENTAL TASKS

The term “developmental task”, refers to those problems that individuals typically face at different periods during their life. An infant or a small child must master the complexities of learning to walk, learning to talk, and controlling the elimination of waste products of the body. In middle childhood such skills as learning to play games and learning to read become of major importance.

So for as adolescents are concerned, the developmental tasks present the vital

problems which must be met and solved during the transition from childhood to adulthood. These problems are not entirely unique to the adolescent period, but they are ones upon which the adolescent must work if he eventually expects to achieve a successful adult role.

Developmental Tasks for Adolescents

Havinghurst has listed the following tasks.

- Achieving new and more mature relations with age mates of both sexes.
- Achieving a masculine or feminine social role.
- Accepting one's physique and using the body effectively.
- Achieving emotional independence of parents and other adults.
- Achieving assurance of economic independence.
- Selecting and preparing for an occupation.
- Preparing for marriage and family life.
- Developing intellectual skills and concepts necessary for civic competence.
- Desiring and achieving socially responsible behaviour.
- Acquiring a set of values and an ethical system as a guide to behaviour.



INTEXT QUESTIONS 11.2

1. Developmental tasks of adolescent's include:
 - a. preparing for marriage and family
 - b. crawling and creeping
 - c. reflecting childish behaviours
 - d. None of the above
2. How many developmental tasks were described by Robert Havinghurst?
 - a. 10
 - b. 6
 - c. 9
 - d. 8

Adolescence is a long period, and many young adolescents have little motivation to master the developmental tasks for their age. In the later period, however, they realise that adulthood is rapidly approaching. This provides them the necessary motivation





to prepare for their new status. As a result, they make greater strides toward the goal of maturity than they did during early adolescence.

Successful achievement of the developmental tasks for one period in life leads to success with later tasks, while failure leads not only to personal unhappiness and disappointment but also to difficulties with later tasks.

Regardless of whether the adolescent has successfully mastered the developmental tasks of adolescence, he/she is, in most “advanced” cultures, automatically given the status of adult when he/she reaches the age of legal maturity. This is in direct contrast to more simple cultures where young people must demonstrate adult status to their elders, in “puberty rites,” privileges, and the responsibilities.

11.6 PHYSICAL DEVELOPMENT

Adolescence is fundamentally a period of physical and physiological changes. The young person’s reactions to physical changes may range from pride and pleasant expectation to bewilderment and fear. When adolescents evaluate each other, especially when they consider qualities they like in a manner of the opposite sex, “good looks” are often mentioned. In particular they dominate in descriptions of girls than of boys but other physical characteristics such as body build, height and the like are often noted when boys are being “sized up”.

One of the most characteristic features of adolescence is the increase in size i.e. in height and weight. However, the beginning of adolescence, known as pubescence, brings with it abrupt and psychologically significant physical changes. While many of these physical changes, such as growth in height and deepening of the voices are obvious and commonly known, others are hidden or less obvious but nonetheless significant.

Surge in Growth

Toward the end of childhood, usually girls at about ten or eleven and boys at twelve or thirteen, show a period of rapid growth in height and weight (general bodily growth). This acceleration of growth is closely linked to the increased hormonal output of the pituitary gland, which serves not only as the catalyst to produce growth but also as the controller of other glands (i.e. adrenals, gonads, and thyroid) that determine both tissue growth and function.

The rapid growth continues for a period of about three or four years, with the greatest increment in growth coming at an average age of 12.6 years for girls and 14.8 years for boys. During this period it is not uncommon for a child to grow as much as six to eight inches in height and to gain 18 to 22 kilograms in a year’s time.



For a variety of reasons, physical development in this period is characterized by asynchronization that brings concerns to adolescents and their parents and teachers. Skeletal and muscular development is more rapid than learning required for making use of the new muscle mass and motor habits. The body requires new learning. Bodily proportions also undergo changes. The facial features alter, because the growth of the lower part of the face lags behind the growth of the upper part. Legs, proportionally, usually grow more rapidly than the body stem, and hands and feet anticipate by several years the total body size of their owners.

General bodily growth is paralleled by physiological changes such as cardiovascular and respiratory growth and changes in metabolism and in general movement toward the adult states.

Skeletal Muscles: Muscles attached to bones, which bring about various types of body movement like the limb movements.

Puberty and Sexual Development

Following closely on the heels of accelerated growth, the pituitary gland directs the adrenal cortex and the gonads into more activity. Prior to this time, virtually equal amount of androgenic (male) and estrogenic (female) hormones are produced for both sexes by the adrenal cortex on the direction of anterior pituitary gland. Now an increased amount of hormonal production differentiates the sexes; the males producing more androgens, the females more estrogens.

Sex Hormones are substances secreted by the gonads for reproductive functions and determination of secondary sex characteristics; e.g. estrogen in the female and testosterone in male. Testosterone is the male sex hormone responsible for the development of the male secondary sexual characteristics as they become sexually mature, while in the female body, this role is played by estrogen.

Moreover, the genital and sex-appropriate tissues become more sensitive to these sex specific hormones. The dawn of these changes is reflected in boys by beginning of the enlargement of the testes. There follows in each sex a series of physical changes whose appearance is highly predictable and whose sequence is unalterable. In girls the enlargement of breast is followed by the growth of pubic hair, the menarche and axillary hair. In boys, after the initial enlargement of the testes, there occurs pubic hair, axillary hair, voice changes, and beard, in that order.

Thus, by observing adolescents, it is fairly easy to determine the point in pubescence that they have reached. The observable secondary sex characteristics, such as development of axillary hair and voice change are secondary to the primary sex changes. Primary sex characteristics include reproductive organs whose maturity is signaled by the menarche in the girl and by the first ejaculation in the boy.



Strength, Skill and Fitness

Physical development as mentioned above presents only the gross picture of the changes that occur in adolescence. Even more significant, perhaps, are the growth patterns of strength and skills. The post-pubescent boy, even though he may be of the same chronological age as his friends who have not yet entered pubescence, will almost certainly be stronger and will likely have greater agility, motor coordination, and bodily skills. He will, of course, rapidly overtake girls, whose strength already has increased about a year earlier and who briefly challenged him. You would like to know what forces account for this development. First, it is clear that the accelerated production of male hormone (androgens) brings with it added muscular strength. Second, the nature of skeletal growth, increased shoulder breadth, bigger chest cavity, and finally, the greater lung size, heart size, and increased blood pressure are all favourable conditions for greater physical strength.

While many of these same changes occur among girls, their physical strength increases at a slower rate, and, of course, never equals that of males. There are two reasons for this superiority: (a) biologically, the male is favoured by larger shoulder breadth, a bigger chest cavity, and better leg leverage; (b) culturally, girls receive little encouragement for the development of strength. In fact they are encouraged in the opposite direction—to be weak and dependent, or at least to pretend that they are.

Along with increases in strength come the development of motor coordination, reaction speed, and perceptual-motor skills. In an appraisal of physical development, one important consideration has to do with what is optimal. Height-weight charts are based on the average, but may, when a large segment of youth is overweight, lead to faulty conclusions. What is average is certainly not optimal.



INTEXT QUESTIONS 11.3

1. Explain how adolescence is a period of rapid physical growth and sexual development.
-

11.7 GENDER ROLES

Gender is a much more complex term. It relates to a given society's beliefs about the traits and behaviours supposedly characteristic of males and females. 'Gender roles' refer to the expectations concerning the roles males and females should perform and the ways they should behave. Such expectations come into play as soon as a child is born.



The beliefs about gender roles continue to influence us and our behaviour throughout life. Children's recognition that they belong to one sex or the other called '**gender identity**' is established quite early in one's life by the age of three or four. At this time, however, they are uncertain as to whether they will always be a boy or a girl. It is not until they are about six or seven that children acquire '**gender consistency**'—the understanding that even if they adopted the clothing, hair style, and behaviour associated with the other sex they would still retain their current sexual identity.



INTEXT QUESTIONS 11.4

1. Explain the meaning of gender role.



WHAT YOU HAVE LEARNT

- Adolescence is the period of transition between childhood to adulthood and it plays a decisive role in relation to the formation of prosocial/antisocial adult.
- Optimal development in adolescence depends on successful accomplishment of the developmental tasks in infancy and childhood.
- Adolescence is fundamentally a period of physical and physiological change. The most important single feature of adolescent development consists of the changes that take place in the young person's body.
- Toward the end of childhood, girls at about ten or eleven and boys at twelve or thirteen begin a period of rapid growth in height and weight.
- Gender role refers to expectations concerning the roles male and females should adopt and the ways they should behave.



TERMINAL QUESTIONS

1. What are the primary and secondary characteristics during adolescence?
2. What are the developmental tasks of adolescents?
3. Give a detailed account of major challenges faced during adolescence.

**ANSWERS TO INTEXT QUESTIONS****11.1**

1. Period of transition, rapid physical and psychological changes, New social roles, independence, faces conflicts.

11.2

1. d
2. a

11.3

1. Speed and length of transition, training, dependency, status, demands, degree of realism, motivation.
2. Surge in growth, height and weight, skeletal and muscular growth, sex hormones, sexual development, sex hormones, strength and skill.

11.4

1. Society's beliefs about behaviours characteristic of males and females. Gender consistency and behaviour of males and females.

Hints for Terminal Questions

1. Refer to section 11.3
2. Refer to section 11.6
3. Refer to section 11.5



12

ADULTHOOD AND AGEING

What is it like to grow old? What changes occur as people grow older? What does it mean to say that some one is old? These are some of the questions which come to our mind when we see or meet an aged person. We find that our parents do not behave as we do. The kind of images which normally come to our mind when we hear the word ‘adult and aging’ are responsibility, stability, forgetfulness and some times poor health. We view the older years as a stage in life when people become more dependent on others. Are these stereotypes or myths?

When we look into our society today we notice that the segment of older population is growing. It has been estimated that by the year 2021 a major portion of the world’s population will be in the category of the aged people. Becoming adult and growing old is a biological process, but many other developments also take place along with it. You will study about these changes in this lesson. This lesson will also help you understand the value of the aged people in the society and relating to them in a better way.



OBJECTIVES

After studying this lesson you will be able to:

- explain the characteristics of the period of adulthood and old age;
- describe the key developmental changes during adulthood;
- describe the problems of ageing and coping with it; and
- appreciate the concerns of ageing and aged people.

12.1 THE ADULTHOOD STAGE

We are often told by our elders to act according to our age. Have you ever wondered what this means? There seem to be certain normative expectations about how



individuals of a certain age should act. The period of adulthood is marked by society's expectations of performing one's duty as an adult. Some special roles and relationships like family and career are the major milestones of adulthood. The spurt of growth during adolescence stabilizes by adulthood and the individual looks forward to more concrete roles in the society. Our capabilities and behaviours continue to change as we grow older not only because of the biological growth but also because of our knowledge and the way we interact with environment. In the Indian tradition the period of adulthood refers to Grihastha Ashram. During this stage an individual enters the social life and accepts responsibilities of family, marriage and entering into one's career. The stage of adulthood has the following sub periods: (1) Young adulthood (20s to 30s), (2) Middle adulthood (40s to 50s) and (3) Later adulthood (60s and above.). Let us understand the various characteristics of each of these sub periods.

Young Adulthood

During this period one sees himself or herself as an autonomous and independent adult. The individual becomes financially less dependent on the parental family. A major developmental task during this period is the choice of a career. Young men and women tend to settle down in a career of their choice. In addition a young adult tries to settle down and start the family life. They are also concerned about various social issues and forming close relationships with one's professional peers and members of community. The duties of a person demand two-fold responsibilities which are towards oneself as well as the society.

The stage of young adulthood is characterized by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship. Unemployment and marital discord are two typical crisis conditions during early adulthood. According to Erikson this period is characterized by a crisis of 'intimacy versus isolation'. The young adults must develop the ability to form deep intimate relationships with others, particularly in marriage. Otherwise, they can become socially and emotionally isolated. Most young adults develop a dream of future accomplishments or a vision of what they want to achieve as a life goal. Such dreams motivate young adults towards goal directed efforts. Occupational and marital choices and gaining social and economic independence are some major tasks of early adulthood. Very often, during the early thirties individuals make a reappraisal of their choices and seek to make specific changes in their career choice and social relations. These experiences are described as "age thirty transition".

Characteristics of Young Adulthood

- Choice of a career.
- Starting a family life.

Adulthood and Ageing

- Forming close relationships with peers.
- Concerns about society.

Do It Yourself

Meet two adults, a male and a female. Ask them to describe their roles and responsibilities. Record their descriptions and your own description. Compare and discuss with your peers and tutor.



INTEXT QUESTIONS 12.1

1. Identify the characteristics of young adulthood.

12.2 ADULTHOOD OR MIDDLE AGE

From the period of twenties and thirties, the individual arrives at middle age in the forties and fifties. Middle age is characterized by competence, maturity, responsibility and stability. This is the time when one wants to enjoy the success of job, satisfaction derived from the family and social life. People look forward to the success of their children. Attention gets more focused on health, the future of children, aging parents, the use of leisure time and plans for old age. For women, menopause occurs between the age of forty-five and fifty. Menopause is supposed to be accompanied by some distressing physical and psychological symptoms in women. During this period men show greater concern towards health, strength, power and sexual potency.

Middle age is also viewed as a period of creativity and significant contribution to society. It is found that the best works of scientists, writers and artists are produced during the late forties and early fifties. Erikson characterizes middle adulthood as a phase of crisis involving generativity versus self-absorption. Unless a person makes this a period of meaningful contribution he/she may become preoccupied with selfish needs and desires. The middle age transition is also a period of turbulence. People start viewing themselves as older and become conscious of their mortality which often leads to emotional instability. They also engage in taking stock of their lives to assess the extent to which they have realized their dreams. Such re-assessments often lead to occupational changes and changes in marital relationships such as divorce. For most people who are employed in regular jobs, the end of the middle adulthood years involves the task of coming to terms with possible retirement from work life and the associated readjustments in life.

Characteristics of Middle Adulthood

- Competence, maturity, responsibility and stability.
- Attention focused on children.

MODULE - III

Human Development



Notes



- Plans for old age.
- Occurrence of menopause in women.

Old Age

Later adulthood or the period of old age begins around the age of sixty. During this stage most individuals lose their jobs as they retire from active service. They begin to fear about their physical and psychological health. In our society, the elderly are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion and spirituality. Many of the elderly people lose their spouses and suffer from emotional insecurity. However, this may not be true of everybody. Many people at the age of sixty or above remain very healthy and active in life. The life style including exercise, diet, and regular health check up helps people enjoy a meaningful and active life during old age.

Aging, however, is also a psychological phenomenon. There are numerous examples of writers, statesmen, professors and yogis who lead a productive and active life during old age. So it is important to note that old age can be a much happier and fuller time. Mental or physical decline does not necessarily have to occur. Persons can remain vigorous, active and dignified until their eighties or even nineties. This is quite possible if they take adequate care of themselves right from their middle age years. In fact, the older persons have vast reservoir of knowledge, experience and wisdom on which the community can draw upon.



INTEXT QUESTIONS 12.2

1. Describe any two characteristics of middle adulthood.

12.3 PHYSICAL AND COGNITIVE CHANGES DURING ADULTHOOD AND OLD AGE

In the present day society, with increasing health consciousness, both men and women want to be physically and mentally fit. With advancing age certain inevitable and universal changes such as chemical changes in cells or gradual loss of adaptive reserve capacity take place. There are also certain cognitive changes taking place from middle adulthood onwards. These changes are slow and gradual. Normally people see aging as a period of physical and mental health decline. These changes



are mainly physical and cognitive in nature. Let us try to understand these changes.

(a) Physical Changes: It has been found that the body organs of most persons show a 0.8 to 1 percent decline per year in the functional ability after the age of 30 years. Part of this decline is normal, some are disease-related and some caused by factors such as stress, occupational status, nutritional status and many other environmental factors. The major physical changes associated with aging are described as external changes, internal changes and changes in the sensory capacities and cognitive abilities. Let us understand these changes.

1) External Changes: This refers to the symptoms of growing old that can be seen in an individual. With many individuals the symptoms of aging can be seen as graying hair, aging skin shift in posture and appearance of wrinkles and other changes.

Key to Longer and Healthier Life

- (a) Eat healthy diet.
- (b) Exercise regularly.
- (c) Reduce stress level.
- (d) Don't smoke or drink alcohol and other drugs.
- (e) Cultivate certain positive qualities.
- (f) Engage with activities of social welfare.
- (g) Develop spirituality and faith.

2) Internal Changes: These changes refer to the symptoms of growing old that are not visible. These include changes in the respiratory system, gastrointestinal system, cardiovascular system, and central nervous system.

Some Great Achievers of late adulthood

- Mahatma Gandhi led India's struggle of freedom at the age of 77.
- Baba Amte
- Ramakrishna Paramhans
- Mother Teresa

3) Changes in Sensory Capacities: With advancing age, there is gradual slow down in the sensory abilities. As you know we communicate with the outer world through our senses. Losing in any of the senses can have profound psychological and social consequences.



Cognitive Changes: Cognition refers to the process by which information is acquired, stored, and used. During adulthood and aging various aspects of cognition like memory, learning, attention and speed of performance get adversely affected. The aged people often report forgetfulness, difficulty in learning new techniques and acquiring skills. Their concentration and responsiveness to environmental stimulus decreases. Dementia and Alzheimer and important diseases of old age. In general people become more vulnerable during old age.

12.4 COPING WITH THE PROBLEMS DURING OLD AGE

You must be wondering whether the process of ageing can be stopped or can anyone remain young throughout? We have noted that ageing is a biological process. This process gets affected by many other things such as stress, tension, habit, undisciplined life, ill health work habits etc. Leading a disciplined life means giving the body enough time to rest, proper work habits, less tension, proper nutrition and spirituality. It seems that aging can be delayed but no one can escape it. One must not deny and accept one's age and act in a realistic but optimistic manner. Different people adopt different coping strategies to meet their life challenges. Some of the effective coping strategies are as follows:

- (1) Develop an attitude of flexibility so that one may adapt to the pressures and problems of old age.
- (2) Recognize that one has to explore new ways of coping with life events.
- (3) Greater use of information seeking and problem solving strategies rather than withdrawing or isolating.
- (4) Increasing self-confidence, self-reliance, developing healthy attitudes about one's strengths and weaknesses.
- (5) Learning and maintaining effective coping skills and adopting an active approach towards the environment.

Use of the above styles of coping can be effective in making healthy adjustments during old age.

Aging and Social Support

Enlarging social network is another means of coping with life problems. Participating in various group activities such as joining clubs. Certain organizations for informal social interaction are found very helpful for the aged. Building a social network of people of their own age group in neighbourhood or elsewhere provides them with greater opportunity to share their life circumstances and find emotional expressions

for their existing problems. Through such social networks, one can get an unconditional expression of approval, share secrets, provide new experiences to each other, and develop trusting relationships.

Involvement in grand parenting helps elderly satisfy many of their personal and emotional needs. Grand parents can serve as important role models. Older people find these roles emotionally self-fulfilling and tend to derive self-satisfaction through achievement of their grand children.

12.5 IMPORTANCE OF THE AGED PEOPLE IN THE SOCIETY

अभिवादनं गीलस्य नित्यं वृद्धोपसेविनः ।

चत्वारि तस्य वर्धन्ते आयुर्विद्याय गोबलम् ।

“Those who greet elders and do service to them, they grow in all four dimensions such as longevity, knowledge, fame and strength”.

One of the reasons for the growth of the Indian society is its multigenerational structure which means staying of many generations together in one family. This phenomenon is expressed in the form of joint family system. Aged people have been always considered as individuals with a vast repertoire of knowledge and experience. Staying with them and respecting them helps not only in personal growth but facilitates multidimensional growth of a person.

Today many of the problems seen in the society are due to breakdown in the family system. Young couples prefer to stay alone to seek independence and doing away with the restrictions. But the repercussion of this system is largely being felt on the younger generation. The elders in the family have always been a medium of cultural transmission. Can you forget the stories told to you by your grand parents and their morals? The cultural traditions followed in our country have been passed from generation to generation. With the emerging nuclear family system, the younger generation is becoming deprived of this rich cultural transmission. It has been found that emotional expressions and values in young generation have also been affected by the absence of elders in the family.



INTEXT QUESTIONS 12.3

State whether the following statements are true or false:

1. The body organs show a decline of 0.8 to 1 percent after the age of 30. T/F
2. Gradual changes in sensory abilities take place with ageing. T/F





3. One must not accept one's age and become younger. T/F
4. Developing healthy attitudes do not help in coping with age. T/F
5. Aged people should be considered as treasure of the society. T/F



WHAT YOU HAVE LEARNT

- Some special roles and relationships like family and career are the major milestones of adulthood.
- Our capabilities and behaviours continue to change as we grow older not only because of the biological growth process but also because of our understanding and the way we interact with the environment.
- The stage of young adulthood is characterized by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship.
- Middle age is also viewed as a period of creativity and significant contribution to society.
- In our society, the elderly are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion and spirituality; however it may not be true.
- The major physical changes associated with ageing are described as external, and internal changes and changes in sensory capacities.
- Leading a disciplined life means giving the body enough time to rest, proper work habit, less tensions, proper nutrition and spirituality. This may help in coping with the problems of old age.
- Aged people have been always considered as individuals with a vast repertoire of knowledge and experience.



TERMINAL QUESTIONS

1. Describe the key to longer and healthier life.
2. What attitude is helpful to meet out the pressures and problems of old age?
3. What is the main cause of today's problems in the society?
4. How can one remain healthy during old age?



ANSWERS TO INTEXT QUESTIONS

12.2

1. Autonomous, independent, choice of career, new tasks and challenges, intimate relationships.

12.2

1. (a) Competence
(b) Attention on children
(c) Plans for old age
(d) Occurrence of menopause
2. By exercise, proper diet and regular health checkup

12.3

1. True
2. True
3. False
4. False
5. True

Hints for Terminal Questions

1. Refer to section 12.3
2. Refer to section 12.4
3. Refer to section 12.5
4. Refer to section 12.3





13

GROUPS AND LEADERSHIP

The purpose of describing group process is to familiarize you with the interpersonal context in which individuals interact with each other. The importance of a group is always felt whenever we are playing our role in our day-to-day social life. We use the word 'group' in various contexts such as games, political party, team for performing a task, committee members to decide about a programme, membership of an academic body or membership of the underprivileged group. We are born as an individual and we become members of various groups in the course of socialization. For fulfillment of our jobs we do become members of groups. This chapter would help you to understand the functioning of groups.

**OBJECTIVES**

After studying this lesson, you will be able to:

- understand the importance of group in our life;
- recognize the characteristics of a group;
- know the way group dynamics operates;
- understand the effect of groups on our performance; and
- differentiate between formal and informal groups.

13.1 IMPORTANCE OF GROUPS IN OUR LIFE

Is human life possible without groups? Can we satisfy our needs, expectations, emotions, challenges, and crises without being members of groups? No, we cannot as groups are the basic components of society. The moment we are born into this world we immediately become a part of a group - our family. It is important to be group member as one's family fulfills certain essential needs and helps us to survive



Notes

in the social world. Each group has a commonsense view of the world and as the baby grows s/he learns what is expected of him/her to become a productive member of the group. Soon the young child comes to acquire a sense of 'self' and comes to develop a personality. Groups like family help to transmit culture of one's society by the process of socialization. Groups also teach us thoughts and behaviors. Also if one is a member of a sports team, cricket or football, then we know that each member must obey rules and regulations.

In early years of life the family supports us, and then as we move on to school and college we get the support of various social, academic, and professional groups. We can be member of various groups such as political, religious, ethnic, sports, music, and cultural that allow us to pursue our needs and goals. Such groups help us to make our life more meaningful and comfortable. We cannot live and grow as an isolated individual moments reflection will tell you that group life allows us to fulfill social and emotional needs. These include recognition, affiliation, security, prestige, identity, sense of belongingness, and status. Groups also allow us to meet our task related need such as goal achievement. Indeed groups are central to human life.



INTEXT QUESTIONS 13.1

1. Why do people join groups? List the names of the groups that you belong to.

13.2 CHARACTERISTICS OF A GROUP

A group is collection of individuals who work together so as to contribute towards a common aim or goal under the direction of a leader. Groups share common characteristics and have a social structure as in religious groups, caste groups, community groups of business men, sportsmen and so on. The characteristics of a group are as follows:

- Members define themselves as group members and have a strong 'we feeling' a psychological feeling of belonging to each other. Do you have a group of friends that you are fond of? Do you not feel close to each other? Yes you are likely to support each other in every day life.
- Group members are engaged in frequent interaction and they affect the behavior of each other. Do you meet your friends frequently? It helps you to know how the group is moving ahead in its goal.
- Further, group members share common norms and mutual interests and values. They depend upon each other and rely for fulfillment of their needs and the survival of the group.

Group and Leadership

- Members of a group are aware of rules and regulations that are to be followed, as it helps maintain order and discipline. Does your mother ask you to talk softly while your elder brother is studying for an exam? Or that you must help in washing the dishes after having dinner?
- Groups vary in size. They can be large or small. A family can consist of four members or a traditional joint family can consist of 50 members or more! A political party can be of 100 members or of a few thousands.



INTEXT QUESTIONS 13.2

1. State whether the following are examples of a group:
 - a. People crossing a street
 - b. Religious gathering
 - c. People standing at a bust stop
 - d. Birthday party
 - e. Political club
2. Describe the important features of a group.

13.3 GROUP DYNAMICS

The behavior of one member influences the behavior of other members in the group. This process of influencing each other's behavior pattern in a group is called group dynamics. Group dynamics is affected by factors of individual personality, social situation and cultural traditions. Group dynamics varies in different kinds of group situations.

Cohesiveness

Cohesiveness refers to the shared perspective which binds the members of a group or community. At the time of external threat people have a tendency to fight unitedly to ward off the common threat. During war times this feeling of togetherness soars because of common threat perceived by the group. For example, when terrorists attacked Mumbai Taj Hotel on 26/11/2008 the people of Mumbai united forgetting regional, linguistic and community differences.

Conformity

It is important to understand the concept of conformity while describing group processes. Conformity is getting affected by how the behaviours of others change

MODULE - IV

Social Psychological Processes



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our own behavior by changing our beliefs. Conformity can be of two types. Sometimes we conform to others without believing it. This type of outward conformity is called **compliance**. If our compliance is to an explicit command or acting in accordance with a direction - it is called obedience. The sincere inward conformity is a process when we are genuinely convinced and it is called acceptance. For instance, it is suggested that morning walk is useful for health and we start doing so.



INTEXT QUESTIONS 13.3

1. What is the process of group dynamics?

2. With the help of examples describe cohesiveness and conformity.

13.4 DIFFERENCE BETWEEN “US” AND “THEM”

Do you not like your friends more as compared to other peers in your social world? And, if you are a sports fan do you not like to cheer for your home during match rather than for the visitor’s team? Yes, we have a more positive attitude towards our group. There is a natural tendency of humans to form groups based on common identity. We use our identity with our groups, often called in-group, to evaluate others, termed as out-group, even when it leads to forming incorrect conclusions. We tend to evaluate the out-group as being more similar to each other than the in-group, for example, people say “They are all the same”. We are also likely to exaggerate the differences between ‘us’ and ‘them’, thus we are likely to say, “They are so very different from us”. This type of social categorization becomes associated with stereotypes, prejudice and discrimination. When we link negative attitudes towards other groups and differentiate between ‘us’ and ‘them’ we start creating a boundary that separates the groups. This labeling makes the ‘them’ group to be less human. Violent and evil acts are common against those whom we have a prejudice.

We tend to categorize people on the basis of shared characteristics. We automatically categorize people on the basis of sex, age, and religion. Why do we categorize people into ‘us’ and ‘them’? We categorize people because it is a quick and easy way of dealing with people. Categorization has an adaptive function. Responding to every person as an individual would create an overload on the perceiver’s cognitive assessment of the person. However, if we have enough time and information then we tend to make a more accurate perception of the person or group.



INTEXT QUESTIONS 13.4



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- (i) Describe the important differences between “us” and “them”?
-

Group’s Effect on Performance

The effect of a group on performance can be positive or negative. There are some important concepts that can help us understand the effect of groups.

Social Facilitation

We are affected by the mere presence of another person. Mere presence means that people are not competing with each other and they are present as a passive audience or co-actors. Does our normal activities of eating and playing are affected by mere presence of others? In our daily life we can notice such differences in our behavior. It is found that cyclists or joggers in a park times are faster when racing or moving together than doing alone against the clock. It has also been found that social arousal facilitates performance.

Social Loafing

Social loafing is the tendency of people in a group to exert less effort towards a common goal. When they are individually accountable contrary to common notion “in unity there is strength” group members are actually less motivated when reward is equally divided and the task is less challenging, appealing or involving. In contrast people in a group are likely to loaf less when the task is appealing and member’s identify with the group.



INTEXT QUESTIONS 13.5

1. Explain the term social facilitation?

2. Explain the term ‘social loafing’.

Social facilitation is a process by which people are aroused in a group and leads to better performance. Social loafing refers to diffused responsibility. It means that members of the group do not put in the necessary effort to achieve the goal or task. Have you played the game ‘tug of war’ with a rope? Have you noticed that people in

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the front are putting in effort and are pulling the rope, whereas people at the tail end, are just holding the rope? Yes, social loafing is common when one's effort is not being measured or rewarded.

Group Size

The bigger the group size the more its members lose self-awareness and in an aroused state are more likely to commit mob atrocities of looting, burning or lynching. An aroused mob enables its members to believe they will not be persecuted, they perceive the action as that of groups.

Group Polarization

When a group has to make a decision, the members meet. It is noticed that while the discussion is going on, there is a strong tendency for the group decision to shift to be more extreme and risky. When one holds a given opinion or position with regard to a topic, then during a group discussion information supporting one's view points helps us to validate our beliefs and opinions. This shift from a position of no or little risk to an extreme position is termed as 'group polarization'. This happens because group members may get new information and more persuasive arguments.

Group Think

Group think refers to group-induced distortions that do not allow objective considerations of all the possible alternatives. It takes place when a cohesive group remains isolated from dissenting viewpoints. The presence of a directive leader who signals what decision he or she favors also contributes to it. The group think phenomenon occurs due to illusion of invulnerability, unquestioned belief in the group's morality, rationalization and conformity pressure.

**INTEXT QUESTIONS 13.6**

1. Describe the factors that influence group work?

2. Describe the harmful effect of group polarization?



13.5 FORMAL AND INFORMAL GROUPS

Groups are of various types. One major categorization is of formal and informal groups. Groups that are established for a specific purpose are called **formal groups**. This type of group is usually formed to meet clearly defined goals. The examples of formal groups include student projects groups, committees, boards or commissions.

Informal groups on the other hand form naturally out of interaction among individuals overtime. Informal groups may emerge out of formal groups with members having similar ideas, values, beliefs and social needs. For instance, Indian National Congress, Rotary Club started as small informal groups but with time became formal groups. Spontaneous interaction of likeminded people aimed towards achieving a common goal may give rise to the formation of informal groups. Membership of any group depends on many things. Some of the important factors include importance, common motive, socio-economic background, cultural aspiration, poverty, deprivation, and job security. Attitude similarity and external factors of situation and leadership characteristics also play an important role in the formation of groups.

13.6 GROUP DEVELOPMENT

Newly formed groups show different behaviors than groups that have been together for sometime. This is because a group progresses through reversal stages of development. Groups progress through the following stages: forming, storming, initial integration and performing stage.

Forming Stage

When a group is formed, a number of issues are decided. Before joining a group, people ask various questions including Who can become a member? What are the roles one has to play as members? What the group can offer me? How can I contribute to the group? In the first stage the group defines its behavior for the members and finalise the goals of the group.

Storming Stage

In this stage members feel comfortable to express their feelings. Differences in attitudes and needs are widely noticed during this stage. The internal and external demands create conflicts among the members. If conflicts are ignored, members develop bitterness and that may damage the group's ability to perform.

Initial Integration Stage

The members in this stage develop an initial sense of closeness and belonging. By this stage the rules are finalised which till the way group members will operate. The members in this stage start co-operating to each other.



Performing Stage

In this stage the group starts functioning as an effective unit. By this stage the group members learn well as to how to get along with each other. The roles of members are decided and the leadership issues are settled by now. The group starts pursuing its goals. Most of the members at this stage are satisfied with the group.



INTEXT QUESTIONS 13.7

1. State the various stages of group development.

13.7 LEADERSHIP

It is often said that “the youth of today are the leaders of tomorrow.” Leaders in the various walks of life are very popular. The images of leaders in sports, politics, cinema, business are brought to our notice through mass-media. There are different success stories behind every successful leader and there is no single accepted quality of becoming successful leader. The socio-cultural tradition, and politico-economic situation are some of the important determinants of leadership. Success in family, business, school, country or the military is often attributed to the quality of leadership. In today’s work environment, the melting away of national and geographical boundaries via computerisation and Internet has created greater need for global leadership. The importance of leading in diverse environments has become more important in today’s context. Leadership is defined as ability to influence others to achieve certain goals. A good leader can significantly influence the behaviour, attitude and performance of the followers.

13.8 QUALITIES OF A LEADER

If Gandhi is an example of social leader, Narayan Murthy is an example of professional leader and Buddha, Christ, Gurunanak are examples of religious leaders. Initiative and dominance are important in the leadership process. Leaders are heard and accepted by a sizeable number of the people. Their followers involve communication and the authority of such leaders is accepted by them.

The qualities required to be a successful leader varies from place to place, culture to culture, and situation to situation. There are leaders in specialized fields such as Sachin Tendulkar in cricket, Ratan Tata in business and Abinav Bindra in shooting but they are not recognized as mass leaders. Successful leadership in a particular field and leadership of the mass social spectrum are different. The main psychological

attributes of a leader are as follows:

- leaders are aware of the abilities of their followers.
- leaders have good communication skills, both verbal and non-verbal.
- leaders accept personal responsibilities and set examples for group members.
- leaders have ability to understand the situation.
- leaders are good planners, visionary and trustworthy.



INTEXT QUESTIONS 13.8

1. Identify the qualities of a leader

13.9 THEORIES OF LEADERSHIP

There are many theories of leadership and important among them are the following:

Early views of leadership described that leaders are born. According to this theory some people are born with the traits of leadership and possess inherent properties to become leader. Subsequently many theories were developed.

A. Trait Approach : This approach attempts to tell which personal characteristics lead to effective leadership. It has been found that the following are major traits of leaders:

Belief in oneself (self-confidence), along with openness to the ideas of others, a passion for the job and a drive that set an example for others, love of people, acceptance of others, maturity and responsibility and desire to achieve goals are other relevant leadership traits.

B. Behavioral of Approach: It has been noted that successful leaders exhibit two types of behaviours, task centered and employee-centered. Task orientation relate to the quality and the quantity of work. On the other hand, employee-centered orientation focuses on meeting the personal needs of the group members.

C. Situational Approach: We often notice that situational variables play important role in effective leadership. The effectiveness of a particular style of leadership behaviour depends on the situation. As situation changes different leadership styles become appropriate.

D. Path-Goal Approach: Path-goal theory focuses on how leaders influence





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followers' expectations. According to it leader behaviour is acceptable when followers view it as a source of satisfaction or showing the way to future satisfaction. The four styles of leadership identified by path-goal theory are as follows:

- (i) Directive style provides guidance to followers about what should be done and how to do it.
- (ii) Supportive style is primarily concerned with establishing interpersonal relations with the followers.
- (iii) Participative style believes that follower participation improves the quality of decisions.
- (iv) Achievement oriented style sets challenging goals for the followers. Minimal supervision is required with this style of leadership.

E. Charismatic Leadership : This kind of leadership focuses on the interpersonal transaction between leaders and followers. Leaders are engaged in behaviours that maintain a quality interaction between themselves and followers. The main characteristics of these leaders are as follows:

- They offer an unusual or far-out vision of reality.
- They make sacrifices or take risks to further their vision.
- They use unconventional methods to achieve their goals.
- They communicate with confidence.

Charismatic leadership transforms followers by creating changes in their goals, values, needs, belief and aspirations. They accomplish this transformation by appealing to followers selves.



WHAT YOU HAVE LEARNT

- Two or more persons interacting for some time having common goal constitute a group. Group is required to satisfy our individual needs and expectations.
- Importance of group processes can be understood with the help of factors like competitiveness, cohesiveness and co-operation that lead to enhanced performance and productivity.
- Group processes help understanding the different aspects of group behavior at village, caste and community levels.
- At the organizational level productivity can be immensely improved by strengthening the group diversity and its energy.
- Humans are so complex that we have a number of theories describing leadership.

Group and Leadership

- Great men theory of leadership suggests that certain people are born to become leaders but this view has become outdated.
- According to trait theory there are certain physical, social and psychological characteristics that one needs to become a leader.
- The situational theory prescribes that we should understand traits and behaviour not in isolation, but in the context of a situation.
- Charismatic theory proposes a visionary approach and use of unconventional methods in achieving goals.
- Leadership is one of the most talked about topic even in our day to day life and a better understanding of this topic will be of great use in our practical and professional life.



TERMINAL QUESTIONS

1. Describe various advantages of being a group member.
2. What is group dynamics?
3. Describe psychological attributes of leadership.
4. How would you go about demonstrating leadership if you were the new president of a company?



ANSWERS TO INTEXT QUESTIONS

13.1

Satisfaction of needs, identity, belongingness, development of self and personality, socialization, discipline, goal achievement.

13.2

1.
 - a. No
 - b. Yes
 - c. No
 - d. Yes
 - e. Yes

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2. Work together, common aim, share common characteristics, we-feeling, frequent interaction, rules, regulations, size.

13.3

1. Influence each other, cohesiveness, conformity products of group dynamics.
2. Cohesiveness binds people together, common threat.
conformity, change in behaviour, compliance, order or command.

13.4

1. In group, out - group, social categorization, prejudice, discrimination, labeling.

13.5

1. Effect on performance due to audience presence, arousal.
2. Diffused responsibility, low effort, effort not measured or rewarded.

13.6

1. Group size, polarization, group think.

13.7

1. Forming, storming, integration, performing.

13.8

1. Initiative, dominance, communication, understanding, visionary, planner.

Hints for Terminal Questions

1. Refer to section 13.1
2. Refer to section 13.3
3. Refer to section 13.8
4. Refer to section 13.9



14

COMMUNICATION

Communication, just like food and shelter, is an important means of survival. We only have to look around us to realize that there are various means of communication used for reaching large number of people. We can obtain entertainment, information, knowledge, political updates, latest movie releases and the like from media, books and other people. We exchange information through words, gestures, symbols, tones, music, etc. In this lesson you will learn about communication, its kinds and uses, how communication can be made more effective in our daily life and the impact of mass media on the individual and society.

**OBJECTIVES**

After studying this lesson, you will be able to:

- describe the components of communication process;
- appreciate how communication can be made more effective;
- learn the significance of non-verbal communication in the Indian context; and
- understand the role and impact of mass media.

14.1 UNDERSTANDING THE MEANING OF COMMUNICATION

Communication is a process of interaction with people and the environment. When we interact with others we use language to transmit information, ideas and attitudes from one person to the other. When you learn that your friend is unwell you ask her about her health and express your anxiety about her well-being. When you go to a shop to buy a shirt the sales person may comment on how a particular color is suiting you. Communication is thus a personal process which occurs between people so as to bring about a change in behavior, and, it allows us to express our thoughts and



emotions through words and actions. Communication is an important tool for controlling and motivating people by providing information to facilitate decision making.

14.2 ELEMENTS OF COMMUNICATION

The key elements of communication are:

- i. Communication is a two-way process:** It involves a sender and a receiver. When you talk to your father, communication is at the individual level. When a teacher talks to a group of students, communication is at group level.
- ii. There has to be a message:** The information has to be in the form of a message, a directive, an idea, a feeling or an opinion.
- iii. Commonness of understanding:** Communication can occur only when there is commonness of understanding between sender and receiver. The basis of commonness can be culture, language, and environment. Words, phrases, idioms, gestures and proverbs provide common basis for communication.
- iv. Modifying the behavior of other people:** The information transmitted to the receiver brings forth a response in the form of some change in his/her behavior. For example, the moment you hear that fire has broken out in the building, you along with others will run out of the building.
- v. Method of giving information:** Information is provided with the help of words or through gestures, expressions and the like.



INEXT QUESTIONS 14.1 AND 14.2

1. Which of the following statements is **not** correct:
 - a. Communication is a continuous process.
 - b. We can communicate through words.
 - c. We cannot communicate through gestures.
 - d. We cannot express through tones and expressions.
 2. Explain the key elements of communication.
-



14.3 TYPES OF COMMUNICATION

Communication can be broadly divided into two categories. These are:

1. Verbal communication, and
2. Non-verbal communication.

Verbal communication - When words are used as tools of interaction between two or more individuals, it is termed as verbal communication. It can be oral or written. Verbal communication provides us with **meaningful interaction** between people, **information** and **direction**. It is a fundamental requirement for life. Researchers have noted that on an average a person spends 10 to 11 hours every day in verbal communication that is, reading, speaking, writing, or listening. Some common forms of verbal communication are conversations, speeches, letters, newspapers, magazines, telephonic conversations, etc.

Non-verbal Communication – It is interesting to note that non-verbal communication or body language, accounts for more than 70 percent of our communication while words account for just about 10 percent ! Thus non-verbal communication is very important in human interaction. Gestures, eye contact, facial expressions, posture and body orientation, distance are some of the non-verbal ways of communicating. Non-verbal communication helps to

- create impressions beyond the verbal element of communication,
- reinforces what has been said,
- helps to express our emotions and interpersonal attitudes,
- helps to convey power, affection, dominance, respect etc,
- manage and regulate the interaction with others, and
- allows self-presentation.

There are various channels of non-verbal communication. However it is important to note that non-verbal communication is influenced by culture; hence it must be understood with reference to the culture. **Kinesics** or body language deals with physical movement, while **gaze** or eye contact deals with the eyes (fixed gaze or a lot of eye movement).

Proxemics involves the use of social distance between people. It is estimated that following pattern of distance is maintained in different contexts: intimate space (0-18 inches), personal space or informal distance (18 inches -4 feet), social distance or formal distance (4feet – 12 feet), and public space (beyond 12 feet). **Haptics** refers to touch as another channel of communication which is a function of culture. Usually North Americans and North Europeans touch less, but people from Asian Mediterranean and Middle Eastern cultures employ more social touching.



Notes

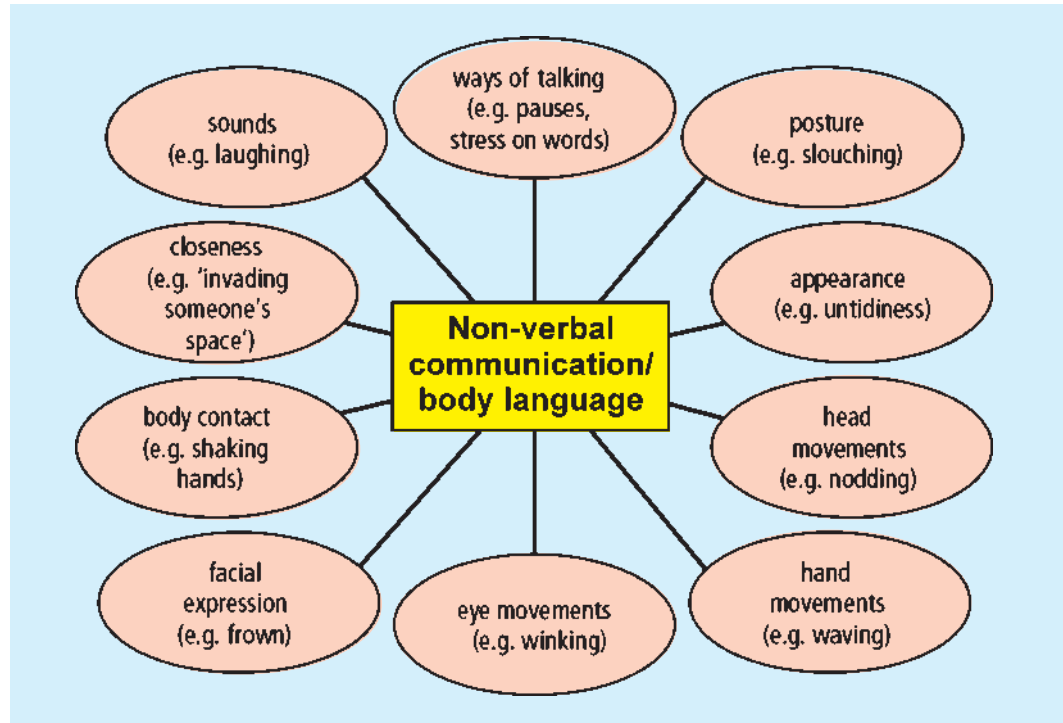


Fig. 14.2: Non verbal communication

Did You Know?

Eye contact:

- Direct eye contact indicates confidence.
- Looking downwards shows respect, listening carefully, or guilty.
- Single raised eyebrow indicates doubting.
- Both raised eye brows indicates admiration.

Posture:

- Standing erect, but not rigid, and leaning slightly forward indicates that one is approachable, receptive and friendly.
- Facing each other – indicates interpersonal closeness.

Facial Expression

- Smile is a powerful cue that indicates happiness, friendliness, warmth, liking and affiliation.

**INTEXT QUESTIONS 14.3**

Fill in the blanks:

1. Reading, speaking, writing, or listening are examples of _____.
2. Gestures, eye contact, facial expressions, posture and body orientation, distance are _____ ways of communicating.
3. The four basic channels of non-verbal communication are, _____, _____, _____, _____.
4. Haptics refers to _____ and is a function of culture.

Activity 1**Communication Game: Active Listening**

Active listening is an important aspect of communication. Play this game to learn some tips about active listening, understand your own communication style, be an active listener, and give appropriate feedback.

1. Make a group of 4-6 people. Assign a number to each person.
2. Each person writes a sentence on a slip of paper.
3. Let person number 1 pick up any slip and read the sentence.
4. Person number 1 should now whisper the sentence to person number 2 and so on till the message reaches back to person number one reads out aloud the sentence written on the slip of paper.
5. Please note: Is the message (sentence) exactly the same? Has it changed? What are the changes?

This activity shows that verbal communication can change and distant the message gets distorted by the time it reaches the last person. This is because every person has his or her own style of communication, different thought processes and ways of interpreting a message.

14.4 EFFECTIVE COMMUNICATION

You have learnt how verbal and non-verbal communication play an important role in our daily life. It becomes essential that we communicate effectively to others for progress in academics, professional domains as well as to improve our interpersonal

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relationships. At times we are misunderstood partially or even completely. In both cases the purpose of communication is defeated. So let us look at some of the points we need to keep in mind so that our communication is made effective.

Before we learn about effective communication let us understand some difficulties that **hinder effective communication**. Very often a **message is distorted**, for example, some people may change facts and say things to please their boss. People also are **selective** in terms of their **perception**, what they see and hear is based upon their needs, motivation, experience, and personal characteristics. While decoding a message people may project their interests and expectations. People have a **limited capacity** to process incoming information, when the information is too much **information overload** takes place. Then people tend to select, ignore, pass over or forget information. Further, when we are **emotional**, such as sad, angry, or very excited, then we are likely to miss out some information. Finally, words mean differently to different people. **Language usage** is influenced by age, gender and the cultural background.

14.5 FEATURES OF EFFECTIVE COMMUNICATION

Certain features of effective communication are:

- i) **Common frame of reference** – The sender and the receiver should interact at a common level of understanding. When a mother speaks to her child she uses words which are present in the child’s vocabulary e.g. a scolding tone, if the child has been naughty or a concerned tone when the child is unwell. But while speaking to her sister she will use different words, phrases and tones depending upon the context. Thus a common level of understanding is essential for effective communication.
- ii) **Mutual interest** – Contents of the communication must be of mutual interest to the sender and receiver. For a farmer how the Stock Market operates is of no interest as his concern is about the quality of seeds and manure or the effect of climate changes on the crops.
- iii) **Common Language** – Language is the strongest means of verbal communication. A common language ensures effective communication. Because it ensures minimum misunderstanding of words, phrases, idioms and proverbs.
- iv) **Common environment** – People from similar backgrounds understand the message without much problem. Thus common nationality, economic status, culture, social interests, age group and professions are some examples. Can you make a list of the other common issues? You must have noted how it is easier to talk to people from your own religious group, class or town.



Given below are tips on how verbal communication can be made more effective:

- Improve language by reading and listening;
- Work on voice modulation, tone and pronunciation;
- Think and then speak;
- Do not speak fast or too loudly;
- Learn about culturally sensitive words, signs and contexts for different cultures.

In order to improve your body language, please remember to:

- Keep the appropriate distance, particularly with reference to culture, gender and authority figures.
- Touch only if required, or necessary.
- Maintain eye contact in an interview situation, and be sensitive if such a communication is frowned upon by a culture.
- Look presentable and confident.

Verbal and non-verbal communication together provide a powerful medium of communication. If used properly and carefully, effective communication can convey the message immediately. Advertisers make use of effective communication to make people buy certain products. Have you noticed how advertisements make use of well known personalities, visual images, spoken and written words and music so as to influence us to make us want to buy a particular, car, soap, motorcycle or dress? Can you recall some of the well known jingles '*Thanda Matlab Coca Cola*', '*Daag Ache Hai, Dhundhate rah jaoge*'. Can you recall any more such phrases?

Communication is a process of sharing meaning with each other in the world. However the meaning attached to nonverbal communication differs from one culture to another. It is said that spoken language is about 7 to 35 % of our communication. The majority of our communication is through nonverbal means. Thus when verbal language seems to be unclear we search for nonverbal cues to provide us with more information.



INTEXT QUESTIONS 14.3 AND 14.5

1. State whether the following statements are 'True' or 'False':
 1. Majority of our communication is through the non-verbal channels.
 2. People have an unlimited capacity to receive and process information.
 3. Language usage is influenced by age, gender and cultural background.



4. Contents of the communication must be of mutual interest to the sender and receiver.
 5. Effective communication can be achieved by talking fast.
2. Describe the main the features of effective communication.

14.6 NON-VERBAL COMMUNICATION IN INDIAN CONTEXT

It is important to understand the nature of non-verbal communication of any culture, particularly as it is used in everyday life. Some non-verbal cues are common to all cultures and they send the same message. Non-verbal communication gives us information about our relationships with others, with regard to liking, status, age, gender and it is appropriate for conveying our emotions also. In the Indian context certain non-verbal cues are distinct.

Let us understand about **body language and movement**, or Kinesis. In the Indian setting, couples are not expected to show affectionate or intimate gestures towards each other, particularly if they are in a public place or in the presence of the family. Holding of hands or even looking at one's husband is frowned upon. Indians, like any other culture, have distinct gestures and hand movements. In India, when you slide one hand over your wrist, it indicates the use of a traditional Hindu woman's bracelet called a bangle. If this is done to a man, it questions his manhood and provokes him to a fight.

Handshakes are common, but more so between men or between women. Handshake between a man and woman are generally avoided. In cities like Delhi and Mumbai handshakes between men and women in the corporate world is quite common. Hence the context will determine the appropriate non-verbal communication.

Social factors in non-verbal communication – Indians have high power-distance index, which indicates that cultural factors, such as hierarchy, authority, and age (elders), play a definitive role in communications. Interpersonal relations, position of authority, age and gender determine the distance to be maintained between two people. People superior in status can directly look at a person from a lower status, but a person of lower status usually stands with eyes down cast (as a mark of respect), and stands at a reasonable distance from the superior person. For example, employer-employee, father-son, daughter-in-law and an elder person of the husband's family. Women generally do not maintain eye contact with men from their husband's family. Often women from a conservative, traditional background cover their head with a veil.

Indians value their personal space, usually one and a half to two meters is the norm. Yet there is little physical distance with family and close friends. Public affection, holding hands, hugging, amongst family and close friends is quite common. Also

after visiting family or friends, while leaving a group each member is expected to be bid good bye individually. Indian youngsters usually bend and touch the feet of older persons to greet them or while taking leave of them.



INTEXT QUESTIONS 14.6

1. Explain the role of culture in non-verbal communication in the Indian context.

14.7 ROLE AND IMPACT OF MEDIA

Media is the technological means of sending information, ideas and opinions to a large audience. We live in a society where information and communication help us to progress ahead in various fields of life, like work, health care, entertainment, education, travel and personal relationships. We wake up every day to check the news on TV, newspaper or the Internet. We are exposed to advertisements which influence us as to what we buy from the market. Children and teenagers are heavily influenced by media information regarding fashion, ideal body type, ideal image of beauty, urban lifestyles etc.

Positive influences - Media has an important role to play; it both **educates** and enriches our lives. It provides educational information and improves academic performance. It **collects and distributes information** and news (religious, political, social, entertainment, and environmental) to the public. Media can be used for helping a beneficial cause, such as promoting literacy or providing information about the benefits of medical progress (vaccination, polio, health care for the child and mother, or AIDS). It **transmits social and cultural values**. Media plays a significant role in informing the public about the **government policies**, dealings and latest programmes. It allows the public to address its problems and **maintain democracy** in the country. Media helps to mobilize people and brings about social integration. Mass media contact has been possible with the use of newspapers, radio, television news channels, and the Internet.

Negative influences - Media can also have negative effects both on the individual and society. India is well known for its diverse population in terms of faith, religion and language. Media can be misused by spreading **wrong information and news**, often leading to **violence, prejudice and hatred** among communities. Inciting communal violence and praising acts of violence must be avoided. Spread of **rumors and propaganda** is an organized way of spreading **false information**. Often media does not respect the **privacy of the individual** and publishes private and confidential material about ordinary and well-known personalities. The use of media to circulate **vulgar and obscene material** is of concern to all, for the young and the adult.





It must be realized that media serves important functions in society. Therefore it must fulfill certain **responsibilities and obligations**. The media must maintain **ethical standards** whereby it provides **objective, balanced and accurate** information to the masses. It should avoid inciting the masses towards crime, violence and hatred. **Community building** and **national integration** must be one of its objectives. In fact the media should reflect the **pluralistic nature** of India and provide a voice to all members of the nation.



WHAT YOU HAVE LEARNT

- Communication is a process of interaction with people and the environment.
- Communication is a two-way process with a message to bring about a change in behavior, with commonness of understanding and a method of sending the message.
- Verbal communication provides us with meaningful interaction between people, by providing information and direction, through words, spoken or written.
- Non-verbal communication involves the use of gestures, eye contact, facial expressions, posture and body orientation, and maintaining distance.
- Features of effective communication include a common frame of reference, mutual interest, common language and common environment.
- Indian context has its unique forms of non-verbal communication.
- Communication through media has positive and negative influence on human behavior.



TERMINAL QUESTIONS

1. With the help of relevant examples define communication. Discuss the five elements of communication.
2. Discuss how verbal and non-verbal communication play an important role in our daily life.
3. Explain the different features of effective communication.
4. With the help of relevant examples discuss the unique patterns of non-verbal communication in the Indian context.
5. Discuss the role and impact of media on society.



ANSWERS TO INTEXT QUESTIONS

14.1 and 14.2

1. a. True
b. True
c. False
d. False
2. Refer to section 14.1

14.3

- a. Verbal communication
- b. Non-verbal communication,
- c. Kinesis, gaze, proxemics, haptics
- d. Touch

14.4 and 14.5

1. 1. True
2. False
3. True
4. True
5. False
2. Refer to section 14.5

14.6

1. Refer to section 14.6

Hints for Terminal Questions

1. Refer to sections 14.1 and 14.2
2. Refer to sections 14.3
3. Refer to section 14.4
4. Refer to section 14.6
5. Refer to section 14.7



**15**

ATTITUDES, BELIEFS AND SOCIAL COGNITION

Have you noticed that when ever we meet someone we tend to evaluate him or her? You may think of your friend as trustworthy, caring and helpful and hence have a positive and favourable feeling towards him/her. On the other hand you may consider your neighbour to be loud who tend to interfere in your family's activities. You are likely to have a negative or unfavourable feeling toward such a person. Similarly our family, grandparents, neighbours, friends, political leaders and others communicate their attitudes and beliefs towards us. We need to understand ourselves and others and evaluate the social world we live in. Our attitudes and beliefs help to understand ourselves and the people who live around us. In this lesson we will examine the nature of attitude. We will also examine how the attitudes are formed, how can they be changed and, the relationship between attitude and behaviour. Finally, we will learn how do we make sense of our world by trying to find the causes of various events in the world and the errors we may make while assessing the happenings in the social world we live in.



OBJECTIVES

After studying this lesson, you will be able to:

- describe the main components of attitude;
- explain the relationship between attitude and behaviour;
- indicate the ways by which attitude change can be facilitated; and
- explain the concept of social cognition and its biases.

15.1 NATURE OF ATTITUDES

You meet your parents, family members, friends, teachers and many other people over and over again. Gradually you start '**thinking**' about their behaviour towards



you. You experience certain kind of **'feeling'** towards them, and start **'behaving'** toward them in a particular manner. In other words by **'thinking'**, **'feeling'** and **'behaving'** you come to form an attitude towards the people, events, objects and everything that exists in the social world.

Attitudes are defined as our **favourable** or **unfavourable evaluations** of people, objects, and situations. We communicate our attitudes in the form of statements such as: "I like mangoes", "I enjoy classical music", or "I do not enjoy rock music". When we use words such as 'like', 'dislike', 'love', 'hate', 'good' and 'bad' we are describing our attitude towards objects, people or issues. Attitude consists of three aspects i.e. cognitive, affective and behavioural:

- 1. Cognitive part** – It refers to the **thinking** that brings about the development of a belief about the attitude object.
- 2. Affective part** – It refers to the direction (positive or negative feeling), intensity of a person's evaluation or the **emotion experienced** towards the attitude object.
- 3. Behavioural part** – It is the likelihood of **acting** in a certain manner towards the attitude object.

These three components, thinking, feeling and behaving, come together and we form an attitude towards a person or an object. At times these components may be inconsistent. Thus you may hold a positive attitude towards a neighbour – he is intelligent and hardworking (positive qualities) – but you may not like his/her manners. Or you may not like your neighbour but you may still help him/her when the situation demands. Both the possibilities are likely to occur. Normally if you hold a strong attitude, all the three components of attitude remain consistent and do not contradict each other. For example, if a well known cricketer, like Sachin Tendulkar, is visiting your neighbourhood and you are extremely fond (feeling) of playing and watching cricket, then you will actively plan (thinking process), and visit the venue (behaviour). Or, you may find Sachin Tendulkar to be an excellent cricket player (thinking part), yet are not a keen player yourself nor do you watch the game of cricket regularly (low liking emotional experience) and hence may decide not to put in the effort to meet him (low probability of behaviour).

Activity 1

Components of Attitude

- Make a list of the various aspects that you think, feel and act towards your best friend. Identify the cognitive, affective and behavioural components of attitudes.
- Make a list of various issues. A list is provided below you can also use, now rate the following - school education, smoking, teachers, drinking, myself, dieting, meeting new people, family, friends, eating vegetables, chocolates on a 7- point scale of liking, ranging from "least liked" (1) to "most liked" (7).



A 15 year old boy and girl student gave the following responses. You can also make a similar representation of the ratings on various issues.

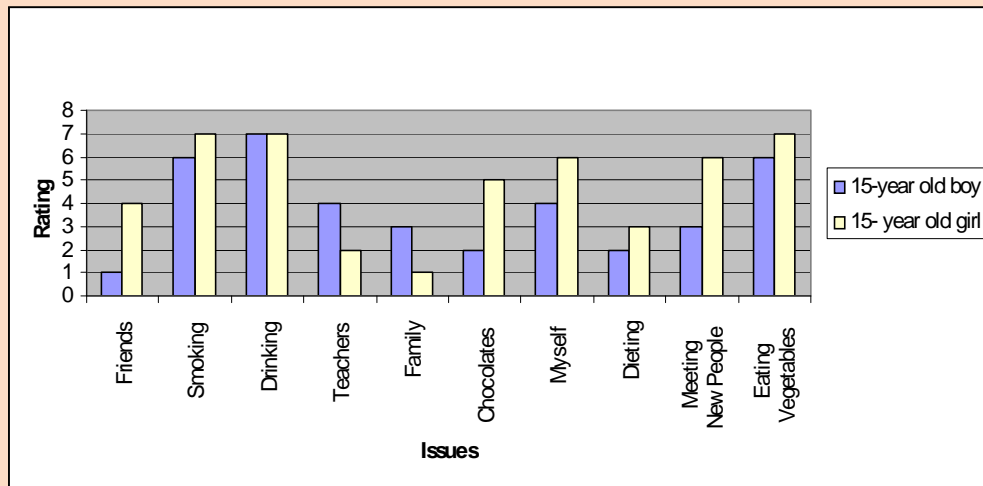


Fig. 15.1: Ratings of 2 individuals on various issues

- C) Ask a friend to rate the same list. Compare the two lists and identify the similarities and differences between the two sets of ratings. You can prepare your own list also.
- D) Can you assess a person's attitude by asking about only any one attitude component?

It has been found that attitudes are held for a **long period of time**. **Attitudes change** especially when you undergo new experiences. Also they are characteristics of a person, and differ in type and strength from person to person depending upon the socialization and interaction with the social world.

Functions of Attitude

Why do we form attitudes? It allows us to simplify social life which is complicated and full of various types of information. Attitudes serve four important functions in our lives:

1. Attitudes allow us to **understand the world** around us. Positive attitudes help to come closer to some people and make you agree to their requests. You may identify with role models (e.g. Sachin Tendulkar, Mother Teresa) and try to develop their way of thinking and behaving. The negative attitudes make us stay away from such people or situations.
2. Attitudes help **describe the social groups** that each one of us belongs to. As members of a family, group of friends, or, religious, political group we share similar attitudes and this helps to bind us together. Thus we may favour the religious and political groups we belong to and show unfavourable attitude towards the other groups.

3. Attitudes also help us to understand ‘**who we are**’ or our identity. Attitudes express an individual’s values and self-concept. For example, some people value equality while others may value freedom or compassion. Mahatama Gandhi’s attitude towards honesty and Mother Teresa’s concern for the poor and needy is well known.
4. Attitudes help us to **get support, praise and acceptance** from others. People who hold similar attitudes are attracted toward each other. For example, your friend and you share common interests and attitudes, both of you like each other and hence it makes easier to carry on the friendship. Thus attitudes help us to adjust in our social interaction.



INTEXT QUESTIONS 15.1

State whether statements are true or false:

1. Attitudes are positive evaluations of a person or an object.
2. Emotions expressed about an attitude object refers to the affective component of an attitude.
3. Attitudes are held for a short period of time.
4. Attitudes provide us with a sense of self.
5. Holding specific attitudes helps us to gain approval from others.

15.2 FORMATION AND CHANGE OF ATTITUDES

By now you have understood that attitudes are basically learnt through interaction with others and personal experiences. Usually children acquire the attitudes of their parents. Has your mother warned you not to talk to strangers? Are you as religious as your grand parents and parents? Attitudes are the result of many different influences yet the common aspect is that it is acquired through different types of learning.

Direct contact: In an earlier lesson you have learnt about how a neutral object gets associated with an established stimulus-response. Repeated association with the stimuli evokes positive or negative feelings. The attitude object now comes to have the same feelings. This involves **classical conditioning** (see Lesson 5). Strong smells, tastes and sensory information can bring about strong emotional responses. For example, if a child eats sprouts and dislikes it, there are chances that this dislike will be generalized to other food items similar in colour and taste.

Direct instruction: Instructions given by parents, teachers, or leaders, lead to formation of specific attitudes. Parents tell their children not to smoke and drink





because it is unhealthy. Teachers may also reinforce this attitude. The child may develop a negative attitude towards smoking and drinking.

Interaction with others: We are usually in the company of others and adopt attitudes similar to the group we belong to. For example, if your group of friends think it is 'cool' to wear black jeans and shirts decorated with chains, you may think it cool to be dressed in such clothes. Also, if your friends think it 'cool' to smoke and drink then you may not listen to your parents and teachers but agree with the peer group. You choose such a way of behaving, as this behaviour is reinforced by the reward you get from your friends, that is, praise, approval and acceptance as a group member. Further, such actions make you 'feel good', increase your self-esteem and make your attitude even stronger. The use of rewards involves **instrumental learning** (see Lesson 5). By controlling rewards and punishments children are taught specific attitudes.

Observational learning: Attitudes are often learnt through observation of other people's actions. As a child do you remember how your grand parents sang *bhajans* everyday during prayer time? As a young adult you may also now enjoy such songs. Or, how did your mother react when she saw a stray dog? If she showed fear and an attempt to run away from the dog, it is likely that you may also have developed the same attitude.

In addition, the educational system, media particularly television, movies, magazines and newspapers all influence attitude formation. Belonging to an impressionable age children believe in what they watch on the TV. Advertisers take advantage of this and try to get children to form specific attitudes towards what they want to sell. As you have noticed almost all companies and organizations spend a lot of money on advertisement aimed at persuading people for change in their attitude.

Attitude Change

We have learnt about the nature of attitude and how attitudes are formed. No doubt, attitudes once formed are difficult to change. Yet, because attitudes are learnt they can also change with new learning. Attitude change depends upon the following factors.

- **Source:** The person who delivers the message is called the **communicator**. The probability, that you will change your attitude is higher if the message is conveyed by experts, who are considered to be trustworthy, attractive and similar to the person receiving the message. Thus, if the cricketer Sachin Tendulkar says that a particular drink gives him energy, the target audience is likely to be young children who consider him as a role model in the field of sports. They are likely to buy the drink because they assume that they would be able to 'play like him'.
- **Message:** The nature of message is important because it provides the information for attitude change. The message should be clear and well organized. Messages that produce anxiety and fear are more effective. Thus an advertisement on soap may explain that perspiration from the body results in bad odour and your friends

will turn away from you. Or, if you have a bath with a particular soap then you are likely to be flooded with friends!

- **Person:** The characteristics of the person whose attitude is to be changed plays an important role in attitude change. Attitudes that are strong, personally important, complex and interconnected are difficult to change. Thus your attitude towards family would be difficult to change rather than preference of a soap or drink.

Thus ‘who’ (communicator) says ‘what’ (message) to ‘whom’ (person for whom the communication is meant for) will determine whether attitude change will take place or not. What other people *say* and *do* has an effect on us. The advertising industry’s aim is to change attitudes towards a particular product or services. They use these three aspects of attitude change in their advertisements.

Activity 2

Attitude Change

Attitude change is possible when a message plays on the emotions of others. Select advertisements (from television, newspaper or magazines) about body image and target adolescents in the age group of 15-16 years. Analyze on the basis of the three components of attitude. Which attitude component is most dominant in the advertisement message?

Activity 3

Attitude Change

Select a magazine which has a high readership in your own city. Mark all the advertisements in the magazine.

- Note the words and images used in the advertisements. Now identify the three sources of attitude change in each advertisement: the source person, the message communicated and the person to whom the message is addressed to. Prepare a table and find the frequency of occurrence of each source.
- Advertisers often use a wide range of human motives/needs to sell their products. In lesson 5 (Motivation and Emotions) you read about the different types of motives: physiological needs, self-esteem needs, social and prestige needs, and self-actualization amongst others. Take each advertisement and identify the need which is being called upon. Prepare a table of the frequency of occurrence of each need that you have identified. This project will help you understand how advertisers use primary and secondary needs to change the attitudes of people.



INTEXT QUESTIONS 15.2

State whether the statements are ‘True’ or ‘False’:

1. Learning plays an important role in the acquisition of attitudes.





2. We tend to adopt similar attitudes of the groups we belong to.
3. Messages that produce anxiety and fear are ineffective.
4. Change in attitude is higher if the message is conveyed by an expert.
5. Attitudes that are strong and personally important are difficult to change.

15.3 RELATIONSHIP BETWEEN ATTITUDES AND BEHAVIOUR

The relationship between attitude and behaviour is complex and it is often difficult to predict one's attitude from his or her behaviour. How many times have you heard people state that they want to be fit but they do not exercise, or that they are worried about global warming but drive a big car which consumes petrol by the gallons! People say one thing but do not necessarily follow it up with appropriate behaviours. Studies have shown that there are certain special conditions under which attitudes can predict behaviour:

- When attitudes are **strong and consistent**, that is when the three components of attitude are clear and stable they better predict behaviour. Weak, unimportant and ambiguous attitudes are less likely to predict behaviour.
- When one holds a strong attitude or when one is **conscious of one's attitude**, thereby it is also **easily recalled** and possible to predict behaviour.
- When attitudes have been formed through **direct experience** prediction of behaviour is more accurate.
- When one acts under social pressure attitude may be expressed in diverse ways. An adolescent may not want to smoke or drink because it affects health. But peer group pressure may force him to drink. Thus his way of thinking is different from his behaviour. When **external influences are minimal** then attitude-behaviour relationship is becomes strong.

It is important to note whether behaviour is spontaneous or well planned. When behaviour is deliberated upon and planned, particularly which college to join, or when and whom to marry, these issues become important hence hasty decisions will not be taken. Thus when we have time to think and it is personally relevant then the attitude-behaviour relationship will be strong.



INTEXT QUESTIONS 15.3

Read the list of attitudes carefully and state which type of learning was used for attitude formation: direct contact, direct instruction, interaction with others and observational learning.

1. Asha's mother listens to Hindi classical music at home and while driving. Asha has grown up hearing this music and now she too likes to hear this type of music.
2. Amit's father sits down with his son and explains why it is important to stop smoking and lead a healthy life. Amit stops smoking.
3. Shekar notes that his parents, elder brother, an uncle and close friends value hard work and commitment to work. He also starts to hold this attitude towards his studies.
4. Five year old Rekha watches her grand mother praying everyday in the morning now she also joins her grand mother while praying.
5. Five year old Mehak has recently joined a primary school. Her class room is coloured brightly, with lots of toys and a teacher who is warm and pleasant. She goes to school everyday happily.

15.4 BELIEFS AND BEHAVIOUR

Like attitudes we also have beliefs about ourselves, people and things around us. **Beliefs** refer to the acceptance of something as truth. In fact when one has a strong belief it often becomes unshakable. For instance, belief that a supernatural power controls human destiny or a God is very strong, or, may have a belief in afterlife. Once a belief is formed you are confident about the occurrence of certain events and how you or people are likely to behave. It helps us understand why people behave in a particular way or why an event has taken place. Beliefs help us to organize our experiences in the social world and predict our own behaviour as well as the occurrence of events.

15.5 SOCIAL COGNITION

Our minds try to make sense of the world around, and make necessary adjustments to function in it in adaptable ways. When a friend invites you for her birthday party you know many things about it - what type of dress to wear, you will carry a gift, that there will be many other friends, a birthday cake and good eatables, and the like. How do you know about it? Past experience and information about birthday parties and associated activities help form an image about 'birthday party' as different from other kinds of celebrations.

Social cognition refers to information received from the social world which is interpreted, analysed and remembered, such that we come to think, feel and understand about the people who live around us. But the information coming in is too much so we have to learn to organize it in the form of schemas. **Schemas** are a set of interconnected beliefs, information and examples about social objects, events and people. Once formed the schemas guide our thinking and behaviour. They simplify information so that we can interpret new information rapidly. There are various types of schemas dealing with persons, events and social roles.



**Activity 4****Schemas – Young Vs Older Generation**

Request an elderly person (a male and a female) to prepare a list that describes themselves and another list that describes the younger generation. Also, ask the youth (a male and female) to describe themselves and the older generation. Now compare the two lists how each group has a particular schema about themselves, as well as the other social group.

We also look for other ways to reduce information overload. We tend to use **heuristics** which are simple rules for making complex decisions quickly. If you are asked to identify a person who is abstract-minded, is committed to her/his work, works long hours, has students surrounding her/him – name the person – yes you are likely to say ‘professor’. This is because these are typical attributes of a professor. Similarly, there are typical characteristics of a dancer, doctor or politician.

Attribution: Understand the Causes of Behaviour

We also look for the causes of one’s own and other people’s behaviour. This is termed as **attribution**. If your friend does not invite you for her birthday party you are going to question why she did not do so. So we are like naïve scientists trying to establish cause and effect relationships. If you fair poorly what reasons are you likely to put forward and when you do well in the examination what reasons will you give? There are two categories either you will attribute your success or failure to **internal causes** pertaining to personal reasons, (e.g. “I faired poorly because I did not put in effort”, or “I did well in the examination because I put in a great deal of effort”). The **external causes** include anything outside the person. For instance, “I faired poorly in the examination because the question paper was tough”.

Sources of Errors or Biases in Social Cognition

The internal or external causes lead us to commit the **fundamental attribution error**. For example, when we see another person come late for a meeting and drop her notes on the floor, we are likely to reach a conclusion that the person is ‘disorganized and clumsy’. We tend to explain the cause of ‘coming late’ and ‘dropping notes’ to internal causes. When we are in the same position then we are likely to attribute the reasons of the same happening to external causes, such as, there was a traffic jam and the floor was slippery. Thus when we perceive others we perceive their behaviour to be caused by internal causes and say she is ‘that kind of a person’. When we try to explain our own behaviour we do it in terms of situational or external causes.

In our effort to understand the social world we try to reason out yet we often make serious errors. Let us learn about some of the biases. The **optimistic bias** is the

tendency to believe that we are more likely than others to experience positive events. For example we believe that we will do well in our studies, get a good job and lead a happier life as opposed to not getting a job or falling ill.

We also have a strong **negativity bias**, the tendency to be sensitive to negative information. We give more attention and assign greater importance to such types of information. When you are informed about a person who is friendly, intelligent, good looking and arrogant, which bit of information is likely to stand out and be remembered? Yes, negative information will have a stronger influence than the positive one.

We often we think in terms of “what might have been” or **counterfactual thinking**. For example when we desire a good result in examination and do not get it we show strong regret over the missed opportunity. You are likely to say “I should have studied more and then I could have come first and be awarded the scholarship” either you will study more next time or it could lead you to be depressed about such thinking.

Sometimes we have a tendency to notice and search for information that support one’s beliefs and ignore information that do not conform it. This is called **confirmatory bias**. People also tend to ignore basic information and get influenced by the distinctive features of the object.

It can be said that we make errors particularly when we use heuristics as shortcuts and when we do not put in efforts to think in detail. Also, for unimportant events we use heuristics and automatic processing, whereas, for important events we use conscious processing and thus make better decisions. Although we make these errors they help us to adapt to the situation. It helps us to focus on certain information that is of importance to us and reduces the effort for understanding the world.



INTEXT QUESTIONS 15.4

Fill in the blanks:

- _____ help simplify information so that we can interpret new information quickly. (schemas, social cognition)
- _____ are learnt through personal experiences and social communication. (personal schemata, role schemata, event schemata)
- The tendency to be sensitive to negative information is called _____. (counterfactual thinking, negativity bias)
- When we prevent ourselves about thinking of certain topics we engage in _____. (counterfactual thinking, thought suppression)



**WHAT YOU HAVE LEARNT**

- Attitudes are favourable or unfavourable evaluations of people, objects, ideas and situations. Attitude consists of three different yet interrelated components: cognitive, affective and behavioural components. They combine to create an attitude about an attitude object.
- Attitudes serve important functions of understanding the world, help define social groups and our identity and help gain acceptance from others.
- Attitudes are formed through different types of learning: direct contact, direct instruction, interaction with others and observational learning.
- Attitudes once formed are difficult to change, yet change is possible because attitudes can be learnt under new conditions
- Two types of attitude change – incongruent and congruent change. Congruent attitude change is easier.
- Attitude depends upon the source, message and the target person.
- Conditions under which attitudes predict behaviour – when attitudes are strong and consistent, awareness of the attitude held, direct experience of attitude formation and external influence is minimal.
- Social cognition involves our effort to understand the social world. Schemas and heuristics help us to organize the incoming information from the social world. Causal attribution helps to look for internal or external causes of behaviour.
- Social cognition is subject to many errors, such as, negativity, positivity bias, counterfactual thinking and thought suppression.

**TERMINAL EXERCISE**

1. Define attitudes. Describe the three components of attitude.
2. Briefly describe the functions of attitudes. Illustrate your answer with examples.
3. How are attitudes formed? Illustrate your answer with examples.
4. Can attitudes be changed? Explain the three important factors that help to bring about attitude change.
5. Explain the relationship between attitudes and behaviour. Specify the conditions under which the attitude-behaviour relationship will be strong.



6. Define social cognition. Explain the role of schemas in organizing our thinking and behaviour.



ANSWERS TO INTEXT QUESTIONS

Notes

15.1

1. F 2. T 3. F 4. T 5. T

15.2

1. T 2. T 3. F 4. F 5. T

15.3

- | | |
|----------------------------|---------------------------|
| 1. Observational learning | 2. Direct instruction |
| 3. Interaction with others | 4. Observational learning |
| 5. Direct contact | |

15.4

1. Schemas
2. Event schemata
3. Negativity bias
4. Thought suppression

Hints for Terminal Questions

1. Refer to Section 15.1
2. Refer to Section 15.1
3. Refer to Section 15.2
4. Refer to Section 15.2
5. Refer to Section 15.3
6. Refer to Section 15.5

**16****SOCIAL AND EDUCATIONAL
PROBLEMS**

Social problems refer to the situations faced by the people in which achievement of genuine goals of a community or group are not achieved due to difficulties at the level of system. People get harassed, live under disadvantaged conditions, do not get good education, and are subjected to discrimination and prejudice. These are examples of social problems. These problems have many aspects including social, economic psychological and historical and other solution requires efforts from many angles. Indian society is undergoing socio-economic transformation. Also it has a very rich and old cultural heritage. India is also aspiring to be a strong country at a global level. all these pressures are causing problems and other kinds of development. Some problems like illiteracy, social tension and gender discrimination are well known. Educational problems refer to issues of school dropout, stagnation and wastage. They are also social problems. This lesson will help you understand the psychological aspects of some important social problems faced in the society.

**OBJECTIVES**

After studying this lesson, you will be able to:

- explain important psychological aspects of social problems: poverty, drug addiction, and dowry;
- reflect upon the ways to solve these problems; and
- discuss the extent of school dropout, stagnation and wastage.

16.1 POVERTY

In our country, there are many people living in poverty. Poverty denies individuals and their family of basic rights such as **equality, justice, dignity, health, basic comforts** and **personal security**. Poverty is basically an outcome of inequalities. **Poverty** is usually

defined in terms of **objective poverty**, which is lack of **material belongings** that is, lack of economic resources such as it is difficult to achieve an adequate level of living. Hence we can say that poverty divides the population between those who have an adequate level of living and those who do not. **Subjective poverty** refers to the perception and experience of poverty as felt by a person. **Deprivation** on the other hand refers to loss of opportunities and privileges that are normally available to the general population. It means lack of basic necessities for the survival of an individual. This can take the form of inadequate environmental conditions, impoverished experiences and characteristics of the socially disadvantaged sections.



Fig. 16.1: *The Urban Slums*

Causes and Consequences of Poverty

Poverty needs to be understood as a cause as well as consequence. It is caused by several factors and in turn causes several other problems. An important aspect of poverty is deprivation. **Deprivation**, a lack of opportunity, reduces access to availability of resources and is due to poor economic conditions. For example, education and employment have a two way relationship with reduced opportunity to be gainfully employed. There are many consequences of poverty. They interact with each other to bring about physical and psychological effects on the persons. Let us examine some of the key consequences of poverty.

Malnutrition and Development: Malnutrition influences both physical growth and affect psychological development. A good diet helps a child to be active and happy. Malnutrition and social impoverishment are major factors that bring about mental retardation. Children of poor families start life with a handicap of limited food supply, widespread infections, poor health, inadequate stimulation, and lack of education and awareness among parents.

Socialization Patterns Socialization patterns under poverty conditions are characterized by inadequate stimulation, poor or no schooling, lack of role models, and lack of social and emotional support from the peer group. Lack of such aspects has a detrimental influence on the cognitive and emotional development of the growing child.





Personality Development: Different **personality patterns** are suggested for the deprived and non-deprived groups. Highly deprived children are likely to be high on neuroticism and introversion, and low on extraversion than non-deprived children. Deprivation is also related to social maladjustment, immaturity, and withdrawal. It also predisposes children to delinquency, and proneness to more external and chance orientation than non-deprived young adults.

Activity 1

Understanding the concept of poverty.

Talk to people belonging to different backgrounds - friends, family, neighbours, students, employed/unemployed, slum dwellers, amongst others. Ask each person to define poverty and list the five most important reasons for the occurrence of poverty in India. Add your own answer and tabulate the data. You can calculate the frequency of each cause stated by the people. Discuss your findings with your family.

Motivational Consequences: The experiences of rewards and punishments helps in the formation of one's **motivational orientation**, poverty condition leads to low need for achievement, low extension need, and a high need for dependence.

Mental health: There is increasing evidence of a strong association between poor **mental health** and the experience of poverty and deprivation. The type and extent of mental health problems range from health problems, adjustment is higher if the individual is a migrant and comes from a low socio-economic status. Although mental illness occurs in all ages, gender and backgrounds, the risk is higher among the **poor and homeless, unemployed, and with low education**.

Psychological Interventions: There are many causes and consequences of poverty. It affects the individual, group and society. Psychologists work with the idea that human development is shaped by the experiences faced by the individual. The aim towards helping the person then is to train the individual by building up and increasing support to the deprived person in terms of cognitive, motivational and behavioral skills. Such guidance will increase the competency levels for effective functioning in society.

Psychological interventions do help the deprived and disadvantaged. However we must keep the following aspects in mind. First, **continuous help** may lead to **psychological dependency** and reliance on others. Under such conditions the deprived will not take responsibility for their actions and not become self-sufficient. Second, psychological interventions should be operable at all three levels: the **individual, community and societal**. For example, simultaneous changes of educational practices, social policy and economic input will have far reaching impact. Community involvement brings about commitment and the desire to achieve success in the programmes.



INTEXT QUESTIONS 16.1

1. Complete the following statements:

- Poverty is defined in terms of _____ and _____ poverty.
- Objective poverty is the lack of _____.
- Subjective poverty refers to the _____ and _____ felt by the person.
- _____ refers to loss of opportunities and privileges that are normally available to the general population.
- Deprived person must be trained in terms of _____, _____, and _____ skills.
- Psychological interventions for poverty must operate at the _____, _____, and _____ levels.

2. Explain the causes and consequences of poverty.

16.2 SOME OTHER SOCIAL PROBLEMS

Drug Addiction. Drug addiction is a **chronic problem** that involves **compulsive drug seeking and dependence** on it despite the fact that it has harmful effects on the individual. It is often difficult to understand as to why some people become addicted to drugs. It could be due to a combination of **risk factors** such as individual biology, socioeconomic status, peer pressure, stress, quality of parenting, role models, and age are some important aspects. **Genetic and environmental factors** interact with developmental and maturity stages in a person's life. The earlier a person takes to consuming drugs the more serious the addiction. It is a common problem and a challenge during adolescence, when peer pressure to experiment with new things is present. Drug addiction is closely related to crime and HIV/AIDS. The effects on physical and mental health are also well documented. **Treatment** is available to help people counter their addiction; however **prevention** of drug addiction is a better approach. Involving families, schools, colleges, community and media are effective ways of countering addiction. Public figures and youth icons can participate in anti-drug campaigns.

Dowry. Dowry refers to the cash, gifts, property and material goods the man receives from the wife's family at the time of marriage. Dowry was earlier a way of helping with the marriage expenses but now it has become a way of paying the groom's family for taking on the **burden of a woman**. Due to this aspect the birth of a girl in a family is considered as an expense, and if the family is poor it puts more strain on the family. There are many





reasons for dowry giving and taking. The concern by the girl's parents to provide a good and happy life to their daughter forces them to pay large amounts as dowry much beyond their means. Borrowing money at high interest rates to pay dowry often puts the family in perennial debt. Dowry is a **social custom**, practiced for generations. Changing such customs is very difficult. This custom puts the young woman at very high risks. The woman who brings in little dowry is at the mercy of the husband's family, as they may ill treat her, harass her and indulge in violence and torture. It is sad to note that even in the presence of the Dowry Prohibition Act, 1961, dowry deaths, are becoming more prevalent, and indicating that mere laws do not help in the eradication of this social evil. Effective implementation, active involvement and cooperation of society in removing of this evil must be sought. Boys and girls must be educated, taught to respect each other, and refusals of dowry are some ways of eradicating this social evil.

16.3 SCHOOL DROPOUT, STAGNATION AND WASTAGE

The **right to education** is a fundamental right. Yet we note that children who join school often drop out of schooling. **Dropout rate** is defined as the proportion of children who discontinue school after enrolling in the schooling system. Thirty percent of children leave school before completing five years of schooling and 50 percent leave before completing 8 years of schooling.

Two additional concepts of **stagnation and wastage** are important in the educational setting. Education is necessary for the development of the person and effective contribution of the person towards society. When the education received is of little or no help to the person then it is termed as wastage of education. It is important for the growing child to use the knowledge he or she has gained from education, in its absence there is wastage of the resources. In addition the educational system needs to keep pace with demands and needs of the context and bring about changes in the curriculum and knowledge content of different educational fields. If it cannot do so then educational stagnation takes place. Thus at the primary school level students initially join and after a few years leave school, leading to wastage of the resources employed to educate the child. It becomes essential to retain the child back in school to complete his/her education. Often children are retained in the same class due to unsatisfactory progress. This further demotivates the child to continue studying in school.

There are various reasons for school dropout, stagnation and wastage. These reasons fall into three categories, namely, socio-economic, psychological and educational. The absence of schooling activities in the vicinity, lack of awareness of necessary education among parents, poverty, lack of interest in education, absence of educational environment, examination failure and, the need for children to work for economic reasons are major reasons for leaving school. In addition, poor systemic support in terms of rules and procedures of the schooling system, curriculum that is alien to the needs of the students, poor quality of education, and poor equipment also play a role in increasing school dropouts.

Social and Educational Problems

Efforts to **decrease the school dropout rate** are government programs such as National Literacy Mission, *Sarv Sikhsha Abhiyan* (Total Literacy Campaign) and Mid Day Meal Scheme. Kerala has the highest literacy rate in the country, and other states are also doing their best to decrease school dropouts.

Social problems described above deal with different domains of life. However you must have noted that these problems are closely related to each other and in fact influence each other also. Hence the solutions to these problems is not easy, inputs from various disciplines is required to help out these social problems. The role of psychology to understand human behavior cannot be under estimated. Modification of attitudes, feelings and pattern of behavior are significant. Psychologists along with other social scientists can provide strategies for achieving these changes.



INTEXT QUESTIONS 16.2 AND 16.3

Fill in the blanks:

1. The sex ratio of male and female is unfavorable towards _____ .
2. Two women leaders who have emerged as leaders at national level are _____ and _____ .
3. Drug addiction is a chronic problem that involves _____ and _____ by the individual.
4. _____ refers to the proportion of children who discontinue school after enrolling in the schooling system.
5. Students initially join and after a few years leave school, leading to _____ of the resources employed to educate the child.



WHAT YOU HAVE LEARNT

- Poverty is the outcome of inequalities.
- Poverty may be objective or subjective.
- Deprivation refers to loss of opportunities and privileges that are available to the normal population.
- The causes and consequences of poverty include, malnutrition, socialization patterns, personality development, motivational consequences, and, mental health.

MODULE - IV

Social Psychological Processes



Notes

MODULE - IV

Social Psychological Processes



Notes

Social and Educational Problems

- Psychological interventions aim to train the person to build up and provide support in terms of cognitive, behavioural and motivational skills.
- Drug addiction and dowry seeking are other social problems.
- In the educational setting the drop out rate of students from school is high. The issues of stagnation and wastage are related to school dropout.
- There are various reasons for school dropout, wastage and stagnation - socio economic, psychological and educational.



TERMINAL QUESTIONS

1. Define poverty. Explain the causes and consequences of poverty.
2. Write short notes on :
 - a. Drug addiction
 - b. Dowry
3. Explain the terms 'stagnation' and 'Wastage' in the educational setting. What efforts are being made to reduce school drop outs.



ANSWERS TO INTEXT QUESTIONS

16.1

1. Objective, subjective
 2. Material belongings
 3. Perception, experience
 4. Deprivation
 5. Cognitive, motivational and behavioral
 6. Individual, community and societal
2. Deprivation, malnutrition, socialization patterns, personality motivation and mental health.

16.2

1. Women
2. Sarojini Naidu and Indira Gandhi
3. Dropout

Social and Educational Problems

4. Wastage
5. Compulsive drug seeking, dependence

Hints for Terminal Questions

1. Refer to section 16.1
2. Refer to section 16.2
3. Refer to section 16.3

MODULE - IV

Social Psychological Processes



Notes

**17**

HAPPINESS AND WELL-BEING

People have always aspired for a long, dignified and meaningful life. However, the stresses in contemporary life are increasing in such a way that it is becoming difficult to cope with them. The hectic pace of life, environmental factors, and increasing greed are making people's lives more and more stressful. These factors influence our life style and combine to create serious health hazards. Keeping this in view efforts are being made to achieve health and well-being for all. The study of this area involves many subjects such as psychology, medicine, sociology, anthropology etc. Much concern is shown nowadays for the study of the factors influencing health, well-being, quality of life, healthy life style, and happiness. In this lesson you will learn about the concepts of health and well-being and how important they are for good life and for happiness. Awareness, adoption and practice of healthy lifestyle are the keys to our well being.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the concepts of happiness and well-being;
- distinguish between happiness and satisfaction;
- understand the concepts of self-actualization and mature personality;
- identify the strengths of self-actualized individuals; and
- discuss the ways for developing positive emotions.

17.1 CONCEPTS OF HAPPINESS AND WELL-BEING

Happiness and well-being are important and necessary for every individual. Both of these bring about the positive feelings of joy, satisfaction, pleasure and pleasantness. Have you remained unhappy, alone and sad for a long time? Were you able to do your daily activities? Did you like meeting other people or talk to them? Yes, if you

are unhappy you do not feel like doing anything. Remaining in this state for a long time is harmful to our body and mind.

The term ‘**well-being**’ includes many aspects such as, happiness, energy, leisure, peace with oneself, contentment and sensitivity to environment. Well-being involves not only happiness and pleasure but also experiencing/feeling satisfaction in life, presence of positive feeling or affect (e.g. interest, love, surprise, pleasure) and the absence of negative feelings (e.g. anxiety, depression, stress). A very rich person may be unhappy and a poor person may be happy. Well-being is a matter of how one experiences and interprets one’s life conditions. Money, property, power and prestige provide us with limited sense of well-being. It has been found that material prosperity is positively related to life satisfaction to some extent. But indefinite increase in material prosperity does not lead to significant life satisfaction. You may attempt Activity 1 to understand the meaning of well-being.

Understanding the Meaning of Well-being

Activity 1

Ask some people to choose any one life style - (a) either a life of 70 years in a village with basic amenities and few material comforts or (b) a life of 50 years in a rich country with high living standards. Ask them to provide reasons for their choice. You could answer this question yourself and also ask your parents and/or friends to do the same. Compare the answers given.

Activity 2

Prepare a list of priorities/main concerns in life, that is, those things that are needed in life. You could answer this question yourself and also ask your parents and/or friends to do the same. Compare the lists and note how many material and non-material aspects are listed by the younger and older generation.

A. Factors Influencing Well-Being

We can achieve a sense of well-being through a healthy lifestyle and by adopting good habits. The basic principles of healthy life style include good diet, adequate exercise, sleep, proper recreation and a set routine. Balance and avoidance of extremes is very important for leading a good life.

Nutrition: Do you remember when you were unable to eat for a long period of time? You must have felt weak, irritable and hungry. Sufficient calorie intake is necessary for good health. Since we need energy through out the day we should not skip meals or go on diets or under eat. We should eat a **balanced diet** of carbohydrates, proteins, fats and vitamins. The reverse is also true as some people consume too many calories and became overweight. Such people are also likely to have a lower self-esteem particularly if the culture approves a slim body.





Exercise: Talk to your grandparents, they will tell you that they have led a physically active life. They used their body to work and to go from place to place, whereas now we prefer to use cars, buses and other vehicles. Decreased physical activity affects our health and well-being. Lack of exercise can lead to headache, high blood pressure, diabetes, backache, irritability, anxiety and depression. Today obesity is another serious problem faced by the youth and adults alike. Exercise has a positive effect on mood. People who exercise regularly are able to control stress and enjoy high quality of life.

Sleep: Adequate sleep is required to rejuvenate and refresh both the mind and body. Sleep deficiency leads to irritability, anxiety, depression and disturbed thinking. How many hours of sleep do you get? We need about 8-9 hours of sleep to function effectively. We should try to establish a regular sleep routine and not sleep at irregular hours. Remember that people who exercise regularly also sleep well.

Recreation: Just as we need proper nutrition, exercise and sleep, we also need to relax and enjoy life. Indulging in certain activities, personally important to us, give us joy, fulfilment, satisfaction and act as a diversion from the hectic life we lead in current times.

Yoga and meditation: These activities bring discipline and peace in life. In addition there are many health related benefits which make a person fit and active.

Having friends and maintaining relationships: Friends and other people provide support and give opportunities to develop network, cooperation and enriching social life.

Optimism, resilience and hope: People with optimism, resilience and hope are found to be healthier and happier than others who lack these characteristics. Having these positive attitudes makes a person effective and productive. Optimism refers to being positive while resilience is the ability to be strong in difficult times.

Activity 3

Healthy Pleasures

Make a list of various things that you do every day which give you happiness and make you feel 'good'. A 15 year old boy wrote the following list: my early morning run, aloo paranthas made by my mother, playing with my dog, listening to music undisturbed, talking to my friends, time spent with my father on Sunday evening, and, watching football matches.

It is the little pleasures we create ourselves that give us delight and a 'good feel' factor.

Routine: Routines help establish healthy habits that bring structure to our lives. A daily routine provides us with a framework and orders our life world. We know what is expected from us; otherwise we get alarmed when we are unclear about the

expectations from others. The positive effect of routine is that it provides a sense of organization, control and responsibility to the person. Bad habits can be turned into good habits. You may love to sleep late but you know that you need to keep your body in good shape. Do you have a routine? Pick a routine that will keep you happy.



INTEXT QUESTIONS 17.1

1. Identify the various aspects of well-being.

2. Identify the important factors that influence a healthy life style.

Quiz 1 State whether the statements given below are ‘True’ or ‘False’.

1. Cultivating healthy pleasures helps increase daily life pressures.
2. Adequate sleep refreshes both body and mind.
3. Consumption of more calories than required leads to more energy levels.
4. Exercise has a positive effect on mood.
5. Routines make our life boring and repetitive

B. Happiness, Well-Being and Need Satisfaction

What is happiness? All of us know what we feel when we are happy but it is often very difficult to define it and express in words. Happiness can be a pleasant feeling for a brief time or for a long duration. When you help a needy person or your friend it may make you feel happy. When you are in need of help and your neighbour helps you, that condition may also give you happiness. Happiness is not only an emotion but refers to living a good life, experiencing well-being and enjoying good quality of life. Happiness and well-being can be attained through many ways.

1. **Material resources:** Money, clothing and housing, provide us with the possibility to satisfy our basic needs. Different needs and their nature were discussed in an earlier lesson. We must satisfy both our primary and secondary needs to be happy.
2. **Cognitive competence:** The ability to search and find what we need is also important. Thus we must be knowledgeable, intelligent, and open to learning.
3. **Subjective competence:** When we believe in our problem solving capacity we have faith in our self and our abilities to achieve our goals.



**Activity 4****Happiness and Well-being**

- Ask persons who are working in an organization as to how work is a source for happiness and well-being. Ask them if they can imagine themselves “free” from work? What are their reactions to such a situation?
- Ask a 15 year old and a 65 year old about various sources of happiness and unhappiness. Compare the two lists to study how age influences the sources of happiness and unhappiness.

We have many needs with some being more important than the others. Fulfilment of our biological and psychological needs is essential. Since need satisfaction provides us with fulfilment it leads to happiness and comfort. When we expect our desires to be continuously fulfilled or immediately satisfied then we are likely to face problems. Non-fulfilment of desires often leads to unhappiness and displeasure. Basic needs must be fulfilled to feel happy and satisfied but there is a limit to it. Do you expect your parents to fulfil every need and desire – to buy clothes every month, an outing every week, a lavish meal every day, or to buy the latest music CD? When we desire too many things we are likely to be dissatisfied when these desires are not fulfilled and that leads to unhappiness. This is the reason why contentment (*santosh*) has been considered important for experiencing happiness. Continuous striving for attaining newer and newer goals pushes us toward a perpetual state of dissatisfaction and discomfort.

Activity 5**Experiencing Happiness**

Ask the following question from people of different walks of life, such as rich and poor, educated and uneducated, men and women, boys and girls, married and unmarried, and so on.

“Considering all things in your life, would you say you are very happy, rather happy, not very happy, or not at all happy?”

Now calculate the frequency stated by the participants of different groups. You can also present your results in a graphical representation, such as a pie diagram or bar diagram.

C. Characteristics of Happy People

Happiness depends upon situational and personal characteristics. The key personal characteristics are:

- Mental and physical health:** People who are physically and mentally healthy are happier than those who suffer from poor health.
- Psychological characteristics:** Happy people believe that they are in control of the situation, are resilient and confident and open to learning experiences (as we

will discuss in self-actualization). Generally happy people are found to have high self-esteem, get along with other people, feel more in control of events in life, and, are optimistic that they can achieve their goals. Most importantly such people are moderately happy most of the time.

- **Good personal relations:** Happy people interact socially and fulfil social needs of sharing, bonding and in return get support from them in time of need.

Life events: Happiness is correlated with happy events, such as, promotion, winning an essay competition, parenthood or marriage. Do you think more wealth means more happiness? Once our basic needs are met more wealth does not mean more happiness. Research has indicated that happiness is more important than wealth. There is a strong correlation between happiness and self-esteem, extraversion, optimism, self management skills, good personal relations, progress towards goals, spirituality and religious beliefs. Therefore happiness is closely related to different aspects of the individual and behaviour. Societies that report being happy, value wealth, access to knowledge, personal freedom and equality.

Do you know?

Happiness in Bhutan

Bhutan is a small country in the Himalayan ranges. In the 1970's Bhutan gave the world its first Happiness formula. Countries across the world calculate Gross Domestic Product (GDP) as the measure for happiness, well-being and development of the country. Bhutan has happiness at the heart of its government policy. They calculate "Gross National Happiness" (GNH) stating that wealth cannot be the only factor in determining overall development. Growth and development must be considered by a balance between the inner (self) and outer life worlds. Thus, wealth must go hand in hand with cultural values, connection with the environment (nature) as well as the community (people).

Research has also shown that being rich does not make people happy. Are the Bhutanese people giving an important message to the world? Countries like UK and France have also adopted this as a part of their government policies to evaluate well-being of its people. You can read more details about GNH at: http://en.wikipedia.org/wiki/Gross_National_Happiness or watch a video about "Happiness – Bhutan" at www.youtube.com



INTEXT QUESTIONS 17.2

1. Define happiness. Identify the different ways by which happiness and well-being can be achieved.





2. Can you explain why contentment (*santosh*) is important for maintaining need satisfaction.

3. Identify the important characteristics of happy people.

17.2 SELF-ACTUALIZATION AND MATURE PERSONALITY

In another lesson we read about motives and the crucial role they play in our life. We learnt that fulfilment of primary needs and secondary needs is essential for growth and development. All humans have the tendency to grow and develop. There is a need to grow, expand and mature. All of us have talents and capabilities, but do we really use them to the maximum? Some people appear to be doing the best that they are capable of doing, but not all.

Self-actualization refers to the development of the individual upto his or her full potential. We must understand that self actualization does not mean the end of growth; it is not the path *to* maturity rather it is the path *of* maturity. You may feel that only grown ups or elderly people achieve self actualization. You must start learning about the process as early as possible. As we are nurtured in our social world we come to learn social and moral values. Values help us to give direction and help us evaluate the world to make effective decisions and successful adjustments. Love and respect for self, others and nature, being problem centered and not self-centered, openness to learning, having a purpose in life are some significant aspects to imbibe in life.

In addition we have to continually work for our personal growth. Just having values is insufficient, for we must be motivated to translate our values into action. Self-actualization provides us with the motivation to grow and expand.

Mahatma Gandhi not only advocated but also personally followed the principles of *ahimsa* and disciplined life. Mother Teresa served the poor and down trodden with love, devotion and compassion. Such people recognize and identify their potential and put it to productive use. Self-actualization helps define the person, thus when we say Mahatam Gandhi or Mother Teresa the words '*ahimsa*' and 'devotion' immediately come to our mind.

17.3 RECOGNIZING STRENGTHS OF SELF ACTUALIZED INDIVIDUALS

We find that some people are able to smile even when they face difficult conditions. They have resilience How is this possible? We note that such people are likely to have the following strengths which help them to face their problems and go ahead with their life:

- Self-monitoring or examining own behaviour in relation to self and others.
- Self-acceptance, self-esteem and confidence in self.
- Effective communication skills.
- Positive attitude: coping with failure and learn from mistakes.
- Purpose in life or finding meaning in what they do.
- Set realistic goals and try to achieve them to the best of their ability and skills.
- Flexibility or changing according to the demands of the situation.
- Belief that setbacks are temporary and short-lived and not going to last for ever.
- Relate to others and have deep relationships with others.

17.4 DEVELOPING POSITIVE EMOTIONS

In a previous lesson we learnt about the importance of emotions in everyday life. Here we will learn about the role of positive emotions in health and well-being. Negative emotions are important for survival yet often they create disturbance and interrupt the natural flow of life. Positive emotions are desirable to sustain life activities. Would you not like to be loving than hateful, joyful than fearful, and caring for others than neglecting them? Positive emotions make us feel good, soothe us and provide a sense of comfort. For example, when we appreciate the behaviour of another person, we in turn feel happier, relaxed and have a sense of fulfilment.

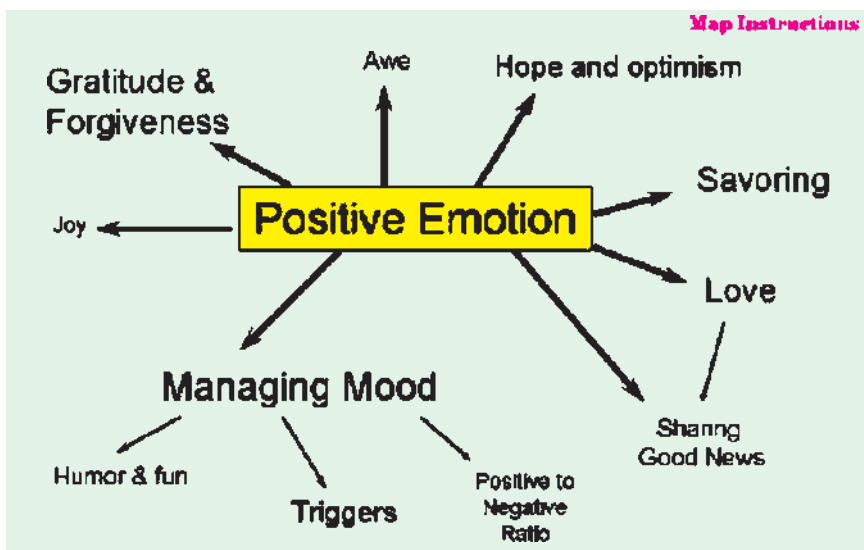


Fig. 17.1: Positive Emotions

A. Positive emotions affect us in two important ways- they **'broaden'** our thinking, physical and social resources, and help **'building'** reserves to draw upon at times of stress and strain. Over time the influence of positive emotions helps because -





- Attention and thinking are broadened and deepened which in turn builds our coping strategies.
- Positive emotions repair the negative effects of negative emotions.
- Enhances mental health and well-being: we show alertness, enthusiasm, determination and energy.
- Helps build personal resources for interaction with others: we make new friends, we share and bond with them.
- Build optimism, tranquility and resilience.
- People who show positive emotions are more likely to feel loved.
- Happy people are more effective and successful in their work.

Activity 5

List the positive emotions you have felt in the last few days and state how they have helped you in evaluating the situation. Also make a list of possible positive emotions. Some examples are: accepting, admirable, beautiful, cheerful, cherish, jovial, sharing, patient, self-reliant, good natured and active.

B. Ways to Promote Positive Emotions

The ways by which we can enhance positive emotions are:

- Do relaxation exercises such as meditation and yoga.
- Find positive meaning in life – reframe negative events and view in a positive light.
- Find happiness and satisfaction in daily life activities.
- Pursue realistic goals so that you get a sense of achievement.
- Undertake activities which you love doing.
- Focus beyond self and help others as this makes you a happier person.
- Show gratitude – when you show gratitude towards others your identity and awareness will be broadened.
- Nurture your spiritual self – people who have a faith system in place are happier. When you join a community/group you are part of a shared belief system which gives you a sense of belonging and provides help in times of stress and strain.

Activity 6

Positive Emotions - The above mentioned effects of positive emotions are important for our health and well being, but can we make them a part of our life? Yes, we can if we develop a positive outlook towards our life. Recall any incident where you failed to achieve your goal. Now read the following statements and try to review negative incidents in a positive light:



- *Each setback teaches me something. What can I learn from this situation? Reframe negative events and view in a positive light*
- *Sometimes things do not work out, that does not mean that I am not capable of achieving anything.*
- *I am going to remember what I have achieved and what I can do. I will acknowledge my losses and failures but not keep brooding over them. I will remember the 90 % of the achievements rather than the 10 % I have not been able to achieve.*



INTEXT QUESTIONS 17.3

1. Explain the term self-actualization. Name people who have achieved this stage.

2. Identify two strengths of a self-actualized person.

3. Explain how positive emotions influence our happiness and well-being.

Quiz 2

Fill in the blanks:

1. The three components of happiness are,, and
2. Happiness depends upon and characteristics.
3. Happy people have high self, good relations and are
4. refers to the development of the individual with all his or her potential.
5. Positive emotions influence our and
6. Positive emotions help and Our resources and coping strategies.



WHAT YOU HAVE LEARNT

- Health, well being and happiness are interrelated concepts that include physical, mental, social and spiritual dimensions.

**Notes**

- Adopting a balanced lifestyle includes good diet, adequate exercise, sleep and recreation and it ensures health and well being.
- Self-actualization is a process through which a person achieves the level he/she is capable of.
- Positive emotions can be enhanced through a balanced routine, realistic goals, helping others and working towards self actualization.
- Happiness is an emotion but also refers to good living and well-being.
- Need satisfaction provides fulfilment yet we must set realistic desires and goals.
- Happy people are physically and mentally healthy, accept themselves, are confident, resilient and have good relations with others.
- Self actualization is a process through which we achieve what we are capable of doing. We have to continually work towards achieving self-actualization.
- Self actualized people monitor their behaviour, accept self, others and nature, have effective communication skills, a positive attitude, purpose in life, set realistic goals, and believe setbacks are temporary in nature.
- Positive emotions influence our health and well-being. Positive emotions help broaden our resources and build coping strategies.

**TERMINAL QUESTIONS**

1. Define happiness and well-being. Explain the significance of leading a balanced life style to achieve happiness and well being.
2. With examples explain the characteristics of self actualized persons.
3. Discuss the ways of developing positive emotions.

**ANSWERS TO INTEXT QUESTIONS****17.1**

1. Happiness, energy, peace with oneself, contentment, etc.
2. Nutrition, exercise, sleep, recreation, etc.

17.2

1. Happiness is an emotions and also refers to living a good life, experiencing well being and enjoying good quality of life. Material resources, cognitive competence, subjective competence.

2. When we desire too many things we are likely to be dissatisfied when these desires are not fulfilled and that leads to unhappiness.
3. Mental and physical health, resilience, confidence, openness to experiences, personal control, good personal relations.

17.3

1. The development of the individual upto his/her full potential. Mother Teresa, Mahatma Gandhi
2. Self monitoring, self acceptance, effective communication skills, positive attitudes, etc. (any two)
3. Broaden our thinking, physical and social resources, help build reserves to draw upon at stressful and strenuous times.

Quiz 1

1. True
2. True
3. False
4. True
5. False

Quiz 2

1. material resources, cognitive competence, subjective competence
2. situational, personal
3. esteem, personal, optimistic
4. self actualization
5. health, well being
6. broaden, build

Web Sites

1. There are various tests of happiness available on the Internet. One important site is 'Authentic Happiness' of Positive Psychology Center, University of Pennsylvania, and connected with Seligman's ongoing research activities. The site also lists various exercises that you can undertake to remain happy. <http://www.authentichappiness.sas.upenn.edu>
2. The website of Tal Ben Shahar contains articles on happiness and provides tips on how to maintain happiness. He tells us how we can keep a balance between work and life. <http://www.talbenshahar.com/>
3. This web site presents the rankings of the worlds happiest countries: <http://thehappinessshow.com/HappiestCountries.htm>



MODULE - V

*Health and Well
Being*



Notes

Hints for Terminal Questions

1. Refer to section 17.1
2. Refer to section 17.3
3. Refer to section 17.4



18

MENTAL DISORDERS AND THEIR TREATMENT

You might have seen some persons displaying different kinds of behaviours at home, school or at public places, for example, checking school bag frequently, roaming on the road in a totally unhygienic condition, or having sweating, increased heart palpitation and upset stomach before an examination. Such kinds of behaviours seem unusual and undesirable to us. It makes us think as to why this person is displaying these kinds of behaviours. In psychology these behaviours are labeled as mental disorders. These develop gradually. There are many factors which lead to mental disorders, including heredity, personality weaknesses, low stress tolerance, childhood experiences, stressful situations and inability to cope.

The situations, which the individual perceives difficult to deal with or cope with, are called stressors. Stress imposes certain demands on the individual which he or she finds excessive and difficult to deal with. Consistent failure in meeting these demands of the stressors creates mental stress in the individual. Thus, in this lesson you will study the nature and sources of stress as a source of disturbed mental health, various kinds of conflicts and frustrations which result from ineffective coping with the stressors, different kinds of mental disorders and their treatment process.



OBJECTIVES

After studying this lesson, you will be able to:

- discuss the nature of stress as a source of disturbed mental health;
- describe the different types of conflicts and frustrations;
- list the main types of mental disorders;
- describe the therapeutic process; and
- explain the process of coping with stress.



18.1 STRESS AS A SOURCE OF DISTURBED MENTAL HEALTH

In today's world stress is a very common human experience characterized by a host of physiological and psychological responses. The traditional definition of stress focuses more on the physiological response of the body. Hans Selye coined the term 'stress' defined it as a non-specific response of the body to any demand on it. The definition of Hans Selye has a physiological basis and it gives more importance to the activities of hormones which are secreted by adrenal and other glands.

Selye conceptualized two categories of stress: a) Eustress, i.e. moderate and desirable stress such as when playing a competitive sport b) Distress which is bad, excessive, irrational or undesirable stress.

The recent approach to stress focuses on the role of appraisal or **interpretation of the situation** in relation to the coping resources available to the individual. The interdependent processes of appraisal and coping determine the relationship between a person's environment and his or her adaptation. **Adaptation** is the process through which people manage their environment to maintain an optimum level of physical, psychological and social wellbeing.

18.1.1 Stressors

Till now you have come to understand the meaning of stress. It is also important to know which objects or events create stress in the individual. Any event or object in the environment that has potential to induce stress in the individual is called a stressor e.g. too many assignments, disaster created by earth quake etc. Stressors can be broadly organized under the following categories:

- (i) **Major Life Events and Changes:** Under this category any event in one's life is considered which has significant and enduring impact on the individual e.g. marriage, retirement or divorce.
- (ii) **Daily Hassles:** Hassles are those irritating, frustrating and distressing demands that the individual encounters in everyday life e.g., misplacing or losing items, having deadlines, getting caught in traffic jams, waiting in lines.
- (iii) **Chronic Role Strain:** Such as in a difficult marriage, dealing with a disabled child or living in poverty.
- (iv) **Traumas:** These are unexpected, horrifying or deeply disturbing incidents which create a significant impact on life e.g. nuclear attack, bomb-blast or death of a loved one.

18.1.2 Common Responses to Stressors

Our responses to stressors can vary widely, ranging from minor sensation to severe behavioural changes. These responses are grouped under the following categories



Notes

(1) Behavioural Responses

- (i) Alcohol/ drug abuse
- (iii) Sleep disturbances
- (v) Restlessness
- (viii) Irritability
- (ix) Impaired speech/ voice tremor
- (xi) Compulsive behaviour
- (xiii) Withdrawal from relationship
- (xv) Frequent crying
- (ii) Fear/Phobia
- (iv) Increased nicotine/caffeine intake
- (vi) Loss of appetite/over-eating
- (viii) Aggression
- (x) Poor time management
- (xii) Low productivity
- (xiv) Increased absenteeism
- (xvi) Untidy appearance

(2) Emotional Responses

- (i) Anxiety
- (iii) Anger
- (v) Hurt
- (vii) Shame/embarrassment
- (ii) Depression
- (iv) Guilt
- (vi) Jealousy
- (viii) Suicidal feeling

(3) Cognitive Responses

- (i) Negative self-concept
- (iii) Low frustration statements
others
- (v) Cognitive distortion
- (ii) Self-assurance
- (iv) Pessimistic view about self and
others

(4) Interpersonal Responses

- (i) Passive/aggressive relationship
- (iii) Competitiveness
- (v) Withdrawn
- (vii) Manipulative tendencies
- (ii) Lying
- (iv) Flattering behaviour
- (vi) Suspiciousness
- (viii) Gossiping

(5) Biological Responses

- (i) Use of drugs
- (iii) Frequent urination
- (v) High blood pressure
- (vii) Dry skin
- (ix) Diabetes
- (xi) Frequent Flu/common cold
- (xiii) Poor appetite
- (ii) Diarrhea/constipation
- (iv) Allergies/ skin rash
- (vi) Chronic fatigue/exhaustion
- (viii) Cancer
- (x) Asthma
- (xii) Lowered immune system

(6) Imagery: Images of

- (i) Helplessness
- (iii) Losing control
- (ii) Isolation/ being alone
- (iv) Accidents/injury



- | | |
|----------------------|--------------------------------|
| (v) Failure | (vi) Humiliation/Embarrassment |
| (vii) Dying/suicide | (viii) Physical/ Sexual abuse |
| (ix) Poor self-image | |



INTEXT QUESTIONS 18.1

1. What do you understand by the term stress?

2. What are the broad categories of stressors?

3. What are the common behavioural responses to stressors?

18.2 TYPES OF CONFLICTS AND FRUSTRATIONS

You should know that an individual becomes stressed when he or she faces obstacles in reaching the goals. This often creates **conflict** and **frustration** in the individual. A conflict becomes more stressful because of the intensity of frustration it involves. The individual generally lands in conflict when he or she faces a mutually incompatible situation. There are three types of conflict which the individual faces depending on the nature of goals and situation. These are

- a. Approach-approach conflict
 - b. Avoidance-avoidance conflict
 - c. Approach-Avoidance conflict
- a. Approach-approach conflict:** This type of conflict occurs when the individual has to choose between two or more desirable goals. In this kind of conflict both the goals are desirable, for example choosing between two marriage invitations on the same evening.
 - b. Avoidance-avoidance conflict:** This kind of conflict occurs when an individual has to choose between two or more undesirable goals. This kind of conflict is often called “caught between the devil and the deep blue sea”. For example a youth with little educational qualification has to choose either unemployment or a low paid disagreeable job. This kind of conflict can create serious adjustment problems because even the resolution of the conflict may bring frustration rather than relief.
 - c. Approach-avoidance conflict:** In this kind of conflict the individual has a strong tendency to both approach and to avoid the same goal. For example a young man may want to marry because of social and security reasons, while at the same

time he fears the responsibilities and loss of personal freedom he feels getting married will involve. This kind of conflict is generally resolved by accepting some negative and positive features of the goal.

Approach-avoidance conflict is sometimes referred to as “mixed-blessing” conflicts because of the involvement of multiple alternatives.

Frustration: Frustration as an experiential state which may result from either a) blocking of needs and motives by some external forces which create hindrance and prevent the attainment of needs or b) by the absence of a desired goal.

Hindrances or obstacles can be both physical and social and create frustration in the individual. These include accidents, unhealthy interpersonal relationships, and death of loved ones. Personal characteristics such as physical handicaps, inadequate competencies, and lack of self-discipline can also be sources of frustration. Some of the common frustrations which often cause special difficulty include delay in getting the desired outcome, lack of resources, failure, losses, and loneliness and mindlessness.



INTEXT QUESTIONS 18.2

1. Explain the term conflict. Discuss various types of conflicts.

2. Explain the term frustration.

18.3 TYPES OF MENTAL DISORDERS

While coping with the demands of stressors the individual generally follows problem-focused or emotion-focused coping strategies. In problem-focused coping the individual uses his/her intellectual resources to deal with stressful situation and often reach an effective solution. In the case of emotion-focused coping the individual displays emotional behaviour in dealing with the stressful situation e.g. crying. However, if the individual fails to deal with stressors he/she may turn to defense oriented coping strategies which if repeated very frequently can create various kinds of mental disorders. Defense-oriented behaviour does not deal with the situation, but uses methods to justify own actions.

Like physical ailments there are various types of mental disorders. The list of these disorders ranges from minor anxiety to severe kinds of disorders such as schizophrenia. Diagnostic and Statistical Manual (DSM) of mental disorders published by American Psychiatric Association mentions various types of mental disorders. The branch of psychology which deals with these disorders is called abnormal psychology.





A. Disorders of Childhood

It may be quite surprising to you that children can also develop some psychological disorders. DSM-IV-TR deals with various kinds of childhood disorders usually first diagnosed during infancy, childhood, or adolescence. Some of them are Attention-deficit hyperactive disorder (ADHD) where the child has problems in paying attention or is extremely over-active and Autistic disorder are where the child is withdrawn, does not smile and has delayed language development.

B. Anxiety Disorders

You might have experienced fear and apprehension in your life. However, if somebody persistently becomes fearful, apprehensive, and anxious without any appropriate reason you may call this person as having anxiety disorders. There are different kinds of anxiety disorders in which the feeling of anxiety manifest in different forms. Some of these disorders are phobia or extreme and irrational fear of something and obsessive-compulsive disorder where the person has repetitive thoughts or has to do actions repeatedly

C. Mood Disorders

The person who suffers from a mood disorder experiences these emotions for a long period of time in a restricted way, remains fixed at one emotion or fluctuates on the ranges of these emotions. For example a person can be sad for days together or he/she can be sad one day and happy the other day regardless of the situation. Thus depending on the behavioural symptoms of the person mood disorders are of two types- (i) depression and (ii) bipolar disorder. We will now try to understand the meaning and symptoms of these two disorders.

Depression is a mental state characterized by sadness, loss of interest and pleasure in routine activities, disturbances in sleep or loss of sleep, poor appetite (weight loss) or increased appetite (weight gain), being lethargic, feeling of guilt, worthlessness, helplessness, and hopelessness, difficulty in concentration, and negative thinking about self and others. If a person has these feeling for at least two weeks he or she may be called a depressive person and for his/her treatment immediate clinical intervention is required. Bipolar disorder is characterized by alternating phases of depression and excitement or mania.

D. Psychosomatic and Somatoform Disorders

Diseases which are very common nowadays such as high or low blood pressure, diabetes, hypertension are physical illnesses but these are due to psychological causes like stress and anxiety. Hence *psychosomatic disorders* are those psychological problems which have physical symptoms but psychological causes. In the term psychosomatic the meaning of psyche is mind and of somatic is body. Contrary to this *somatoform disorders* are those disorders which are characterized by physical



symptoms that do not have any known, identifiable biological causes. For example a person may complain for stomach pain but for this stomach pain there is no problem with the particular organ (stomach) of the body.

E. Dissociative Disorders

You must have seen many movies in which the hero of the movie, after a traumatic event, is unable to recall his previous identity, the past events and the people around him. In clinical psychology such kind of problems are called dissociative disorders in which the personality of the individual becomes dissociated or separated from the rest of the world.

One of the categories of dissociative disorder is *dissociative amnesia* in which the person is unable to recall important personal information usually after some stressful episode. The other category is *dissociative fugue* in which apart from the memory loss the person also assumes a new identity. Another is *depersonalization disorder* in which the person suddenly feels changed or different in a strange way. The person feels that he has left his body or his movements have suddenly become mechanical or dreamlike. However, the most serious dissociative disorder is *multiple personality disorder* or *dissociative identity disorder* in which several distinct personalities emerge in the same individual at different time.

F. Schizophrenia and Other Psychotic Disorders

You may have seen some individuals on roadside in very dirty clothes, eating the unhygienic food spillover around the garbage and talking and behaving strangely. They have very poor orientation about person, place and time. We often call them mad, insane or so on. However, in the language of clinical psychology they are called schizophrenics. Schizophrenia is a psychological disorder characterized by disturbances in thought, emotion, and behaviour. Schizophrenics have incoherent thinking; faulty perception, disturbances in motor activity, and flat or inappropriate emotions. They withdraw from people and reality; often into a fantasy world of delusions and hallucinations.

Hallucination is characterized by false sensory perceptions in the form of seeing something which is physically not there, hearing some voices that are actually not there. Delusions are false beliefs about reality. Such beliefs distort their relationship with others. Schizophrenia is of many types, such as catatonic schizophrenia.

G. Personality Disorders

Personality disorders have their roots in early childhood when some children develop inflexible and maladaptive patterns of thinking and behaving. This takes the form of different kinds of personality disorders ranging from harmless avoidant ones to coldblooded serial killers. The range of personality disorders has been classified in three clusters. The first cluster is characterized by odd or eccentric behaviour; anxiety



and apprehension is the characteristic feature of second cluster; and the third cluster is characterized by dramatic, emotional, or erratic behaviour. Under the first cluster paranoid, schizoid, and schizotypal personality disorders are included. In the second cluster dependent, avoidant, and obsessive personality disorders are described. Antisocial, borderline, histrionic, and narcissistic personality disorders constitute the third cluster.



INTEXT QUESTIONS 18.3

1. Identify and explain the two types of anxiety disorders.

2. What do you understand by depression?

3. What is the difference between psychosomatic and somatoform disorders?

4. Discuss the major symptoms of Schizophrenia.

5. What do you understand by the term ‘personality disorders’?

18.4 PSYCHOTHERAPEUTIC PROCESS

In order to deal with any kind of mental disorders there is a certain **psychotherapeutic** process used to help the individual. The person who designs psychotherapeutic program is a trained individual and is known as **clinical psychologist** or **psychotherapist**. The person who requires treatment is known as client. Psychotherapy is often called “the talking cure” as help is provided through interpersonal contact. medicines can only be given by a psychiatrist who is a medical doctor with further specialization in mental disorders.

There are various kinds of psychotherapeutic approaches which are based on theories about the causes and development of abnormal behaviours. These are psychoanalysis, behaviour therapy, cognitive-behaviour therapy, client centered therapy etc. Psychotherapy is a plan of intervention designed keeping in mind the nature and severity of mental disorders.

The steps in psychotherapy include:

- (i) *Rapport formation*: The psychotherapist builds a good and working relation with the client so as to ensure cooperation.

- (ii) *Preparation of case history*: The history of the particular disorder is prepared targeting the adjustment pattern of the client with family, friends, social and occupational set up.
- (iii) *Determination of the problem*: After preparing case history the psychotherapist identifies certain key problems which require urgent attention. This is achieved through administration of clinical tests and interview.
- (iv) *Therapeutic Session*: Depending on the nature and severity of the problem the psychotherapist conducts session with the client with a focused treatment plan. Progress after each session is monitored and assessed, and further interventions are modified if necessary.
- (v) *Termination of Therapeutic Intervention*: Once it is confirmed that the sessions have yielded the desired outcome set by the psychotherapist then it is terminated. The client and the family members are asked to follow the suggestions at home and if required the client is asked to visit the psychotherapist again.



INTEXT QUESTIONS 18.4

1. What is psychotherapy?

2. Explain the main steps in the process of psychotherapy.

18.5 PROCESS OF COPING WITH STRESS

As already explained in the previous section, the individual while coping with stressors generally follows two mechanisms namely **Task-oriented coping** and **defense-oriented** or emotion-focused coping.

Task-oriented coping are aimed at realistically coping with the adjustive demands posed by the particular stressor. These are based on an objective appraisal of the stressful situation on a conscious and rational level and taking a constructive course of action. This kind of coping can fall into any of the three categories such as **attack**, **withdrawal**, and **compromise**.

- (i) In case of **attack** the individual directly confronts with the situation. He/she assesses the feasibility of the coping resources available to him/her. He/she chooses the most promising course of action to deal with the stressor and in the course of dealing with it maintains flexibility and shifts approach if it does not seem to be





Notes

working. He/she also develops new coping resources as per the situational requirement by searching out new information, developing new competencies or improving existing ones. An example of attack reaction would be when a student plans revision much before a difficult exam.

(ii) In the case of **withdrawal** reactions the individual admits defeat at the first instance if the situation is too difficult to handle or he/she has used inappropriate strategy. He/she may physically or psychologically leave the stressful situation. He/she may also redirect his/her effort toward a more appropriate goal. An example of withdrawal is when one friend rejects you repeatedly, you withdraw and try to make friends with another person.

(iii) During **compromise** the individual may accept a substitute goal if he/she feels that the original goal cannot be obtained. This kind of reaction generally occur when the individual reassess his/her abilities and accordingly lowers his/her level of aspiration. It also reflects the accommodative nature of the individual while coping with the adjustive demands of the stressful situation. For example a child who does not do well in a particular subject, but gets very high marks in other subjects, tries to accept the fact.

Emotion-focused or defense-oriented coping is not helpful because the person is not moving towards any solution, but only using methods to make himself/herself feel comfortable. An example of defensive methods is rationalization, such as reasoning that all the students have failed as the paper was very difficult. Another example is displacement, when you 'displace' the anger you are feeling for a strict teacher by scolding or hitting your younger brother.

It is important to understand that in order to deal and cope effectively with stress, one should adopt a healthy life-style. By using positive thinking, emotions and actions, not only can we deal with stress in a better way, we will be far happier, leathier and more productive in our lives. You have already studied about health in lesson 17, and you will read more details in lesson 19 and 24.



WHAT YOU HAVE LEARNT

- The behaviours which are uncommon or unusual are labeled as abnormal behaviour. The individual develops these behaviours gradually in particular situations which he finds difficult to deal with.
- The situations which the individual perceives difficult to deal with or cope with, are called stressors. They impose certain demands on the individual which he or she has to fulfill. Failure in meeting those demands of the stressors may lead to mental disorders in the individual. Genetic and biological factors are also very important.

- Stress is defined as a non-specific response of the body to any demand on it. There are two categories of stress, namely good or desirable stress (eu-stress) and bad or undesirable stress (distress).
- The recent approach to stress focuses on the role of appraisal of the situation in relation to the coping resources available to the individual.
- Behavioural, Emotional, Cognitive, Interpersonal, Biological, and Imagery reactions are common responses to stressors.
- There are three types of conflict which the individual faces depending on the nature of goals and situation. These are Approach-approach conflict, Avoidance-avoidance conflict, Approach-Avoidance conflict
- Frustration as an experiential state often results from either blocking of needs and motives by some external forces which create hindrance and prevent the attainment of needs or by the absence of a desired goal.
- There are various categories of mental disorders. The list of these disorders ranges from minor anxiety to severe kinds of disorders such as schizophrenia.
- In order to deal with any kind of mental disorders there is certain psychotherapeutic process which are used to cure the individual suffering from mental disorders. The person who gives psychotherapy is a trained individual and is known as clinical psychologist or psychotherapist. The person who requires treatment is known as client.
- There are various kinds of psychotherapeutic techniques which have been developed following sound theoretical frameworks which describe the causes and development of abnormal behaviours. These are psychoanalysis, behaviour therapy, cognitive-behaviour therapy and client centered therapy.
- The individual, while coping with stressors, generally follows two mechanisms namely task-oriented coping or defense-oriented coping.
- Adopting a healthy life-style with positive thoughts, feelings and actions is the best way of coping with stress.



TERMINAL QUESTIONS

1. Define stress. Identify the major stressors in the life of a student, and the usual responses to them.
2. Explain how conflicts and frustration lead to stress.
3. Identify any 5 mental disorders and describe their main symptoms.
4. Discuss desirable ways of coping with stress.



**ANSWERS TO INTEXT QUESTIONS****18.1**

1. Nonspecific response of the body to any demand on it.
2. Major life events and changes, daily hassles, chronic role strain, traumas.
3. Alcohol/drug abuse, restness, initalbility, aggression etc.

18.2

1. Conflict refers to the difficulty in choosing between two or more goals:
 1. Approach - approach
 2. Avoidance - approach
 3. Avoidance - avoidance
2. Experiential state which may result from (a) blocking of goals or (b) absence of desired goal.

18.3

1. Phobia, obsessive - compulsive disorder
2. Mental state characterised by sadness, loss of interest and pleasure, loss of sleep etc.
3. Psychosomatic disorders are psychological disorders having physical symptoms but psychological causes.

Somatoform disorders are characterised by physical symptoms without identifiable biological causes

4. Incoherent thinking, faulty perception, disturbance in motor activity, flat or inappropriate emotions.
5. Inflexible or maladaptive patterns of thinking and behaving are developed.

18.4

1. Therapy provided through interpersonal contact. Also called “Talking cure”
2. Rapport formation, preparation of case history, determinaton of the problem, therapeutic session, terminaton of therapeutic intervention.

Hints for Terminal Questions

1. Refer to section 18.1
2. Refer to section 18.2
3. Refer to section 18.3
4. Refer to section 18.5



19

MENTAL HEALTH AND HYGIENE

You may be quite aware about the term ‘health’. We generally understand it in terms of effective physical condition or functioning of the body. When we use the concept of health with reference to mind we use the term ‘mental health’. In fact we need both physical as well as mental health. You must be aware that body can only function well when the condition of mind is balanced and healthy. In this lesson you will learn about the meaning of ‘mental health’ and ‘hygiene’. You will also learn about the behaviours and practices which indicate poor mental health as well as those which promote good health. Finally, you will learn some effective strategies to manage time so as to get optimum results.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the concepts of mental health and hygiene;
- distinguish mental health from mental ill-health and mental illness;
- explain behavioural symptoms of poor mental health;
- describe health behaviours which sustain good health; and
- learn strategies for time management.

19.1 CONCEPTS OF MENTAL HEALTH AND HYGIENE

Health is often used to refer to a state of physical, mental, social and spiritual well-being of the individual. Thus, mental health is one of the components of the broad concept of health. It is concerned with an optimum level of emotional and behavioural adjustment of the individual. It is a state of maintaining harmony or balance between the needs, desires, aspirations and attitudes of the individual with respect to the prevailing conditions in the external environment.



The term *mental hygiene* is closely related to mental health. We use the term hygiene to refer to keeping oneself and one's living and working areas neat and clean in order to prevent illness and disease. When we extend this concept to the domain of mind it stands for the art of developing, maintaining, and promoting necessary behavioural, emotional, and social skills to sustain good, effective and efficient mental health. One can achieve this by following some basic strategies at mental and behavioural levels in one's daily life. These are as follows:

- A. Reality Contact:** In order to maintain good and sound mental health it is important to have a realistic appraisal of one's own reactions, emotions, and abilities. If you are in touch with reality you may be able to avoid a number of disappointments and frustrations in your daily life.
- B. Impulse Control:** A person with healthy adjustment would have good control over his/her behaviours and impulses. So in order to maintain good mental health it is necessary that you should be in complete control over your impulsive behaviours.
- C. Self-Esteem:** The awareness about oneself is called self-concept. It includes all the statements about "I" or "me" expressed in terms of feelings, beliefs and values. Thus self-concept is sum total of all that a person is aware about his or her own self. Self-esteem is the evaluative component of self. The personal evaluation of self could be either positive or negative. A sense of personal adequacy or positive self-concept is essential for mental health.
- D. Positive Thoughts:** The quality of mental health depends on whether we direct our thoughts in positive or negative ways. Negative thoughts generate negative emotions such as anger, hate, jealousy, fear, and despair. The effect of such negative emotions on our mind is unhealthy. They also harm the endocrine system. Therefore in order to maintain good mental health, we need to develop the power of positive thinking which generates positive emotions such as love, joy, happiness, hope, compassion, empathy, and optimism in us. Such emotions strengthen our capacity to cope with various life challenges.

Activity 1

Assess Your Mental Health

It may be quite interesting for you if you are asked to assess your mental health by just responding to some statements dealing with your daily life activities. These statements are given below. Each statement is followed by three alternatives namely "agree", "uncertain" and "disagree". After reading each statement, please decide whether you "agree", or "disagree" with it. It may also happen that you may not be able to decide whether you agree or disagree with a particular statement. In that case you are free to choose the alternative "uncertain". In order to express your view please encircle (O) which will best indicate your way of thinking and behaving.



Notes

	Agree	Uncertain	Disagree
1. I am satisfied and happy with my life.	3	2	1
2. My life is very happy.	3	2	1
3. Even when I am with the members of my family, I feel lonely	1	2	3
4. I am confident about my abilities	3	2	1
5. I have not been able to achieve as much as I want to.	1	2	3
6. I am not as adequate and competent as others are.	1	2	3
7. I am very intelligent and competent.	3	2	1
8. I do not want to mix up with others.	1	2	3
9. People are generally selfish.	1	2	3
10. I have no zest for living.	1	2	3
11. I generally trust people and have no problem in getting along with them.	3	2	1
12. I experience a sense of well-being.	3	2	1
13. I get enough love and satisfaction from my family and others.	3	2	1
14. I am generally able to solve my problems when I encounter them. I do not remain in conflicting situation.	3	2	1
15. I have no goal in life. Life just drags on.	1	2	3

Key

After giving your view on each statement, add the score of all the alternatives you have chosen. The total of all the 15 items is your mental health score.

Interpretation

Obtained Score	Your Mental Health
36-45	Good
26-35	Fair
15-25	Poor

**INTEXT QUESTIONS 19.1**

1. What do you understand by the term health?

2. Explain the relationship between mental health and mental hygiene.

3. What strategies can we adopt to maintain good mental health and hygiene?

19.2 MENTAL HEALTH, MENTAL ILL-HEALTH AND MENTAL ILLNESS

In order to understand mental health in a better way you are also required to know the meaning of mental ill-health and mental illness. *Mental ill-health* is defined as the absence of the qualities of positive mental health in the individual. For example if someone among you often displays negative feelings and attitudes about others, you can assume that this person is displaying the characteristics of mental ill-health. *Mental illness* is a broad term which includes almost all the disorders of behaviour which are caused by faulty perception, emotion, thinking and attitude. Such individuals have problems in making adjustment with others in the society. We will discuss the categories of mental illness in lesson.

**INTEXT QUESTIONS 19.2**

1. What is the difference between mental ill-health and mental illness?

19.3 INDICATORS/SIGNS OF POOR MENTAL HEALTH

As human beings we are required to maintain sound mental health. However, we develop certain behaviours and habits which can lead to a poor state of mental health. Such behaviours range from mild irritation to severe forms of anxiety and depression. The main behaviours which indicate poor mental health are as follows:

- (i) Haphazard and disorganized daily life routine.
- (ii) Short-tempered and irritating behaviour.

- (iii) Anger and aggressive behaviour.
- (iv) Restlessness.
- (v) Increased or poor appetite and indigestion.
- (vi) Irregular sleeping pattern such as insomnia, disturbed sleep, or narcolepsy (excess sleep).
- (vii) Poor interpersonal relationships.
- (viii) Anxiety and worry.
- (ix) Negative attitude toward self and others.
- (x) Withdrawing from relationships.
- (xi) Irregular and abnormal physiological conditions (e.g., blood pressure, heart palpitation, and pulse rate).
- (xii) Excessive use of drugs (e.g., alcohol, tranquilizers, and hallucinogens).
- (xiii) Cigarette smoking and use of tobacco in other forms.

The above may cause threat to mental health. If an individual is frequently involved in such behaviours or remains in a particular state for a long period then it is more likely that (s)he may develop various kinds of mental disorders.



INTEXT QUESTIONS 19.3

1. Give any four signs of poor mental health.

2. Which behaviours of a person sustain good health?

19.4 BEHAVIOURS WHICH SUSTAIN GOOD HEALTH

In modern life scientific and technological advances have created many facilities for comfort. However, if we develop dependency on them, our lifestyle becomes very sedentary and fragile. In order to overcome the risks involved in such a life we should observe certain precautions and engage in behaviours which promote and sustain good health. Ayurveda, the science of Indian medicine, deals with four aspects of lifestyle which can ensure good health in us. These include right food (*Ahara*), right recreation (*Vihara*), right routine (*Achara*), and right thinking (*Vichara*). Observing certain practices ensures a healthy and happy life. Let us examine each of these aspects in some detail.





(i) **Food (Ahara):** Food is the most important aspect of life. Compared to non-vegetarian food vegetarian food is safe and invigorating for a healthy body. For better health one must eat fresh fruits and vegetables with enough fiber content. Oily, spicy, junk and processed food causes obesity, hypertension, heart disease, diabetes, gastric ulcer and even cancer. Our daily food should contain green vegetables, fresh fruits, beans, honey, curd, milk, butter oil which provide enough of vitamins, minerals, iron, antioxidants and fibers. In addition there should be a balanced proportion of each category of food in our daily intake. We should also maintain fixed meal times. Chewing food properly and eating in controlled manner are good for health.

(ii) **Routine (Achara):** Routine consists of three kinds of activities in which an individual indulges in. These are taking food and doing activities as per the seasonal demands called *Ritucharya*. It means taking food and doing activities in accordance with seasons. We must eat and act according to the characteristics of seasons. Thus in summer we should take light food containing little oil but plenty of fluids such as curd, fruit juice, rice curry and beans. During the winter and autumn seasons sweet and salty food can be taken in larger quantity such as milk products, vegetable soup, ghee, rice and oily food. During the spring season light food with less content of oil should be taken such as preparation containing gram and rice. During the rainy season food with astringent, acidic, salty and sweet taste are taken.

Day routine (*Dincharya*) and night routine (*Ratricharya*) refer to eating and doing activities according to the time of day and night. One should get up early in the morning before sunrise. Drinking water should be the first act after waking. It ensures smooth excretion of body waste, and is a sure remedy for constipation. After excretion of feces and cleaning of teeth, massage of the body should be done before taking bath. Thus there should be proper time for each and every activity in the cycle of twenty four hours.

(iii) **Recreation (Vihara):** Doing exercise and morning walk are the most important components of recreation. It makes the body light and strong. It increases the immunity, resistance power of the body and capability to work. During exercise toxins of the body are excreted with perspiration. It increases the appetite of the individual. The health problems such as heart disease and diabetes are also controlled by daily exercise. Exercise delays the ageing process and prevents impotence. It helps in purifying blood as the increased intake of oxygen and expulsion of carbon dioxide helps removal of dead cells from the body. Recreational activities like music also help in maintaining good health.

(iv) **Thinking (Vichara):** Sound and positive mental health can only be maintained with right kind of thinking. A person who is mentally fit and healthy has self-satisfaction, accommodative intellect, ability to accept criticism, understanding of the emotional needs of others, and self-control. Such individuals are neither

driven by greed or lust nor dominated by fear, anger, attachment, jealousy, guilt or worry. On the social front an individual with positive thinking enjoys good friendships and earns respect from everybody.

Thus an individual can maintain a sound, healthy and happy life if (s) he follows the above health promotive behaviours.

Activity 2

Briefly describe the principles of health promotion that you should follow. Compare with the test you have taken in Section 19.1. What steps will you adopt to promote your health.

19.5 STRATEGIES FOR TIME MANAGEMENT

You know that we have only twenty-four hours in a day to perform all the activities. We generally fail to organize activities according to the time available. This creates a lot of pressure, tension and frustration. This happens because we do not allot a fixed time for any activities. This habit often results in doing inappropriate activity at an inappropriate time. Hence it is very important to prioritize activities and organize them according to available time. This we can do by scheduling the activities of twenty-four hours in order of priority and importance. The structured routine is called *activity schedule*. Before preparing an activity schedule we are required to make a list of activities which are supposed to be done during the twenty-four hours. Thereafter we should sequence these activities in terms of importance. For example the time for study, play, and sleep should be properly arranged. In addition to activity schedule, listing of activities in a diary and following it up can also be a good technique of time management. In order to make it clear let us discuss the basic principles of time management one-by-one.

Manage Your Time

Activity		Strategy
I	Preparing a list of work	You can plan it one day in advance at night. Try to prepare a list of work you have to accomplish next day. Identify and list all that you have to do.
II	Prioritize the list	From the list you have prepared for the day, prioritize the work. Put the toughest task first and keep the easiest task for the later part of the day, when you are tired and low on energy. Take best advantage of the hours when you work best.





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III	Identify uninterrupted periods	Some tasks may require sustained attention and uninterrupted periods. Keep such tasks for periods when you can devote time without any interruption.
IV	Flexible schedule	You should be prepared to face events that are not planned and you did not expect them. Thus, be flexible to handle such unexpected events.
V	Time of exercise	Set aside some time in your daily schedule for exercise and yoga. Time spent on such activities helps to maintain good mental and physical health and results in increased productivity.
VI	Leisure time activities	Set aside some time each day or work to do some planned leisure activity. It gives mental and physical rest and break from the daily routine. For example, listening to music, watching favourite programme on television, gardening, painting, playing favourite sports etc.

Activity 3

Managing Time

Make a time-table of your daily activities. Now list the ways you can manage your time in a more efficient way.



WHAT YOU HAVE LEARNT

- The term health refers to a state of physical, mental, social and spiritual well-being of the individual. Mental health is one of the components of the broad concept of health. It is concerned with an optimum level of emotional and behavioural adjustment of the individual.
- The term *mental hygiene* refers to keeping oneself and one's living and working areas neat and clean in order to prevent illness and disease. When we extend this concept to the domain of mind it stands for the art of developing, maintaining, and promoting necessary behavioural, emotional, and social skills to sustain good mental health.

Mental Health and Hygiene

- *Mental ill-health* is defined as the absence of the qualities of positive mental health in the individual. *Mental illness* is a broad category which includes all the disorders of behaviour which are caused by faulty perception, emotions, thinking and attitude.
- Ayurveda, the science of Indian medicine, deals with four aspects of lifestyle which sustain good health in us. These are food (*Ahara*), recreation (*Vihara*), routine (*Achara*), and thinking (*Vichara*). Observing certain practices related to them ensures a healthy and happy life.
- We generally fail to organize activities according to the time available. This creates a lot of pressure, tension and frustration. A structured routine involves making an activity schedule.



TERMINAL QUESTIONS

1. What are the main strategies to achieve the state of good mental hygiene?
2. Describe the indicators of poor mental health.
3. Describe any three strategies of time management.



ANSWERS TO INTEXT QUESTIONS

19.1

1. State of well-being, mental health is part of health and deals with optimization of emotional and behavioral development.
2. Mental hygiene refers to relevant behavioral, social skills for restoring mental health.
3. Reality context, impulse control, self-esteem and positive thoughts are the main strategies.

19.2

1. Mental ill health refers to absence of positive mental health and mental disorders involve disorders caused by faulty psychological functioning.

19.3

1. Disorganised daily life routine, irritations, and aggressive behaviour, disturbed sleep, anxiety, negative attitude towards others, withdrawal, abnormal physiological conditions, excessive use of drugs and smoking.

MODULE - V

Health and Well Being



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*Health and Well
Being*



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2. *ahara, vihara, achara, vichara.*

Hints for Terminal Questions

1. Refer to section 19.1
2. Refer to section 19.3
3. Refer to section 19.5

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APTITUDE, INTEREST AND JOB REQUIREMENTS

One of the important areas of psychology is to study individual differences in various attributes. We differ not only in physical appearance but also in our habits, feelings, personality, thoughts, and behaviours. Some persons are very friendly, others are shy, some are outgoing, others are reserved. Some like to watch cricket, others want to watch some movie or listen to some music or enjoy dancing. Some want to become doctors and some engineers/teachers/craftsmen/tailors and so on.

Thus it is clear that there are several ways in which we differ. In this lesson we are concerned with the ways in which people differ in their aptitudes, interests and abilities and how these determine our important decisions in life such as selection of courses of study or choice of a job.

Effective educational, personal and vocational decisions demand knowledge of individual differences. Psychologists use various assessment procedures to measure psychological traits to help persons choose careers according to their aptitudes and interests, keeping in mind the requirements of specific job.



OBJECTIVES

After studying this lesson, you would be able to:

- explain the concept of aptitude and its role in making educational and vocational choices;
- describe interest and its role in making choices;
- explain the different approaches for understanding ability; and
- describe various tests and techniques to assess psychological attributes.

**Notes****20.1 APTITUDE**

We often hear people remark that a particular child has a talent or gift for music, art or painting. This is what is implied by aptitude. An aptitude therefore is a special potential in a certain field of performance. It indicates a special ability, acquired or innate, to learn or develop knowledge of a skill in some specific area. It involves prediction of the probability of success of a person with training in a certain type of work/job/vocation. The aptitude of an individual is the result of both inherent and the environmental factors. An aptitude is more than mere potential ability. It involves the following:

- Readiness to acquire some skill or knowledge.
- Ability to acquire those skills/knowledge.
- Ability to derive satisfaction from those activities.

So aptitude refers to a combination of characteristics that indicate an individual's capacity to acquire some specific knowledge or skill after learning. Knowledge of aptitude can help us to predict an individual's future performance. With proper training these abilities can be enhanced. Aptitude can be assessed. Aptitude tests are available in two forms – specialized aptitude tests and general aptitude tests. Example of specialized aptitude tests are Mechanical Aptitude Test and Musical Aptitude Test. Multiple aptitude tests exist in the form of Test Batteries, which measure aptitude in several separate but homogeneous areas. Differential Aptitude Tests (DAT) and General Aptitude Tests Batteries (GATB) are well known Test Batteries.

**INTEXT QUESTION 20.1**

1. What do you understand by the term 'aptitude'?
-

20.2 INTEREST

Interest may be defined as a tendency to choose one activity in preference to another, or to seek out an activity or object. It implies preferences or likes and dislikes for specific activity or a group of specific activities such as lawyer, physician, engineer, musician, artist etc. Interest is generally manifested in the way one likes to spend one's leisure time. Interest is a preference for a particular activity. Interest provides emotional pleasure. Hobbies are based on interests. In a broad sense interests can be classified in two categories: Extrinsic interests and Intrinsic interests.

Aptitude, Interest and Job Requirements

If the emotional pleasure of the interest area is attached to the activity, it is intrinsic interest. Liking an activity without any reward is intrinsic. If the emotional pleasure is attached to some reward and praise, it implies extrinsic interest. Liking or doing any activity for some reward or money implies extrinsic interest.

Various techniques have been developed to measure interests. They include self ratings, interviews, questionnaires, checklists and inventories. Interest inventories have been primarily used in vocational and educational guidance. They are more satisfactory in some ways than interviews because a large number of specific questions representing a broad range of careers or subject areas are used. A typical interest inventory consists of a list of activities to each of which an individual responds by indicating whether he or she likes/dislikes or is indifferent by indicating preferences. Strong Vocational Interest Blank (SVIB) and Kuder Preferences Record are some well known inventories/records for measuring interest.



INTEXT QUESTION 20.2

1. Why do you think that intrinsic interest will lead to a better match between job and an applicant's personality?

20.3 ABILITY

Ability, commonly known as intelligence, represents one of the most important sources of individual differences. Ability is the innate capacity to act and helps in the solution of a problem. Environment can develop abilities but cannot produce them within the person. Abilities help to accumulate knowledge but those should not be confused with knowledge itself. These abilities increase efficiency in the person.

Intelligence is an important ability. A great deal of research has been done in constructing tests and techniques to assess intelligence. There are various approaches to conceptualize intelligence. Initially it was limited to cognitive or intellectual domain only. The contemporary view, such as given by Gardner, is that there are multiple intelligences and people can have intelligence in cognitive, musical, kinesthetic (bodily) interpersonal and other areas.

20.4 MENTAL AGE AND IQ

Mental ability is developmental in nature. It increases with age. Therefore, psychologists have developed age related scales. Each scale comprises a series of

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questions which are normally answered correctly by a majority of children of that age. For example, the five year old scale is what most five year olds could pass comfortably (as well as all children over five), but which most four year olds could not. Hence a child passing the five year old scale would have mental age of five. The concept of mental age by itself it does not tell us how bright, average or dull the child is. To establish this, we must compare the child’s mental age with his actual or chronological age. For this purpose the concept of IQ is introduced. Intelligence Quotient (IQ) is a ratio of mental age and chronological age multiplied by 100.

$$IQ = \frac{\text{Mental Age (MA)}}{\text{Chronological Age (CA)}} \times 100$$

It may be noted here that where MA and CA are the same, IQ is 100 (which by definition is average), where MA is greater than CA, IQ is over 100 or above average, and where CA is greater than MA; IQ is below 100 or below average. However, the concept of MA does not apply beyond 18 years, since mental ability is usually fully developed by that time. Therefore the concept of IQ is not meaningful beyond the age of 18 years. The current practice is to create a profile of a person in different types of abilities and tasks instead of one single assessment score.



INTEXT QUESTIONS 20.3

1. What is the difference between mental age and IQ?

2. What do you understand by ability?

20.5 IMPORTANCE AND RELATIONSHIP AMONG APTITUDE, INTEREST AND ABILITY

It is important to make job decisions consistent with one’s abilities, aptitudes and interests. These concepts are also related to choices of study in different grades or different stages of education, co-curricular activities, hobbies, learning some special skills and so on. Choice of career is a very important decision for a person. The right career decision brings happiness and job satisfaction. Therefore job decisions need to be made in the light of accurate, reliable and up to date information, regarding the requirements of the job and about the individuals intelligence, aptitudes, and interests.

20.6 ANALYZING AND COMMUNICATING JOB REQUIREMENTS

Job descriptions serve several purposes. A job description aims to inform the

Aptitude, Interest and Job Requirements

applicants about what an employer wants them to do and the knowledge and skills that they will need to bring to the job in terms of aptitudes, interests and abilities to perform a job. It serves its purpose when it attracts the right applicants with right aptitude. The job descriptions mainly provide information on the nature of work, the salary and other benefits, work timings and holidays, as well as the kind of intelligence level, aptitude and interest required. For example, the job of a school teacher would require good communication skills, patience, aptitude in teaching and managing the class and certain educational qualifications. The job description would also include details of school timings, holidays and salary. If an applicant finds that he or she has the required qualifications, aptitude and interest, he/she could take the decision to become a teacher.

In the next chapter you will learn more about how to decide on a career path.



INTEXT QUESTIONS 20.4

1. What is the outcome of right career decision?

2. What is the purpose of job description?



WHAT YOU HAVE LEARNT

- It is important to understand the individual's aptitudes, interests and abilities and to match them with job requirements.
- The knowledge of individual differences can be gained through the assessment of aptitudes interests and abilities.
- An aptitude is a special ability in a certain field of performance. It is the result of inherent and environmental factors.
- Aptitude tests results are useful in the educational and vocational guidance.
- Interest may be defined as a tendency to choose one activity in preference to another.
- Intrinsic interests are real and natural interests while extrinsic interests are acquired and outward interests.
- Interest helps in educational and vocational guidance in the selection of subject areas or streams or courses.
- The data from interest inventories should be supplemented by ability and aptitude tests as well as with individual's attitude towards occupational experiences, co-curricular activities or recreational pursuits.

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- Ability is commonly known as intelligence. It represents one of the most important sources of information about an applicants suitability for a particular job.
- Job requirements include information about the nature of work, salary, work conditions, timings, and also about the abilities, aptitude and interest required for success in the job.

**TERMINAL QUESTIONS**

1. What is an aptitude? Describe one aptitude test and indicate its use.
4. What is an interest? How does interest help in selection of proper subjects and career?
3. Briefly discuss the concept of ability and describe the current view of intelligence.
4. Describe the role of aptitudes, interests and abilities in making educational and vocational choices.

**ANSWERS TO INTEXT QUESTIONS****20.1**

1. It is a special ability and helps predicting future performance.

20.2

1. It involves liking for specific activity itself.

20.3

1. Mental age refers to age related mental maturity in a normative sense whereas IQ refers to the ratio of mental age and chronological age.
2. Innate capacity to act.

20.4

1. Happiness and job satisfaction.
2. It provides the information about nature of job, salary and working conditions etc.

Hints for Terminal Questions

1. Refer to section 20.1
2. Refer to section 20.2
3. Refer to section 20.3
4. Refer to section 20.5



THE WORLD OF ORGANIZATION

In today's world an individual alone can not achieve all the desired goals because any activity requires contributions from many persons. Therefore, people often get together and work to achieve a common goal. For this purpose coordination and systematic approach is needed. Such a group of people is called an 'association'. You must have seen in your locality where two or more people get together and start a business of their own. This is an example of a small organization whereas large factories with thousands of employees are examples of large organizations. Every organization has its own norms because it works as a system. This lesson will help you to know about the key features of organizations' and familiarize you with the world of organizations.



OBJECTIVES

After studying this lesson, you will be able to:

- describe organization as a system;
- explain organizational climate; and
- analyze factors influencing productivity and excellence at work.

22.1 ORGANIZATION AS A SYSTEM

An organization is a social unit which is created with a specific purpose. We can have a better understanding of an organization if we view it as a system. The systems approach recognizes that organizations have unique properties, capabilities and its components hold mutual relationships. A system may be either closed or open. A closed system does not have any interaction with the external environment. Modern organizations are more or less open systems.

An open system is in constant interaction with the environment. It is characterized by a continuing process of input, transformation, and output. The organizations get inputs from the environment and transform them into outputs which can be supplied to the environment. The organization gets feedback from the environment and takes suitable steps to meet the challenges and expectations of the environment. Let us understand these terms in detail.

Inputs: Each system takes certain kinds of inputs from its environment. These may be in the form of Human Resource (HR), Capital, Technology, Material, and Information. The inputs received from the environment are processed within the organization to produce the desired output.

Outputs: Outputs may be both intended as well as unintended. Intended outputs are usually called objectives. For instance high productivity is an intended objective. An unintended objective may be informal relations among the group members. It may however, be stated that all unintended consequences are not undesirable.

Environment: An organization is called an open system because it is influenced by and also influences the environment. The suppliers of inputs, customers and many other organizations constitute the environment of a system. Through the process of feedback the system gets connected with the environment.

Activity 1

Learning About Organization

Identify an organization in the region where you stay and describe the inputs, outputs and type of environment in connection with that organization.

Thus it is clear that organizations do not exist in a vacuum. They are social institutions operating in the larger society of which they are a part. The organization and the individual both share a reciprocal relationship. For example the nature of organizations and technology have all changed society. We are becoming used to modern amenities like computers, internet, mobile and other electrical appliances. Thus modern technology has transformed the life style in many ways. India has been primarily an agrarian society in the past, but with all the advancement it is moving toward an industrial mode of life. This shift has brought with it a change in the attitudes and values of the people. Competition and consumerism are becoming important in the context of growing market economy.

Sub Systems of an Organization

Organizations usually have a number of parts or sub systems. The key sub systems are described below:

- i) **Goal Subsystem :** It comprises of the overall goals and objectives of the organization and also the specific goals of different departments and individuals in the organization.





- ii) **Technical Subsystem** : This subsystem refers to the use of knowledge, facilities equipment and technology by the people who work in the organization.
- iii) **Managerial Subsystem** : This involves planning and co-ordination of the activities undertaken in the organization.
- iv) **Structural Subsystem** : People work together on well defined tasks and integrated activities in different units (like production, marketing, HR) or departments. They make up the structural subsystems.
- v) **Psychological Subsystem** : People live in social relationships within an organization. This must not be viewed simply in terms of people and technology but also in terms of coordination or structure of work tasks based on following certain rules, regulations, norms, and values.

It may be remembered that each of the subsystems has its specific significance. For example the goal subsystem determines what work, task, and activities should be undertaken. It is important that these goals and objectives are in agreement with the goals of the society at large.

22.2 ORGANIZATIONAL CLIMATE

Climate is the atmosphere of an organization, a relatively enduring quality of its internal environment, which is experienced by the members and influences their performance. It conveys the impression people have about the internal environment within which they work. It may also be viewed as the degree to which organizational rules are reinforced by the administrative component. It also represents the attitudes of the organizational members toward the organization itself.

Thus organizational climate often distinguishes one organization from another. It is relatively enduring over a period of time, and influences the behaviour of the members of an organization. It may be noted that there may be differences in the climate of different departments like HR, production, research and development.

In understanding organizational climate it is necessary to know how organization members communicate and relate to each other, the amount of cooperation between the level of satisfaction and so forth. All these factors determine the effectiveness of an organization. An organization is likely to be more effective if there is two – way communication; employees are cooperative and have a positive view of the organization. Such employees have higher job satisfaction and commitment. Their productivity will also be higher. A positive organizational climate results in making employees more satisfied and productive.

Determinants of Climate

Many factors determine the climate of an organization. At least four of these seem especially relevant. These are:

- i) **Organizational Structure:** It is the frame work of authority – responsibility relationship in an organization. It clarifies who is to supervise whom and who is responsible to whom. It serves as the basis of interpersonal relationships between supervisors, subordinates and coworkers. For example if the top management feels the need to give greater emphasis to the subordinates, it will follow a decentralized structure. This means there will be fewer layers in the hierarchy and employees would be encouraged to participate in decision making. But if top management likes to maintain greater consistency in decision making, it would follow a centralized structure.
- ii) **Technology:** The nature of technology employed by an organization also influences the organizational climate. For example routine technologies like assembly lines tend to create rules, leading to a rigid climate where trust and creativity are low. More dynamic and changing technologies e.g. aerospace engineering seem to lead to greater trust and personal responsibility for task accomplishment.
- iii) **External Environment:** External events or factors that have relevance for employees may also affect the climate. For example when economic conditions are severe, organizations are forced to cut down the number of employees. Those who remain would probably perceive the climate as threatening with little warmth, support and low motivation.
- iv) **Management Policies and Practices:** Managers who provide their subordinates with more autonomy and feedback contribute significantly to the creation of achievement oriented climate leading to greater productivity.



INTEXT QUESTIONS 22.1

1. What is an organization?

2. Give two examples of input from the environment in an organization.

3. Name any three subsystems of an organization.

22.3 INTERPERSONAL RELATIONSHIPS AT WORK

Performing a task in an organization often involves contributions by many people. It is a social activity. Virtually any kind of work requires social interaction with several individuals. The salesman interacts with his customers, the doctor with his patients, the supervisor with





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his subordinates and the teacher with students. Further, most workers are members of one or more work groups with whom they may interact more frequently.

Interpersonal relations may be seen to form contracts. These contracts involve agreements to interact in particular ways. We may interact with many people but may not necessarily enter into a relationship. A relationship comes into existence only when we have certain expectations about appropriate ways of behaving.

In the work context employees build different kinds of relationships with others. These may be a result of both the formal work role and the position in the organizational hierarchy. People have to interact with the boss, with coworkers and the peer group.

Superior-Subordinate Relationship

Every employee has to build a relationship with the boss to seek instructions and guidance. It is the boss who allows (or disallows) the subordinate to participate in decision making, gives assignments, evaluates performance, determines pay increments and decides who has to be promoted. The kind of relationship that an employee shares with the boss depends upon the leadership style adopted by the boss. These are described in Box 22.2.

Leadership Style	Nature of Relationships with Workers
Authoritarian:	Management directs and uses threats and punishment to enforce orders and get the work done by subordinates. Involves one way downward communication.
Paternalistic:	Basically authoritative but permits some participation to subordinates. Involves two-way communication between boss and subordinates. Rewards and threats are employed to enforce the orders.
Consultative:	Orders are issued and goals set after consultation with the employees. Team work is encouraged to some extent.
Participative:	Employees are fully involved in setting the goals and two-way communication becomes the norm.

Generally the more the boss takes into consideration the needs and judgments of the subordinates and the more participative his style of functioning the greater the productivity and satisfaction of the employees and the less the absenteeism and employee turnover.

Relationship with Co-workers and Peer Group

We spend more time with our colleagues than with anyone else. The work group context affects our experiences at the work place. Relationship with coworkers does not develop

according to rules and regulations as stated in formal terms. Relationship with peer group often develops as a result of common taste, likes and dislikes. Some employees are more interdependent on their coworkers and provide an opportunity for the employees to have greater ease in interaction. Also coworkers provide an opportunity for the employees to compare their beliefs with similar others. It is likely that a newcomer will first look at his/her work group peers for appropriate ways of behaving. For example the employee may learn from his peer group that is not appropriate to give an opinion about the company policy even when asked by the boss. Besides, learning the unwritten rules within the organization the peer group also provides an outlet for employees to express their emotions which they cannot do with their supervisors. So such relationships provide job satisfaction and increase organizational commitment.

One critical factor which helps establishing the context for the development of interpersonal relationships and adopting the work roles is the process of organizational socialization.

Organizational Socialization

The process of organizational socialization refers to the process by which an individual employee acquires the knowledge and skills necessary for assuming a place within the organization. Before entering any organization we are socialized on a number of occasions from early life by our parents and others about how to behave in particular ways as members of society. At every stage in life we have to get accustomed to the changes faced. Just as adjustments need to be made when people get married, have children etc. in the same way when an individual joins a work organization he has to learn to interact and collaborate with others, and build relationships with others. These relationships then help to have knowledge about accepted behaviours and attitudes within the organization. Entering a work organization serves as an important basis for adult socialization. This kind of socialization is a continuous process and not a single event. It continues as a person shifts from one work role to another and one environmental situation to another. It is a two-way process where not only does the individual internalizes the values, goals and objectives of the organization but the organization also has to adapt itself to cater to the needs of the diverse workforce made up of women and other minority groups.

Thus both the individual and the organization adapt to each others' needs as each has a set of expectations that must be met. There seems to be a psychological contract between the two. A psychological contract is not a written document but a shared understanding that aids in the process of fulfilling mutual expectations.

Communication

The effectiveness of all interpersonal relations lies in the quality of communication. It is through communication that we are able to exchange thoughts, feelings, emotions and experiences to others. For the smooth functioning of any organization the members of the organization should be able to communicate among themselves.





Meaning : Communication entails the transfer of meaning between a sender and receiver. It establishes a common frame of reference for understanding among individuals. Although some basic form of communication occurs between all living organisms nonetheless, only human beings have the unique capacity to transmit information with the help of symbols. Symbols could refer to simple objects in the physical world like tables, chairs, books etc, or they may refer to activities like eating, reading, sleeping and so forth. At an abstract level symbols may be used to refer to concepts like intelligence, truth, worthiness, etc. The use of language by humans represents the most evolved use of symbols. Communication may be spoken or written. It may take place between (a) two individuals, (b) in a group, (c) in the entire organization, and (d) with masses.

Organizational communication may entail the use of computers. Thus from the point of view of organization both mechanical and human communication become important. The general communication process is discussed in detail in lesson 20.

22.4 PRODUCTIVITY AND EXCELLENCE AT WORK

When organizations meet the expectations of the people every one benefits i.e. owners, employees, customers and local communities in which they operate. Then they are considered effective. However, when they exceed the minimum standards of effectiveness they may be considered to have achieved excellence. Over time excellence brings reputation – that is when an organization is regarded and recognized for superior performance. To achieve excellence an organization must be productive and be able to transform inputs into outputs at minimum cost. Individual behaviour in organizations is jointly determined by two factors – the characteristics of the perceived environment and the characteristics of the individual. The perceived environment or climate has been examined in some detail earlier. Let us examine the role of individual characteristics and the way they influence productivity and excellence at work, and ultimately the success or failure of an organization.

When questions about organizational output and productivity are analyzed from the standpoint of individual employees the importance of good job performance becomes apparent. Without superior performance at all levels of the organization, the objective of attaining goals and thereby achieving productivity becomes very difficult. Any organization will be able to successfully meet its objectives, only when individual employees are able to meet their personal goals. Thus, it becomes important to identify the factors responsible for individual performance which has repercussions for organizational productivity and excellence in the long run.

Factors Influencing Productivity and Excellence

The important factors which influence an individual's performance and thereby productivity are as follows.



i) Abilities, Aptitudes and Interests

Ability, aptitude and interest represent those individual characteristics that largely determine an employee's capacity to contribute to an organization. These attributes are relatively stable over time, though some changes are possible through training. Concern here is not so much with a detailed examination of the range of human attributes and their measurement but rather with the implications of variations in such attributes as they affect productivity and excellence in organizational settings. These have been discussed in detail in lesson 20.

Employee's abilities can affect productivity and performance in many ways. For instance managerial success has been shown to be closely related to the level of one's intellectual capacities (for e.g. verbal comprehension, reasoning ability and memory). In fact, it has been suggested that at higher levels in the organizational hierarchy intellectual abilities are important for managerial performance. This would entail selecting and recruiting employees with appropriate abilities and offering jobs which are sufficiently challenging. Hiring employees of superior intellectual capacities and then placing them on a dull and routine job would shift their performance and have an impact on productivity. Additionally productivity is also dependent on the appropriate match of the personality traits and interests of a person with the right job profile.

ii) Role Clarity

The degree to which an individual understands the job requirements and work objectives the more energy will be at the disposal of goal directed activities. Moreover, role clarity is related to increased goal commitment, involvement and productivity. These are two role related problems which can serve to diminish productivity. In the long run they are (a) role ambiguity and (b) role conflict. Role ambiguity exists where individual is confronted with two sets of role demands that are incompatible. For instance an employee's supervisor may ask to increase the number of goods produced, but the coworkers may be emphasizing the need to maintain the number of items produced at the current level. This has a direct impact on organizational productivity to the extent that the goal related role prescriptions of the employee come in conflict with other demands. Thus organizations which attempt to integrate personal or group goals with organizational objectives help to satisfy both sets of demands and alleviate conflicts.

iii) The Performance Environment

In order to increase productivity at work it is important for managers to understand the nature of the performance environment where goal directed activities take place, and to be able to modify this environment where needed. This would ensure a more suitable atmosphere for employee effort, performance and ultimately productivity and excellence.



22.5 STRATEGIES FOR DEVELOPING PRODUCTIVITY AT WORK

Four principal strategies exist for developing and enhancing productivity and excellence at work : (1) employee selection and placement; (2) training and development (3) task design and (4) performance appraisal and rewards. Together, such activities can contribute substantially to improving productivity at work which ultimately is a key factor in contributing to organizational excellence. These are explained below.

i) Employee Selection and Placement

By selecting only those with high ability and skill levels, high initial motivational levels and then placing them on suitable jobs – organizations can improve the initial quality of at least some of the human inputs which go on to determine excellence at work. Recruitment and selection may also substitute for employee socialization and training. If desirable employees can be secured through a combination of recruitment and socialization, it would ensure organizational success.

ii) Training and Development

Training can serve to develop the capabilities not only in the present job but also future jobs. In fact training is an investment in employees (a talent bank) that can be drawn upon in the future. Employee training programmes may take a variety of forms including information presentation techniques (such as lectures), case studies, role play and so forth.

iii) Task Design

The effects of task design on productivity and excellence are two-fold. In general increasing the amount of variety, autonomy, responsibility, feedback and task identity (or completeness of task) can improve performance. The important thing then for both individuals and organizations is to understand the need-strength and goals for redesigning the jobs.

iv) Performance Appraisal and Rewards

Finally, a variety of methods are available to guide, direct and reward employee-behaviour. Formal performance appraisal and appropriate use of reward system represent two such methods.



INTEXT QUESTIONS 22.2

State whether the following statements are True or False :

1. Work is a social activity.
2. All works require social interaction.

3. In authoritarian relationship employees are fully involved in setting goals.
4. The process of organizational socialization is a factor in determining the development of interpersonal relationships at work.
5. Role clarity influences productivity at work.



WHAT HAVE YOU LEARNT

- An organization is a social unit which is formed with a specific purpose.
- As an open system an organization gets feedback from the environment and takes suitable steps to meet the challenges and expectations of the environment.
- Organizations have a number of parts or sub systems such as Goal Subsystems, Technical Subsystem, Managerial Subsystem, Structural Subsystem, Psychological Subsystem.
- The organizational climate may be defined as a set a characteristics that describe an organization and that distinguish one organization from another. These characteristics are relatively enduring over a period of time, and influence the behaviour of the members of an organization.
- Many factors determine the nature of climate prevalent in an organization. These include organizational structure, technology, external environment and management policies and practices.
- The effectiveness of all interpersonal relations hips rests on communication.
- To achieve excellence an organization must be productive and be able to transform inputs into outputs at minimum cost.
- Factors influencing productivity and excellence include abilities, aptitude and interests; role clarity and performance environment.
- Strategies for developing productivity at work are employee selection and placement, training and development, task design, performance appraisal and work.



TERMINAL EXERCISE

1. Describe any two subsystems of an organization.
2. List the determinants of organizational climate and explain any two determinants.
3. Write short note on any two of the following:
 - i. Relationship with co-workers.



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- ii. Productivity and excellence at work.
- iii. Strategies for developing productivity at work.

**ANSWERS TO INTEXT QUESTIONS****22.1**

1. An organization is a social unit which is formed with a specific purpose.
2. Human Resource, Capital Technology, Material, Information (any two)
3. Goal substem, Technical subsystem, Managerial subsystem, structural subsystem, (any three)

22.2

- 1) True
- 2) True
- 3) False
- 4) True
- 5) True

Hints for Terminal Questions

1. Refer to section 22.1
2. Refer to section 22.2
3. i) Refer to section 22.3
ii) Refer to section 22.4
iii) Refer to section 22.5



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ENVIRONMENTAL STRESS

Our environment plays a vital role in determining our well-being. We live in an environment and the quality of our life depends on the quality of the surrounding environment. Today various types of pollution (e.g., water, air) are creating stress for the people. As you know a large number of diseases come from the environment in which we live. In this lesson we will study about the factors in our environment which produce stress, their psychological impact and analyze some of the ways of overcoming them.



OBJECTIVES

After studying this lesson, you will be able to:

- explain the various models of human-environment interaction;
- state the various aspects of environmental stress;
- describe how environmental stress can be managed; and
- explain the concepts of pro-environmental behaviour and sustainable development.

23.1 ENVIRONMENTAL STRESS

You have read about stress and its various effects in lesson 21. To recapitulate it may be noted that stress is any physical or emotional state that causes bodily or mental tension. In the same way environmental stress can be defined as an undesirable transaction between the person and the environment. The demands made by environmental factors on us constitute the sources of environmental stress. To understand environmental stress better, let us learn about some issues linked to the human-environment relationship.

As indicated earlier considerable part of human behaviour is influenced by our environment. Environment has been used to include the physical world and socio-cultural surrounding in which we live and interact with others. The field of



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environmental psychology deals with the diverse effects of environment on behaviour. We all wonder at times that in the relationship between human and environment who is superior? We all have read in the newspapers about the remarkable achievement of human beings over nature like going to the moon, cloning etc. But does this mean that human beings are free to play with nature? What answer can one give to the natural calamities which befall human lives?

To answer these questions, let us try to understand the different ways in which the human-environment relationship can be understood. Let us understand these views in some detail.

a) Humans Subjugated to Nature: During the early part of history human beings looked at the environment from a different perspective. They believed that the nature rules human beings. The various components of nature were considered supernatural and objects of worship. However, this view is still held in some cultures. The sun, moon, stars, animals, birds, trees etc. all are worshipped and also considered to be objects to be afraid of. This view did not find place in the modern scientific view in which reality in the physical form became important and human capabilities were highly valued. This led to another model which favoured human beings i.e. power or control over nature.

b) Humans Control over Nature: With the advent of science and technology, nature no longer remained a thing to be afraid of. Experiments were conducted by scientists in the various facets of life. We all have heard about kidney transplant, open heart surgery etc. In the same way we all see that nowadays the vegetables grown at a specific time of the year are now available throughout the year. A field called genetic engineering is bringing changes in the pattern of crop production and medicines. Human life has been elevated scientifically but again it was felt that some questions remained unanswered. Devastating earthquakes and global warming (rise in the temperature) which have brought climatic changes and depletion of the ozone layer—all are now matters of great concern. Nuclear power has become a constant threat to the world. These problems lead us to think about environment differently in which a balance between man and environment is warranted.

c) Symbiotic Relationship between Human and Nature: We all read slogans like 'conserve oil', 'plant trees' and 'save water' but have you ever thought why it is said so? Do you know that many of the changes in our environment are happening due to various acts of human beings? Human beings and nature have always shared an interdependent relationship which means that no one is sufficient in itself. Human beings derive a lot from nature in various forms and it also becomes a necessity that a sense of duty towards nature is generated. People blindly exploit various natural resources without thinking about their impact on others in present time and future. Many natural resources (e.g. oil, coal) are unreplenishable and therefore should not be wasted.

The imbalance created due to blind exploitation of nature is also resulting in various forms of pollution and threats to life. You will read more about the various types of pollution and their impact in a later section of this lesson. The quality of air, water and eatables all are influenced by human intervention.

Environmental Stress

The symbiotic relationship between human beings and nature is a balanced view which tells us that we must recognize our limitations and do not blindly harm environment by our activities. It recognizes the natural interdependence of the two.



INTEXT QUESTIONS 23.1

1. What is environment?

2. What is the symbiotic relationship between human being and nature?

23.2 POLLUTION ISSUES

Till now we studied about the various views about human-environment relationship. We have noted that the environment has both constructive as well as destructive effects on human life. In this section we will study about the various aspects of environmental stress which are also known as stressors. We can categorize the various types of pollution as air pollution, water pollution and noise pollution.

First of all let us understand pollution. Pollution is an undesirable change in the physical, chemical or biological characteristics of air, land and water that may harmfully affect life. It is an unfavourable alteration of the environment largely as a result of human activities. It is caused by various pollutants which are substances foreign to the medium such as air or water in which they are present. It causes problems to the animal and human world. The various types of pollutions are as follows:

1. Air Pollution
2. Water Pollution
3. Noise Pollution
4. Crowding
5. Green House Effect

1. Air Pollution

Nobody can ever forget Bhopal Gas tragedy when thousands of innocent people died due to inhaling of methyl isocyanate gas which got mixed in the air - the essential component of life. Till today its ill effects are felt as new born babies and adults suffer from asthma, cough and defective eyesight.

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If you ever visit big cities like Delhi, Kanpur, Mumbai, Kolkata or happen to stay there - you will experience that your eyes, nose and throat are irritated. A burning sensation can be felt in the eyes. You can feel the poor quality of air once you travel from these cities to any countryside area. Air pollution is defined as an imbalance in the quality of air so as to cause adverse effects on the living organisms. It is caused by the excessive presence of certain gases and suspended material particulates (SPM). The air is the carrier of oxygen for all life forms. Gases like carbon di-oxide (CO₂), Nitrous Oxide (NO₂), Sulphurdioxide (SO₂) and suspended particulates including lead are the major pollutants. These not only cause irritation but also result in diseases like respiratory problems, cardio-vascular problems, hypertension, asthma, eye-related and neurological problems and result in early deaths too. You must remember that human behaviour is linked to air pollution both as a causal factor and also as an effect.

The major sources of air pollution are increase in power consumption, industrialization, vehicular traffic and burning of refuse, garbage, smoking and cutting trees for building construction.

2. Water Pollution

Pollution of water refers to addition of excess undesirable substance to water that makes it harmful to human, animal and aquatic life.

We all know about Hepatitis A and Hepatitis B. Do you know that these are water born diseases? It has been found that all surface water and a lot of ground water in India is unfit for direct consumption by human beings. The poor quality of water causes various diseases like diarrhoea, intestinal worms and hepatitis. It has also been found that ten percent of all diseases and twenty percent of the communicable diseases in India are water-related.

You must be wondering that how does the water quality gets affected. It is largely due to following factors : (i) domestic and human waste water, (ii) industrial waste water, and (iii) agricultural run off.

The domestic and human waste water is often times used without proper treatment as irrigation water. Some vegetables which are eaten raw are also washed in this dirty water. This water and the industrial waste water are dumped into the rivers which contaminate the river water too. The chemically treated water of the industries pollutes the river water in such a way that it becomes polluted beyond treatment.

Air Pollution and Health

The health hazards of air pollution are well known. It is believed that 50-90% of cancer cases are due to air pollution. Other kinds of ill health include epilepsy, memory disturbances, visual and auditory impairments and asthma spasms.

This further affects the quality of our ground and surface water. The decreasing life of our rivers can be seen in the case of Yamuna in Delhi and Ganga in Kanpur.

Water is a basic necessity for life. If water pollution is not checked, then that day is not very far when we will have to buy water even for taking bath and cooking.

3. Noise Pollution

Have you ever listened to music which has been so loud that you have to raise your voice to talk? Have you ever stood besides a railway track and talk in your normal voice as the express train passes by at a high speed? Have you ever tried to work while workmen dug up the road just outside your room? Do all these things allow you to function in your normal self? Your answer will be definitely negative. Why? It is because high sound causes noise pollution.

How will you define noise pollution? Noise pollution can be defined as the intensity, loudness, timbre or pitch of sound which causes us physical discomfort or it may be unwanted because of the situation. The intensity is an important dimension yet the degree of annoyance is not necessarily related to intensity only. Factors like familiarity and attitude often influence the degree of annoyance. People become habituated to noise and experience lesser degree of discomfort.

There are various ill effects of noise pollution. Let us discuss some of them:

- (i) **Health hazards:** It has been observed that traffic noise is related to certain symptoms such as nervousness, sleeplessness, undue irritability, depression and asthma. Some studies have also revealed that noise pollution triggers aggressive behaviour and reduces altruism and helping behaviour. It has also been observed that noise disrupts the harmony of interpersonal relations.
- (ii) **Problems in Communication :** One of the easily observed effects of high level of noise is the disruption of communication. Another effect of noise appears to be reduction in performance and low job satisfaction. This has also been inferred that noisy classroom reduces students' clarity regarding tasks, attention, motivation and reduces academic performance.
- (iii) **Accidents :** Apart from various other things, noise has been identified as one of the major factors causing accident.

Damage caused by noise level higher than recommended level lead to a number of adverse effects on health. It can range from impaired eardrums, permanent hearing loss, cardiac and cardiovascular changes lack of concentration, deterioration in motor and psychomotor functions etc. Workers habitually exposed to noise complain of anxiety and emotional stress.





4. Crowding

We all have frequent experiences of crowding. We often encounter crowding in a city bus, at railway reservation counter, in market, in village fair etc. Sometimes crowding creates a lot of anger and distress particularly in situations like over crowded bus and long queue on reservation counters. On the other hand it creates a great deal of enjoyment and pleasant experiences in situations like marriage, social functions at home, school, party etc. More recent researches have suggested that crowding is related to crime and negative emotions.

As a form of stress, crowding involves subjective discomfort and physiological arousal. The feeling of discomfort, perception of loss of control over social interaction, encroachment on privacy and negative perception of space are considered as characteristic features of crowding. This feeling is a state of stress which often leads to negative behavioural consequences.

Before discussing some of the effects of crowding, let us understand the meaning of crowding. Psychologists distinguish between density and crowding. Density is the number of persons per square kilometer. This is an objective measure of the number of persons present at a given place. Let us illustrate this with the help of an example. Suppose there are two situations one in an overcrowded bus and another at a marriage party. Though the density may remain the same in both situations the behaviour and experience would be different. Therefore, behaviour and experience of crowding depend upon our relationship with the people involved, the duration of the experience, the physical context and the meaning assigned to it. We are likely to feel less crowded in a group of friends than in a group of strangers.

Let us discuss some of the effects of crowding in detail.

(i) Crime

A link between crime and crowding has been noted. The most known crimes such as pick-pocketing and snatching tend to occur in crowded settings. We are all familiar with increase in this sort of crime during busy rush hour on local trains and buses, peak hours in market places etc.

(ii) Crowding in Corrective Institutions (Prisons) and Psychiatric Institutions

Over crowding in prisons has become a major problem in India as well as other parts of the world. In recent past various cases of riots/clashes among inmates and stress among prison officers have been reported in the different parts of India. Both these cases seem to be related to over crowding because violent criminals require greater personal space than non-violent individuals.

Similarly individuals with mental disorders particularly patients suffering from schizophrenia and neurosis etc. exhibit higher sensitivity to crowding. This leads to assaults on other patients or staff.

(iii) Effects on emotion and behaviour

It has been observed that crowding leads to increased physiological arousal and stress. Because of this it is not surprising to find increased incidence of high blood

pressure and faster heart rate in crowded situations and increased levels of physical illness. So anger and aggression seem to be the most likely emotional responses. Some times crowding also leads to apathy, social withdrawal and learned helplessness.

The only thing which should be kept in mind is that various effects of crowding on human behaviour and experience co-exist along with other features of environment.

5. Green House Effect

Human beings, for quite some time now, have been indulging in anti-environmental behaviours on a large scale. Because of this abuse of the environment, like producing waste, burning of fossil fuel (petrol, diesel etc.) deforestation, burning of coal, forest fires, the use of chlorofluorocarbons (CFC) for refrigeration, etc. global warming is taking place. The gradual increase in temperature of earth's atmosphere and oceans is being brought about partly as a result of various human activities. It has far reaching consequences on the ecology and environment. These include increase in storms and other weather extremes, melting of ice caps at the North and South Poles that has resulted in raising the sea levels. These effects have been observed in several parts of the world. The oceans are rising about one inch every five years. It has been observed that three of the islands of the Republic of Maldives are now under water. You must have learned about increase in the occurrences of Tsunami.

The change in climate (global warming) is closely related to 'greenhouse effect'. The effect is called 'green house effect' because in cold regions where sunlight is needed for developing plants, a glass house is made which they call - Greenhouse. The Greenhouse has a glass roof that lets in warming sunlight but prevents escape of warm air. In the same manner the four gases released into the atmosphere (carbon dioxide, methane, and CFC) trap the sun's heat, that turns the earth into a vast "green house" i.e. not letting the heat to be released. This increases the temperature of the atmosphere. The increase in the levels of the three gases began about the middle of the 18th century. If this trend continues, it is estimated that it will result in an average warming of the earth's surface air temperature by about 3.5 degrees Fahrenheit by the year 2100. Even an average increase of 1 or 2 degrees can change regional climates and disrupt agriculture world wide. This trend will cause extensive melting of polar ice caps, resulting in raised ocean levels and flooding of huge low lying coastal areas in many countries. The global warming, can be reversed, if human behaviour that brought about this problem is changed. For example, the carbon dioxide emissions are reduced, planting more trees and ban on the use of CFC for refrigeration. The ban on CFC use by fifty nations has brought some change in the ozone layer. However, the extent of damage to the ozone layer has been so much that it should return to its normal thickness in fifty to one hundred years.

23.3 SUSTAINABLE DEVELOPMENT

According to World Commission on Environment and Development which is also popularly known as Brundtlandt Commission, sustainable development is defined as "development which meets the needs of the present without compromising the





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ability of future generations to meet their own needs”. Sustainable development means preservation of the stocks of resources including environmental resources and exhaustible resources. The major cause of worry about the sustainability of development is supposed to be the wasteful consumption style. The present production technology is making large use of the non-renewable natural resources such as coal, gas, petroleum which are also called fossil fuels. These sources of energy are the result of natural storage which is of hundred or more years old. Even the renewable natural resources like forest animals, water etc. are being used by the human being in such a way that very soon there will be shortage of these resources. The nature has assimilating capacity but if the pollution levels remain very high then nature may not be able to assimilate it. This may result in lack of clean water and clean air. If these non-renewable natural resources deplete rapidly then our future generations may not find anything for their use. Therefore, a little restraint needs to be practiced. The environment is not restricted to natural boundaries which means that if people in any part of the world follow unhealthy practices it may result in harming the entire humanity. Hence sustainable development is a path of development in which options of future generations are not compromised by the acts of present generation.

How can you contribute for a better environment?

1. Conserve water by avoiding unnecessary use of water.
2. Use public transport.
3. Ask for paper bags or cotton bags for carrying your things.
4. Use as less electricity as you can.
5. If you have a garden, consider composting the vegetable wastes.
6. Try to reduce the amount of material you use and buy. Reuse containers and any other items that you can.
7. Try to obtain recycled paper.
8. Plant as many trees as you can.
9. Buy appliances that are energy efficient.
10. Save electricity by turning off unnecessary lights.
11. In your home, avoid using substances that could damage surface and ground water such as use phosphate free detergents and do not dispose of unwanted house hold chemicals in the drain.

It needs to be understood that because each one of us contributes to environmental degradation, it becomes mandatory to make efforts for environmental conservation and pollution control.

Environmental Stress

One day the great Greek philosopher Plato was walking through a street of Athens. One of his students had a shop in the same street. On seeing the teacher passing by he ran after him, saluted, and invited him to visit his shop.

Plato walked into the student's shop. The student was delighted. He said to the teacher. "Sir, Please take anything you want."

Plato looked around and saw the attractive items and said, "*I don't see anything that I need here.*"

Plato's reply can help us in distinguishing between 'want' and 'need'

- A want is a wishful thing, which you desire to have. There is no end to our desires and wants.
- A need is something without which you cannot survive, e.g. for our physical survival we need air, food, water, clothes, house and medicine. Then we have our professional needs. For instance, a writer needs a pen. A carpenter needs his tools. Fortunately our needs are few but wants are unlimited.
- When we want to buy anything we should question ourselves: "Do I want this? Or do I need this?"
- By buying things we really do not need, we not only waste money, but also contribute to the exploitation of natural resources. Such things end as rubbish.
- Simple living means to live physically with less wants but with inward richness such as joy, contentment, beauty and wisdom.



INTEXT QUESTIONS 23.2

1. Define pollution.

2. Is there any relationship between crowding, emotion and behaviour? Describe any one emotional response to crowding.



WHAT YOU HAVE LEARNT

- The environment has both nourishing as well as destructive effects on human life.

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- We can categorize various types of stresses such as air pollution, water pollution, noise pollution, crowding, global warming and green house effects.
- Pollution is an undesirable change in the physical, chemical or biological characteristics of air, land and water that may harmfully affect life.
- Pollution is caused by various pollutants which are substances foreign to the medium like air or water thus causing problem to the animal and human world. The various pollutions are air Pollution, water pollution, noise pollution, crowding and Green House Effect.
- Water pollution is defined as addition of excess undesirable substance to water that makes it harmful to human, animal and aquatic life.
- Noise pollution can be defined as the intensity, loudness, timbre or pitch of sound which causes us physical discomfort or it may be unwanted because of the situation.
- Sustainable development means preservation of the stocks of resources including environmental resources and exhaustible resources. The major cause of worry about sustainability of development is supposed to be the wasteful consumption style.

**TERMINAL QUESTIONS**

1. Explain any one model of the human-environment relationship.
2. What is environmental stress? Explain.
3. Describe air pollution and its consequences for health.

**ANSWER TO INTEXT QUESTIONS****23.1**

1. Environment includes the physical world and the social and cultural set-up in which we live and interact.
2. The symbiotic relationship considers that human and environment are interdependent on each other.

23.2

1. Pollution is an undesirable change in the physical, chemical or biological characteristics of air, land and water that may harmfully affect life.

Environmental Stress

2. Yes, Anger/Aggression/Social withdrawal (any one of the three)

Hints for Terminal Questions

1. Refer to section 23.1
2. Refer to section 23.1
3. Refer to section 23.2

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HEALTHY MIND IN HEALTHY BODY

“One who is moderate in his diet, activities, exercise and duty, one whose periods of sleep and wakefulness are moderate, Yoga drives away his ailments.”

Body and mind are two parts of a whole. If mind is happy, we do our work actively and energetically. If the body is healthy, the mind also remains radiant, alert and enthusiastic. The Yoga school of thought tells us how to facilitate the body - mind functioning so that one may enjoy happiness, peace and fulfillment in life. Yoga, the science and art of life, was discovered by our forefathers and they handed it over to us as a priceless heritage. Its value is increasingly realized in today's world. Human life today is quite stressful. Yoga is a science that enlightens us regarding why we experience stress, tension and pain. It suggests a life style which is free from stress and pain. It makes our body and mind effective for leading a happy and healthy life.

In this lesson we will try to understand the meaning and nature of Yoga, the different types of Yoga and some techniques to keep ourselves physically and mentally fit.



OBJECTIVES

After studying this lesson, we shall be able to:

- explain what is yoga;
- explain different types of yoga;
- describe the breathing techniques that ensure physical and mental vitality; and
- explain certain ways of concentrating and meditating.



24.1 WHAT IS YOGA?

Yoga literally means ‘union’ i.e. being one with the Supreme Energy. It is communion of individual being with the universal being. It is a passage from ignorance to self-knowledge. Yoga is an effort towards self perfection. By helping the union of the body with the mind and mind with the soul, it creates an impressive symphony of life.

Yoga is a science which leads to health in the body, peace in the mind, joy in the heart and liberation of the soul. It also means the discipline of the body, mind, intellect, emotions and will, giving poise to the soul. It transforms the inert body to the level of vibrant mind into the union with the serenity of the higher consciousness or soul.

Yoga is of great benefit to the entire humanity. In its essence it is a passage from the ordinary consciousness in which we are aware only of appearances into a higher, wider and deeper consciousness.

Yoga is also considered as a discipline for happy and effective living. There are two aspects of Yoga: outer and inner. The outer aspect of yoga (*vahirang*) deals with the *yama*, *niyama*, *asana* and *pranayama* which revitalize our body and mind. The inner aspect of yoga (*Antarang*) includes controlling of senses (*Pratyahara*), concentration (*Dharana*), meditation (*Dhyana*) and Samadhi.

Maharshi Patanjali defines Yoga as “योगश्चित्तवृत्ति निरोधः” It means that Yoga is regulation of mental processes. It is only through self regulation one can excell in performance. That is why Yoga is also considered as the ability to perform actions with excellence: “योगः कर्मसुकौशलं”. In broad terms Yoga may also be said as an integrated individual life style. Now, after knowing the meaning of Yoga, we shall try to know about the different types of Yoga.



INTEXT QUESTIONS 24.1

1. Define Yoga according Patanjali.

2. What are the two main aspects of Yoga?

24.2 DIFFERENT TYPES OF YOGA

Yoga has several types. Some of the main types of Yoga include the following. In general all systems of Yoga are meant for facilitating harmony, peace of mind, and self-regulation.



- (i) **Hatha Yoga** - This kind of Yoga aims at controlling the functioning of the body and helps channeling the flow of energy (Prana).
- (ii) **Raja Yoga** - It is meant for restraining the fluctuations in the consciousness (Citta).
- (iii) **Karma Yoga** - This is the path of selfless action (Anasakta karma) without expectation of rewards. In Karma Yoga, you learn to do all actions in relaxation.
- (iv) **Bhakti Yoga** - This refers to the path of devotion and surrender to God. The person forgets his own self and existence and merges with the identity of God or higher consciousness. Bhakti takes many forms of relationship (e.g. friend, servant, beloved).
- (v) **Gyan Yoga** - This form of yoga emphasizes on removal of ignorance and seeking of spiritual knowledge. People form wrong impressions about themselves and continue with masks that lead to egotism and conflicts of various kinds.

There are some other types of Yoga. Every practice of yoga requires some preparation and control over our food habits and other aspects of life, which will be discussed in a subsequent section.

**INTEXT QUESTIONS 24.2**

1. What is Karma Yoga?

2. Explain the meaning of Raj Yoga.

24.3 YOGA TO KEEP FIT

The practice of yoga involves attending to the functioning at different levels of existence. Techniques to gain mastery over body, prana, and mind – diet, yogasanas, at body level, breathing practices and Pranayamas at Prana level and meditation at mental level have been developed. By following these practices one can remain fit, active and energetic without any medicine.

1. Diet

Yoga places great importance on diet because the kind and quantity of food that we eat determines our temperament. It is said that having right kind of food purifies the mind and soul (आहारशुद्धोसत्त्वशुद्धिः)

When the food is pure, the mind becomes pure. When the mind becomes pure, memory becomes firm. And when a man is in possession of firm memory, one is able to perform various tasks in competent ways.

Gita speaks about three types of food – *Sattwik*, *Rajasik* and *Tamasik*. *Sattwik* food is recommended because it is nourishing and warm. It does not trouble the digestive system. It gets assimilated in our body easily. *Rajasik* food is oily and spicy. It is hard to digest. *Tamasik* food is dry and stale. It is harmful for the system. Milk and sprouts are examples of *Sattwik* food. Spices and oils are *Rajasik* food. Left-overs and junk food are *Tamasik* food. According to Yoga, *Sattwik* food makes our mind benevolent, *Rajasik* food makes us restless, and *Tamasik* food makes us lazy and dull.

Besides food, proper rest and sleep are also necessary to keep oneself fit. Rest, fresh air and proper exercise are the needs of our body. Do you know why we need exercise? Without exercise body loses its elasticity. It becomes heavy, accumulates fat and toxins and gets rapidly worn out.

2. Yoga Asanas

You must have heard about various *Asanas*. They are body postures that make our body muscles supple and improve the blood circulation in the body. They tone up the activities of brain, glands, nerves, tissues and cells. If practiced regularly, *Asanas* can protect us against cold, fever, headache and stomach disorders. The *Asanas* are designed to bring the body into a condition where the healing forces of nature are able to do that work. Here, we are going to learn about some of the Yogic postures that help us keep fit.

Precautions while Performing Asanas

- *Asanas* should be performed preferably early in the morning in a well – ventilated room.
- Bowels must be cleared before starting the *Asanas*. It is not desirable to have bath immediately after the *Asanas*.
- *Asanas* must be performed on a mat spread on hard ground. Clothing should be as light as possible.
- Breathing should be normal while performing the *Asanas*.
- Do not eat immediately after *Asanas*.
- It is advisable that the *asanas* should be done after learning the proper methods of doing the *asanas* by a Yoga-teacher.
- *Shavasan* should be the last *Asana*, so that you get enough rest.

Let us learn about some of the main *Asanas*.





Paschimottan Asana (Stretching back and legs posture)

Technique - Sit on the floor with both legs stretched straight *in front of you* and take a few deep breaths. Exhale and extend the hands to catch the toes, keep spine and the legs straight. Extend the spine and keep the trunk close to the extended legs, Pull the trunk forward and touch the forehead to the knees and gradually rest the elbows on the floor, After you have gained flexibility, you will be able to have grip of the soles of your feet, resting the chin on the knee. Stay in this pose for 30 seconds to one minute according to your capacity and revert back to the starting position.

Benefits - This Asana tones the abdominal organs and kidneys and rejuvenates the whole spine and improves digestion. A good stay in this Asana will message the heart, spinal column and the abdominal organs. This Asana is strongly recommended for those suffering from high blood pressure. It also strengthens knees, improves the function of pancreas and corrects the functioning of regenerative system.

Sarvang Asana (Shoulder – Stand Posture)

Technique - Lie down with your back on the floor. Keep the palms down near the body. Bring the heels and toes together and keep them loose, and look towards the ceiling. Make your legs straight with toes stretched. Inhale and start lifting both legs towards the ceiling, Lift your back so that the weight of your body rests on the neck, give support to your lifted body by placing the palms on the back. Your elbows will be bent and will remain on the floor, let the hands help in pushing up the body so that it is balanced perpendicular on the neck. When the body has been raised to a maximum point, stay there and breathe normally. Stay in this position for 3 minutes in the beginning increasing the capacity upto ten to fifteen minutes. Then come down with caution after folding your legs from the knee slowly landing them on the floor. Raise your head and entire body to the resting position and breath normally.

Benefits - This Asana activates all parts and organs of the body. Because of the inversion, the gravity pull will enhance circulation of blood. It provides energy, inner strength and vitality. The greatest benefit of this Asana is that it nourishes and activates the thyroid and parathyroid glands. It also provides blood supply to the brain, improves lung functioning, throat and larynx functioning, enhances memory capacity and concentration and strengthens leg muscles.

Shavasana (Complete Relaxation Posture)

Technique - Lie down with your back on the floor keeping your feet a little apart forming a 30 degree angle. Keep your arms straight on either side, fingers a little curled up, Breath normally and close your eyes after an intent gaze on the roof. Start relaxing your feet, waist, chest, neck, arms, and head one by one with complete concentration. If relaxation is proper, your breathing will become slow and shallow with a feeling of bliss and sleepiness; stay for ten to fifteen minutes and then roll your body to the right and stay there for a minute before you get up.

Benefits - This asana is very beneficial. Its immediate effect is complete relaxation of all the muscles, nerves and nervous system, the brain and all the organs of the body. Persons suffering from insomnia, nervousness, tension, anxiety, acidity, high and low blood pressure and heart troubles benefit from this asana.

Shalabh Asana (Locust Posture)

Technique - Lie full length on the floor on the stomach, with the face touching the floor. Keep arms stretched on each side of the body and close to the hips. Now raise the legs, upward as high as possible, taking the support of the fisted hands by pressing them downward to the floor. Keep your chest and head on the floor and breathe normally. Stay in this pose for 10 to 15 seconds in the beginning and gradually increase the period according to your capacity.

Benefit - This Asana helps digestion and relieves gastric troubles and flatulence. It relieves pain in the sacral and lumbar regions. Persons suffering from slipped discs are also benefitted. The bladder and prostate gland too benefit from this Asana.

Ushtra Asana (Camel Asana)

Technique - Kneel on the floor and keep your thighs and feet together. The toes should point backward and rest on the floor. Then bend backwards by lowering the head and hands, touch the heels with the palms of the hands, with your head looking up and backwards. Keep the thighs straight and the back arched. Feel more stretch in the chest, abdomen, neck, throat, shoulders and waist. Stay in the pose for 30 seconds or more according to the capacity.

Benefits - The posture improves the problems with shoulders. It corrects any deformity in the legs. The heart is massaged making it healthier. The chest is developed and abdominal organs and the back are toned.

Dhanurasana (Bow posture)

Technique – Lie on the stomach. Bend the knees while keeping them together. Take the ankles in the hands and rest the chin on the ground. Inhale as in complete Yogic breathing, then raise the legs, head and upper parts of the body while arching the back. Remain in this position as long as possible, breath regularly and direct attention to the lower part of the spinal column (pelvic region). Now, relax the body gradually and return to the original position. Repeat the exercise two or three times, then relax.

Benefits – This Asana loosens up the spinal column. It also tones up the abdominal organs. The exercise stimulates the endocrine glands and is excellent for women suffering from irregular or faulty menstruation. It also prevents fat from forming around the stomach and hips.





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Halasana (The Plough Posture)

Technique - Lie on the back with the arms stretched by the side of the body, palms flat on the ground. Inhale through normal breathing, exhale and slowly raise the legs stretched vertically. Supporting oneself by the arms flat on the ground, gently lower the legs behind the head until the tips of the feet are touching the ground. Remain in this position for a few seconds and breath normally. Now return to the starting position.

Benefits - This Asana is extremely beneficial for the spinal column. The whole region receives an abundant supply of blood which revitalizes the nerves and muscles of the back. Exhaustion and fatigue quickly disappear. The position also has a regenerating effect on the glandular system, and clears up menstrual disorders. Regular practice may prevent fat forming around the stomach, hips and waist.

Bhujang Asana (The Cobra position)

Technique – Lie on the stomach, with palms on the ground underneath the shoulders. Inhale in yogic breathing. Supporting oneself lightly on the arms, slowly raise the head and trunk, leaning backwards as far as possible without raising the abdominal region from the ground. Hold this position for a few seconds, then exhale slowly and gradually return to the starting position.

Benefits – During the practice of this Asana, the muscles of the back are activated, exerting pressure on the vertebrae from the neck to the lower part of the spinal column, and provoking a copious supply of blood to this region, thus toning it up. This Asana may correct slightly slipped discs. It also soothes backaches, has a beneficial effect on kidney (adrenal glands) and stimulates digestion.



INTEXT QUESTIONS 24.3

1. How do Yogic postures help us attain health?

2. What are the benefits of performing Pashchimottan asana?

3. How many asanas have you learnt in this lesson? Name any three.



24.4 PRANAYAM

Yoga says that Prana is not merely breath but it is a form of cosmic energy. It is the life-giving principle which is everywhere. By breathing exercises it is possible to enhance the circulation of Prana in the body.

Activity 1

An Exercise in Concentration

Concentration is focusing our mind on a particular object-internal or external. Internal could be your heartbeat. External could be a candle flame.

Try this simple exercise in concentration. Look at the second needle of your watch or a clock on the front-wall. Remain aware of your breathing simultaneously. See how long it takes before your mind begins to wander. Very few people can focus their concentration for even a short period of time. Like any other skill, concentration improves with practice.

Unfortunately, most of us do not know how to breath, though we breath every moment in our life. Only babies know how to breath in a natural way. In natural breathing, when we inhale the navel and lower abdomen bulge out a little, and when we exhale, the navel and the lower abdomen sink down a little. It is called abdominal breathing.

In order to enjoy good health, a person needs at least 60 deep breaths in a day. Shallow breathing is directly or indirectly responsible for a number of physical and mental diseases ranging from common cold to nervous disorders. To function properly, our brain requires oxygen three times more than the rest of the body. If it does not get its share, it extracts it from the total supply to the body. That is why many intellectuals tend to have a poor physique and bad health.

Deep breathing not only refreshes the whole system but also cleanses it. We should learn deep breathing. We must re-educate ourselves in the ways of living in the light of Yoga system. The functioning of our mind is closely related to breathing. When we are calm, our breathing is deep and slow. When we are excited and agitated, our breathing is shallow and fast. Vice versa is also true. When we deliberately slow down our breathing rate and consciously take deep breaths, then our perturbed mind becomes quiet and is at peace.

Normally, we breath between 13 to 15 times per minute. It has been observed that the animals like tortoise breath 5 to 8 times per minute and live much longer than human beings. It is also observed that people with addictions like cigarette and liquor have greater breathing rates and their longevity is limited. When we run fast our breathing rate increases temporarily but with the exercise, our muscle tone and circulation increases. That, in turn, slows down and deepens our natural breathing and increases our longevity.



Activity 2

Observing your breath

Sit on a chair or on the floor, with your back and neck straight and your body relaxed. Take air in and let it out (inhalation and exhalation) as if you were on the seashore observing the ocean waves. With each intake of breath, feel that you are breathing in fresh energy and vitality with the oxygen. With each out take of breath, feel that you are breathing out tiredness, fatigue, negativity and toxins as you expel carbon dioxide. Feel the fresh, vitalizing energy permeating your body and mind as you continue with the exercise.

Sit quietly with your mind peaceful and calm.

Some more exercises in Pranayama are as follows:

1. **Pooraka** : Taking air in slowly and consciously – deep inhaling.
2. **Rechaka** : Giving air out slowly and consciously – deep exhaling.
3. **Kumbhaka** : After inhalation you keep the breath in for a few seconds or after exhaling you stop for a few seconds before inhaling. This should be done under proper guidance.
4. **Kapalbhati** : You exhale fast and inhalation is automatic. This clears the sinuses and provides a gentle massage to abdominal muscles.
5. **Bhasrika** : This is brisk breathing. Inhaling and exhaling is quick and fast.
6. **Sheetali** : Here we give a tune like shape to our tongue and slowly inhale through our mouth and slowly exhale through the nose. In summer this Pranayam makes our body cool.
7. **Seetkari** : Here our upper teeth line and lower teeth line touch each other. We inhale slowly through mouth and the air massages our gums gently. In the same way we exhale through mouth pushing air out gently through the passages between the teeth.
8. **Nadi Shuddhi**: Here we take air in from left nostril and give it out through right nostril (Anulom-Vilom). Then again we inhale from the right nostril and exhale from the left nostril. This is one cycle. One should do at least five cycles at a time three or four times during a day. This purifies our body. Simple deep breathing also helps a lot in gaining enough oxygen supply for your brain and the rest of your body.



INTEXT QUESTIONS 24.4

1. What is prana?

2. What are the effects of deep breathing?

3. List any four exercises of Pranayama?

24.5 MEDITATION

We have seen the place of exercise, eating, sleeping habits, *Asanas*, and *pranayama* in life. This is preparation for meditation. Yoga compares the mind with a lake. When agitated and restless, the lake can not reflect the sky. Only when it is calm and undisturbed, it can mirror the sky. In the same way, a calm and poised mind can reflect the universal energy. The final aim of meditation is to gain the vision of truth, to realize the oneness with all life and to enjoy peace and bliss.

Activity 3

An exercise in meditation

Sit straight with your back, neck and head in one line. Let the body relax. Observe your breath for about two to three minutes.

Later, imagine that there is a white lotus at the place where your eye brows meet, or at your heart. Internally feel the tender touch of the bud, see it blooming gently, opening up its petals and smell the lovely fragrance. Be with it as long as possible.

You can see a white flame instead of a bud. See it between your brows or at your heart. Mentally, feel its glow and warmth. Remain in this experience as long as possible.

For meditation, relax your body, sit comfortably in padmasana or sukhasana (squatting posture), keep your spine neck and head in a straight line. Let your chest spread out a little. First concentrate on your breath and breathe deeply. Exhale fully and inhale deeply a few times. Let the mind follow the breath and listen to its sound. Just listen to that and you will be able to hear the humming musical note within you. This is a part of cosmic vibration. By concentrating on this inner vibration, you will be in tune with the cosmic sound. Then all the ripples of thoughts and emotions will quieten. The lake of your mind will become still and you will experience peace and bliss. In this state of silence you will forget all differences and become one with all life.



INTEXT QUESTIONS 24.5

1. What is the final aim of meditation?



**Notes**

2. What posture do we adopt in meditation?

3. What are the benefits of meditation?

**WHAT YOU HAVE LEARNT**

- Yoga is a system of physical, mental and spiritual training for a healthy and happy life.
- Yoga teaches us what the good habits of eating, drinking, sleep, exercises, work, thinking and relaxing are.
- Being moderate in eating, exercise and enjoyment is necessary if we want to lead a healthy life. Asanas and meditation help develop mind and sharp intellect.
- Yoga is also defined as excellence in action.
- Yoga helps us in our studies, in improving our health and relationship with the world.
- Yoga teaches us about asanas which are beneficial to maintain our physical and mental health and prepare the ground for spiritual development.
- Yoga also teaches us how to breathe properly. Breathing exercises are to control our breath and bring us physical poise and mental peace.
- Meditation is for gaining the vision of truth, to realize the oneness with all life and to enjoy peace and bliss.

**TERMINAL QUESTIONS**

1. Enlist the various Yoga types given in your text book.
2. Define Gyan Yoga.
3. What is the goal of meditation?

**ANSWER TO INTEXT QUESTIONS****24.1**

1. Study of consciousness and its operations.

Healthy Mind in Healthy Body

2. Yoga is control of thought waves arising in the ocean of mind.
3. Outer and Inner.

24.2

1. Self-less (detached) action without expectation of reward.
2. Emancipations through spiritual knowledge.

24.3

1. Asanas make our body muscles supple and improve blood circulation.
2. Takes the abdominal organs and kidneys.
3. Eight – (i) Savang Asana (ii) Halasana (iii) Shalabh Asana

24.4

1. Prana is the cosmic energy.
2. Deep breathing refreshes and cleanses the whole system.
3. (i) Poorka (ii) Rechaka (iii) Anulom-Vilom (iv) Kapalbhati

24.5

1. The final aim of meditation is to gain the vision of Truth.
2. Padma-asana or Sukha-asana.
3. In meditation we come in tune with cosmic sound then all the ripples of thoughts and emotions are quitted.

Hints for Terminal Questions

1. Refer to section 24.2
2. Refer to section 24.2
3. Refer to section 24.5

MODULE - VII

Yoga : A Way of Life



Notes



SELF-DEVELOPMENT AND YOGA

In the last lesson we have tried to understand the meaning, nature and various types of Yoga along with the practices which help us achieve physical and mental health. Indeed Yoga makes our life enjoyable. There is no domain of life where Yoga is not relevant. It changes our attitude towards life. It awakens our creativity and enriches our relationships with others. In the light of Yoga nothing remains simply mundane but everything gets a touch of the sublime. We develop self control and grow morally. In this way, self does not remain an attribute related to personal functioning only. It goes beyond that and relates to the social world that we inhabit. Our notion or idea of self influences our interactions with the social world and is also influenced by that. We long and strive for success. Success is the result of tireless striving towards the goal with a positive attitude, and confidence in oneself and others. This is self-development. In this lesson, we are going to understand how Yoga contributes to self-development and relevance of Yoga for competence.



OBJECTIVES

After studying this lesson, you will be able to:

- explain how yoga helps you in the different walks of life;
- describe how it shapes attitudes, thinking and behaviour;
- explain the relevance of yoga for competence; and
- discuss the eightfold path of yoga for progressive self-development.

25.1 SELF-DEVELOPMENT THROUGH YOGA

Most of us would agree that human beings have a self. Ordinarily we use the word ‘Self’ in the sense of ego but the term ‘self’ does not mean merely the ego. According to Indian thought the ego in us is the actor, knower and experiencer. That which performs all the functions of body and mind, is generally known ‘I’ or ‘Ego’, but it is



only the reflection of the absolute called Brahman or pure consciousness. It is said that the ego is the image of that divine spark within us, which gives it vitality and makes it do all works mental as well as physical. It is treated as a distinct entity with its own qualities and functions. As people grow, they develop their own concept of self-which determines how they relate to others and perform various activities. We perceive others as persons, relate to them and develop friendship and other kinds of close relationships. Our self concept, however, does not remain constant, rather it changes during the different stages of life. Now let us see how the development of self occurs during the different stages of life.

Infancy: Children of different age groups respond differently to the images they see. Infants are found to have a visual self recognition by the age of two years but clear self awareness is not found even in the third year of age. During childhood the idea of self remains concrete.

Childhood and Adolescence: During early childhood children start defining themselves on the basis of certain psychological attributes. They start thinking about attitudes. During adolescence representations of the self become much more subtle. They realize that they are not the same kind of person with everyone and in every situation. Identity provides a stable sense of who a person is and what one's values and ideals are. Many adolescents experience identity confusion. They fail to have a coherent and enduring sense of self. They have difficulty in committing to roles, values and occupational choices. Some adolescents establish their identities after considerable soul searching and introspection. Others commit early without much effort. This forecloses the process of identity development.

Early Adulthood: This stage of development is characterized by the challenge of intimacy v/s isolation. Intimacy refers to the establishment of a committed relationship which is enduring. It includes both romantic as well as friendly relationships. In the course of development one needs to redefine his or her role as father / mother, uncle / aunt.

Middle Age: During this stage of life people become concerned with relating to the next generation and one's contribution to society. During this period a person faces crisis of engaging with generative activities. In fact midlife crisis has become a popular phrase. It brings an interruption in the normal rhythm of life. For some, the changes are gradual and for others quite drastic in nature.

Old Age: In view of social mobility and disintegration of traditional family ties, many aged people lack social support and suffer from poor self concept. However, those who look back upon their life with a sense of satisfaction that they have lived it well, experience a sense of integrity. Others may have regrets and despair.

Thus we find that the notion of self assumes different forms and undergoes continuous change during one's life course. It reflects the changes in the experiential world of people. However, the views of self held are not merely representations of the

**Notes**

expectations of others. They also work as a powerful force which directs behavior and shapes interactions in social situations. Self undergoes transformation and many elements are included and excluded in one's self structure. People often strive for an ideal self. They are expected to contribute to healthy development of society to which they belong.

All famous persons across the globe have contributed to the welfare of society. They are known for their integrity. Well integrated people contribute not only to their personal growth but also to the growth and development of society.

In the first stage infants have difficulty in differentiating self from others. They cry when others cry and laugh when others laugh. After one year they gradually develop a sense of self as characterized by egocentric thinking. They help the other person in the ways that they themselves would want to be helped. Then comes third stage during which children show situation specific empathy. Finally, when they reach the fourth stage they come to relate their expression of distress to others when others are also in distress. In fact in the fourth stage only appropriate exhibition of empathy is demonstrated, that is, others get emotional support from those who show appropriate empathic reaction.

Children can learn helping behavior by imitating significant others (e.g. parents, siblings, teachers). Opportunities for responsibility taking, reinforcing desirable behavior as and when it occurs strengthens the development of pro social behavior.

Yoga in the development of 'Self' can play a very important role. Through yogic asanas, pranayama and meditation the body, mind, vital force and intellect are properly nurtured which results in healthy development. It enhances self esteem, self confidence and self respect. Yoga is actually a systematic and properly regulated way of life. Let us see how yoga is useful in involving our selves in day-to-day activities like studies, relationships with other members of society, success at work place and maintenance of our health. Our attitudes, thinking and behavior also reflect our sense of self. We will study in the next section how yoga is helpful in shaping our attitudes, thinking and behavior.

**INTEXT QUESTIONS 25.1**

Fill in the Blanks

1. Visual self concept is found in _____.
2. During early childhood children start defining themselves on the basis of _____.
3. During middle age a person faces crisis of _____.
4. _____ can play a very important role in the development of self.



25.2 APPLICATIONS OF YOGA IN DIFFERENT WALKS OF LIFE

- a) **Studies:** The main hurdle in preparing for our studies is that we study for hours together and still retain hardly anything because our mind wanders and does not remain fixed on the task of learning the lesson.

In the practice of Yoga, when we learn to perform Asana and Pranayama, our breathing becomes long and deep. We focus our attention on a particular spot. When this focused mind is applied to studies, it grasps the ideas and concepts better. It can retain the learning material more effectively. In other words, Yoga improves our learning and memory. When we appear for examination, our mind is cool and composed. So an unexpected question does not disturb us.

Even if we study very hard sometimes we do not get the expected results and our mind gets clouded by anxiety and depression. Regular practice of Yoga – frees us from depression. Yoga teaches us how to involve our self in doing our best and leave the rest in the hands of the Lord.

- b) **Relationships:** Our relationships with persons around brings to us both joy and pain. We are constantly seeking fulfillment through friends, family members and colleagues at our work-places. When we practice yoga, co-operation takes the place of competition. Instead of making constant and unreasonable demands from others, we learn to give selfless love to others. While making friends, we learn to give greater importance to the inner qualities than to outer appearances. The sage Patanjali gives important advice regarding our reactions in relationships. He says, ‘Make friendship with those who are awake to the higher values of life and try to put them into practice. There is less likelihood of misunderstanding in their company. For those who are in misery, we must have compassion. We should not be self-centered. We should feel happy in the progress and prosperity of others. There should be no shadow of envy or rivalry in our minds. Towards the wicked, we should have indifference. It is not worth spending your precious energy – mental or emotional on their bad deeds’. Being intolerant towards others and getting irritated unnecessarily spoils our mind. We can be aware of our reactions towards others and develop a habit of giving a positive response to even a negative situation, that is, emotional balance. This can be achieved only by practicing yoga regularly.
- c) **Work :** Work or employment should be seen as a joyous opportunity for self expression and growth. What do we see in the offices? Boredom, clock watching, politics, fights between workers and management! Our work should be seen in terms of what we can give to it rather than what we get from it. Good posture, deep breathing and gentle stretching will help you to keep relaxed at the work-



Notes

place. Pausing for a moment and watching your breath immediately makes you relaxed. It is good to be creative in your work. Try to find new ways of doing things. Learn to enjoy even the routine work. Gita says that the art of doing work in an excellent way without expecting fruit is Yoga.

- d) **Health:** Why do we fall ill? Usually it happens because of some kind of imbalance in our physical and mental systems. Conflicts create blockages in the flow of life-force or Prana leading to diseases. Illness, depression, sulkiness all are the symptoms of negativity and obstructions in the flow of life-force. Through pranayama and meditation, we gradually free ourselves from the negativity and re-experience our natural state of vibrant health and energy.

Usually, the life-force or Pranic energy flows in the body where it is needed without our conscious control or even awareness on our part. It is possible through the use of will and Yogic techniques to direct the life-force wherever we want. It is possible to energize the whole system, heal the injured or diseased area or even heal others. Will is the master switch that draws the Pranic energy into the body and directs it to flow wherever it is needed. The connection between human will and life- force is the key to healing.



INTEXT QUESTIONS 25.2

- 1. How does Yoga help us in our studies?

- 2. How should one perceive work?

25.3 HOW YOGA SHAPES OUR ATTITUDES, THINKING AND BEHAVIOR

Everybody feels that he or she should become a happy and successful person. Our happiness and success depends on the pattern of our attitude, thinking and behavior. Yoga assures us that our dream can be fulfilled provided we acquire certain healthy attitudes and habits of thinking and living. The ancient wisdom can be turned into some practical hints for joyous and effective living. Some of them are as follows.

- a) **Let us not complain about our environment:** Some people may not be happy with their parents, their financial status, or social status. They may not be happy about their physique, looks and brain. They always look at others, envy them

and feel sad! They think, if only "I had a mother like that", 'or' "Had I been in the place of that scholar or that champion!". It is not healthy to complain about what we have; it is good to think of how we can make the best of it. Many great persons in the world fought against physical disabilities and adverse circumstances and became successful.

Everyone of us is gifted in some way or the other. Let us find out our own gift. It may not be academic intelligence, it may be social or other type of intelligence. We may not be good with books but we may be very good with machines, which is equally valuable. We may have a potential to become a singer, a painter or a stage-actor. Let us have a goal and take steps to move towards it. Yogic techniques make our body, mind and intellect strong. We become competent to take decisions.

- b) Let us train the body first:** Yogasanas shake off our lethargy and idleness. They bring fresh vigor to our body. They free us from tensions and diseases, so that we can focus our attention totally on our goal.

How do we train the body? Let us take care of our food. Let us avoid eating very less or eating unnecessarily. Select the food that agrees with us and brings harmony to our body. Digestion of food, its assimilation in the body and excretion of unwanted stuff, must be regular. Rest and proper sleep is also necessary to keep our body fit.

- c) Let us train our mind:** Self-education is very important in Yoga. If we train our mind to become strong, it will be strong. If we let it be weak like a pampered child, it will become weak and brittle. It would collapse at the smallest shock. Let us avoid self-pity because it makes us weak. Let us avoid all kinds of negative thoughts like envy, jealousy and narrow-mindedness. Some students do not exchange notes because they feel that somebody would 'steal' their knowledge! They forget that the more we give, the more our knowledge grows! Also, let us give up the ideas of dependence. There is no person or thing in the world without whom or without which it is impossible for us to live. Nothing is indispensable. There are persons, communities and nations who have rebuilt life from ashes. Japan is one of the living examples, why can't we?

- d) Let us train our intellect:** If we don't give challenging work to our intellect, it gets rusted, it loses its capacity to do mighty things. In fact we do not use our brain to the fullest extent. If the brain does not get enough exercise, it gets tired easily.

Seeing dreams and exerting all our energies to fulfill them makes our intellect strong. Let us teach our intellect by taking wise decisions and staying firm with our decisions.





Notes



INTEXT QUESTIONS 25.3

Match the Columns:

A	B
1. One way of becoming happy is	a) thinking habits and character
2. Eating unnecessarily	b) make your mind brittle
3. Negative thoughts environment	c) not complaining about your environment
4. There is strong relationship between	d) causes accumulation of fat on body

**25.4 YOGA FOR MOTIVATION AND EXCELLENCE:
IN ACTION**

A poet has said:

**Heights that great men reached and kept were not achieved in a single flight.
They, when their companions slept strove upward in the night.**

We, in our respective field, can make a resolution to ourselves that whatever we do, it will be of excellent quality. May it be teaching or typing, plumbing or fitting. Yoga can train the body and intellect for development of self to achieve excellence and competence in action.

One of the definitions of Yoga given in Gita is योगःकर्मसु कौशलम्. Yoga is excellence in action. Excellence in action does not come without motivation.

Why do we work? There are two reasons: One is visible. You work because you get money. The second is invisible. You work because you enjoy work, it increases your self-respect, people appreciate you, you are proud that you are given responsibility and try your best to rise to the occasion.

When we read the life stories of great men and women, we realize that they kept a lofty goal as the pole star of their life and strove hard to reach it. They had no place for laziness in their life. They could not afford to get entangled in clumsy and demanding relationships. With singleness of purpose, they ultimately achieved their goal. This is Yoga. This harnesses all your energies in a particular direction, keeping your instruments i.e. body, mind and intellect ready and sharp for the work undertaken. Great men see great dreams and make great effort to realize them.



INTEXT QUESTIONS 25.4

State whether the following statements are True or False:

1. According to Gita Yoga is excellence in action.
2. Great men and women could be great without any goal in life.
3. Yoga harnesses our energies in a particular direction.

25.5 PATANJALI ON MIND: ITS NATURE, FUNCTIONS AND STATES

Yoga was compiled in a concise form by Sage Patanjali. This compilation is called Yoga Sutra. It tells us about the nature of human mind and its functions. It analyses the causes of turbulence and suggests the ways of overcoming them. It enlightens us on how to reach the state of oneness with energy or Supreme Consciousness that pervades the entire universe. According to Yoga Sutra mind comprises of four faculties namely *Manas*, *Buddhi*, *Ahankar* and *Chitta*. These are called *Antahkaran*. *Manas* or mind makes *Sankalpa* (I will do this) and *Vikalp* (What, if this does not work?) *Buddhi* or intellect makes decision in the light of previous knowledge and wisdom. *Ahamkar* or ego is the centre around which all emotions, memories and thoughts are organized. *Chitta* is that consciousness on which the waves and ripples of various reactions are generated. *Vikalpa* and *Chitta* or consciousness is seen as the birth place of all mental reactions.

Ever-changing States of Mind

Our mind is found in the following states:

- 1) **Kshipt:** Most of the time our mind is thrown out to some object of interest in the process of experiencing the world. Such totally outgoing mind is called Kshipt (Literally-thrown out).
- 2) **Vikshipt:** Our consciousness or awareness sometimes goes outward and with effort, it turns inside, but again it goes out. So, in Vikshipt state our mind plays 'in and out'.
- 3) **Moodha:** When we are not alert, and our awareness appears to be non-functioning. This state is *Moodha*. A person out of his mind, in coma or in a fit has *Moodha* state of mind.
- 4) **Ekagra:** While practicing Yoga, you learn to concentrate your awareness on a particular object. Here the state of consciousness is *Ekagra* which is very useful for day-to-day functioning and for higher goals. When mind becomes *Ekagra*, it is a major achievement. Yoga helps in achieving this state of mind.





Relatively Steady States of Mind

Besides the ever changing states of consciousness, there are some relatively steady and regular states as well.

- 1) **Jagriti:** Full awareness with conscience (Vivek).
- 2) **Swapna:** A state of dream where some people play wish fulfillment game.
- 3) **Sushupti:** Deep and dreamless sleep.
- 4) **Tureeya:** This is the state of deep meditation in which a person becomes oblivious of space and time. Suppose he or she sits for meditation and enters *Tureeya* level of consciousness. During this state a person's consciousness becomes one with the Divine or universal consciousness.



INTEXT QUESTIONS 25.5

1. Who is the author of Yoga Sutra?

2. What are the different states of mind?

25.6 THE EIGHT-FOLD PATH OF YOGA

Patanjali has given a detailed account of the eight-fold path of Yoga.

There are eight steps that you have to follow if you want to lead life with health and well being. These steps are called eight fold path of Yoga. These are referred to as the limbs of Yoga.

Following are the eight steps of Yoga with their brief descriptions.

1. **Yama:** In general, Yama is exercising restraint on our lower animal like instincts. For instance, overcoming greed, lust, anger and envy and never acting based on these impulses. Yamas are five rules of behavior which purify one's mind and behavior. They also have social relevance. **अहिंसा सत्य अस्तेय ब्रह्मचर्य अपरिग्रहाः यमाः (पतंजलि योगसूत्र 2.30)**
 - (i) **Ahimsa:** It involves not hurting anyone including animals, plants and the so called non-living being like things that you use. It means non-violence in thought, word and deed. You must learn to respect everyone and everything around you.



(ii) **Satya (Truth):** To speak truth, we should mean what we say. Our words should be gentle and free from deception. They should be uttered with the desire to do good to others. We see many types of deception in society like corruption and adulteration and malpractices in medicine causing deaths of innocent people, selling the secrets of our country to enemy countries – all these are forms of untrue behavior. It is socially harmful and dangerous to one's integrity.

(iii) **Asteya (Not stealing).** Some times there is temptation to grab money which does not belong to us. There is tendency in some people to take bribe. They take money for what they are already being paid. Some people steal credit and happiness of others. All this is theft. To keep away from all these temptations is non stealing.

(iv) **Brahmacharya (Restraint on sex related activities):** As there are temptations of money, there are temptations of indulging in unethical sex. In fact this energy can be fruitfully used for one's personality development i.e. development of one's physical prowess and mental faculties. This is Brahmacharya. In this way you channelize your energy for individually satisfying and socially useful purposes.

Marriage and householder's life can be equally pure if its sanctity is taken care of. Husband and wife should be loyal to each other. Thoughtless sex can invite incurable diseases like AIDS. So, Sage Patanjali very rightly emphasized on the importance of Brahmacharya.

(v) **Aparigraha:** Aparigraha also means not to store more than what you need, because by doing that you may be depriving those who are in genuine need of the object.

Now we will discuss Niyamas

2. **Niyama:** Niyamas are mainly for purifying the body and mind. They are practiced on individual basis.

(i) **Shauch :** keeping your body and mind clean. Taking a bath everyday, cleaning teeth and drinking pure water. It covers activities like healthy food including grains, fresh green vegetables provide all the necessary ingredients like starch, fats, vitamins, salts and minerals give stamina and strength to your body. So Yoga advises us to eat healthy food. It also expects you to be regular in your toilet habits so that your body is free of toxins (harmful substances).

Shauch also means purity of mind. Our sages have recognized six enemies that make our minds impure. These include Kama – excessive desire, Krodha – anger, Lobha –greed, Moha – temptation, Mada – ego and Matsar – jealousy. Shauch means keeping away from these six enemies and filling one's mind with noble thoughts.



- (ii) **Santosh:** It means contentment. You should do your best in every undertaking and be happy with that. There are certain factors which are beyond your control so if you achieve the expected success, that is fine and if you do not achieve the expected success that also fine. Joy is lies doing the work itself.
- (iii) **Tapa:** The literal meaning of Tapa is penance. When our exams approach we generally give up seeing movies and T.V. We do not waste time in chatting with friends. To achieve a goal we have to make sincere effort, and give up certain pleasures. This is Tapa. While treading the path of Yoga, we have to control our desires and concentrate our mind.
- (iv) **Swadhyaya:** It literally means self-study. Here it means studying the principles related to Yoga. If we do not understand it all by our selves, we may seek the guidance of experts. Swadhyaya not only means reading literature related to Yoga but also contemplating on the principles of Yoga.
- (v) **Ishwar Pranidhan :** It means being in constant contact with God by chanting or by keeping in mind all the time that our actions are in the worship of the Lord. Lord is the witness of everything we see, do and experience.
3. **Asana:** Patatanjali defines Asana as that posture in which we can sit comfortable for the Yogic practices, with our head, neck and back in a straight line. Since Yoga is vitally related to our nervous system, our spinal cord should be in the right position. Squatting on a mat or sitting on your knees is usually prescribed for yogic practice (Sukhasan, Sahajasan or Vajrasan). The yogic tradition gives us 84 Asanas to keep our body and nerves supple. As we take care of our vehicles and instruments, so we must take care of the body. We must give it proper exercise. Hence, there is a need to do Asanas. They build our resistance to diseases and keep us fit.
4. **Pranayama:** Pranayama is getting control on our Pranic energy through the regulation of breathing. Inhaling air is called *Poorak* in Yoga. Exhaling air out is called *Rechak*. Stopping for a few seconds before exhalation is called *internal Kumbhak*. Kumbhak should not be done for more than five seconds. Pranayama should be done under expert guidance. Otherwise, instead of being useful, it can become harmful.



Fig. 25.1: Pranayama

Along with air we also take in the vital energy from the atmosphere which is called Prana or the life-force, breathing rhythmically improves your blood circulation and circulation of Pranic or vital energy in the body. It is a systematic, scientific process of managing our vital force and an art of utilizing it fully for an allround development of our personality.

5. **Pratyahara:** It literally means withdrawing. In Pratyahara we withdraw the senses from their external objects and turn them inward. We have five main senses



which are sight, smell, hearing, touch, and taste. In Yoga we train our sense organs to remain quiet. Yama, Niyama, Asana, Pranayam and Pratyahara are called external aids to Yoga. For the next steps, you have to go still deeper. So they are called as internal aids.

6. **Dharana:** Dharana is focusing of mind on a particular object. The object may be a part of our body like the midpoint of our eye-brows or it may be outside our body like a flame of a candle or moon or an image of the Lord or a saint. Our attention should be focused on either an internal or external object. This practice improves concentration which helps in studies and professional life.

7. **Dhyana:** When one learns to maintain Dharana or attention on a single object for a relatively longer period, that steady contemplation is called Dhyana or meditation. In Dhyana, we are aware of being a witness to what is happening in our minds. But we are not emotionally or intellectually involved in those happenings. This is also called Meditation. It is the best medication for all mental agitations.



Fig. 25.2: Dhyana

8. **Samadhi:** In Samadhi, the mind is so deeply absorbed in the object of contemplation that it loses itself in the object and has no awareness of itself. Only when one comes out of Smadhi he/she realizes that it was a state of Samadhi where sense of time and space was totally absent. In Samadhi the individual consciousness is absorbed with pure consciousness.

A person who progresses along this eight-fold path of Yoga successfully and becomes an evolved person. He or she is free from anger, lust and other vices. S/he becomes a lover of the entire humanity. S/he does his/her own duty with great excellence but is not at all proud of his/her achievements. S/he becomes an instrument in the hands of the Lord. This eight fold path is not for a chosen few. Everybody can tread on it.



INTEXT QUESTIONS 25.6

Match the following :

- | | |
|----------------|----------------------------|
| 1. Satya | (a) Restrain on sex-deisre |
| 2. Asteya | (b) Non-violence |
| 3. Aparigraha | (c) Truth |
| 4. Ahimsa | (d) Non-hoarding |
| 5. Brahmcharya | (e) Non-stealing |

**Notes****WHAT YOU HAVE LEARNT**

Patanjali defines Yoga as that state of consciousness where there are no ripples of thoughts or emotions. In this state our mind becomes one with the universal mind. Patanjali compiled all knowledge of Yoga in concise form. In 196 Sutras, he explained the nature of mental faculties and eight-fold path of Yoga.

The eight-fold Path is as follows :

- 1) **Yamas** : Attitudes and rules for Yogic life in social context.
- 2) **Niyamas** : Attitudes and rules for individual purity.
- 3) **Asana** : Right posture to keep the body fit and mind alert.
- 4) **Pranayama**: Controlling the in going and out going pranic energy through breathing.
- 5) **Pratyahara** : Shutting down the sense from outside and withdrawing inside.
- 6) **Dharana** : Concentration on a particular object.
- 7) **Dhyan** : Staying there for a long time.
- 8) **Samadhi** : Being one with the object of meditation.

This is the process of purification. In pure consciousness God cosmic consciousness is reflected. When this happens there is great change in one's life. In this state one enjoys supreme joy and becomes an epitome of all divine qualities like love, compassion etc.

By practicing yoga every one can gain mastery over the body and mind. Then, nothing remains impossible for him/her.

**TERMINAL QUESTIONS**

1. Which are the relatively steady states of mind?
2. Explain how yoga shapes our behaviour.
3. Describe Niyama.

**ANSWER TO INTEXT QUESTIONS****25.1**

1. infancy

Self-Development and Yoga

2. psychological attributes
3. generative activities
4. Yoga

25.2

1. Yoga improves learning and memory.
2. as a joyous opportunity.

25.3

1. c
2. d
3. b
4. a

25.4

1. True
2. False
3. True

25.5

1. Maharshi Patanjali
2. Manah, buddhi, ahankar, chitta
3. changing and steady

25.6

1. c
2. e
3. d
4. b
5. a

Hints for Terminal Questions

1. Refer to section 25.5
2. Refer to section 25.6
3. Refer to section 25.6

MODULE - VII

Yoga : A Way of Life



Notes



NURTURING THE WHOLE BEING: AN INDIAN PERSPECTIVE

‘Every one has in him something divine, something his own, a chance of perfection and strength in however small a sphere which God offers him to take or refuse. The task is to find it, develop it and use it. The chief aim of education should be to help the growing soul, to draw out that in itself is the best and make it perfect for a noble use.’

– Sri Aurobindo

Everybody is attracted towards an impressive "personality". Being a positive and effective person is considered to be the best asset an individual can have. Hence personality and its development constitute a major concern for psychology. While "personality" is universally accepted in popular circles, the concept of personality has been approached by psychologists in different ways. Also, personality does not refer to the whole of our existence the physical, social and spiritual. This issue has received attention from the Indian sages from ancient times. Bhagvad Gita provides comprehensive models of highly developed human potential. It emphasizes *Tri Guna* view whereas Upanishads laid down *panch kosha* theory. Similar to *panch kosha* theory of the Upanishads Sri Aurobindo has given a comprehensive system of one's being based on his studies on consciousness. In this lesson we will introduce you to some aspects of personality development from these wholistic Indian perspectives.



OBJECTIVES

After studying this lesson, you will be able to:

- define personality in view of the wholistic Indian perspective;
- to familiarize with the concepts of trigunas and panch koshas; and
- to understand the ways in which the different aspects of existential life can be enhanced.



26.1 WHOLISTIC PERSONALITY: AN INDIAN VIEW

The term personality generally refers to the kind of person an individual is. It comes from the Latin word 'persona' a mask worn in Greek and Roman theaters by actors to enable each actor to play several roles. It also means that the external appearance of a person comprising the characteristics that are accessible to other persons.

The Indian thinkers visualized human existence in terms of an integrated structure having spiritual as well as material aspects. In Upanishads the self, the *atman* or the consciousness is considered as the real core of personality. Consciousness is the eternal and immutable aspect of existence. Thus personality can not be taken as physical appearance (body) only. It extends to the different levels of existence incorporating the physical, social and spiritual levels. Let us try to learn about this model of personality in some detail.



INTEXT QUESTIONS 26.1

1. Describe the Indian concept of personality.

26.2 THEORY OF TRIGUNAS

This theory proposes that entire existence in nature is made up of combination of three Gunas namely *Sattwa*, *Rajas* and *Tamas*. *Sattwa* represents light, *Rajas* represents dynamism and *Tamas* represents lethargy or inertia. Human beings too are mixtures or combinations of these three qualities. Geeta describes how different people under the influence of different Gunas behave in diverse ways. Human development is examined with reference to movement from *Tamas* to *Rajas* and then to *Sattwa*. The highest stage is a state of being above these three gunas. Let us study about three Gunas and personalities related to them .

Sattwik: This kind of person functions moderately in eating, sleeping and performing various activities. He or she meditates regularly, and does all his or her work as worship of the Lord. People love this person and this person also loves and helps people. He or she radiates the light of knowledge. Guru Nanak Dev, Hazrat Nizamuddin, Kabir, Meera, Purandar Das, and Thyagaraj are some of the examples of such evolved persons.

Rajasik: This type of person is very active, dynamic and addicted to work. If he or she does not have work to do, he or she will feel restless. This kind of a person likes to eat spicy food. He or she is fond of entertainment, sitting at one place and observing silence is difficult for him or her. Such persons are often found in the business world.



Tamasik: This type of person does not like to work. He or she gets up late in the morning. They are failures in their lives. Nobody likes them because they are dirty, idle and lethargic. People usually keep themselves away from such persons.

The three qualities mentioned above are not exclusive. Each and every person is a combination of these three gunas in different degrees. In some, Sattwik is predominant, in some Rajasik is and in some Tamasik. However all the three are present in each of us to some extent. Personality development involves achieving and maintaining the right proportion of these three qualities. It should be noted that Rajasik is necessary to some extent but Tamasik should be tried to be kept at the minimum.

Now we come to another way of looking at our existence which sees human beings consisting of five levels. Let us examine them in detail and also the ways in which life develops along with them.

26.3 THEORY OF PANCH KOSHAS (FIVE SHEATHS OF HUMAN EXISTENCE)

Taittiriya Upanishad gives the concept of Panch Koshas and their development. It says that starting from Annamaya Kosha and reaching the Anandamaya Kosh, our existence has 5 layers or sheaths called Koshas. The gross body that we see is **Annamaya Kosha**. The subtler body made of pranic energy is called as **Pranamaya Kosha** or vital sheath. The third kosha is **Manomaya Kosha** or mental sheath comprised of one's feelings and emotions. The fourth one is **Vijnanamaya Kosha**. It is comprised of imagination, memory, knowledge, insight and understanding. The fifth is **Anandmaya Kosha** or sheath of bliss. Its characteristics are creativity, joy and bliss. Let us examine these sheaths in detail.

1) Annamaya Kosha : The Food Sheath

The physical body, the outer most part of our existence is termed as the Annamaya Kosha or Food Sheath. It has emerged from the essence of food assimilated by the father and nourished in the womb by the food taken by the mother. It continues to exist because of food consumed and ultimately, after death, goes back to fertilize the earth and becomes food. The substance of the physical structure, rising from food, existing in food and going



Fig. 26.1: Panch Koshas: Framework of personality



back to become food, is naturally and most appropriately termed the food sheath.

The food we eat gets transformed into muscles, veins, nerves, blood and bones. If proper exercise and proper diet is given the Annamaya Kosha develops well. The signs of healthy development are fitness, agility, stamina and endurance. A person having these qualities can easily master motor skills and has good eye hand co-ordination. Food taken is transformed into various nutritious elements and makes us grow physically.

2) Pranamaya Kosha: The Vital Sheath

The Pancha-Pranas, which are corresponding to the five physiological systems described in Ayurveda, represent the Vital Sheath. These activities which support the body take place as a result of the air that we breath in. Hence it is termed the Vital Sheath. The five Pranas comprising this sheath include the following:

- i) **Prana (The Faculty of Perception):** It controls the perceptions of the five fold stimuli received from the external environment through the five sense organs.
- ii) **Apana (The Faculty of Excretion):** All things thrown out of body or rejected by the body such as septum, perspiration, urine, faeces, etc. are expressions of Apana.
- iii) **Samana (The Faculty of Digestion):** Digests the food collected in the stomach.
- iv) **Vyana (The Faculty of Circulation):** The power by which the nutrients resulting from the digested food are properly conveyed to the various limbs of the body through the blood stream.
- v) **Udana (The Faculty of Thinking):** The capacity in an individual to raise his thoughts from their present level so as to conceive a possibility of or appreciate a new principle or idea-the capacity of self-education.

These five faculties gradually weaken as people advance in age.

The Vital Sheath controls and regulates the Food Sheath. When the *pranas* do not function properly, the physical body is affected. The signs of healthy development of Pranamaya Kosha are enthusiasm, ability to use voice effectively, suppleness of body, perserverance, leadership, discipline, honesty and nobility.

3) Manomaya Kosha: The Mental Sheath

The mind regulates the Pranamaya Kosha or Vital Sheath. For example, when the mind is upset due to some shock, the functions of pranas and the body are affected. Mind interprets the impressions of sense organs. It stores good and bad memories of the past. It is possible to increase the strength of mind by regular prayer, making resolutions and keeping them up. There is a deep relationship between mind, intellect and body.



4) Vijnanmaya Kosha: The Intellectual Sheath

The mind (Manas) is that which receives the external stimuli through sense organs and communicates the responses to the organs of action. Though the stimuli received through the five sense organs are distinct and different from one another, an integrated experience of them is brought about by the mind. The intellect (Buddhi) is the discriminating and discerning process which examines and judges the stimuli received. It also communicates to the mind its decision about the type of responses to be executed. The mind associates the impressions with pleasantness or unpleasantness based on memory. The intellect however, with its capacity to think, takes a rational decision which may not be liked by the mind but is ultimately beneficial to the person.

The mind is the storehouse of all memories and knowledge. This storehouse of experience is the guiding factor in man's actions. The mind can also be described as the seat of emotions and the intellect is to examine the areas in which they operate. The mind has the capacity to travel only to the 'realms known' but the intellect, besides remaining in the realms known, can further penetrate into the 'realms unknown' to investigate, contemplate and comprehend new discoveries.

5) Anandamaya Kosha: The Blissful sheath

This is the innermost of the five sheaths and consists of Vasanas or desires. They exist in the subconscious, the way we exist during the state of deep-sleep. It is considered blissful, because, whatever be the condition in which we are in our waking and dream states, once we reach, all of us experience relatively the same undisturbed peace and bliss due to the cessation of agitation experienced by us when we are awake or dreaming. The Bliss Sheath controls the intellectual Sheath, since the intellect functions under the control and guidance of one's *vasanas*.

When all the other Koshas are well developed we experience harmony between the inner self and the outer world. This harmony gives us a sense of joy and bliss. The five sheaths are like the layers of clothes worn by a person which are totally different from the wearer. So too, the Atman or the real self is distinct and separate from the five outer layers.



INTEXT QUESTIONS 26.2

1. What is the concept of panch koshas?

2. What are the three gunas?



26.4 DEVELOPMENT OF KOSHAS

Personality development moves from annamaya kosha to the pure consciousness gradually removing all the five covers that mask it. Regular eating habits, right kind of food, all types of exercises and games, jogging, running, walking and Asanas facilitate the development of Annamaya Kosha. Pranayam and breathing exercises improve the quality of Pranamaya Kosha. For the development of Manomaya Kosha study of good literature including poems, novels, essays and articles is useful. All the activities that challenge one's intellect develop Vijnanamaya Kosha. These activities include debates, problem-solving, study-techniques, small research projects, evaluation and appreciation of books and interviewing eminent persons. All these activities make you go beyond your tiny self and give you an opportunity to identify with your fellow beings-your community members, your country and the whole world. This facilitates the development of Anandamaya Kosha. Even in your contemplation you can extend your consciousness to reach the earth, the sun, the stars, the galaxies and the universe. This way we gradually build the relationship between individual self or individual consciousness and universal self or universal consciousness.

26.5 SRI AUROBINDO ON LEVELS OF CONSCIOUSNESS

Sri Aurobindo says that two systems are simultaneously active in the organization of the being and its parts: a concentric system and a vertical system. The concentric system is like a series of rings or sheaths. The outer most circle is comprised of awareness of physical body, awareness of vital (pranic) body or sheath and awareness of mental sheath. They are interconnected. The inner circle is composed of inner mind which is in touch with the universal mind or Supreme Energy. The innermost core is called Psychic being which is a spark of the Divine (Supreme Energy) present in all of us and in every thing. It is also called Atman.

The vertical system is like a staircase consisting of various levels, planes of consciousness ranging from the lowest – the inconscient to the highest – Sat Chit Anand. In simple words, from unicellular being, humans have climbed innumerable rungs of the ladder of evolution. We have an evolved body and mind. But our evolution is not complete. Our consciousness has to climb several rungs to reach still higher levels and the highest level of consciousness which is endowed with amazing experience of goodness, freedom and knowledge.



INTEXT QUESTIONS 26.3

1. How can we facilitate the development of Anandamaya Kosha?



2. According to Sri Aurobindo, what is the innermost circle of consciousness called?
-

**WHAT YOU HAVE LEARNT**

- Human existence and its development is a major concern of psychology.
- Bhagwad Gita and Upanishads give us profiles of highly developed life ways. Upanishads also give as the constituents of human potential. They are called Koshas.
- Atman, the divine spark of life, lives in the human body with five coverings on it. The coverings or sheaths are called Koshas. Annamaya, Pranamaya, Manomaya, Vijananmaya and Anandmaya are the five Koshas.
- The food we eat gets transformed into muscles, veins, nerves, blood and bones. If proper exercise and proper diet is given the Annamaya Kosha develops well. The signs of healthy development are fitness, agility, stamina and endurance. A person having these qualities can easily master motor skills and has good eye hand coordination. Wiring, fitting, welding, knitting are motor skills that involve eyehand co-ordination. Indian psychology says that the body is an effective instrument in the worship of God. Our duty and work itself is the worship and one is supposed to do it with total devotion.
- Sri Aurobindo's perspective gives us a concentric and a vertical model of our being. The development according to this is more or less similar to the development of Panch Koshas.

**TERMINAL QUESTIONS**

1. Explain any one Kosha in detail.
2. Describe the ways for development of the five Koshas.

**ANSWER TO INTEXT QUESTIONS****26.1**

1. Personality is not mere external appearance. It includes the whole existence that includes physical, social and spiritual parts of life. An individual's true self or nature is considered as pure consciousness or Atman.



26.2

1. Panch Koshas include the following: Annamayakosha, Pranamaya Kosha, Manomaya Kosha, Vigarammaya Kosha, Anandmaya Kosha.
2. Sativik, Passik, Tamsik

26.3

1. Regular eating habits, exercise, night food and Yoga
2. Psychic being or Atman.

Hints for Terminal Questions

1. Refer to section 26.3
2. Refer to section 26.4



CONTROLLING AND DISCIPLINING THE MIND

At present we are living in the age of technology, industrialization and urbanization. The world is becoming very competitive. The Indian society has become very complex and fast moving. All these cause stress and strain resulting in many diseases like high blood pressure, insomnia, diabetes and heart attack. The remedy to deal with the stress and strain does not lie in taking drugs or alcohol. These are not solutions but may affect adversely. All this happens mainly because we are not in control of our faculties. We let the circumstances and outside world control ourselves. The solution of the problems lies in developing the ability of control to and regulate the mind or one-self. In this lesson we will discuss some techniques which will help us in attaining a peaceful mind and a healthy life.



OBJECTIVES

After studying this lesson, you will be able to:

- state the importance of control and discipline of the mind;
- explain some techniques and methods of mind control; and
- learn about the benefits of various method of mind-control.

27.1 IMPORTANCE OF CONTROLLING AND REGULATING THE MIND

For healthy development of the individual and society self-control and discipline are very important. Without it the negative feelings like possessiveness, arrogance, aggressiveness, anger, hatred and intolerance etc. take precedence.

Controlling and Disciplining the Mind

The key question is: How to achieve control of ourselves? The answer lies in leading a disciplined life. We have to regulate our dietary habits and other aspects of life style. The Indian system of Yoga was developed for this purpose. Yoga as a way of life is necessary for healthy development of an individual. It is a profound physical, emotional and cognitive experience. There should be a balance between body, mind, intellect and emotions. Modern education lays more emphasis on the body and intellect. Its neglect of emotional aspects seem to result in lack of discipline, restraint, tolerance and character.

The control of mind is not a problem for religious or spiritual aspirants only but people in all walks of life need to control mind if they are to succeed in their vocation. No progress in the lives of the individual or the community can ever be done without proper mind-control and regulation. A peaceful and tranquil mind can achieve anything in life. Every human being wants to lead a happy and healthy life and it is possible only with a life without problems.

Interestingly the mind is controlled by the mind itself. The difficulties which we experience in controlling the mind are created by our own mind. Mind cannot be controlled by artificial external means or interventions for any length of time. It needs patient, intelligent, systematic hard work following certain practices of meditation. The mind has to be gradually and systematically brought under control. Let us discuss some of these practices in detail.

Now we will try to discuss some tested disciplines, methods and technique of controlling and disciplining the mind.



INTEXT QUESTIONS 27.1

Fill in the blank

- (a) Self-control and discipline are very important for of individual and society.
- (b) A mind can achieve anything in life.
- (c) Yoga is a profound physical and experience.

27.2 JEEVAN VIGYAN

Jeevan Vigyan is a harmonious practical method to inculcate human values. It teaches us the positive values to enable us to control our mind.

Human behaviour can be disciplined only if our thoughts and mind are disciplined.

MODULE - VII

Yoga : A Way of Life



Notes



According to psychology the control of behaviour is partly regulated by the nervous system and endocrine glands. They keep undergoing changes and they can be consciously changed. The changes can also be brought by *bhavshuddhi* or purifying the emotions. The source of all emotions is body. The chemicals are produced in the gross body. If we learn to control our thoughts, purification of behaviour will follow.

Jeevan Vigyan is a plan to build a wholesome personality. It can be instrumental in fulfilling the dream of a new society and a new life style. We have to learn that we are interdependent beings and relate to nature as well as other fellow beings. Education is meant to develop the awareness of interdependence. Jeevan Vigyan is a method of controlling our emotions. Our emotions have to be refined otherwise they may create problems. The anger and rage of a single boy/girl can result in disintegration of the whole family. Jeevan Vigyan trains our brains to regulate emotions and behaviours.

It is often said that modern education helps the development of knowledge and intellect. It considerably neglects our attitudes, inner consciousness and spirituality. Jeevan Vigyan provides for a balanced development of both the hemispheres of the brain. It teaches control of our senses and reflex – actions. It is possible to get rid of negative thoughts by cultivating positive thinking. Jeevan Vigyan is a way of developing a balanced personality of an individual and provides a solution to build a healthy society.

**INTEXT QUESTIONS 27.2****Tick the right answer****1. Jeevan Vigyan teaches us**

- a. Positive values
- b. Negative values
- c. Only social values
- d. Impractical methods

2. The main objective of Jeevan Vigyan is-

- a. to develop a harmony between the individual and the society
- b. to develop the emotional competence
- c. to make us insensitive
- d. teaching us to be self-dependent.

3. Modern education helps in developing

- only emotional functions
- spirituality
- consciousness
- only cognitive functions

27.3 PREKSHA DHYANA

Dhyana or meditation is an important component of Jeevan Vigyan. It is a particular technique of controlling and disciplining the mind. Its objective is to attain change in attitudes and behaviours and develop an integrated and balanced personality. The different aspects of preksha include – Shwas Preksha (perception of breathing), Sharer Preksha (perception of body), and Chaitanya Kendra Prekshna (perception of psychic centres) When a person starts practicing dhyana or meditation one gradually experiences a change in one's thinking and feeling. He/she feels that anger and fear are no longer disturbing and person's behaviour changes. One becomes a more righteous person. Preksha dhyana brings poise to the mind and it looks controlled and disciplined.

Preksha Dhyana involves developing self awareness by relaxation. Today eminent doctors of various fields have realized the importance of relaxation as a therapy, for both healing and maintaining good physical and mental health. In Preksha Dhyana total relaxation is achieved by following stages meditations as given below:

- Kayotsarg** – It involves having the condition of perfectly motionless state of body. Unless body is relaxed mind can not be relaxed.
- Mental Concentration**– Here auto suggestion is used. By mastering this technique one will achieve mental stability in due course.
- Awareness of the body and realizations of the non-material self.** It is not a passive state. Both mind and spirit are very active in it. It is seeing, knowing and realizing. It leads to realization of spiritual self and attainment of wisdom.



INTEXT QUESTIONS 27.3

Tick the correct answer –

- Preksha is a technique of (concentration, meditation, relaxation)





2. Fill in the blank
 - a. Kayotsarg is a state of body.
 - b. Autosuggestion is basic to the technique of
 - c. Awareness leads to of spiritual self and attainment of

27.4 ART OF LIVING

The basic tenets of Art of Living and the Science of Living (Jeevan Vigyan) are the same: Let our body, mind and soul be in total harmony. A hundred years ago Sri Paramhansa Yogananda introduced the concept of Art of Living. The essence of his teachings is that to lead a more integrated humane and spiritual life we need discipline and control of mind. It gives certain practical methods for the uniform development of mind and soul. These include taking balanced diet, regular exercise, practice of meditation, studying religious literature and leading a pious life.

More recently Art of Living has been revived and refined by Sri Sri Ravi Shanker with the goal of creating an atmosphere of love and peace for entire humanity. For the purpose Sri Ravi Shanker has introduced a technique of Sudarshan Kriya. He says, unless we have a stress-free mind and a violence – free society we cannot achieve world peace. Art of living helps individuals get rid of stress and experience inner peace. The training includes stress-elimination programmes such as Prayanam (breathing techniques), meditation and yoga.

The degree to which stress unduly influences our lives is generally underestimated, often the mind clings to anger, guilt or regret about the past, or is plagued by anxiety and worry about the future. This oscillation of the mind between the past and the future causes tension and stress for us and for the people around us and leads to reduced effectiveness in action. Breath is the link between body and mind and thus works as a key to handle negative emotions and facilitate the use of true potential at work at home and at leisure. For example, when you are angry, the breath is short and fast, when sad, the out-breath is long and heavy. So, we can learn to skillfully use the breath to change the way we feel, hence release negative emotions (e.g. stress, anger, anxiety, depression and worry) and leaving the mind happy, relaxed and energized.

Sudarshan Kriya: Just as there are rhythms in nature – day and night, season after season, similarly, there are rhythms in the body, mind and emotions. When these rhythms get disturbed, say due to overwork, food habits or busy lifestyle, we feel stress, discomfort or get an illness. To get rid of such disturbances Sudarshan Kriya is used. Its cleansing power harmonises the whole system. Sudarshan Kriya incorporates specific natural rhythms of the breath which harmonises the body, mind

Controlling and Disciplining the Mind

and emotional stress, fatigue and negative emotion as anger, frustration and depression. Leaving you calm yet energized, focused yet relaxed. Actually it transforms the individual both physically, mentally and emotionally.

We need to do a cleansing process within ourselves. In sleep we get rid of fatigue, but the deeper stress remains in the body. Sudarshan Kriya cleanses the system from the inside. The breath has a great secret to offer. Thus by controlling breath through Sudarshan Kriya we can control and discipline the mind easily. In addition Satsang, observing silence, meditation and service may help.



INTEXT QUESTIONS 27.4

Write True or False

- Sudarshan Kriya is pranayam.
- Sudarshan Kriya is a breath cleansing process.
- Art of living is a movement for world peace.
- Art of living has been introduced by Swami Ram Dev.

27.5 TRANSCENDENTAL MEDITATION

Maharshi Mahesh Yogi has propounded (developed) a simple system of meditation called Transcendental Meditation (TM). Meditation in general, helps in regulating thoughts and establishing a sense of peace in the mind of the participant. There are many types of meditation in India. Some people meditate using OM, some focus on Jyoti, some by worship an idol. Concentration is involved in all these meditations which make them strenuous. It is said that meditation is like floating on the surface of a pond, contemplation is like swimming on the surface and TM is like diving deep into the pond—from the outer surface to deep inside the water.

TM does not involve concentration or contemplation. Using this method the mind experiences subtler (finer) state of thought and eventually transcends (goes beyond) all thoughts. In TM the mind experiences a kind of freshness where all mental and physical tensions are removed. The qualities of energy, positivity and creativity then manifest (appear) in the mind or consciousness.

TM moves our mind from the surface of life to the depth of our Being. By this method the conscious mind takes a dive into the deeper levels of consciousness and this makes the surface value of the mind more powerful. The thought waves become more powerful. When the thought force is powerful, the whole life becomes powerful.

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Human life is just a play of the mind. If the mind is weak, life is weak, accomplishments are weak and problems and tragedies increase. If the mind is strong, thoughts force is strong, accomplishments are greater and tragedies do not occur.

TM ensures the connection of the outer life with the inner value of Being. This makes all the avenues of outer life to become positive and worthwhile. In other words, through TM the outer conscious mind can get access to the inner glories of life. We are able to experience the innermost core of personality – that field which is the source of all wisdom, all peace, all happiness and all creativity.

In TM the mind experiences subtler states of thought and eventually transcends all thoughts. Our existence is rejuvenated and all mental and physical tensions are removed. The mind becomes peaceful, disciplined and controlled.

27.6 VIPASSANA

It is a technique to bring peace and tranquility to the human mind. One has to keep on observing the truth that manifests itself and the Law of Nature starts revealing itself. While starting this exploration of truths within you have to abstain from every type of violence, sexual misconduct, speaking lies, and taking any type of intoxicants. If you are generating such defilement it becomes impossible to go to the deeper levels of mind.

To practice this technique you sit with your eyes closed without any vocal or physical action. Now start experiencing the breath coming in and breath going out. The breath comes in the breath goes out naturally. Start observing it. This is the reality, a very gross reality, but reality pertaining to your own mind and matter which has started manifesting itself. It is not breathing exercise, you are not to control your breath. Controlling, disciplining and regulating the breath is other technique called 'Pranayama'. But 'Vipassana' is quite different from 'Pranayama'. In Vipassana you observe the breath as it is – natural and normal breath. The exercise is to experience the reality which manifests itself within the framework of the body, not a breathing exercise.

Let anything happen, you never try to interfere with the natural flow of breath. Let Nature play its own role. Your role is to observe. Just observe objectively.

After sometime the mind calms down, becomes more subtle and more sensitive. You develop your faculty of awareness. Now you are able to feel the touch of the breath. The barriers of conscious and unconscious mind are broken by this technique of observation.

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The word “Vipassana” means to observe the reality as it is in its true nature, not just as it appears to be, not just as it seems to be, but as it is in its true nature.

In this lesson we have familiarized with the different systems of disciplining and controlling the mind. Though Pranayama or Dhyana we not only learn to control our breath but also our senses and mind. Meditation teaches us to concentrate, relax, feel and receive the essence of real and universal life. All this leads to a feeling of peace tranquility, mental harmony and spiritual realization.



INTEXT QUESTION 27.5

Fill in the blanks:

- TM is that technique which brings our mind from the _____ to the depth of our being
- In TM the thought waves become more _____
- Vipassana is quite different from _____



WHAT YOU HAVE LEARNT

- For a healthy growth of the individual and society self control and discipline are very important.
- Jeevan Vigyan provides for a balanced development of cognitive and emotional functions. It teaches control over senses and reflex actions. It is possible to get rid of negative thoughts by cultivating positive thinking through Jeevan Vigyan. Preksha Dhyana is a very practical technique to bring out the desired result of jeevan Vigyan.
- Transcendental Meditation is that technique which brings our mind from the surface of life to the depth of our being. By this method the conscious mind takes a dive into the deeper level of consciousness, which get activated and this make the surface value of the mind more powerful.
- Paramhans Yogananda gave the concept of Art of Living; which has been revived by Sri Sri Ravi Shanker thought of Living foundation in 1981 and introduced Sudarshan Kriya which as a unique and wonderful breathing technique. It eliminates stress, fatigue and negative emotions.
- Vipassana is a technique of self observation, i.e. observing things as they really are not just as they seem to be. This is what the Buddha taught through the technique of self observation. Vipassana is a natural and normal breathing which is observed without any special effort, and in return it brings peace and tranquility to human mind.

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**Notes****TERMINAL QUESTIONS**

1. How are Jeevan Vigyan and Art of Living related disciplines?
2. How can we control our emotions?
3. Define Vipassana.

**ANSWERS TO INTEXT QUESTIONS****27.1**

- (a) healthy development
- (b) peaceful and tranquil
- (c) cognitive

27.2

1. (a)
2. (a)
3. (d)

27.3

- a. perfectly motionless
- b. relaxation
- c. realization

27.4

- a. False
- b. True
- c. True
- d. False

27.5

- a. Surface
- b. Powerful

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- c. Pranayam
- d. Rigveda

Hints for Terminal Questions

1. Refer to section 27.6
2. Refer to section 27.6
3. Refer to section 27.8

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