Psychology

Standard 11th

Psychology

STANDARD ELEVEN
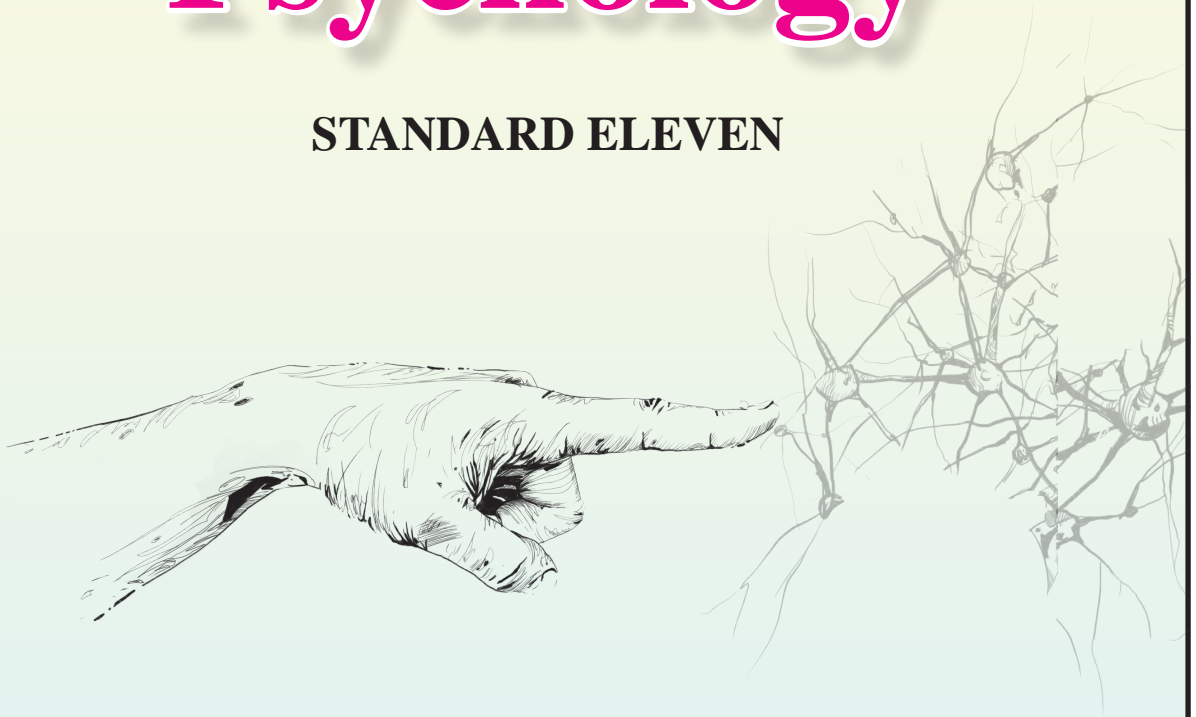
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2019

**Maharashtra State Bureau of Textbook Production and
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The Constitution of India

Preamble

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens:

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.

Jana-gana-mana-adhināyaka jaya hē
    Bhārata-bhāgya-vidhātā,

Panjāba-Sindhu-Gujarāta-Marāthā
    Drāvida-Utkala-Banga

Vindhya-Himāchala-Yamunā-Gangā
    uchchala-jaladhi-taranga

Tava subha nāmē jāgē, tava subha āsisa māgē,
    gāhē tava jaya-gāthā,

Jana-gana-mangala-dāyaka jaya hē
    Bhārata-bhāgya-vidhātā,

Jaya hē, Jaya hē, Jaya hē,
    Jaya jaya jaya, jaya hē.

PLEDGE

India is my country. All Indians are my brothers and sisters.

I love my country, and I am proud of its rich and varied heritage. I shall always strive to be worthy of it.

I shall give my parents, teachers and all elders respect, and treat everyone with courtesy.

To my country and my people, I pledge my devotion. In their well-being and prosperity alone lies my happiness.

Preface

Dear students,

Welcome to eleventh standard. Congratulations on successfully completing your secondary school education. We are extremely glad to place this Psychology textbook in your hands as you take your first steps towards higher secondary education.

Psychology is primarily a study of the human mind, brain and behaviour. Whenever a person engages in any act or thought, what exactly happens in his / her brain? In a given situation, why does one individual behave differently from another? How do emotions and thoughts affect human behaviour? What leads to the development of mental illnesses? What are some of the reasons and remedies behind mental illnesses? These are some of the questions that Psychology tries to answer. Every individual feels the need for guidance, advice at some stage in his/her life. Also the stressful lifestyle of our times creates many problems for us. In these times, a Psychologist or a counsellor or a guide can empower people to deal with these challenges. Currently, the field of Psychology has many different career opportunities.

Even if Psychology is classified under social sciences, it comes close to the basic Sciences in many ways. Case studies and surveys are emphasised in Psychology. The counselling process changes with every individual case and the issues concerned. This is a field where a lot of responsibility rests on the shoulders of the counsellor since any intervention directly affects human well being. The study of Psychology involves both - theory and practical. Conducting surveys, practical hands-on experience through internships, completing research projects is also a part of studying Psychology. Psychological tests, theories, mental illnesses and remedies, research methodologies are some of the topics to be studied.

Since you are being formally introduced to this subject for the first time, the textbook has been designed to provide you more clarity about the scope of the field of Psychology. You will be required to complete different activities as part of the course. We urge you to complete these activities in all seriousness. They will certainly help you to achieve a deeper understanding of the concepts.

The textbook also includes plenty of small tasks. These tasks are designed to stimulate your thought process. Carefully complete all the tasks. Seek help from your teachers, parents and peers whenever necessary. You are of course very well versed with the use of smartphones and computers. You can also refer to the resources available online to supplement the textbook.
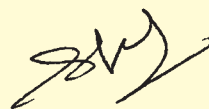
Let us know your feedback about the textbook - especially the parts that you liked the most or the ones you found difficult to understand.

Wish you all the best for your future educational journey !

Pune

Date : 20 June 2019

Bharatiya Saur : 30 Jyeshtha 1941

(Dr. Shakuntala Kale)
Director
Maharashtra State Bureau of Textbook
Production and Curriculum Research, Pune

Statement of Learning objectives : Psychology

This chapter aims at facilitating students to

Sr.No.	Units	Learning objectives
1.	**Story of Psychology**	1. know how Psychology has evolved as an important subject to understand human behaviour. 2. understand the basic concepts related to human behaviour. 3. understand the goals of Psychology.
2.	**Branches of Psychology**	1. know about and understand difference between theoretical and applied branches of psychology. 2. acquire knowledge about applications of various branches of psychology in real life.
3.	**Self**	1. develop an understanding about the concept of Self. 2. understand how does the concept of one's self develop. 3. know the significance of self awareness, self image, self efficacy and self esteem. 4. identify the ways of self regulation. 5. understand Rogers theory of self.
4.	**Human Development**	1. know what is human development. 2. understand human development and other parallel concepts. 3. understand the stages of human development with specific characteristics, problems and developmental tasks at each of them. 4. relate the principles of development in day to day life.
5.	**Healthy Me - Normal Me**	1. develop an understanding about Normal and Abnormal Behaviour. 2. understand the criteria of normal and abnormal behaviour. 3. develop an understanding of Emotional Intelligence. 4. identify the problems faced by adolescents in general.
6.	**Stress**	1. develop understanding of stress. 2. know the different types of stress. 3. know the sources and effects of stress. 4. identify the sources of stress from day to day life. 5. understand the different coping strategies.
7.	**Nervous System**	1. understand the human Nervous System. 2. understand the structure and functions of the neuron. 3. understand the important parts of the brain and the spinal cord. 4. understand the functions of the endocrine glands. 5. understand the behavioural implications of the endocrine functioning.
8.	**Memory**	1. understand the process and nature of memory. 2. understand the various methods of measuring memory. 3. understand the various causes of forgetting. 4. understand the strategies of improving memory and relate the same to day to day experiences.

For Teachers

Dear Teachers,

We have been given the opportunity to introduce the subject Psychology to the students of eleventh standard. This text book has been designed to fulfil the following objectives in eleventh and twelfth standard-

1. Students should understand why is Psychology classified as a branch of Science.

2. Students should understand how are matters concerning our daily life studied under this subject.

3. Students should understand the concept of 'self', how it applies to them personally and how could it be developed.

4. Students should be able to apply the techniques which they learn in this course in their day-to-day life; for instance, techniques to remember what is read.

5. Students should feel motivated to pursue higher education in the field of Psychology and make a career for themselves in it.

To enable us as teachers to achieve the above mentioned objectives, we must keep in mind a few important points.

• We must ourselves go through and study the entire textbook.

• The main aim of the textbook for 11th and 12th standards, is introduction to Psychology. Therefore, the syllabus is divided into four core themes.

1. History and scope of Psychology

2. The concept of self

3. Mental health

4. The nervous system: structure, function and relevance to everyday life experience

The book is so organised that the foundation of these themes is laid in eleventh standard whereas the themes are explored in greater details in twelfth standard. Therefore mentioned four themes would remain same in both the years.

Though the concepts of 'perception' and 'attention' have been introduced to the students in lower classes, the topic of memory is very appealing to both - the students and adults alike. Thus it has been included in the text of eleventh standard.

The level of difficulty of the text and the suggested activities has been decided after carefully considering the resources accessible to the students and teachers, variation in their experiences and ability to grasp different concepts as well as the resources available to the teachers. Even then, it is possible that some students may find the book too easy whereas others may find it too difficult. Here, the teacher has an important role to play. The teacher needs to facilitate the difficult concepts and provide higher challenges if they are found to be too easy and preliminary. This can be done by referring the students to appropriate resources or setting challenging activities for them to complete.

Plenty of examples of poems or suggestions of movies or activities or experiments have been provided in the textbook. The teacher can use them at her discretion and choice. However, it should be ascertained that students have understood the concepts for which the material and method have been suggested in the first place. The teachers should use QR codes given in the textbook whenever possible. The teacher can of course use resources above and beyond those suggested in the textbook.

We are all aware of the wide scope of the subject of Psychology. No textbook, however well written can claim to be complete. We all know that a textbook is always just a medium or an instrument towards an end.

We hope that you enjoy learning as well as teaching the subject and that the students find the subject challenging, meaningful and interesting too.

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1 ▶ Story of Psychology

Learning objectives

This chapter aims at facilitating students to

1.   know how Psychology has evolved as an important subject to understand human behaviour.

2.   understand the basic concepts related to human behaviour.

3.   understand the goals of Psychology.

1.1 Introduction

Although Psychology is new for us in terms of study, we are aware of this subject from our childhood, because we have been observing different forms of emotions, behaviour, moods of human beings. Human behaviour is full of diversity. This diversity amazes us. When we open daily newspaper or watch news on T.V. we see different aspects of human behaviour. Some examples are given in following pictures.
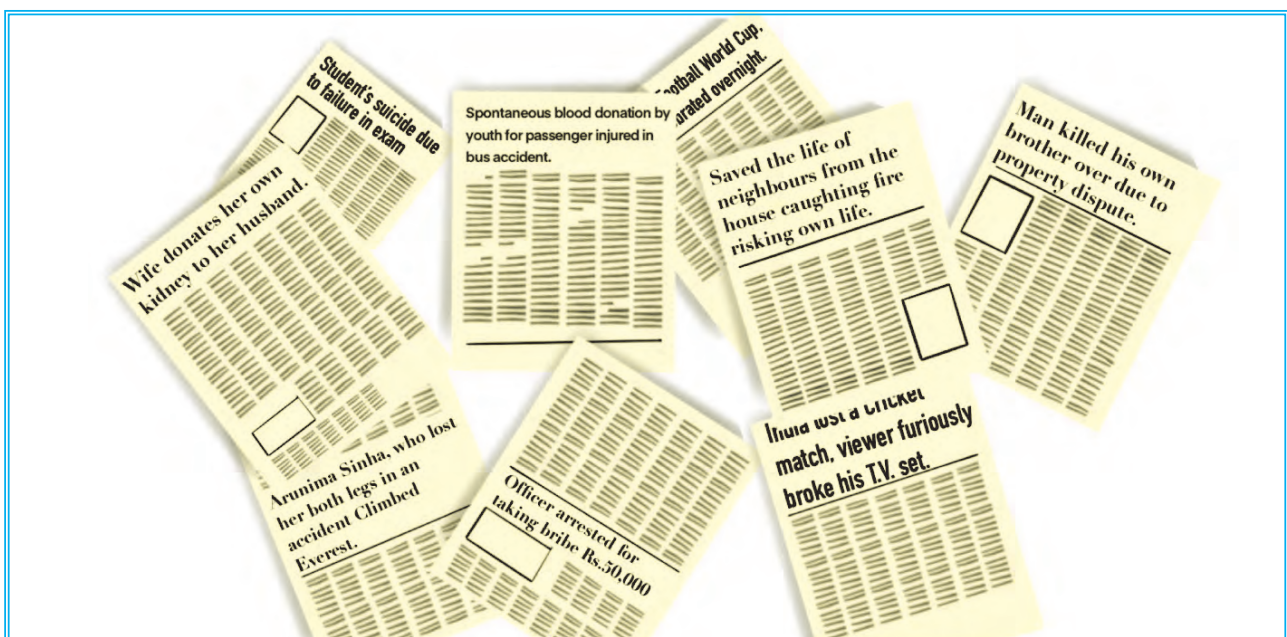
Following are the news in the collage.

1. Spontaneous blood donation by youth for passengers injured in Bus Accidents.
2. Neighbour saves life from a house that caught fire risking his own life.
3. Man killed his own brother due to property dispute.
4. Wife donates her kidney to her husband.
5. Officer arrested for taking a bribe of Rs. 50,000.
6. Arunima Sinha, who lost her both legs in an accident climbed Everest.
7. Student's suicide due to failure in exam.
8. India lost a cricket match, a viewer furiously broke his T.V. set.
9. France won Football World Cup, citizens celebrated whole night.

Activity 1 :

- What type of emotions and human nature is expressed through above news?
- Apart from above news, what type of news you read in newspapers or see on T.V.?
- What could be the possible reasons of such behaviours?

When we observe people around us, we realize that some individuals do not lose their courage and overcome difficult situations. On the other hand some commit suicide due to some minor failure. Some do not hesitate to harm others for their motives while some sacrifice their lives for others.

We have seen diversity of human behaviour through the above examples. Why is human behaviour so diverse? What type of circumstances lead to these behaviours?

Psychology helps us to understand these aspects of human behaviour.

1.2 The history of Psychology

Psychology is a vast field studying behavioural aspects of mankind. This makes it difficult to define Psychology precisely and in concrete terms.

Psychology did not emerge directly as a science. It started as a branch of philosophy. It evolved as a separate branch later 19th century.

Plato believed that knowledge is innate, whereas **John Locke** thought that each child is born as an "empty slate" and that knowledge is primarily acquired through learning and experience.
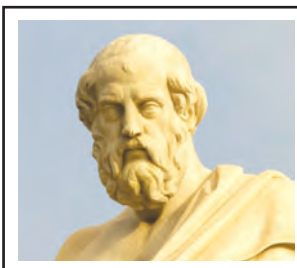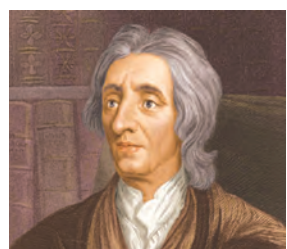
Fig. 1.1 Plato   **Fig. 1.2 John Locke**

Science of soul

The first attempt to define psychology was made on the basis of the terminology used. The word Psychology was derived from two **Greek words – 'Psyche' and 'Logos'.** Psyche means soul or mind and logos means science or branch of knowledge. Thus Psychology was meant to be the Science or branch of knowledge that deals with soul or mind.

Do you know?

Symbol of Psychology

The symbol of Psychology is the 23rd Greek alphabet Psi means soul or mind.

Ψ
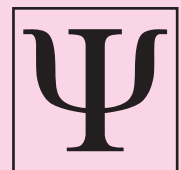
But later psychologists were not satisfied with this definition. To them, soul was difficult to study as it could neither be visualized nor could be described in concrete terms.

Both **Soul and mind** are **abstract concepts**. Rational Sciences establish their facts from

observation and experimentation. If Psychology is a Science, it must be based on some sort of observation and experimentation. However neither soul nor mind can be observed. We cannot see or touch them. We can't describe its nature nor can we say where it exists. Therefore, the definition of Psychology was modified.

Activity 2 :

Do you agree with the definition of Psychology as the Science which deals with the soul? If yes why? If no why?

Activity 3 :

Collect information about **Bahinabai Chaudhri : Mana** (description of Mind)

htttp/www.youtube.com/watch?v=DEDSDQqNyg4

1.2.1 Study of Conscious

In late 19th century German Physician and Philosopher Wilhelm Wundt established first Psychological laboratory at Leipzig University in 1879 to study human behaviour. He introduced the term 'conscious experience'. The term 'conscious experience' refers to the awareness of the mental activities of an organism. The awareness includes the stored mental impressions or representations of the past, present and future. He conducted experiment on reaction time, perception, consciousness etc. After that psychology emerged as a science.

Fig. 1.3 Wundt and his colleagues in the first laboratory of psychology

Wilhelm Wundt (1832 - 1920)

Fig. 1.4 Wilhelm Wundt

- University of Leipzig, Germany
- Established first Psychology Laboratory in 1879.
- Defined psychology as the study of consciousness.
- He used scientific methods to study fundamental psychological processes, such as reaction time in response to visual or auditory stimuli.
- He introduced Introspection method.

1.2.2 Study of Unconscious

Dr. Sigmund Freud, an Austrian physician defined of Psychology as the study of unconscious. He believed that most of our motives are hidden. There is an unconscious level of our mind where we push or repress all our threatening urges and desires. He stressed the importance of early childhood experiences and believed that personality is formed in first five years of life. If there are any major psychological problems seen in the person's life, it has roots in the early years of life.

Dr. Sigmund Freud (1856 - 1939)
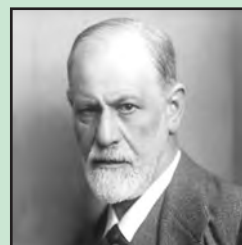
Fig. 1.5 Dr. Sigmund Freud

- Austrian neurologist and the founder of psychoanalysis

- Defined Psychology as the study of unconscious.

- Believed that early childhood experiences and unconscious impulses contributed to the development of adult personality and behaviour.

Activity 5 :

Do you agree with the definition that psychology is the study of unconscious? What could be the limitations of this definition?

1.2.3 Study of Behaviour

Wilhelm Wundt defined Psychology as study of Consciousness and Dr. Sigmund Freud as study of Unconsciousness. However, here again, 'consciousness', and 'unconsciousness' are not observed directly. Hence, John B. Watson redefined Psychology as a Science of human behaviour.

The latest definition is -

The study of human behaviour and mental processes.

In this definition, following terms are important.

(1) Behaviour

In general we can say that behaviour is an organism's response to various stimuli present in our surrounding. But each individual might have different response to the same stimulus, because of their interest, personality and attitudes.

Behaviour is either overt or covert. Overt behaviour includes directly observable responses like walking, talking, dancing etc. Covert behaviour includes responses which are not directly observable but can be inferred from behaviour like thinking, feeling etc.

(2) Mental processes

In Psychology, we study the external as well as internal factors of behaviour. Here we study the mental processes of an individual. It includes thinking, memory, forgetting, emotion, motivation, attention, perception.

(3) Scientific method

Experiment means an individual's objective observations in controlled conditions. Here a researcher or experimenter can test his assumptions by observing and collecting the data from sample population. These observations can be generalized for analyzing and predicting human behaviour.

1.3 What is Behaviour

John Watson - 1878 - 1958

Fig. 1.6 John Watson

- American psychologist

- Established school of behaviourism.

- Conducted research on animal behaviour, child rearing and advertising.

S-O-R Model

John Watson defined behaviour as anything a person or animal does, that can be observed, recorded and studied. Behaviour is an organism's response to any external or internal stimulus.

This fact is represented by the symbol : S–O–R, where 'S' stands for stimulus 'O' stands for organism and 'R' stands for Response which is reaction of the organism to the stimulus.

Example :

Stimulus is same, but individual responses are different.

| Stimulus | — | Organism | — | Response |

Teacher asks some questions in the classroom

Rohan – gives answer
Sanika – remains silent
Sachin – ignores
Saurabh – tries to recollect answer in his mind
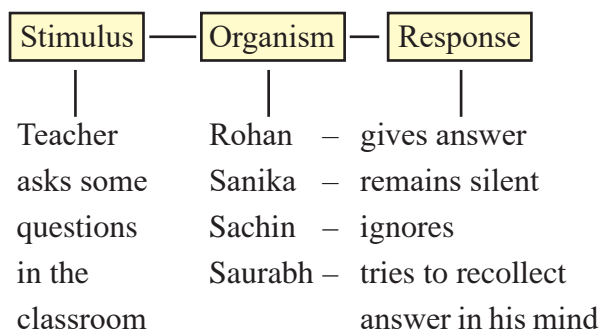
Stimulus is any physical event or condition that gives rise to a reaction. The stimulus can be external or internal. An **Organism** stands for human being or an animal, who gives a response to the stimulus. A **Response** is a reaction of the organism to a given stimulus.

Activity 6 :

Make a note of how your friends react to the same stimulus in a different way. Example. examination.

Behaviour includes overt and covert activities. Overt activities include bodily movements like walking, playing, dancing, singing, fighting and many other things which can be observed directly. Covert activities include mental processes like feeling, thinking, remembering, forgetting etc. which can't be observed directly. These mental processes can be measured through how people react to different problems and situations in their lives.

Activity 7 :

Do you agree with Watson's definition that psychology is the study of covert and overt behaviour? What are the limitations of this definition? Can you think of examples which can't be explained with the help of this definition?

1.4 Study of Cognition

During 1950s and 1960s, focus of psychology shifted from behaviour to cognitive processes. Psychologists were interested in studying processes like perception, thinking, memory and other higher order activities. Cognitive psychologists are interested in studying inner processes that trigger particular response to the stimulus.

1.5 Psychology in India

Just for your reference

Table No. 1

Professional development of Psychology in India	
1916	First psychology department was established in Calcutta University by Prof. Narendra Nath Sen Gupta.
1925	Indian Psychological Association (IPA) was established and launched the Indian Journal of Psychology
1940	Lumbini Park Mental Hospital was founded in Calcutta.
1945 to 1949	Psychology wing of Defence Research was established. It is part of the Defence Science of Organization of India.
1955	National Institute of Mental Health and Neurosciences (NIMHANS) was established in Bangalore.
1962	Indian Academy of Applied Psychology (IAAP) was established.
1962	Establishment of Hospital for Mental diseases at Ranchi.
1968	The Indian Association of Clinical Psychologists was formed.
1989	National Academy of Psychology (NAOP) was founded.

1.5.1 Psychology : Indian Perspective

Many ancient Indian thinkers tried to solve the mystery of human mind. During the period of 2000 B.C. to 500 A. C., Philosophers studied mind and human behaviour from different prespectives and tried to explain ideas like soul, mind, intuition and so on. All this was a part of philosophy.

Upanishadas explain the self and personality structure with the help of concept called Kosha (something similar to cover).

These are Annamaya kosha, Pranmayakosha, Manomayakosha, Vidnyanmaya kosha and Anandmaya kosha.

They also talked about factors that affected these koshas and also how these koshas determine human behaviour.

According to Ayurveda, there are three types of doshas, which are Kapha, Vata and Pitta and these doshas determine Prakruti (characteristics) of human beings. For example, individuals who have kapha as a dominant doshas are calm, flexible, patient, and caring. They have strong memory. It is said, that they take longer to grasp a subject but once they understand it they are able to retain it for a longer time. Individuals who have Vata as a dominant dosha are unpredictable. Their moods and thoughts fluctuate. They get angry very quickly but they also calm down very fast. They are art lovers. Individuals who have Pitta as a dominant dosha are believed to be very sharp. They are known to be short tempered.

Activity 8 :

Find out more attributes of vata, kapha and pitta and try to find out which two dosha dominate your personality.

Besides doshas, there is another concept to explain human temperament called Guna namely, Sattva Guna, Rajas guna, Tamas Guna

Human body is made up of Rajas, Tamas and Sattva Guna. The influence of Gunas is seen in the person's behaviour. For example, people who have Tamasi qualities are idle and sluggish. They do not work hard. They seem to be depressed. Rajasi people are aristocratic. Their self esteem is very strong. They think that everything should happen according to their own wish. They are belligerent. People those have Sattvaguna are calm and understanding. They do their work carefully and promptly. They are aware of reality therefore they behave calmly.

Activity 9 :

(1) Find out different characteristics of Rajas, Tamas and Sattva guna.

(2) Find out which guna are observed in your personality?

In the fifth century B.C., Patanjali explained deep thought about Psychology in Yogsutra. He was the Yogi having a great scientific vision. He studied levels of human consciousness and also proposed ways to evolve spiritually. His theory of ashtangyoga is useful today also. Eight aspects of *ashtangyoga are yama, niyama, aasana, pranayam, pratyahar, dharana, dhyan and Samadhi.*

Samadhi
Dhyan
Dharana
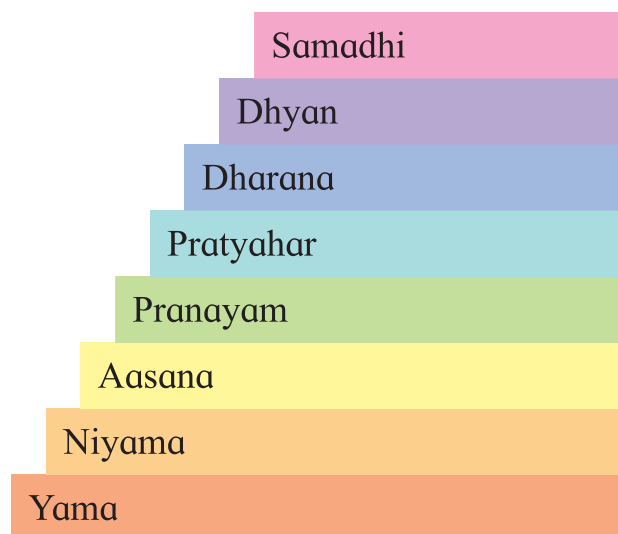Pratyahar
Pranayam
Aasana
Niyama
Yama

Fig. 1.7 Aspects of Ashtang yoga

It also helps us to control our wishes and desires. Many Indian saints and philosophers have made many comments about mind or human behaviour. Jain Tirthankar, Saint Kabir, Samartha Ramdas, Swami Vivekanand etc. highlighted various aspects of human mind and behaviour. It reflects their understanding of human nature.

1.6 Goals of Psychology

(1) Why did you opt for psychology in 11th std?

(2) Why did you select psychology over other subjects?

(3) Why should we study psychology?

Activity 10 :

Look at the statements given below. Analyse each one of them and come up with goals of Psychology or role that Psychology plays in real life.

(1) A group of psychologists observed 1000 individuals and recorded their behaviour and reactions.

(2) After analysing their responses, they tried to understand the reasons behind their behaviours.

(3) These observations can be generalized to entire population. Therefore behaviour of an individual under stressful situation can be predicted.

(4) The psychologists came up with some conclusions so that people can change their responses to stressful situations for better.

There are four main goals of Psychology.

Four Goals of Psychology

1	Describe	What
2	Explain	Why
3	Predict	Anticipate
4	Control	Change or Modify
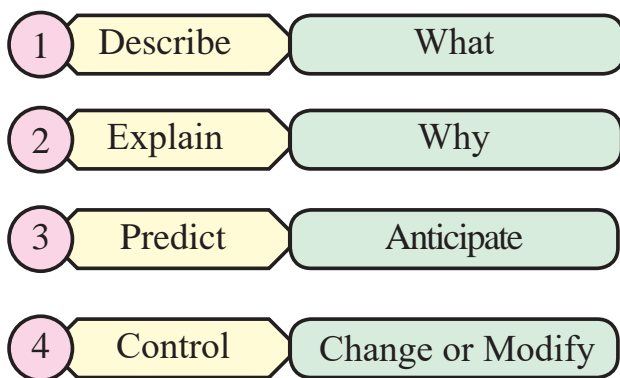
1.6.1 Describe: What is happening?

The primary goal of Psychology is to identify and classify behaviours and mental processes as accurately as possible. How do individuals think? What factors are responsible to stimulate their behaviour? How do individuals react to a specific situation? To know these answers, researchers need to record a particular behaviour in the socio-economic, cultural, geographical space. For example People behave differently in formal and informal situations and their reactions are studied in psychology. For this purpose researchers use various psychological tools. For example Standardized psychology tests, psycho-analytical techniques, survey method, laboratory experiments and observations.

1.6.2 Explanation : Why it is happening?

Second major goal of Psychology is to understand the causes of the observed responses by explaining the facts in a meaningful way. Psychologists are interested in knowing the reasons behind their reactions. They use standardized psychological tests to understand the causes of their behaviour. If a particular behaviour is observed only in one individual, it can not be generalized to entire population. Whereas if it is observed in most of the people, then we can generalize it to entire population. For example, accidents of bike riders are more fatal due to head injury therefore wearing helmet should be made compulsory for bike riders.

1.6.3 Prediction : What will happen next?

Third major goal of Psychology is to predict how a given condition or set of conditions will affect or lead to particular behaviour and mental processes of an individuals. Prediction involves knowledge about the possible outcomes of behaviour.

Example : If someone drinks alcohol, it will slow down his reactions and that will increase possibility of an accident. So driving after consuming alcohol should be strictly avoided.

1.6.4 Control : How can it be changed?

Control or modification of behaviour is the fourth goal of Psychology. Controlling behaviour means shaping or moulding behaviour in a particular direction. It is accomplished when the researcher uses various principles of psychology to bring successful and smooth changes in behaviour so that unwanted behaviour patterns can be avoided. Psychologist use various psychotherapeutic techniques to shape and modify human behaviour.

For example, if some students remain absent in the school or do not study then school psychologist can help them to find out the causes and modify their behaviour. For this purpose, they may organize some intervention programs in school. School counsellors can study psychological problems of students and help them with proper guidance and counselling. Now a days, students experience stress due to bullying, parental expectations, unhealthy competition etc. Counsellor can help these students by making them accept the reasons behind it so that they can modify their behaviour wherever necessary.
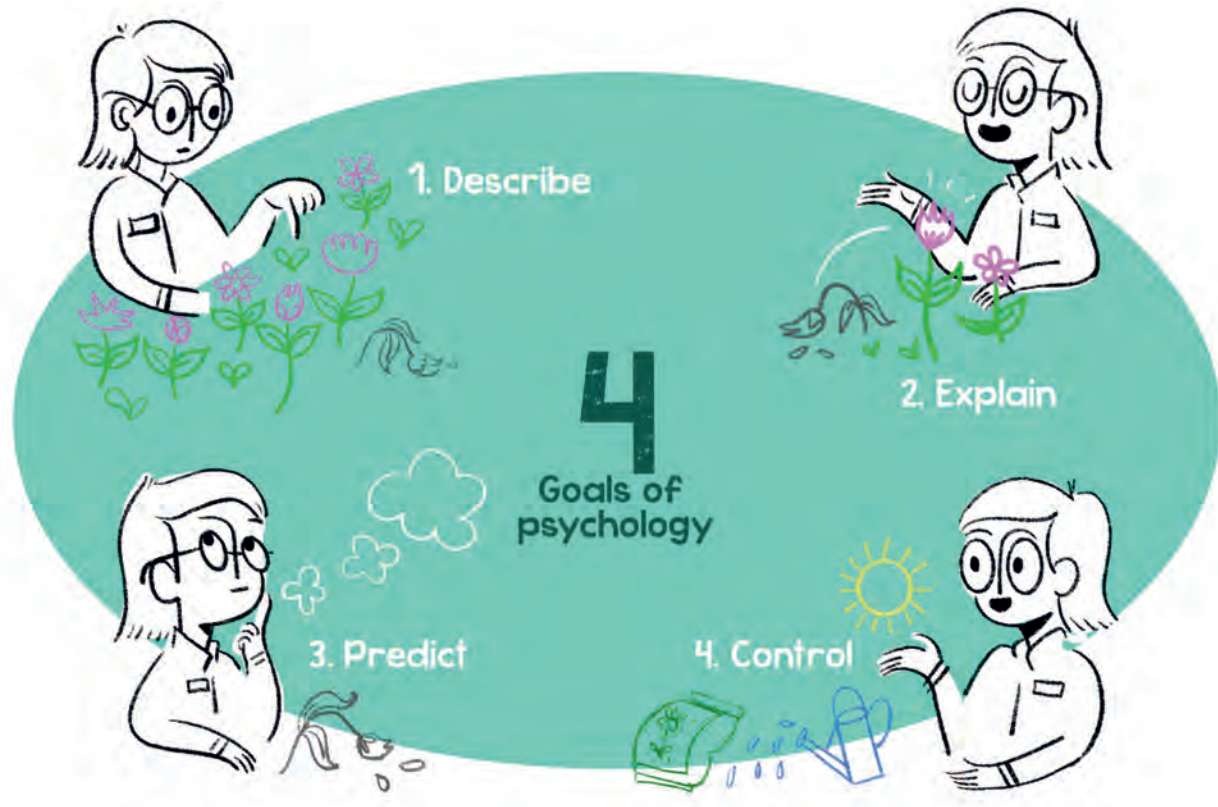
Fig. 1.8 Describing Behaviour by noting behaviour, Explaining behaviour, Predicting behaviour, Changing behaviour

Activity 11 :

Find more examples of each of the above goals of psychology. They could be real examples that you know or you have read about or they could be fictional examples.

Activity 12 :

Go through internet and search for researches which fit into either of the four categories. Find at least one example each.

Let us look at the different branches of Psychology in the next chapter.

Summary :

- Psychology has evolved from the quest of man to understand behaviour. From perceiving as a study of soul, mind, consciousness to behaviour and mental processes, it has been still exploring the behavioural aspects of man.

- It was only in 1879 when Wilhelm Woundt established the first psychology laboratory in Leipzig that it was known to be an independent science.

- We saw in this chapter that how in India too, the study of human behaviour has been reflected in our Ayurveda and Patanjali Yogsutra.

- The important goals of Psychology are description, explanation, prediction and control.

Key Terms :

- Psychology
- Behaviour
- Overt Behaviour
- Covert Behaviour
- Stimulus
- Response
- Kapha
- Vaat
- Pitta
- Ashtanga Yog
- Prediction

Key Psychologists :

John Locke : John Locke was an English philosopher in the 17th century and gave theory of mind which suggested that each child is born as a "an empty slate" and the knowledge is primarily acquired through learning and experiences.

Plato : Plato was Athenian philosopher who believed that knowledge is innate.

Wilhelm Wundt : A German physician and philosopher who established first Psychology Laboratory in 1879.

Sigmund Freud : An Austrian neurologist and psychoanalyst who put forth the concept of unconscious level of human consciousness and asserted that the unconscious forces have a very strong impact upon behaviour.

John Watson : American psychologist who established school of behaviourism.

Q. 1. (A) Complete the following statements

1. Psychology is a study of ....
    a. Mind   *b. Behaviour*
    c. Soul

2. .... processes include thinking, memory, emotions etc.
    a. Mental   *b. Cognitive*
    c. Spiritual

(B) Match the following pairs.

A	B
1. Tri-doshas	a) First laboratory of psychology
2. Tri-gunas	b) Study of unconscious
3. Wilhelm Wundt	c) Perception, thinking, memory etc
4. Sigmund Freud	d) Satva, Rajas, Tamas
5. Cognitive processes	e) Ashtanga Yog
6. Patanjali	f.) Kapha, Vaat and Pitta

(C) State whether the following statements are true or false.

1. Psychology is a study of mind.

2. The first mental hospital in India was established in Mumbai.

3. There was no study of mental processes in India till the formal discipline of Psychology was recognized as a science.

4. Dr. Sigmund Freud proposed the concept of unconscious.

5. Control is one of the objectives of Psychology.

(D) Identify the odd item from the following and give reasons for the same.

1. Soul, Mind, Feeling, Consciousness, Behaviour.

2. Walking, dancing, playing, thinking, eating.

3. Yam, Niyam, Karya, Aasana, Pratyahar.

4. Feeling, memory, attention, perception

(E) Complete the following table.

1. [ ]   -   Soul
2. John Locke   -   [ ]
3. [ ]   -   Leipzig university
4. Sigmund Freud -   [ ]
5. [ ]   -   Behaviour

Q. 2. Explain the following concepts

1. Psychology
2. Behaviour
3. Overt Behaviour
4. Covert Behaviour
5. Stimulus
6. Response

Q. 3. Answer the following questions in 35 to 40 words

1. Psychology is a science: explain why?
2. Explain the S-O-R model, with your own experience.
3. Explain the goals of Psychology.

Q. 4. Give a historical account of emergence of Psychology as a science.

Q. 5. Describe the goals of Psychology.

2 ▶ Branches of Psychology

Learning objectives

This chapter aims at facilitating students to

1.   know about and understand difference between theoretical and applied branches of psychology.

2.   acquire knowledge about applications of various branches of psychology in real life.

2.1 Introduction

Psychology is an important science in modern time. Scope of Psychology is getting wider everyday.

Knowledge of psychology is needed to understand and combat behavioural problems. Therefore new branches of Psychology are emerging. For example now a days sports psychology is emerging as a new branch of psychology to deal with psychological issues faced by sports persons.

Internet made financial transactions and social interaction easier, but it also gave rise to online cheating and fraud. So to understand and deal with these issues a branch called 'cyber psychology' has emerged.

Now a days more than 50 branches of psychology are existing to study human behaviour from various angles.

2.2 Branches of Psychology

In the last chapter, we understood the history of Psychology and its main goals in brief. Let us now take an in depth look at the different branches of Psychology.

Activity 1 :

Look at the following pairs of tasks. Can you differentiate between task 1 and 2 on the basis of what are they trying to do? Can you see the same pattern in other pairs as well?

Task 1 : Which factors motivate student's behaviour in the classroom? Write them down.

Task 2 : Use the information found in task 1 to create a better classroom environment.

Task 1 : Try and identify qualities of successful student. Make a list.

Task 2 : Using the information found in task 1 prepare guidelines for other students.

Task 1 : Note down the causes of unhappiness or sadness among people.

Task 2 : Using the information found in task 1 write down how you can help them.

As you might have realized, task 1 in all pairs deals with finding out new information, connections, relationships between an individual and his environment. In other words, the task 1 deals with **'theorizing'** about individual responses. Task 2 in all pairs, deals with **'applying'** that information to make changes in existing structures or conditions. These two tasks typically exemplify the two broad areas of Psychology.

- Theoretical branches of Psychology
- Applied branches of Psychology

Modern psychology touches every aspect of human life. The scope of psychology is extremely wide which has led to development of many sub fields. Let us look at these main branches one by one.

2.2.1 Theoretical Psychology

Psychology as a theoretical science includes many areas of specialization. Psychologists working in theoretical fields focus mainly on conducting research and formulating theories. Basic focus is on developing principles and establishing laws to explain human behaviour.

Activity 2 :

Look at the five columns below in table no. 1. Each column represents one sub-branch of theoretical branches of psychology. Can you look at the content of each column and figure out which aspect of human behaviour is studied in that branch.

As one can see – Refer to table No. 1

Column 1 contains questions related to the changes that happens during entire life span. These qualities fall under **Developmental Psychology**.

Table 1 - Theoretical Branches of Psychology

Developmental Psychology	Child Psychology	Social Psychology	Cognitive Psychology	Experimental Psychology	Abnormal Psychology
What are the developmental changes that take place during childhood?	What are the causes of misbehaviour in children?	What incites the mob to resort to violence?	What are the factors that affects the span of attention of an individual?	Is it possible to conduct experiments on human behaviour?	Why do some people behave abnormally?
What are the changes that take place during adolescence?	How does separation of parents affects a child?	When do people follow norms and when do they break rules?	Why and when do people forget?	How do we understand the human behaviour?	What are the causes of depression?
Why do old people behave in certain ways as they do?	Why do some children suck their thumb?	Why are some qualities valued more in some societies and less in others?	How does use of language affect concept formation?	How we can devise the principles of human behaviour through experiments?	Why are some people extremely suspicious of others or why some have extreme mood swings?

Column 2 contains questions focusing on children and their responses. They come under **Child Psychology**.

Column 3 contains questions which focuses on individual responses to group influence. They fall under **Social Psychology**.

Column 4 contains questions which focus on specific cognitive abilities. They fall under **Cognitive Psychology**.

Column 5 contains how experiments should be conduct on human behaviour under **Experimental Psychology**.

Column 6 contains questions which focus on abnormal behaviour. They fall under **Abnormal Psychology**.

It is important to note that there are various sub-branches in theoretical Psychology. However to limit our scope, we will only look at the main six branches mentioned above.

(1) Developmental Psychology

Developmental Psychology studies changes in behaviour from conception to death. Developmental psychology is the scientific study of how and why human beings change over the course of their life. It aims to explain how thinking, feeling, and behaviour change throughout life. A developmental Psychology may study a specific period of life such as childhood, adolescence, adulthood and old age. This field examines changes across three major dimensions : physical development, cognitive development, and social development.

(2) Child Psychology

It deals with the biological, psychological and emotional changes that occur during childhood. These changes occur as the individual progresses being dependent to becoming independent. (Refer to fig. 2.1)

For example psychologist working in this area may study problems related to children such as lying, bunking school, stealing, bed wetting etc. They use standardized psychological tests to measure intelligence, adjustment etc. They also conduct researches on effective child rearing practices, role of reinforcement in motivating children etc.

Fig. 2.1 Child Psychology deals with study of childhood span, changes in behaviour from childhood to adolescence.

(3) Social Psychology

We spend much of our lives in the presence of other people, with whom we interact in a variety of ways and in different settings. Social Psychology studies how an individual influences others and gets influenced by others. According to **Myers**, social Psychology refers to the scientific study of how an individual's behaviour is affected by others.

The primary focus of social Psychology is on understanding how individuals are affected by others. Social Psychology examines issues such as co-operation or conflicts within groups, attitudes, prejudice, friendliness or leadership qualities of an individual.

(4) Cognitive Psychology

Cognitive Psychology focuses on higher mental processes such as thinking, reasoning and decision making. It is concerned with the study of attention, perception, language development, thinking, memory and problem solving. Some of the topics of research in this field could be – How does memory disruption occur? What are the different types of learning styles and learning disorders? What causes them? What leads to speech impairment? How does the decision making mechanism work? etc. Refer to fig. 2.2

Cognitive Psychology
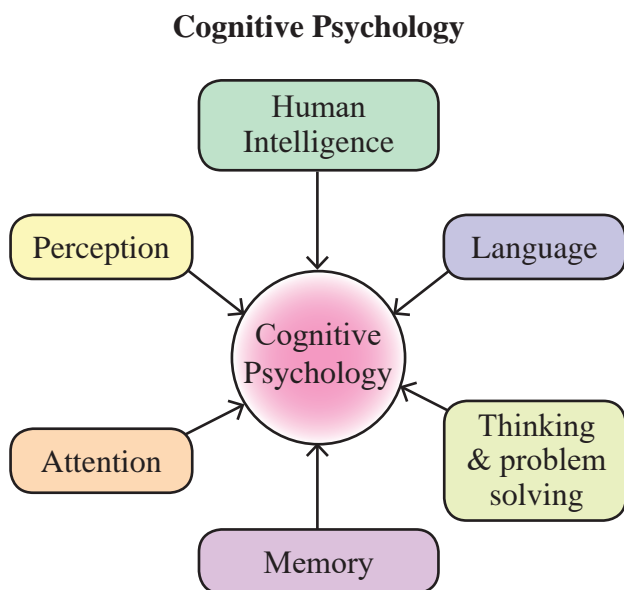
Fig. 2.2 Mental processes studied in cognitive psychology

(5) Experimental Psychology

The experimental psychologist tries to understand the fundamental causes of behaviour. They conduct experiments to study how people react to sensory stimuli and perceive the world. Experimental Psychology studies how people learn and remember, reason and respond emotionally. It deals with such problems as sensation, perception, learning and memory. The method of investigation in this field is that of laboratory experiment.
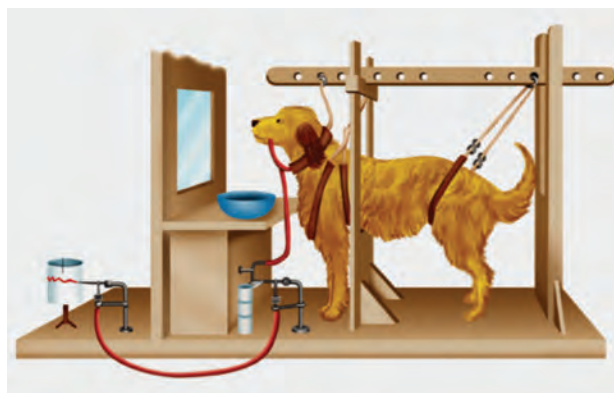
Fig. 2.3

Ivan Pavlov conducted experiments on classical conditioning taking dog as his subject

(6) Abnormal Psychology

Abnormal psychology is the branch of psychology that studies unusual patterns of behaviour, emotions and thinking. It aims to study the causes and factors leading to abnormal reactions. For example : excessive suspiciousness, extreme mood swings, perceiving objects or situations which are not real, mental retardation, extreme fear of objects, animals or situation etc.

Activity 3 :

Try to find at least one example that can fit into each of the above sub-branches of theoretical Psychology.

2.2.2 Applied Psychology

The knowledge and principles generated through research in theoretical Psychology are used to develop techniques to solve practical problems of individuals. Through various branches of applied psychology, psychologists are putting knowledge into practice so as to help individuals to adjust to their real life situations.

Applied Psychology is further divided into many sub-branches. Let us see a few of these branches.

(1) Educational Psychology

The field of Educational Psychology examines and studies all factors related to education. It is concerned with increasing the efficiency of teaching and learning process. The educational psychologist is concerned with developing effective methods of teaching / learning, preparing intervention programs for exceptional children, developing personality development programs, preparing relevant curriculum etc. It is also concerned with the general problems of teaching and learning process. It focuses on learning difficulties of slow learners, exceptional as well as average children. They try to design intervention programs to develop motivation, effective study habits and better classroom environment.

Educational psychologists are primarily associated with schools, colleges and universities. They conduct psychological tests to provide guidance to students. They deal with behavioural issues of children such as learning disorder, hyperactivity, lack of concentration, ADHD etc.
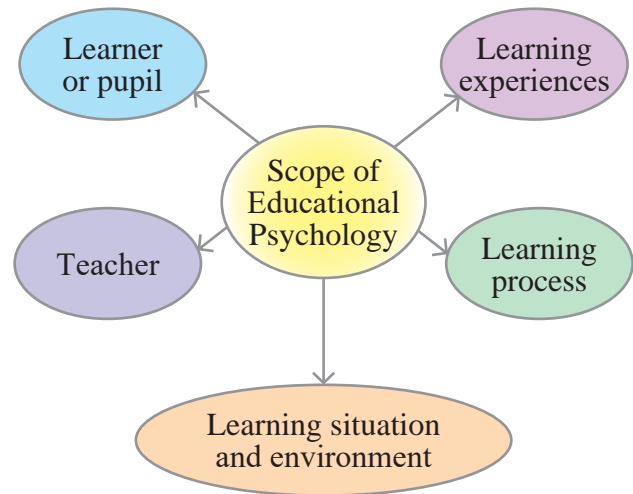
Fig. 2.4 Scope of Educational Psychology

Activity 4 :

Can you think of at least one problem that educational psychologist can find solutions to, concerning the following areas?

1. Behaviour of the student

2. Teaching methods

3. Teacher's behaviour in the class

(2) Clinical Psychology

Clinical Psychology is concerned with the study, diagnosis and treatment of emotional and behavioural problems such as mental illness, marital and family conflict, drug addiction, severe depression, alcoholism, delinquency etc. For the purpose of diagnosis, clinical psychologists collect detailed information about the client by using psychological tests, interviews of client and his significant others like family and friends. They use appropriate psychotherapy to help the client to deal with his problem.

The Clinical Psychologists either work in hospitals and community health centers or have their private practice. This is the largest sub field of Psychology.

Fig. 2.5 Clinical Psychology

> **Activity 5 :**
>
> Watch any movie like 'Dear Zindagi' and note down how a clinical psychologist helps the female character in the movie.

(3) Counselling Psychology

This field of Psychology is similar to clinical Psychology but counselling psychologists deal with milder behavioural problems. They offer guidance about adjustment issues faced by a person. Counselling psychologists will be involved with vocational and career guidance. Some problems dealt by counselling psychologists are related to issues or difficulties experienced by a person in studies, personal life issues or workplace issues.

> **Activity 6 :**
>
> Can you think of at least one problem that a counselling psychologist can find solutions to, concerning the following areas?
>
> 1. Adjusting with peers
> 2. Adjusting with parents and siblings
> 3. Making decision about career

(4) Criminal Psychology

This branch is closely related with social Psychology. Criminal psychologists are concerned with identifying the causes of crime, studying personality of criminals, suggesting preventive measures to control criminal behaviour and implementing plans for criminal rehabilitation. Criminal psychology deals with the motives behind the criminal behaviour. They play significant role in forensic department to uncover the scene of crime by understanding and interpreting the behavioural clues of the criminals. They generally work with the law enforcement department or the criminal investigation department or social organisations working for rehabilitation of criminals.

> **Activity 7 :**
>
> Watch any crime investigation series to understand the causes of criminal behaviour and make a write up on it.

(5) Sports Psychology

Sports Psychologists help sports persons to maintain their motivation, stamina during actual performance and also maintaining themselves when they are not on the field.

They help players to maintain composure when they are working under pressure, help them to maintain their emotional balance when they are going through a bad patch and guide them to maintain themselves when they are recovering from personal injuries.

> **Activity 8 :**
>
> Think of at least one problem that a sports psychologist can find solutions to, concerning the following areas.
>
> 1. Improving team spirit
> 2. Emotional management
> 3. Improving self confidence
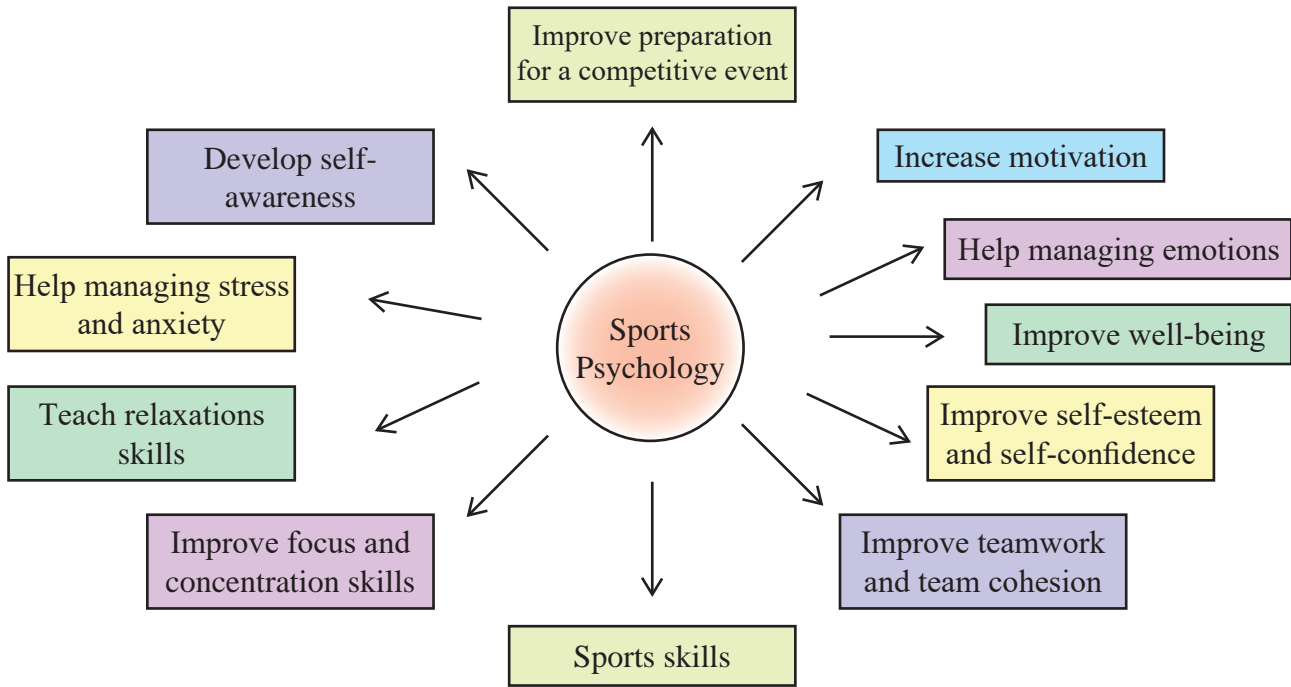
Fig. 2.6 Sports Psychology : Goals

(6) Industrial Psychology

Industrial psychology is concerned with behaviour of people working in organization. They play important role in selection and placement of employees, motivation, job satisfaction, appraisals and grievances. They help to enhance motivation, group morale, leadership skills among the employees.

Consumer psychology which is a branch of industrial psychology deals with consumer behaviour, quality of products, brand loyalty and influence of advertisement on purchasing.

Activity 9 :

1. Talk to your parents / teachers and enlist the factors that give them satisfaction at their work.

2. While buying something from market, which factors affect your desires? Enlist these factors that influence your choice. For example : advertisement, brands, etc.

Now that we have seen the various branches of Psychology, you may have got some idea about the fields and also possible opportunities for higher studies and employment. Let us now look at how we could use Psychology for our own betterment.

2.3 Careers in Psychology

Table 2 - Careers in Psychology

Psychological Fields	Career Opportunities	Description
(1) Counselling psychology	(1) Educational counsellor (2) Vocational counsellor (3) Marriage counsellor	Help to solve problems in various fields of life.
(2) Educational psychology	(1) School counsellor (2) Educational counsellor	Work in schools and educational fields. They assess and minimize student's learning problems.
(3) Clinical psychology	(1) Clinical and counselling psychologist. (2) Psychoanalyst (3) Psychotherapist (4) Psychiatric Nurse (5) Rehabilitation Psychologist (6) Hypnotherapist	Work in hospitals, school for children with special needs, social agencies and independent private practice.
(4) Industrial / Organizational Psychology	(1) Organisational psychologist (2) Consumer psychologist (3) Ergonomist (Human accessible tools making)	Help in selection and evaluation of employees, marketing of products, Examine effects of working conditions on employee's behaviour.
(5) Social psychology	(1) Public Relation officer (2) Social welfare officer (3) Labour welfare officer	Deal with social fields. They attempt to solve social problems. Work in NGO.
(6) Sport psychology	Sports counsellor	Work in gyms, schools, professional sport teams. Help to improve confidence, concentration and morale of players.

(7) Rehabilitation psychology	(1) Special educator (2) Rehabilitation psychologists (3) Disaster management and Rehabilitation officer.	Work for specially abled persons. Help in disaster management and rehabilitation. Work in remand homes.
(8) Child psychology	(1) Child psychologists (2) Women and child development (3) Remand home superintendent.	Focus on child development work to solve the problem related to children.
(9) Military psychology	(1) Army Mental Health Specialist (2) Army Psychologist (3) Navy Psychologist (4) Air Force Psychologist (5) Marine Psychologist	Working in selection of officers. Improving morale and Rehabilitation of people working in defence services.

❖ ❖ ❖

Summary :

- Psychologists try to understand and help to address and resolve problems in today's life. Therefore many branches of psychology are emerging. For example : to understand and deal with behavioural problems related to internet use, branch of **Cyber Psychology** has emerged .

- In theoretical branch, Developmental psychology discusses about various developmental stages of human life.

  Child psychology talks about changes that take place during childhood and behavioural patterns of children. Social psychology tries to study effect of an individual on the group and group's effect on individual behaviour. Abnormal psychology discusses patterns, reasons and remedies of abnormal behaviour. Experimental psychology studies patterns of fundamental problems of human life.

- Applied field of psychology has contributed in a great way for better adjustment of human being. E.g. Clinical psychology, Counselling psychology, School psychology. All psychologists have their share in the welfare of human beings.

Key Terms :

- Developmental Psychology
- Child Psychology
- Social Psychology
- Cognitive Psychology
- Experimental Psychology
- Abnormal Psychology

- Educational Psychology
- Clinical Psychology
- Counselling Psychology
- Sports Psychology
- Criminal Psychology
- Industrial Psychology

《 Exercise 》

Q. 1. (A) Complete the following statements

1. The branches of Psychology which explore into relationships among different variables and human behaviour are known as .... Psychology.

   a. Theoretical   b. Applied

   c. Common

2. The study of human behaviour at work place is the concern of .... Psychology.

   a. Social   b. Industrial

   c. Experimental

3. One can study the problems of adolescence in ....

   a. Developmental   b. Social

   c. Cognitive

4. .... Psychology is concerned with diagnosis and treatment of psychological disorders.

   a. Counselling   b. Cognitive

   c. Clinical

(B)   Identify the odd item from the following.

1. Experimental Psychology, Social Psychology, Industrial Psychology, Cognitive Psychology.

2. Clinical psychology, Industrial Psychology, Sports Psychology, Abnormal Psychology

(C)   Match the following pairs.

A	B
1. Developmental Psychology	a) studies organizations, human factor design and employee training
2. Criminal Psychology	b) studies how people become who they are from conception to death
3. Educational Psychology	c) Studies thinking process
4. Industrial Psychology	d) Helps educators to promote learning
5. Social Psychology	e) studies criminal behaviour
6. Cognitive Psychology	f) studies the influence of other people upon an individual's behaviour.

Q. 2. Compare and contrast

1.   Theoretical and Applied branches of psychology.

2.   Abnormal psychology and Clinical Psychology

Q. 3. Write Short Notes

1.   Clinical Psychology

2.   Cognitive Psychology

3.   Developmental psychology

4.   Industrial Psychology

Q. 4. Suggest appropriate branch of psychology related to the following situations

1.   A husband and wife do not understand each other so they keep fighting.

2.   My friend's father lost his job and he is in depression

3.   A 5th standard student is unable to concentrate

4.   I want to study the process of thinking and learning.

5.   I want proper information about attitude, prejudice or conflicts in a group.

Q. 5. Answer the following questions in detail.

1.   Explain any five theoretical branches of Psychology.

2.   Describe any five applied branches of Psychology.

3.   Write any five career opportunities in Psychology.

3 ❯ Self

Learning objectives

This chapter aims at facilitating students to

1. develop an understanding about the concept of Self.
2. understand how does the concept of one's self develop.
3. know the significance of self awareness, self image, self efficacy and self esteem.
4. identify the ways of self regulation.
5. understand Rogers theory of self.

Activity 1 :

Complete the following sentences

Who are you?

My favourite activity is…

I am good at….

I would like to be …..

The most important thing about me is …..

I am……….. .

3.1 Introduction

While answering the first activity, we all will be aware of the fact that we all are part of most complicated world. We play many roles as a son, daughter, student, teacher, friend, pal. We could answer these questions in many ways. The sum total of these answers could define our uniqueness. **This is called as self concept.** It includes our thoughts and feelings about ourselves and others, our behavioural patterns, our beliefs, our emotional make-up and so on. Our self concept develops rapidly during early childhood and adolescence, it continues to form and change throughout our life span as we change.

3.2 Dimensions of self concept

Your answers to specific questions related to self concept can be unique and different but the overall organization of self concept is common for all. When Rentsch and Heffener (1994) asked 20 questions to 200 university students, they found that there were eight categories by which the participants defined themselves. Some of the categories are concerned with personal attributes, such as interpersonal characteristics ('I am a student' or 'I am the team leader of my class'), interest ('I like psychology', or 'I like dancing'), personal beliefs ('I am against honour killing' or 'I am against child abuse') and self awareness ('I am a good person' or 'I don't get angry without valid reason').Others referred to our social environment such as ascribed characteristics ('I am a citizen of India') or social differentiation that is how we differ from others ('I am from another country' or ' I am from another part of India'). The point here is that 'who am I ?' has many meanings for us.

3.3 Definition

The self concept is our total image of us. It is our total picture of our abilities and traits. It is basically cognitive construct which determines how we feel about ourselves and guides our actions (Harter, 1996).

Self concept is defined as the totality of perceptions each person has of themselves. OR The totality of complex organized and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence (Purkey, 1988).

According to Symonds (1957) It is the way individual reacts to himself. There are four aspects. (1) How a person perceives himself. (2) what he thinks about himself. (3) How he values himself. (4) How he enhances or defends himself.

3.4 Self and the life cycle

On an average, till the age of six months the child is unaware of himself. As the child grows, he starts making distinction between his own body and everything else. He develops distinction between 'me' and 'what is not me'. Slowly, he realizes that he is different from the rest of the world.

When psychologists conducted a simple experiment of recognizing oneself in mirror with a simple technique of placing a mark which can't be seen without mirror. Then, when the subject faced with mirror they tend to touch the mark on their face. (Gallop, 1977a). In normal children, face recognition with mirror occurs at the average age of one and half years (Lewis and Ramsay, 2004) They are capable of pretend play like they may pretend to feed their baby doll. When they start recognizing themselves they start using personal pronoun like I,me, mine.

By the age of 2, the child becomes aware of general expectations like what is good and bad behaviour. They will smile when others are smiling at them and frown when others are getting angry with them. They are developing a sense of themselves by comparing them with the standard role model. This is beginning of self esteem.

By the age of three, they start recognizing themselves and others as boys or girls. Between the age of 3-12, the self concepts are based on developing talents and skills. Child thinks of himself as what he can do or what he can't do. Such as he can sing, he can draw or he can travel alone. At this age, the self concept is defined mainly in terms of sex, age, family and what child believes he or she can or can't do.

When the schooling starts at the age of 5-6, child begins to compare himself or herself such as 'I am intelligent, smart, faster than others'. This is beginning of social comparison.

Also during this stage, children learn that they can lie and keep secrets. There is hidden side of self which includes thoughts, feelings and desires which parents are unaware of. This development of **private self- concept** is major but often difficult developmental stage in the growth of self concept. It may start out with some imaginary friend, someone only they can hear or see. (Please watch the Hollywood film Bogus on YouTube). A child may not share this information with others.

Final unfolding of self concept during adolescence involves **perspective taking** that is, they are able to think and understand other's point of view. This is the main reason why teenagers become self conscious and why they are very cautious about their appearance. They might enter into the stage of **objective self awareness** where they want to become center of attraction and popular. Many adolescents accept group's mannerisms and behaviour patterns for the sake of this need.

3.5 Gender identity and gender role

Gender role and gender identity are important aspects of self-concept. 'Gender identity' and 'Gender role' are two different concepts . Gender identity is biological one. It is the perception of oneself as male or female. The sex chromosome determines whether the child will be boy or a girl.

'Gender role' is an acquired attribute which is psycho-social by nature. Gender role is determined by family atmosphere, cultural influences where the child learns through observation and imitation. Sometimes, you may notice a girl behaving assertively by leading the group and by taking firm decisions.

You may say that 'this girl is so masculine' or you may observe a boy who is interested in artistic things or nursing, cooking, caring etc. Here, people may give loose comments like 'the boy is so girly' which may make the person very uncomfortable. Remember, there is nothing wrong if a man takes up feminine role or woman behaves in a masculine way. You may notice that some men like Pt. Birjoo Maharaj, Sanjeev Kapoor or Vikram Gaikwad are famous in female dominated areas. Or females like Phogat sisters, Kalpana Chawla, Kiran Bedi, Avani Chaturvedi (first Indian fighter pilot) are successful in male dominated areas. Here, we can conclude that gender based roles are diluting now. Society is approving and accepting these changes with open mind which is reflecting in advertisements also like a father is getting his daughter ready for the school or a man is doing dish washing at home.

Now let us discuss some more concepts which are related to self concept….

3.6 Aspects of Self

There are four major aspects of self. They are self awareness, self image, self efficacy and self esteem.

(A)   Self Awareness :

This is a component of self concept. It is the quality or trait that involves conscious awareness of one's thoughts, feelings, behaviours and traits. (Cherry, 2018A). To have proper self concept, one must have some level of self awareness. It is the understanding that a person has separate identity from others. According to Piaget, self consciousness starts emerging between 15-24 months. Self awareness is necessary before the child becomes aware of being a focus of attention so that he can understand what others are feeling. Because on this basis they can differentiate between something that belongs to them and something that belongs to others.

Activity 4 :

Place your name in the centre. Choose five different aspects of your identity and write each of them in the identity circles provided.
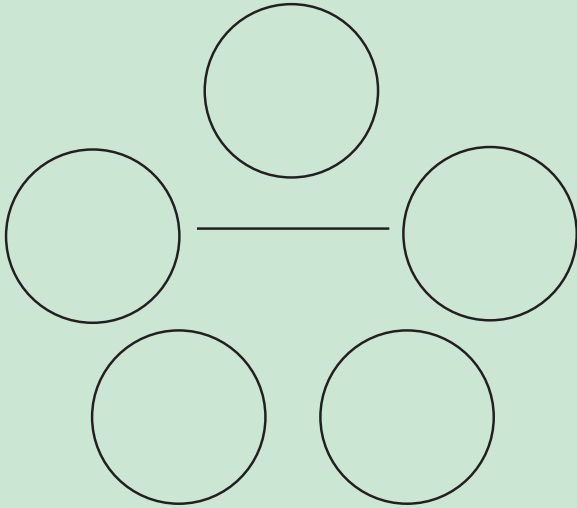
Fig. 3.1 Self Awareness

Make a list of 5 strengths and 5 weaknesses of yours. Discuss how can you convert your weaknesses into strengths.

(B)   Self Image :

Self image is a personal view or mental picture that we have of ourselves. Self image is an internal dictionary that describes an individual including things such as intelligent, beautiful, ugly, talented, selfish or kind. It is a collection of assets (strengths) and liabilities (weaknesses) of an individual.

Self image is dynamic and changing. We can develop healthier and accurate view of ourselves. A healthy self image starts with learning to accept and love ourselves. It will also include being accepted and loved by others.

Specific steps to develop a positive self-image

- Make a list of your positive qualities.

- Ask your parents, friends to describe your positive qualities.

- Define personal goals and objectives that are achievable.

- Try to overcome illogical, irrational thinking.

- Avoid comparing yourself to others.

- Develop your strengths.

- Learn to love yourself.

- Give positive affirmations.

- Remember that you are unique.

- Remember how you have dealt with problems of your life.

Fig. 3.1 Self Image

Body image is a part of self-image. Our body image includes more than what we look like or how others see us. It also refers to how do we think, feel, and react to our physical attributes. For example, a normal girl till the age of 25, Anagha Modak, became visually challenged after attack of dengue, is now successful compere in Marathi who is positively and confidently helping others to look at life more positively.

Body image development is affected by cultural images and the influence of family, peers, and others. A positive body image contributes to enhanced psychological adjustment (less depression, positive self-worth, life satisfaction, less interpersonal anxiety, fewer eating disorders). Distortions in our thinking contribute to a negative body image which will lead to maladjustment.

(B) Self Efficacy :

Self efficacy is a person's belief in their ability to accomplish some specific goal or a task. It depends on his trust in his own competency. Competence can vary from one situation to another. Say for example, a teenager's self efficacy may be high in Psychology but his self efficacy may be low in mathematics. Maddux (2002) defined it as 'what I believe I can do with my skills under certain conditions'. There are two factors related to it, one is **Outcome expectancies** means the skills required to complete the goal and **efficacy expectancies** is person's analysis about whether he has those capacities. Self efficacy is based on Social cognitive theory holds that humans actively shape their lives rather than passively reacting to environment (Barone, Maddux and Snyder,1997).

Table no. 2

Characteristics of self efficacy

Characteristics of high self efficacy

- Self confidence
- Accurate self evaluation
- Willingness to take risks
- Sense of accomplishment

Characteristics of low self efficacy

- Fear of risks
- Fear of uncertainty
- Fear of failure
- Impression management

How self efficacy can be improved?

- Develop skills
- Accept role model and follow him/her regarding that particular activity.
- Ask others to give specific and constructive feedback
- Reinforce yourself.
- Use verbal persuasion by a counsellor
- Learn various techniques to control your arousal which is lowering your performance for example : meditation, mindfulness, biofeedback, hypnosis, relaxation.

Activity 5 :

Refer to Table no. 2 and evaluate yourself on characteristics of high self efficacy and low self efficacy . In a group of friends, think and discuss about various ways of improving self efficacy. Make a note of it and share it on college notice board.

More recently, Chen et al. (2001) have developed an 8 - item New General Self-Efficacy Scale.

Table no. 3

Using 5 - point rating scale, show how much you agree with the following statements:

1 = strongly disagree;

2 = disagree;

3 = neither agree nor disagree;

4 = agree;

5 = strongly agree.

1. I will be able to achieve most of the goals that I set for myself.

2. When facing difficult tasks, I am certain that I will accomplish them.

3. In general, I think that I can obtain outcomes that are important to me.

4. I believe I can succeed at most any endeavour to which I set my mind.

5. I will be able to successfully overcome many challenges.

6. I am confident that I can perform effectively on many different tasks.

7. Compared to other people, I can do most tasks very well.

8. Even when things are tough, I can perform quite well.

Key for interpretation- 40- 32 means high on self efficacy,31-24 is average on self efficacy and below 24 is low on self efficacy .

(D) Self – esteem :

Self esteem is general evaluation of an individual along a dimension. For example, good-bad or like – dislike. According to Seligman, self esteem is 'your overall evaluation of your worth as a person, high or low, based on all positive and negative self perceptions'. Self esteem is respect one has for himself. An individual may have various levels of self esteem like a girl may have high self esteem about her intelligence but she may have low self esteem while talking to the strangers . (we have discussed this topic into detail in chapter number 5).

Table no. 4

Characteristics of self esteem

Characteristics of high self esteem

- Responsibility
- Goal commitment
- Genuineness and forgiving
- Internal values
- Positivity
- Self improvement

Characteristics of low self esteem

- Feeling of unhappiness
- Feeling of anxiety
- Feeling of superiority or inferiority
- Impatience with self or others
- Externally oriented goals
- Negativity

How self esteem can be improved?

- Eliminate negative self talk
- Recognize your strengths
- Recognize self worth
- Accept mistakes
- Accept rejection

After discussing various aspects of self, now you must be wondering how we can regulate ourselves. Let us discuss…

3.7 Self Regulation

Is being able to control our thoughts, feelings and actions for our benefit. Here we are behaving according to social norms. We must take care that our behaviour should not disturb our college atmosphere, and our relationship with others. When you regulate yourself, you will not react impulsively or you will stop or control yourself from immediate satisfaction of desire.

Self regulation involves monitoring our actions and reactions because we can predict or imagine the consequences. It also involves focusing on certain parts of life and ignoring some other part for some time. For example As your exams are nearing, you will stop spending time with your friends and focus on your studies. Higgins, (1996) research on regulatory focus shows that people either have promotion regulatory focus or prevention regulatory focus. People either focus on achieving positive outcomes or they don't do anything in order to prevent negative outcome. People from East Asian culture tend to focus on preventive form of self regulation, attempting to avoid negative reactions from others (Hamamura and Heine, 2008) That may mean that we all study because we don't want scolding and taunts from our parents, relatives and friends.

Self regulation has crucial implication in our life and our brains are evolved that way. Heatherton (2011) identifies important psychological components that helps us to stay socially connected. First, we must be aware of our actions and at least be able to evaluate it. Secondly, we must be able to predict other's reaction to it. Here, we are aware of what others will think, this capacity develops during childhood. Third, we must detect any kind of threat or rejection from others. Finally, we must do something constructive to improve the situation. Such as establishing good relations with others. Here we have control over our actions, control over acting on our impulse and even avoid nasty thoughts, which is not at all easy.

To understand the concept of self better, let us discuss at least one theory like

3.8 Carl Rogers theory of self

According to Rogers, every individual has tendency to actualize himself. According to Rogers, mentally healthy individuals have congruence between their experience and their self concept. Neurotic individuals deny awareness of their sensory and emotional experience. For example, if a mentally healthy student is facing failure in exams, he will find out the reasons and will try to overcome his weakness. But those who deny this experience and are incongruent with it, may accept escapist attitude, may give false excuses and will not accept his failure and blame others for it.

There are two important concepts related to this :

Real self (self image) is what we actually are. It is very important for good psychological health. A teenager may perceive himself as beautiful or ugly, good or bad person. Self image directly affects how a person feels, thinks and acts in this world. Real self has tendency to actualize himself, organismic valuing needs and receives positive regard and self regard. Real self is our inner personality. It may not be perfect but it is our real part (Grice, 2007).

Ideal self is what we want to be. For example, a girl may want to be a dancer or a boy may want to be a cricketer. It represents our dynamic ambitions and goals. By Ideal self, Rogers meant some goals which are beyond our reach. This may result in the gap between real self and ideal self.

If ideal self and real self are similar, our self concept is accurate. High congruence between real self and ideal self leads to greater sense of self worth and a healthy productive life. When there is large gap or incongruence between them, it leads to maladjustment.

When we try to achieve our full potential. we strive to be **fully functioning individuals**. These people are self actualized . Self actualization means people recognize and explore their own potential. They are well balanced, well adjusted and interesting to know (McLeod, 2007). For (Rogers, 1959) a person who has high self worth can cope with challenges of life, tolerate failure and sadness at times and is open to people. An individual with low self worth may avoid challenges, can't tolerate troubles and distress. Now ask yourself, how you will prefer to see yourself? If you plan to develop proper self concept, use the information given in this chapter and develop your appropriate self concept.

Incongruent

Self-Image   Ideal-Self

Congruent

Self-Image   Ideal-Self
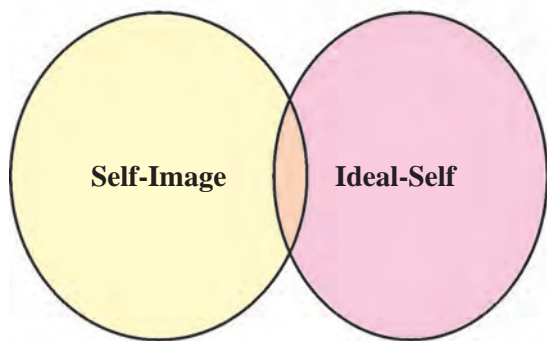
The self-image is different to the ideal self.

There is only a little overlap.

Here self-actualisation will be difficult.
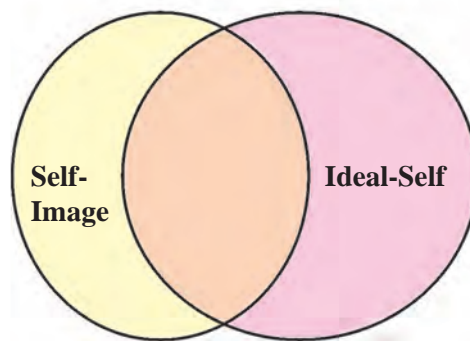
The self-image is similar to the ideal self.

There is a more overlap.

This person can self-actualize.

Summary :

- Self concept is defined as the totality of perceptions each person has of himself. It is how a person perceives, thinks and values himself and how he enhances or defends himself. It begins to form as an infant starts distinguishing his body from the rest of everything he sees. Gradually, he continues to identify his gender, his talents and abilities in childhood. The child also learns to hide certain things about himself. This hidden side of self which includes thoughts, feelings and desires of which others are unaware. This is his private self-concept. During adolescence they are able to think and understand other's point of view. They enter into the stage of objective self awareness.

- Self awareness is the quality or trait that involves conscious awareness of one's thoughts, feelings, behaviours and traits.

- Self image is a personal view or mental picture that we have of ourselves. Self image is an internal dictionary that describes an individual including things such as intelligent, beautiful, ugly, talented selfish and kind. It is collection of the strengths and weaknesses of an individual.

- Self efficacy is a person's belief in their ability to accomplish some specific goal or a task. It depends on his trust in his own competency.

- Self esteem is an overall evaluation of one's own worth as a person, high or low, based on all positive and negative self perceptions.

- Self-regulation is being able to control our thoughts, feelings and actions according to the social norms.

- According to Rogers, every individual has tendency to actualize himself. Mentally healthy individuals have congruence between their experience and their self concept. Real self is what we actually are. It is very important for psychological health. Ideal self is what we want to be. High congruence between real self and ideal self leads to greater sense of self worth and a healthy life. Lack of congruence between the real and the ideal self leads to maladjustment.

Key Terms :

- Self Concept
- Ideal Self
- Real Self
- Self Actualization
- Self Esteem
- Self Efficacy
- Self Awareness
- Self Image
- Self Regulation

Key Psychologists :

Carl Rogers (1902- 1987)

Carl Rogers (1902-1987) was an American psychologist who took the humanistic approach to psychotherapy which was nondirective and client centered. According to Rogers, every individual has tendency to actualize himself. According to Rogers, mentally healthy individuals have congruence between their experience and their self concept. Self image directly affects how a person feels, thinks and acts in this world. Real self has tendency to actualize himself, organismic valuing needs and receives positive regard and self regard

Q. 1. (A) Complete the following statements

1. The Self concept begins to form when ....

    a. a one and half year old child recognizes her image in the mirror.

    b. an infant is able to distinguish his body from the rest in his surrounding.

    c. a child recognizes his/herself as a boy or a girl

2. According to Carl Rogers, every individual strives for ....

    a. Achievement

    b. Self actualization

    c. Status in society

3. Self esteem is a sense of self worth that depends upon ....

    a. Actual performance of an individual

    b. Self perception of one's own performance

    c. Other people's perception of one's performance

4. Ability to monitor our actions and feelings, is called ....

    a. Self regulation

    b. Self awareness

    c. Self efficacy.

(B) State whether the following statements are True or False and give reason for your answer.

1. Congruence between the Real self and Ideal Self is an indicator of good mental health.

2. Namrata aspires to become a pilot but she should not be encouraged because one must choose a profession appropriate to their gender.

3. People with a high self esteem are not necessarily the ones who are always successful.

4. Accepting mistakes helps improving self esteem.

5. Self awareness is a necessary attribute to have a healthy self concept.

6. To have a healthy self concept implies to be a highly capable person.

(C) Identify the odd item from the following:

1. Goal-orientation, Internal values, Feeling of superiority, Positivity

2. Fear of risks, Fear of uncertainty, Self confidence, Impression management

3. Self indulgence, Self awareness, Self efficacy, Self esteem

(D) Match the following pairs.

A	B
1. Rentsch and Heffener model	a) A sense of self worth
2. Carl Rogers	b) Monitoring one's own actions
3. Congruence between ideal and real self	c) Confidence in one's own abilities to complete a task
4. Self esteem	d) Categories of self concept
5. Self regulation	e) Fully functioning person
6. Self efficacy	f) Good mental health

Q. 2. Answer the following questions in around 35-40 words each.

1. How do we develop a concept of our 'self' as we grow?
2. Explain the sex-identity and sex-role as a part of the self concept.
3. What are the ways in which we can achieve congruence between the Ideal self and the Real self?
4. Why is the congruence between the ideal self and the real self is very significant to enjoy psychological wellbeing?
5. What is meant by self esteem?
6. Describe the characteristics of individuals with high self esteem.
7. What are the ways to improve one's self esteem? Give example.
8. What are the characteristics of individuals with self efficacy? Give examples.
9. What is self image?
10. What are the ways to regulate Self? Give examples

Q. 3. Compare and contrast

1. Ideal self -- Real Self
2. Private Self -- Objective Self Awareness
3. People with High Self-esteem -- People with low Self esteem

Q. 4. How will you deal with the following situations if it were you in those situations

a) Grishma thinks she is extremely good-looking;which is not true in reality; she aspires to become a star model.

b) Harshad is avoiding places where he has to meet many people as he wears spectacles and he has got lot of pimples.

c) Sushma is too short so she does not mix with others.

Q. 5. Write short notes in 50-60 words each.

1. Gender role
2. Carl Rogers' theory of Self
3. Self Efficacy
4. Self Awareness
5. Self Esteem
6. Self Regulation

Q. 6. Answer the following questions in 150-200 words.

1. Give a detailed account of development of an individual's Self concept through the stages of life.

2. Explain the theory of Self as proposed by Carl Rogers.

4 ❯ Human Development

Learning objectives

This chapter aims at facilitating students to

1. know what is human development.
2. understand human development and other parallel concepts.
3. understand the stages of human development with specific characteristics, problems and developmental tasks at each of them.
4. relate the principles of development in day to day life.

4.1 Introduction : Concept of Human Development
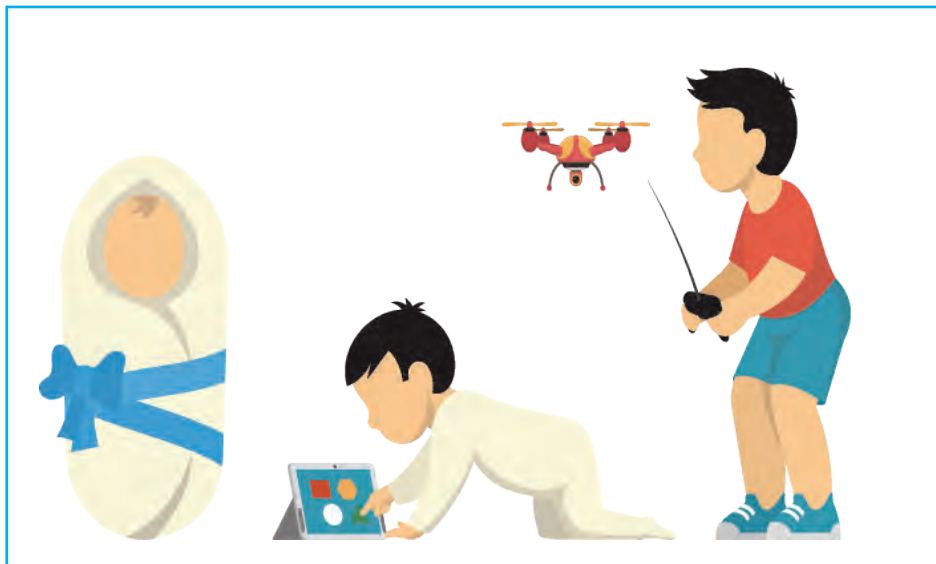
In this chapter, we shall discuss the definition, characteristics of development and parallel concepts.

The term 'Human Development' means a progressive series of changes that occur as a result of maturation and experience.

Human life proceeds in stages. The life of the individual is real and significant just as the geographical age of the earth or the revolutionary stages of life. Each stage is distinguished by a dominant feature, a leading characteristic which gives the period its coherence, its unity and its uniqueness.

4.2 Characteristics of Development

1. Development follows a specific pattern :

Every species follows a specific pattern and sequence of development. Specific pattern follows in prenatal and postnatal development of human being. e.g. all babies learn to turn over, crawl, stand and then walk. They may skip a particular stage, but the order or pattern will remain the same. Specific pattern follows in behavioural development also. For example, in language development child first makes some sounds, then babbles and starts speaking some words and sentences. Sexual development starts at a specific age. There is certain pattern to the development.

2. Development takes place in specific direction :

Development takes place during prenatal and postnatal stage. There are two principles of development.

(1) Cephalocaudal principle of development :

Development proceeds from the head to toe. This is called the Cephalocaudal principle. This principle describes the direction of growth and development. According to this principle, the child gains control of the head first, then the arms and then the legs. Infants develop control of the head and face movements within first two months after birth.

(2) Proximodistal principle of development :

Development proceeds from the centre of the body to outward. This is the principle of Proximodistal development also describes the direction of development. This means that the spinal cord develops before outer parts of the body. The child's arms develop before the hands and the hands and feet develop before the fingers and toes.

3. Development is continuous :

One stage of development lays the foundation for the next stage of development. There are various stages of human life span that is prenatal, infancy, early childhood, late childhood and adolescence, early youth, adulthood and old age. But the rate of development is not same for all stages.

4. Development proceeds from general to specific :

The infant's first motor movements are very generalized, like reflexes and non-directional waving arms or kicking before being able to reach or crawl towards an object. Child uses his full hand before developing finger dexterity.

5. There are individual differences in development :

Although the patterns and sequences for growth and development are usually the same for all children, the rate at which every individual reaches that stage is different. Some individuals attain a particular stage very early where as some of them mature late.

6. The rate of development is different for different body part :

Child first develops control over his neck, then raises his head resting on chest, then sits, crawls and finally starts walking.

<table>
<tr><td colspan="4" align="center">**Table No. 1**
An Overview of Growth, Development, Maturation</td></tr>
</table>

Concept	Growth	Development	Maturation
Characteristics	• It is quantitative change • It is physical • Perceived in size and weight • It is part of development	• It is qualitative change • It is physical as well as mental • Perceived through behaviour • It is all inclusive	• It is species specific behaviour • Maturational changes are genetic by nature • Maturation events cannot be speeded up by special efforts

7. Development leads to integration :

Physical and mental growth does not take place simultaneously. For example, we suddenly notice child's teeth but that does not mean that he is grown up. Child starts producing sounds first, then mono syllable, then words, the sentences and then complex sentences.

8. Behavioural problems are normal for the particular stage :

Children have certain behavioural patterns in every developmental stage. Any variation in that necessarily need not be labelled as abnormal. Sometimes some behaviour perceived by parents as problem behaviour may subside with age.

9. Development is predictable :

The rate of development is fairly constant for every child. This shows that it is possible to predict development of a child.

10. The child develops as a unified whole :

Physical and mental development and sociocultural factors like family, peers, school, influence each other and in turn affect development of that individual as a whole.

4.3 Development : parallel concepts : Growth, Maturation and Development

Growth, Maturation and Development : In order to understand meaning of human development, we need to understand its parallel concepts i.e. growth, maturation and development. Growth refers to the physical changes like increase in size, weight etc as the age advances.

Maturation refers to a natural unfolding of the genetic potential at appropriate time in the course of development. These characteristics show up naturally and they are not dependent on environment or training. e.g. approximately around 12 months infant starts walking.

Development results from an interaction between maturation and exposure to training and environmental factors.

Developmental psychologist study the characteristics and patterns of developmental stages. Here we are going to study various developmental stages.

4.4 Developmental Stages

4.4.1 Prenatal Stages

A period between conception till birth is called prenatal period. The duration of this is period is 238 to 290 day. During this period major developmental changes take place and that too in a very rapid manner. This development goes through three stages : Germinal stage, Embryonic stage and Fetal stage.

(a)   Germinal Stage :

This stage ranges from conception to 2 weeks. Within few hours after conception, the single fertilized cell called as zygote starts a journey down the Fallopian tube to the uterus where it will begin the process of cell duplication. In this process zygote divides itself into two cells, then goes on duplicating itself. By the end of this period zygote gets attached to the wall of uterus.

(b)   Embryonic stage :

At this point, the mass of cells is known as an embryo. This period starts from the third week after conception and continues till the 9th week. It is a time when the mass of cells becomes distinct as a human. The embryonic stage plays an important role in the development of the brain. Almost all the internal as well as external organs are developed by the end of this period.

Fig. 4.1 Embryo

(c)   Fetal stage :

The fetal period is marked by more important changes in the brain. This period of development begins during the ninth week and lasts until birth. The body parts and structures established in the embryonic stage continue to develop during this stage.

The characteristics of prenatal stages are as follows :

(i)   Heredity serves as the foundation for later development.

(ii)   Favourable conditions in the mother's womb can foster development of hereditary potentials while unfavourable conditions can block their development. It may distort the pattern of future development

(iii)   Sex determination takes place during first three months of life.

(iv)   Proportionally   faster   growth   and development takes place during the prenatal period as compared to an individual's entire life.

(v)   If proper care of the mother is not taken, it may lead to physical and psychological hazards to the unborn child.

4.4.2 Postnatal Stages

(a)   Neonatal Stage :

From birth to two weeks period is called neonatal stage. During this period, newborn starts adjusting with the external environment. For example, outside temperature. The neonate sleeps for around 18 to 20 hours.

The **characteristics of neonatal stage** are as follows :

(i)   Neonatal stage is the shortest of all developmental periods

(ii)   Neonatal stage is the time of radical adjustment

(iii) Neonatal stage can be a hazardous period, both physically and psychologically. Physically because the neonate has to make radical adjustments to the new and different environment and psychologically because it is the time when the attitudes of significant people towards the neonate will have an effect on his development.

(b) Infancy :

This stage ranges between 2 week after birth to 2 years. During this stage rapid physical and motor development takes place. Within 2 months child can turn his head. Child can sit and walk with support by 9 months. Child starts walking independently by around 12th months of age.

Fig. 4.2 Infant

The **characteristics of infancy** are as follows :

(i) Infancy is a foundation age because many behavioural patterns, attitudes, emotions develops during this age.

(ii) There is rapid growth and changes. These change are qualitative as well as quantitative.

(iii) Infancy is an age of independence due to control on body movements which enables infant to sit, stand and walk and to manipulate the objects.

(iv) As a result of developed interests and abilities, infancy is the age of increased individuality.

(v) Infancy is the beginning of socialization, as infant goes from being asocial to social.

(c) Early Childhood :

This stage extends from 2 years to about 6 years. This age is also called preschool age. Child develops control over his muscles. Child becomes physically independent. The physical territory of the child increases, so automatically child learns about social behaviour. Child asks number of questions to others. Hence this age is called as 'questioning age' or the 'age of curiosity'.

Fig. 4.3 Child in nursery

The **characteristics of Early Childhood** are as follows :

(i) Parents call this age as toy age as children play with toys.

(ii) Educators called this age as preschool age as the child starts going to preschool.

(iii) Psychologists term this age as pre-gang age as in earlier stage the child plays alone, does not share his toys but now he starts mixing around.

(iv) They experience stranger anxiety or separation anxiety.

(d) Late Childhood :

This stage ranges between 6 years to 11 years of age. According to psychologists this age is also called as the 'gang age'. During this stage boys and girls make their separate gangs. The fundamental skills of reading, writing, and calculations develop at this age.

According to educationalists this is the age of skill development. During this stage, speed of development is slow. At this stage eye-hand co-ordination develops along with micro skills. Even cognitive abilities like thinking, reasoning, start developing.

The **characteristics of Late Childhood** are as follows :

(i) For many parents, late childhood is the troublesome age. As they are curious by nature, they experiment with new ideas. They are not satisfied with lame answers.

(ii) Educators regard late childhood as a critical period in the achievement drive.

(iii) For psychologists, late childhood is the gang age.

(e) Adolescence :

Have you ever noticed that

• Your friend has suddenly started gaining weight.

• Girls and boys in your group have started becoming more conscious about their looks and appearance.

• Suddenly your friend starts talking about his or her crush.

• You feel like having a girlfriend or boyfriend.

Fig. 4.4 Adolescents in a group

Hold on, you have reached adolescence.

Age between late childhood and youth is called adolescence. This age ranges between 12-13 years to 19-20 years. During this age rapid physical development takes place. This stage begins with puberty. Height and weight of adolescent increases. Menarche in girls and nocturnal emission in boys occur. This is due to maturation of sex organs. Secondary sex characteristics develop during this stage like breast development among girls, growth of moustache and pubic hair among boys and their voice becomes hoarse.

At this point, search for identity and independence develops. Thoughts are more logical, abstract and idealistic. Adolescents like to spend more time with their friends.

Some other adjustment problems faced by adolescents.

(1) Internet addiction :

Adolescents are indulging more in social media like whatsapp and face book and in online games which in turn leads to problems like lack of concentration and social interaction.

(2) College drop outs :

Some students may leave college before completing their graduation due to financial problems or problems in academics.

(3)   Identity crisis :

Adolescents are confused about who they are as they are neither child nor adult. Parents treat them differently in different situations.

Some adolescents pursue psychological moratorium. A period in which they take time off from upcoming responsibility of adulthood to explore various roles and possibilities.

James Marcia's Approach to Identity development-

(A)   Identity foreclosure :

Here adolescent just accepts others decision about what is best for them. For example : a doctor's son becomes a doctor. Such adolescents are happy and self satisfied. They have need for self approval. They tend to be authoritarian.

(B)   Identity diffusion :

Here adolescents neither explore nor commit to the alternatives. Such people are socially withdrawn. They appear carefree but their lack of commitment impairs their ability to form close relationships.

Some adolescents shift among all the four categories but for most of them identity gels in late teens and early twenties.

(C)   Moratorium :

Here adolescents explore some alternatives but make no commitments .They experience high anxiety and psychological conflict. They are lively and appealing and seek intimacy with others.

(D)   Identity Achievement :

Here adolescents explore and search through what they are and what they do. Teens who have reached this stage tends to be psychologically healthier, higher in achievement, motivation and moral reasoning.

(4)   Depression :

When adolescents experience break up in relationship, failure in exams or in particular activity or death of loved one, they experience feeling of sadness, loss or grief. Sometimes, they feel so hopeless that they stop following normal routine .

Depression could be due to genetic and environmental factors. Environmental factors like parental over expectations, unhealthy competition, peer pressure, unpopularity, having less number of friends, getting bullied , rejection are associated with depression

(5)   Suicide :

The rate of adolescent suicide is higher for boys although girls attempt suicide more frequently than boys. In case of boys, it is more fatal as they use violent means to commit suicide .

Social inhibition, perfectionism and high level of stress and anxiety also create higher risk of suicidal attempts.

Activity 1 :

Warning signals of suicide

- Look for such signs among your friends/ classmates and if someone has such signs, talk to them. Encourage them to talk to Psychology teacher/ school counsellor.

- If a friend talks like 'I wish I was dead' or 'I am worthless, I must die'.

- A friend is missing classes or there is decline in his grades.

- Giving away important possessions like their favourite pen to others.

- Writing a will.

- Loss of appetite or excessive eating.

- Change in sleeping patterns , slowness, lethargy and reduced communication.

- Dramatic changes in behavioural patterns such as shy person becoming outgoing.

- Preoccupation with sad music,art or literature.

The **characteristics of Adolescence** are as follows :

(i) Adolescence is an important period because this period has its immediate effect on attitudes and behaviour of an adolescent.

(ii) Adolescence is a transitional period, as it is a bridge between childhood and adulthood.

(iii) Adolescence is a period of physical changes.

(iv) Adolescence is an age of challenges, because during childhood, majority of problems are solved by parents and teachers but an adolescent wants to be independent.

(v) Adolescence is a time for searching one's own identity.

(vi) Adolescence is a time of unrealistic ideas. They have a tendency to look at life through rose-tinted glasses and they day dream a lot. As a result they face problem of lack of concentration.

(vii) Adolescence is a threshold of adulthood.

(f)   Adulthood :

This stage ranges between 21 years to 40 years. During this period personal career choice and economic independence are the prime concerns for a young adult. At this stage individual tries to settle in his life. Men and women take responsibility of their families and start earning money. They plan for earning money, having children, gaining place in society during this stage.

The **characteristics of Adulthood** are as follows:

(i) Adulthood is the age of settling-down. Once they are legally mature they have to shoulder their own responsibility.

(ii) Adulthood is the reproductive age.

(iii) Problems faced in this stage are different from problems faced at earlier age.

(iv) An adult tries to establish himself in life and as a result he experiences tension.

(v) As they start working and get married they don't get time to mingle around with their friends like earlier.

(vi) They have to adjust to new patterns of life.

(vii) Adulthood is a time of changed experiences, change in value system.

(viii) Early adulthood is the time of adjustment to new lifestyle.

(g)   Late adulthood :

This period range between 40 years to 60 years of life. It is the time of more responsibilities. They assists next generation to be competent. The capacity of reproduction starts declining. Mental and physical capacities slowly start declining.

The **characteristics of Late adulthood** are as follows :

(i) Late adulthood is a dreaded period, due to mental and physical deterioration.

(ii) Late adulthood is a time of transition, where men and women leave their physical and behavioural characteristics of adulthood.

(iii) Late adulthood is a time of stress, as there is radical financial burden.

(iv) Individual may experience nervous breakdown due to overwork, anxiety etc.

(v) Late adulthood is a time of achievement. Erikson says that at this age people get experiences and society expect them to be more constructive.

(vi) Late adulthood is a time of evaluation, where they evaluate themselves by their achievements and previous aspirations.

(vii) Late adulthood is the time of Empty Nest, as children go out for higher education, job or get married.

(h) Old Age :

This stage ranges between 60 years to death. During this stage individual perceives that his capacities and strengths are declining gradually. Individual faces certain health issues. An individual has to adjust to his environment. In some cases, death of spouse leads to loneliness.

The **characteristics of Old Age** are as follows :

(i) Old age is a period of decline in physical and mental capacities.

(ii) There are individual differences in the impact of aging.

(iii) Old age is judged by different criteria like society tends to judge age in terms of physical appearance and activities.

(iv) There are many stereotypes about old people.

(v) Most stereotypes area unfavourable.

(vi) Elderly people have a minority-group status.

(vii) Aging requires role changes

(viii) Adjustment is poor during old age.

(ix) The desire to be young is seen in old age.

Fig. 4.5 Life span : from infancy to old age

Table No. 2
Stages of development

Name of the stage	Duration of Development	Characteristics
Prenatal Stage	Conception to Birth	• Child is completely dependent on mother for nourishment. • Rapid development of physical systems and organs.
Neonatal	Birth to 2 weeks	• Child is still dependent. • Development of initial reflexes.
Infancy	2 weeks to 2 years	• Motor, Cognitive and psychosocial development. • Rapid physical development.
Early Childhood	2 years to 6 years	• Physical development is comparatively slow. • Increase in cognitive and linguistic development. • Beginning of Socialization. • Change in adjustment ability, gang age.
Late Childhood	6 years to 10-12 years	• School provides opportunity for overall development. • Physical, mental, cognitive and psychosocial abilities can be observed.
Adolescence	12-14 years to 20-21 years	• Rapid visible physical changes occur. • Concept of self identity starts developing. • Career related awareness develops.
Early Adulthood	21 years to 40 years	• Individual completes education and chooses his career. • Chooses suitable partner. • Give importance to family responsibilities.
Late Adulthood	40 years to 60 years	• Increase in family responsibilities. • Increase in occupational responsibilities. • Importance is given to social responsibilities. • Societal expectations. • Responsibility of parents. • Menopause in women / Andropause in men.
Old Age	60 years till death	• Retirement life begins. • Increasing health problems. • Forced leisure. • Individual starts thinking about death.

❖   ❖   ❖

Summary :

Development means progressive series of changes that occur in an orderly predictable pattern as a result of maturation and experience. Hereditary potentials as well as the physical and social environment are the factors that determine development. Development occurs at appropriate time in various aspects, be it physical, cognitive, emotional or social. There is a certain pattern and sequence in development. Therefore, it is predictable. We can observe developmental norms and spot deviation in certain cases. Development begins right from conception and continues throughout life till death. Each of the various stages of development is marked with certain typical changes and problems. Based upon the norms of development, there is a set of expectation about changes in an individual at a certain age. This set is known as developmental task.

Key Terms :

- Development
- Maturation
- Egocentrism
- Prenatal stages
- Conception
- Zygote
- Germinal stage
- Fetal stage
- Neonatal stage
- Infancy
- Developmental tasks
- Identity crisis
- Foreclosure
- Diffusion
- Moratorium

Key Psychologist :

James Marcia observed that every adolescent resolves his identity crisis going through the four states: Foreclosure, Diffusion, Moratorium and Achievement.

Q. 1. (A) Complete the following statements

1. The rate of development in each stage is ....

    a. Same   *b. Different*

    c. Slow

2. Developmental changes occur in .... pattern.

    a. Predictable   *b. Unpredictable*

    c. Uncertain

3. The period between conception to birth is called ....

    a. Post natal   *b. Perinatal*

    c. Prenatal

4. .... period is also known as the period of identity crisis.

    a. Childhood   *b. Middle age*

    c. Adolescence

(B)   Match the following pairs.

A	B
1. Early childhood	a) A single fertilized cell
2. Adolescence	b) From second week to 2 years after birth
3. Infancy	c) Age of Questioning
4. Zygote	d) Adjusting to the new environment after birth
5. Neonatal period	e) Storm and stress

(C)   State whether the following statements are true or false.

1. Development has specific and continuous pattern.

2. Development proceeds from specific to general.

3. Development proceeds through dependency to independence.

4. All the changes in an individual are due to development.

(D)   Identify the odd item from the following.

1. Zygote, Neonate, Embryo, Foetus.

2. Early childhood, Neonate, Foetus, Infancy.

Q. 2. Explain the following concepts

1. Explain characteristics of human development.

2. Why is prenatal period is the most crucial period in development?

3. What are the developmental tasks?

4. Describe the neonatal stage.

5. What are the characteristics of the early childhood?

6. Write characteristics of the late childhood.

7. Describe the problems during adolescence.

8. Write a note on adulthood.

9. Explain the adjustment problems in middle age.

10. Discuss the application of the principles of human development in different fields.

Q. 3. Compare and contrast :

1. Growth and development

2. Maturation and development

3. Prenatal and post natal stages of development

5 ▶ Healthy Me - Normal Me

5.1 Mental health and normal behaviour	5.2 Maladjustment and abnormal behaviour
5.1.1 Indicators	5.2.1 Abnormal behaviour
5.1.2 Well adjusted individuals : My understanding	5.2.2 Perspectives on abnormal behaviour
5.1.3 Criteria of well adjusted individuals	5.3 Challenges faced by adolescents

Learning objectives

This chapter aims at facilitating students to

1.   develop an understanding about Normal and Abnormal Behaviour.
2.   understand the criteria of normal and abnormal behaviour.
3.   develop an understanding of Emotional Intelligence.
4.   identify the problems faced by adolescents in general.

5.1 Mental health and normal behaviour

Mental health and normal behaviour - my definition

Activity 1 : Think about the words 'mental health' and 'normal'. What do they mean to you? What would be your criteria for calling someone healthy and normal? Try to define.

(1)   Misha is intelligent and physically fit, but she does not get along with anybody and invariably ends up fighting with them.

(2)   Saurabh does not like himself and thinks he is extremely inferior as compared to others. He feels shameful of himself and is always withdrawn in a social setting.

(3)   Akram cannot manage his anger. At times he indulges into self harming behaviour.

(4)   Christopher gets so tensed during his exams that sometimes he turns blank while writing his papers.

(5)   Daisy gets very irritated if she has to do work which she does not enjoy. She feels she should only do things that she enjoys.

After looking at the examples above, do you feel the need to redefine, change or add to the criteria of healthy and normal that you previously defined?

5.1.1 Mental health and normal behaviour - some indicators

While there can be some disagreement on the absolute definition of mental health and normal behaviour, some indicators are seen to be universally accepted to indicate mentally healthy and normal individuals. The foremost among these, is being a 'well adjusted individual'. Let us understand more about who could be called a well adjusted individual.

5.1.2 Well adjusted individuals - My understanding

Activity 2 : Following are few examples of well adjusted individuals. Examine these examples and try to come up with some criteria of well adjusted individual.

(1)   Manisha experienced a break up recently and went through a lot of emotional turmoil for some time. However she managed to get over it and successfully concentrated on her studies.

(2) Samuel was insulted by his teacher in front of the entire class. He felt very bad about it and even cried for a couple of days. Soon he got over it and went back to his normal routine.

(3) Rustom's parents trust and support him. They give him freedom. At the same time they hold him accountable for his actions. Rustom understands their concerns and respect them. Rustom has warm relationship with his parents.

(4) Geeta doesn't want to choose dance as her career because she knows that she cannot dance well. At the same time she knows that she is good in languages so she can take up her career as a language teacher or translator or a journalist.

(5) Jenny has recently moved to a metropolitan city to complete her education. The college culture is extremely different from the one she is accustomed to. However she takes efforts to adjust to it. She is open for making new acquaintances and learning new skills.

(6) Rashid gets along well with others. He understands their problems and issues. People feel comfortable in his presence.

(7) Jasminder is a hard working boy. He feels good about himself, but at the same time he is not pompous. He understands his strengths and weaknesses. He is proud of his strengths yet realizes that he needs to work on his weaknesses without feeling shameful about them

From the examples above, what according to you are the criteria of a well adjusted individual?

5.1.3 Well adjusted individuals - some criteria

As you might have inferred from the examples above, there are five criteria of well adjusted individuals -

(1) Realistic perception of self and the world

(2) Openness to new experiences

(3) High emotional intelligence

(4) Capability to maintain healthy relationships

(5) High self esteem

Besides these criteria, there are some other criteria of well-adjusted individuals like expressing gratitude, kindness and sharing, accepting success and failures as part of life.

Let us take a detailed look at the five criteria mentioned above.

(A) Realistic perception of self and the world

Mahjabeen and Sheena were good friends. Mahjabeen placed a lot of trust in Sheena. However Sheena betrayed her. Mehjabeen felt very sad about it and was upset for quite some time. However, she soon realised that the world is full of different kind of people and things will not necessarily happen as she wishes. She realised that while trusting somebody can be her choice, nobody can guarantee that the other person will reciprocate.

Like Mehjabeen, well adjusted individuals accept the world as it is without having unrealistic expectations from others. So their relationships are more easy going, comfortable and conflict free. They are aware of their strengths and weaknesses. They have realistic perception of themselves and their world. They can use their strengths for betterment and they can modify or accept their weaknesses. As a result, they develop deeper capacity to deal with their life more effectively. So life becomes more manageable for such individuals.

Here is another example.

Rahul is a good speaker. He has won many prizes in elocution and debate competitions. In one state level prestigious competition he failed to get the first prize. But he did not get upset by it since he knew that in the real world, winning or losing is part of the game. It is impossible to

win always. He knew that success or failure is temporary, but hard work and consistency will go long way.

(B) Openness to new experiences

Jenni works in a marketing firm. Recently, she and her colleague were told to travel to some of the remote rural parts of the state for some office work. Her colleague developed cold feet at the thought of travelling to remote and unknown villages and interacting with the people there. But Jenny was open to the task and even looked forward to meet different people.

An individual who can try new things, who can deal normally with strangers, is confident in voicing honest opinion fits in this criteria. Such individuals try out new things like new fashion, explore new places and reach out to different people comfortably. Well-adjusted individuals are more open to new experiences. They don't mind trying new things. They dare to take risks regarding unknown experiences. They have confidence in themselves to explore and try new things.

Activity 3 : Think about some negative incidents in your life when things didn't go as you wished. Think about times when you were required to move out of your comfort zone and try out different, new things or experiences. How did you deal with them? How would you rate yourself on the two parameters of realistic perception of self and the world and openness to new experiences?

(C) Emotional intelligence

A very intelligent student from your class is stressed to achieve better grades. He is unable to make new friends or enjoy life. He doesn't share things with others and sometimes he is so depressed that he falls sick very often, becomes nervous at things like losing marks or losing his rank in the class.

The term emotional intelligence was coined by Michel Beldoch in 1964. Daniel Goleman further elaborated the term. According to Mayer and Salovey, "emotional intelligence is the ability to perceive one's own and others emotions, to discriminate among them and to use that information to guide one's thinking and action." It has four proposed abilities : perceiving emotions, using emotions, understanding emotions and managing emotions.

People with high emotional intelligence are well adjusted individuals because they can deal with others and themselves in a better way. They can control their emotions and are able to handle the situation in appropriate way. They don't get panic easily. As a result they are able to come up with proper solution in a crucial situation.

Fig. 5.1 Components of emotional intelligence

Now a days, emotional intelligence is given more importance than scholastic intelligence as it helps for normal adjustment of the individual.

Activity 4 : Given that emotional intelligence has four proposed abilities : perceiving emotions, using emotions, understanding emotions and managing emotions. What characteristics should be developed by the individual to possess these abilities? Think about the people who, according to you, have higher emotional intelligence. What characteristics do they possess? Watch the following video to understand more about emotional intelligence -
**https : //youtube /LgUCyWhJf6s**

Components of Emotional Intelligence

Emotional intelligence has five components : self-awareness, self-regulation, self-motivation, empathy and effective relationship (social skills). Let us look at them one by one - (Refer to Fig. No. 5.1)

(1) **Self awareness :** Are you aware of your strengths and weaknesses? Can you describe them? Can you describe your efforts to overcome your weaknesses and enhance your strengths? This ability is called as Self-awareness. It is the ability to recognize and understand your own emotions. Well adjusted individuals are aware of their actions, moods and emotions.

(2) **Self-regulation :** Just imagine, you are with strangers and you feel like crying aloud. Have you ever controlled yourself in such situation? Have you ever controlled your laughter just because you felt that the other person would feel bad? Self-regulation is controlling the expression of our emotions. It is the ability to express ourselves appropriately at right place and right time.

(3) **Self-motivation :** It is one's motivation to change. Have you ever gone for a trek? Or helped out a physically challenged person just because you wanted to? Self motivation is doing a particular thing just because you want to. You are setting the goal and try to seek it without any external reward. You enjoy that task so much that you forget your inhibitions.

(4) **Empathy :** Have you ever cried when your friend had a bad experience? Do you feel like helping those who are poor and needy? Have you ever shared your books and notes to a student who is in need of help? This is Empathy. Empathy is putting yourself into someone else's shoes. It is understanding the situation from that person's point of view. It is the ability to understand how exactly others are feeling in a given situation. (Refer to Fig. No. 5.2)
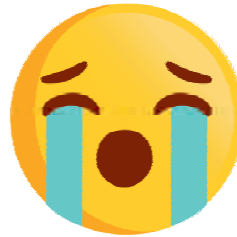
Empathy	Sympathy
I feel your pain	I am sorry that you are in pain

Fig. 5.2

(5) **Social skills :** Have you ever worked co-operatively in a team? Social skills is the ability to interact well with others. Some important social skills include active listening, verbal communication skills, nonverbal communication skills, leadership, and persuasiveness.

(D) Healthy relationships

Have you ever expressed yourself openly to your friends and family? Have you ever helped them out in a critical situation? Have you ever made them feel special?

These are some ways to maintain healthy relationships. Every relationship is a dynamic living experience. It is the treasure, we earn by putting special efforts. It occurs when we honour differences and accept others as they are. It includes respecting personal space.

Such individuals express their concern for others and don't blame others for their mistakes. They do forget and forgive mistakes of others and move ahead with the flow of life. Following image illustrates on a few important aspects of a healthy relationship.
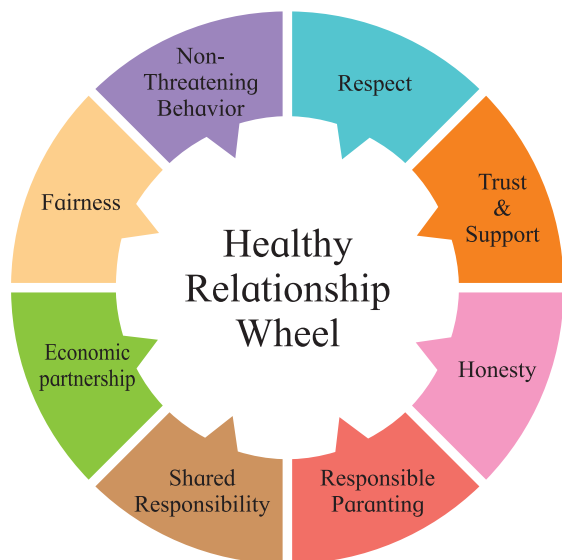
Fig. 5.3 Healthy Relationship Wheel

(E) Self Esteem

Do you like yourself? Are you comfortable with yourself? It is your sense of self-worth and personal value. It is called as Self Esteem. According to Rosenberg (1965) it is your attitude towards yourself. (Refer to Fig. 5.4)

People with high self-esteem are liked by all and are attractive. They have better relationships and they make better impressions on others. People with high self-esteem take initiative and are happy. Those who have high self-esteem show characteristics like confidence, assertiveness, positive outlook, ability to express themselves.

Self-esteem
the way we feel about ourselves
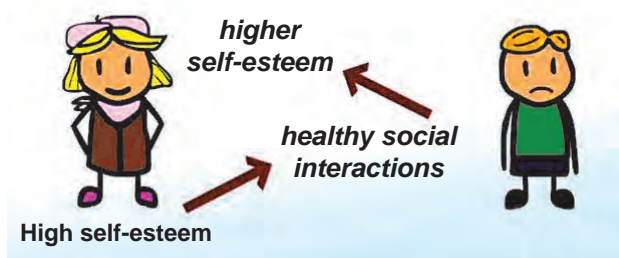
Fig. 5.4

Activity 6 : Answer the following questionnaire.

Scale : Morris Rosenberg self-esteem scale

Instructions

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

(1) On the whole, I am satisfied with myself.

Strongly Agree, Agree, Disagree, Strongly Disagree.

(2) At times I think I am no good at all.

Strongly Agree, Agree, Disagree, Strongly Disagree

(3) I feel that I have a number of good qualities.

Strongly Agree, Agree, Disagree, Strongly Disagree

(4) I am able to do things as well as most other people.

Strongly Agree, Agree, Disagree, Strongly Disagree

(5) I feel I do not have much to be proud of.

Strongly Agree, Agree, Disagree, Strongly Disagree

(6) I certainly feel useless at times.

Strongly Agree, Agree, Disagree, Strongly Disagree

(7) I feel that I'm a person of worth, at least on an equal plane with others.

Strongly Agree, Agree, Disagree, Strongly Disagree

(8) I wish I could have more respect for myself.

Strongly Agree, Agree, Disagree, Strongly Disagree

(9)   All in all, I am inclined to feel that I am a failure.

Strongly Agree, Agree, Disagree, Strongly Disagree

(10) I take a positive attitude towards myself.

Strongly Agree, Agree, Disagree, Strongly Disagree

Scoring :

(1)   For statements 1, 3, 4, 7, 10 - Give "Strongly Disagree" 1 point, "Disagree" 2 points, "Agree" 3 points and "Strongly Agree" 4 points.

(2)   For statements 2, 5, 6, 8, 9 - Give "Strongly Agree" 1 point, "Agree" 2 points, "Disagree" 3 points, and "Strongly Disagree" 4 points.

If your score is between 10 and 20, you are low on self-esteem and if it is between 30 and 40 it indicate higher self-esteem.

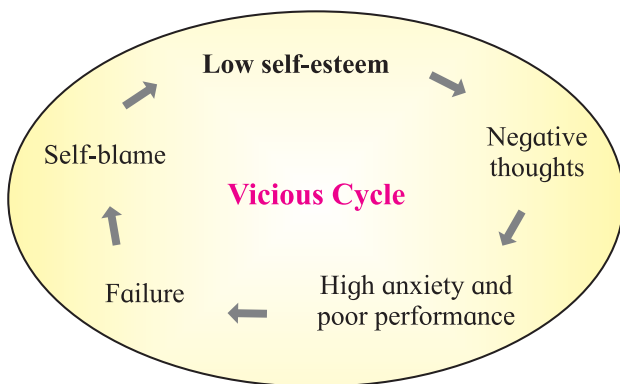If you get low score on this scale. You will fall into the vicious cycle given below. (Refer to Fig. No. 5.5)

Fig. 5.5 Vicious cycle of low self esteem

In such condition consult your psychology teacher / counsellor.

5.2 Maladjustment and abnormal behaviour

It's very rare to find an individual possessing all the criteria of a well adjusted individual. Some people may show some criteria while others may be high on some other criteria. We must try to seek these qualities and try to become well-adjusted individual.

We are not well adjusted at all time and we may experience some level of discomfort in certain situations. The degree of adjustment changes according to the situation and time. Some people have low frustration tolerance to the situation and which may lead to maladjustment - which means not being well adjusted. Sometimes when traumatic effects of the situation continues for a longer period, person gets "burn out". It further leads to mental disturbance which creates abnormal behaviour.

We will take a deeper look into what is termed as abnormal behaviour in the next part of the chapter.

5.2.1 Abnormal behaviour

Activity 7 : What comes to your mind when you hear the word 'abnormal'? Does it mean something different from you? Or something you have not seen? Or something you don't approve of? Do these criteria really make something abnormal? Think about it. What would be your definition for calling someone abnormal?

Activity 8 : Think about the following situations. Try and apply the criteria for abnormality that you came up with, to these cases and try to judge if they could be called abnormal.

(1)   Sameer likes to dress up like girls.

(2)   Kushal is confused about his sexual orientation.

(3)   After marriage, Shoaib went to live with his in-laws.

(4)   Joseph loves to be alone and travels alone.

(5)   Delnaz is introvert and does not like to mix with any one.

Are the above mentioned behaviours really abnormal according to your criteria? Do you need to change your criteria?

Criteria for abnormality

In physiological sense, abnormality has a definite criteria for everything. For example : for adult human beings, height above 7 feet or below 4 feet, is considered as abnormal. Physical health has clearer parameters. But it is not so in the case of mental illnesses. In Psychology, certain efforts are made to define abnormality in terms of intensity, duration, pervasiveness of the behaviours and functional level of the individual.

Let us understand what abnormal behaviour is. Abnormal behaviour is defined as a behaviour that is disturbing (socially unacceptable), distressing, maladaptive (self defeating) and often is a result of distorted thoughts for a long period of time.

Activity 9 : Following are the examples of few abnormal behaviours. Inspect them closely. Some examples are grouped together. Try to reason why the criteria on which the examples mentioned below are abnormal.

(1) Malik feels that somebody is constantly watching over him or spying over him. Madhura constantly washes her hands claiming that there are germs everywhere. Jahangir derives great pleasure in breaking the rules. Shama has an IQ which is very low from the standard range.

(2) Shehnaz feels extremely low throughout the day. She is able to perform her normal duties well, but she feels constantly unhappy. She cries every night.

(3) Sharada feels so lethargic that she cannot get out of her bed. She cannot take care of herself. She cannot do her day to day functions adequately.

As can be seen from the examples above, there are three major criteria for abnormal behaviour

(1) Deviance (social deviance, statistical deviance, breaking laws)

(2) Personal distress (feeling low)

(3) Failure to function normally (failure to perform daily normal responsibilities.)

Let us look at these criteria. It is necessary to remember that judging someone by only one criteria can be misleading.

(1) **Deviance :** Look at the examples of Malik, Madhura and Jahangir above. Malik, Madhura shows a form of thinking that is unreal and deviating from the normal thinking. Jahangir displays a behaviour which is against the set laws of the state and hence deviant. Shama has an IQ which is lower than the average IQ. Statistically speaking, such people are rare to find. Thus statistically Shama is deviant.

Generally when a particular behaviour is performed or displayed by majority of people, it is considered as normal behaviour. So any person who does not follow such behaviour which is harmful to self as well as others is considered as abnormal.

But this criteria is insufficient to explain abnormality. For example : taking bath is normal behaviour in India, but does that mean those who don't take bath for four days are abnormal? Even according to cultural norms, something which is considered as normal in one culture can be considered as abnormal in other culture. E.g. Being homeless is considered as abnormal in some cultures where as it may be considered completely normal in some other cultures.

Thus the dividing line here is vague.

(2)   Personal distress :

Personal distress refers to subjective feeling of an individual in response to persons and events creating extreme discomfort.

Look at the example of Shehnaz. Shehnaz can perform her day to day duties well. There seems to be no problem in her performing the tasks. However She feels extremely low inside.

Many times individuals do not pay attention to their psychological symptoms. They take problems like depression, social withdrawal etc. casually. They are not aware of the problems their families face due to this.

(3)   Impaired functioning : Look at the example of Sharada. She can hardly get out of the bed and perform her daily chores or responsibilities. Here, we can see that her normal day to day functioning seems to be impaired.

This type of abnormality means that people cannot fulfil appropriate and expected roles in family, social and work related situations (Ustun and Kennedy, 2009). Being sad after a traumatic experience for a few days is normal but if it is continued for more than six months it is abnormal and can lead towards depression.

However, one question that you would ask is what causes abnormality?

Case Study : Sameer, the depressed boy and his family : A ten-year-old boy, was admitted to child psychiatric hospital unit after he attempted to stab himself in the stomach with a medium sized kitchen knife. The suicide attempt was foiled by his mother, who pulled the knife away from her son. This suicide attempt occurred immediately after Sameer had an argument with his father. Sameer felt that his "father hates me" and that "I would be better off dead." A variety of factors made Sameer vulnerable to suicidal tendencies. Sameer grew up in an atmosphere in which there was intense disagreement between his parents. His father used to drink heavily and when drunk would physically assault his mother. Sameer's mother was chronically depressed and often said that "life is not worth living," However she loved her son and felt that because he needed her, she must continue to work and manage the home. Sameer has a serious learning disability, and he struggled to maintain his school grades. He had a private tutor who helped him to overcome some of his sad feelings and shame. Often, however, when teased by his classmates, he thought about ending his life.

5.2.2 Perspectives on abnormal behaviour

There are primarily seven psychological perspectives of abnormal behaviour. Apart from that the Stress Diathesis Model and Biopsychosocial Model are also considered. The seven perspectives are as follows : (Refer to Fig. 5.6)

(1)   Biological perspective : This perspective focuses on biological and physiological factors as causes of abnormal behaviour. Abnormal behaviour is treated as a disease, or mental illness, and is diagnosed through symptoms and cured through treatment. Hospitalization and drugs are often preferred methods of treatment rather than psychological interventions.

Thus in case of Sameer, the psychologist with a biological perspective might say that his abnormality is because of the chemical imbalance in his brain and may prescribe him medicines.

(2) **Sociocultural perspective :** Abnormal behaviour is learnt within a social context which ranges from family, friends to the society. Cultural aspects are acquired through learning about particular social norms which are believed to be important in producing abnormal behaviour. e.g. Anorexia Nervosa and Bulimia are found mostly in western culture, where they give more importance to thin female body.

(3) **Behavioural perspective :** They believe that abnormal behaviour is developed from ineffective learning and conditioning.

Treatments are designed so to reshape maladaptive behaviour with the help of principles of reinforcement and punishment.

(4) **Evolutionary perspective :** A central claim of evolutionary perspective is that the brain evolved to solve problems encountered by our ancestors. This perspective suggests that these mental processes exist to serve an evolutionary purpose i.e. survival and reproduction.

(5) **Humanistic perspective :** Those who believe in humanist perspective focus on the ways that human beings are driven to grow, change, and develop to their fullest possible potential.

(6) **Psychoanalytic / psychodynamic perspective :** This view of psychology emphasizes the role of the unconscious mind, early childhood experiences, and interpersonal relationships to explain human behaviour and to treat people displaying abnormal behaviour with

the help of this information. It holds that psychological disorders are the consequence of anxiety produced by unresolved, unconscious conflicts. Treatment focuses on identification and resolution of these conflicts.

It emphasizes the role of unconscious mind and conflicts that can be traced back to the childhood. According to Freud unconscious motives / conflicts have base of primitive sexual and aggressive instincts.

(7) **Cognitive perspective :** According to this perspective, people engage in abnormal behaviour because of their recurrent maladaptive thoughts and behaviours that are often based upon their false assumptions. Treatment involves helping the maladjusted individual to adapt to new thinking process. Therapy is a process of unlearning maladaptive thinking and replacing with more adaptive one. This area of psychology focuses on mental processes such as memory, thinking, problem-solving, language, and decision-making.
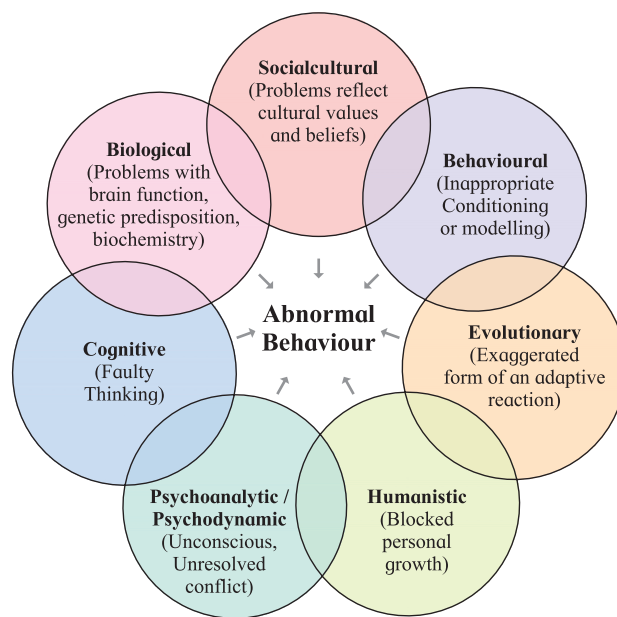
Fig. 5.6 Perspectives of abnormal behaviour

Apart from the 7 perspectives, let us look at two models which explain causes of abnormal behaviour differently -

(A) Stress - Diathesis model

Swapnil and Sumit both faced financial difficulties, experienced parental disputes and there was no social support for both of them. In spite of these adverse conditions, Swapnil managed to progress in his career like a brave fighter whereas Sumit went into depression. Here, we can see that in spite of experiencing same adverse environmental conditions, both of them reacted to those situations differently. Sumit was biologically prone to depression due to genetic factors. When environmental conditions were also adverse, he was pushed into depression. This can be explained with the help of Stress diathesis model. According to this model, disorder is a result of both biological and genetic factors (nature) and life experiences (nurture). Those who are genetically predisposed towards a particular disorder and experience environmental 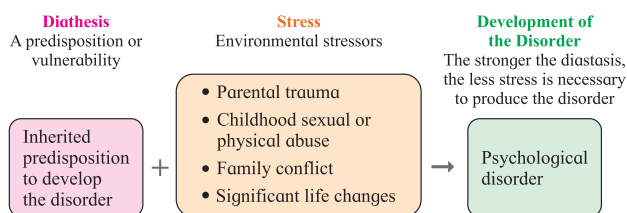stress are more likely to show abnormal behaviour. The word "diathesis" refers to vulnerability of an individual towards a particular disorder. (Refer to Fig. No. 5.7)

Fig. 5.7 Stress diathesis model

(B) Biopsychosocial model :

Eg : A child of a depressed mother who is constantly exposed to physical abuse from his father for a long period of time and who is not accepted by his school-mates. Due to her low performance; he will be more prone to experience depression himself. This example can be explained with the help of Biopsychosocial perspective : The term Biopsychosocial refers to the interaction of biological, psychological and sociocultural factors in the development of abnormal behaviour. It means that if a person is exposed to worst environmental conditions during early childhood will make him more vulnerable for the abnormal behaviour. Contrary to this, if a person is living in a protective environment where he is loved, cared and accepted, there are less chances of developing of abnormal behaviour even if he has biological predisposition towards abnormality. (Refer to Fig. 5.8)

Do you know this :

World Mental Health day is observed on 10th October every year in order to bring attention to mental health concerns. Such as awareness about psychological disorders, therapeutic interventions and preventive measures. It is observed as awareness programme since 1992.

Now that we have seen the criteria of abnormality and some perspectives of looking at it, let us take that understanding with us and look within ourselves, around us and see if we find any signs of maladjustment.

5.3 Challenges faced by adolescents

Activity 11 : You are all adolescents now. Think about how you are today and how you were in 5th / 6th standard. Make two columns and note down the changes you see in these five domains - your self image, your confidence, relationships with your parents, physical changes, importance of friends in your life.

As you might have realized from the activity above, there has been a world of change in you from then and now. Adolescence is called as the period of 'storm and stress' as they experience

lot of physiological and psychological changes during this phase. While it is easy to label various behaviour of adolescence as maladjusted or abnormal, a lot of them are in fact natural in this age. Let us understand these changes and their causes before we judge them as abnormal.

Adolescents are in search of 'self-identity' as they are neither children nor adult. In this phase, they experience many challenges as they have to constantly adjust with these challenges.

Fig. 5.8 Challenges faced by adolescent

The challenges faced by majority of adolescents are given above in Fig. 5.8.

There are still some other problems faced by adolescent.

Some adolescents face difficulty mixing with others, have an inferiority complex about themselves and feel excessively shy. There could be many different reasons behind this.

Some adolescents lack self confidence. They have negative opinion about others. These behavioural changes may occur because of hormonal changes in Puberty. They may become awkward and conscious about their body shape, they experience mood swings which make them more diffident. They may be more conscious about their physical appearance. They may be concerned about various issues like their skin colour, height, weight, body proportions etc.

As a child if they have experienced disturbed family background, they may lose confidence in themselves. Also if parents have over expectations about their performance, they may become diffident.

Adolescents may also have expectations from themselves to perform better, to achieve better grades irrespective of their capacity which creates tension for them. They may tend to think that even if they try hard they will remain failures.

Sexual Orientation :

Some adolescents get attracted towards the same sex person or towards both men and women. It could be very confusing for such individuals. Such adolescents often have a hard time dealing with their sexual orientation.

Sexual orientation refers to an individual's pattern of physical and emotional arousal towards other person. Heterosexual individuals are attracted to persons of the opposite sex, homosexual individuals are attracted to persons of the same sex, and bisexual individuals are attracted to person of both sexes.

During adolescence, sex hormones become active and the adolescents become conscious of their sexual orientation. It can be difficult for an adolescent to accept the fact that his / her sexual orientation is different from his / her friends.

Gender Identity :

Gender identity is a perception of one's own gender which may or may not be corresponding to their birth sex. It is affected by gender role expectations from the society.

Some adolescents may show traits typically thought to be of the other gender. For example, some boys may display some feminine traits whereas some girls may display some masculine traits. Such adolescents may have problems dealing with their gender identity. (Refer to Fig. 5.9)

In 1974, Bem developed a test to assess gender identity. Those who are high on masculinity show traits like assertiveness, boldness, dominance, self-sufficiency and instrumentality. Those who are high on femininity show traits like nurturance, expression of emotions, and empathy. Those who display both masculine and feminine traits are called as androgynous. If an adolescent is inhibited from behaving in a way that is natural for him / her under the pressure of social expectations or stereotypes, he / she may either become rebellious or timid.

Fig. 5.9 Gender Identity

Bullying :

Some adolescents get constantly humiliated and taunted by others or fall victim to other people's aggression because they have less power or prestige. They are not weak but they are not able to stand up for themselves. They become the target of continuous attacks.

Bullying is very common all around the world. Almost all bullies are also victims and vice versa. Bullies and victims are generally low in self-esteem. To improve their self-esteem, they tend to get aggressive. They accept ruthless

manipulative approach to life. They don't trust others and they think that they can easily break their promises and take unfair advantage of others. (Andreou, 2000). They are more likely to respond to stress with aggression (lashing out at someone physically or mentally) or by engaging in self destructive behaviour.

Boys generally indulge into bullying to gain power and be a part of powerful groups. Girls indulge into bullying when they are depressed.
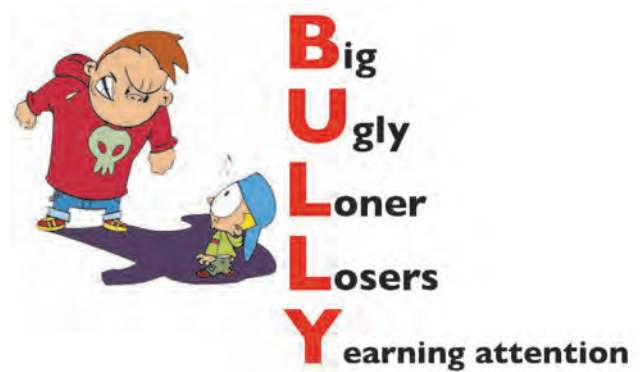
Fig. 5.10

A lot of times, if adolescents are not supported in dealing with the challenges they face, it is possible that they start displaying abnormal behaviour. Do you see anybody who needs help?

Activity 12 : Think about yourself and your adolescent friends. Do you or anyone of them face any of the above mentioned challenges? How can you help yourself and them? Think about it. Discuss with your classmates.

❖   ❖   ❖

Summary :

- The common pattern of behaviour found among the majority of people is said to be normal behaviour. Criteria of normal behaviour are: Realistic perception of self and the world, Openness to new experience, Emotional intelligence, Healthy relationships and Self esteem.

- Abnormal behaviour is defined as a behaviour that is disturbing, socially unacceptable, distressing, maladaptive (self defeating) and often a result of distorted thoughts for a long period of time. There are different perspectives to understand the abnormal behaviour. Biological perspective, Psychological perspective, Sociocultural perspective, Stress diathesis model and Biopsychosocial perspective.

- Criteria of abnormality : Deviance, Personal distress or personal suffering, Dysfunction or impaired functioning

- Challenges faced during adolescence : Lack of self confidence, Dealing with gender identity, Dealing with sexual orientation, Bullying.

Key Terms :

- Normal behaviour
- Realistic perception
- Openness to new experiences
- Emotional Intelligence
- Abnormal Behaviour
- Stress-diathesis model
- Deviance
- Personal distress
- Gender Identity
- Bullying

Key Psychologists :

John D. Mayer is an American psychologist at the University of New Hampshire. He is a personality psychologist. He co-developed a popular model of emotional intelligence with Peter Salovey.

Peter Salovey is an American social psychologist. He is one of the early pioneers and leading researchers in the field of emotional intelligence.

Morris Rosenberg was an American Social Psychologist and sociologist. He developed a scale to measure self esteem.

Q. 1. (A) Complete the following statements

(1) One of the criteria of well adjusted behaviour is ....

    (a) Intelligence

    (b) Openness to new experience

    (c) Success

    (d) Artistic ability

(2) According to the humanistic perspective, every individual strives for ....

    (a) Absence of problems

    (b) Absence of mental disorder

    (c) Enjoyment in life

    (d) Development of one's abilities to the fullest

(3) According to ....perspective, one of the causes of abnormality is 'genetic predisposition'.

    (a) Behavioural   (b) Biological

    (c) Sociocultural   (d) Cognitive

(4) .... face the identity crisis.

    (a) Children   (b) Adolescents

    (c) Young adults (d) Old people

(B) State whether the following statements are True or False and justify your answer with reason.

(1) Sucheta has an IQ which falls into the category of genius which is rare to find. 'Genius' is a statistical deviance. Therefore, she is abnormal.

(2) It is very rare to find a person possessing all the criteria of well adjusted person.

(3) Over expectation from the parents can lead to lack of self confidence.

(4) Well adjusted individual does not encounter failure at all.

(5) Abnormality is always hereditary.

(6) Self awareness is being passionate about fulfilling one's needs.

(7) Social skill is the ability to interact well with others.

(8) Openness to new experience leads to dangerous situations, therefore it should not be encouraged.

(C) Identify the odd item from the following.

(i) Self awareness, Self regulation, Self motivation, Sympathy, Social skills.

(ii) Cognitive perspective, Humanistic perspective, Psychoanalytic perspective, Motivational perspective.

(iii) Failure, High Anxiety, Negative thoughts, High self esteem, Self blame.

(iv) Deviance, Personal distress, Low intelligence, Impaired functioning

(D) (i) Match the following.

	A		B
(1)	The emphasis upon Unconscious mind	(a)	Biological
(2)	Survival and reproduction are the purpose of mental processes	(b)	Cognitive
(3)	Chemical changes the brain	(c)	Psychoanalytic
(4)	Abnormal behaviour is due to faulty learning	(d)	Evolutionary
(5)	Emphasis upon thinking process	(e)	Sociocultural

(ii) Match the columns

	A		B
(i)	Stress and storm	(1)	Used for gaining more power
(ii)	Body image	(2)	Adolescence
(iii)	Bullying	(3)	May lead to lack of self confidence
(iv)	Low self esteem	(4)	Childhood
(v)	Nurturance	(5)	Anorexia
		(6)	Feminine trait

Q. 2. Answer the following questions in around 35-40 words each.

(1) Explain the concept of realistic perception of self with an example.

(2) What is emotional intelligence? Mention the components of emotional intelligence.

(3) What are the conditions that lead to low self esteem? Give examples.

(4) What is the significance of openness to new experiences?

(5) How does self awareness affect psychological well being?

(6) What is the significance of self motivation?

(7) Enlist the qualities a person requires for having healthy relationships with others.

(8) How important are the social skills? Give example.

(9) State the biological perspective to abnormal behaviour with an example.

(10) Explain the humanistic perspective.

(11) Explain the sociocultural perspective to abnormal behaviour.

Q. 3. Compare and contrast

(i) Realistic perception of self --- Unrealistic perception of self

(ii) Openness to new experiences --- Inhibitions/ fear of new experiences

(iii) High self esteem --- Low self esteem

(iv) Sympathy --- Empathy

(v) Behavioural perspective --- Humanistic perspective to abnormality

Q. 4. (i) What are the possible consequences of

(a) Geeta is more interested in literature but being only daughter of a well-established Orthopaedic surgeon having his own hospital, she is under pressure of choosing medial profession as her career.

(b) Sujata is an intelligent girl but she is extremely sensitive to criticism and perceives herself as less competent.

(c) Trisha is not able to make friends. She cannot initiate conversation with strangers at all. She is placed as a leader of one of the teams for campus-cleaning.

(ii) What will you do if...

(a) You see your best friend bullying your classmate.

(b) You see a girl in your class who is not included in many of the class room activities, who does not have any friend and who faces rejection from everyone.

(c) You got very less marks in the First Terminal exam.

(d) You are very much interested in taking part in a drama to be performed in the annual function of your college, but you are not selected.

Q. 5. Write short notes in 50-60 words each.

(1) Criteria of well-adjusted person

(2) Criteria of abnormal behaviour

(3) Psychoanalytic perspective

(4) Cognitive perspective

(5) Bullying

(6) Sexual orientation

(7) Emotional Intelligence

Q. 6. Case study

Read the following case carefully and answer the questions based upon that.

Pritha was a merit holder girl from a middle class family. She joined a college where majority of students were from a rich background. Although she was capable of following lectures and was doing well in her studies, she felt lonely as she could not get acceptance in the groups of her classmates coming from affluent families. She tried to dress like them, and started asking for extra pocket money from her parents. Her classmates joked at her dressing sense. She could not tolerate the mockery and stopped going to the college. Instead, she started spending time visiting strange places like public parks, railway stations and shopping malls. She did not appear for any of her exams. Her parents were unaware of all these things and on asking about college or studies, Pritha answered them without revealing the truth. At the end of the year, her parents received her report card by post from her college with a remark that 'Your ward has to take College Leaving certificate.'

On confronting Pritha, she became violent and started damaging the furniture uttering bad words about the middle class people and there after her utterance was incomprehensible for her parents. This continued for a very long time.

Questions :

(1) Which problems did Pritha face in her college?

(2) Could Pritha, according to you, have avoided her condition of 'feeling lonely'?

(3) What would you do if you were in Pritha's place?

(4) Do you think Pritha should have spoken to her parents about her feelings at college? If yes, how it would have helped her?

Q. 7. Answer the following questions in 150-200 words.

(1) What are the criteria of abnormal behaviour? Explain with examples.

(2) What are the causes of abnormal behaviour?

(3) Describe the challenges faced by adolescents with examples.

6 ⟩ Stress

⟨ **Learning objectives** ⟩

This chapter aims at facilitating students to
1.   develop understanding of stress.
2.   know the different types of stress.
3.   know the sources and effects of stress.
4.   identify the sources of stress from day to day life.
5.   understand the different coping strategies.

6.1 Being well adjusted-a dynamic balance

As we have seen in chapter 5 about Mental health and normal behaviour, we are not well adjusted in   all the situations and we may experience some level of discomfort in certain situations. The degree of adjustment changes according to the situation and time. Let us look at such commonly experienced discomforts in this chapter.

Activity 1 :

Look at the following examples, we see them all around us. What do we call this particular type of discomfort in our day to day life?

•   Sometimes Mitali is so worried about her performance in the examination that she turns blank during the exams. We say that Mitali is ....

•   When Faizal was going through a bad phase in his business he used to shout and scream at everyone around him. His family said that Faizal was ....

•   Robert had an audition on Monday but at the time of audition he felt so under confident about performing well that he cancelled the audition. The organisers said he was probably ....

As you may have realised, we use the terms 'tensed', "worried" 'under pressure', 'anxious' to indicate the discomfort one experiences in seemingly demanding situations. However these different words mean different things in psychological terms. In psychological terms, the discomfort that one experiences in a seemingly demanding situation is called stress. Since, as students of 11th standard, you are facing demanding situations frequently, understanding the phenomenon is important not only as students of psychology, but also as individuals for your own mental health.

6.1.1 Stress-my definition

Activity 2 :

Look at the following examples of stress. Try to find a pattern in them and make a definition of stress for yourself.

- Meena needs fees for her higher education. But her father has less money than the required. He feels very stressed.

- Rashid is late for an appointment and he is stuck up in a traffic jam. He is stressed about reaching on time.

- Parminder is suppose to make a model for Science examination which is not working. Parminder feels stressed.

Definition of stress

The word stress is derived from the Latin word 'Stringi' means "to be drawn tight". According to Richard Lazarus (1922-2002) "stress is a feeling experienced when an individual feels that the demands exceed the personal and social resources an individual is able to mobilize."

In the examples given in activity, Meena's education needs much more money than she is able to mobilize, Rashid needs more time to reach the destination but he has only 5 minutes, making Parminder's model needs a level of expertise beyond her capability. Thus in each case, the demand of the situation is much greater than the resources/capabilities, the person is able to mobilize.

In medical term, stress is described as "a physical or psychological reaction that may lead to illness."

According to Indian philosophy, our desires and involvement in material world are the cause of our stress which leads to Klesha. There are five types of Kleshas : Avidya, (Ignorance), Asmita (Ego), Raga (Attraction), Dvesha (Repulsion) and Abhinivesha (Lust for life). Out of these Avidya is the base of remaining four. We must seek realistic knowledge to be free from Avidya.

In Sanskrit, they are not only talking about mental health as Arogya (absence of disease) but it is explained as Swasthya (being relaxed and maintaining one's mental peace)

Let us see three different scenarios -

Jay is preparing for his upcoming semester exam. He has moderate amount of stress. So he studies hard and gives his best in his exam.

At the same time, Spruha is under extreme stress for the exam as she wants to be a topper. So in spite of studying well, she panics and goes blank while writing the paper.

Azhar does not have any stress for his exam. He bunks his classes while thinking that he can prepare himself at the last moment and pass the exam. But when he appears for the exam, he is not able to do well.

Everybody deals with stress in his own way depending upon his genetic predisposition and environmental conditions. Stress works just like a key operated toy. If the key is wound too much, the arrangement would break. At the same time if it is wound too less, the toy won't work as it should. Similarly when stress exceeds a limit or if it is very less it will deteriorate the performance. Only under moderate stress, we can achieve the optimum performance. This phenomenon can be explained with the help of following diagram. (Refer to fig. 6.1)
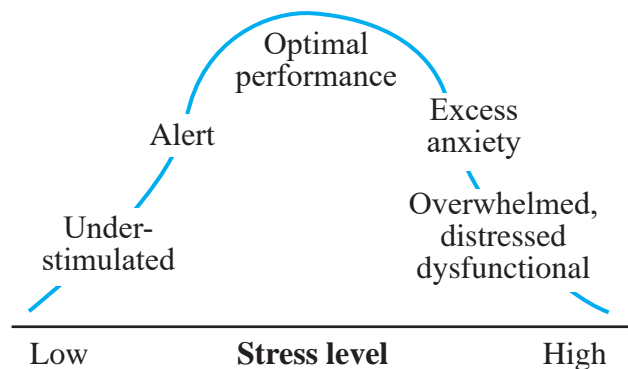

Fig. 6.1

Activity 3 :

Try to remember situations in your life when-

1. The stress was moderate.

2. The stress was too much

Try to remember what happened in both these situations. Which was a more productive situation? Did it follow the graph shown above or was it different? This leads to discussion of types of stress

6.2 Types of stress

- Amit has nothing to do during vacation or Smita who is an intelligent student finds the course unstimulating. They experience **Hypostress**. Hypostress is caused when a person has nothing to do at all. It is insufficient amount of stress. When people have nothing to do, they get bored and if this feeling persists for longer time, it results in hypo stress.

Usually, people with hypostress are working on unchallenging jobs, in which they become demotivated, unenthusiastic and restless. Hypostress may be due to work underload.

Hypostress is different from leisure. Leisure is a quality time spent away from work or domestic duties or studies, after a heavy period of work. It has relaxing and recreational qualities and we have freedom and choice for our leisure time.

- Jason is stuck up in a traffic jam, has lost his hall ticket and is already late for the exam. He is going to experience **Hyperstress**. It causes due to extremely pressurizing conditions. Due to hyperstress, a person may experience panic attack and may engage in exaggerated reactions like throwing temper tantrums. It leads to frustration or agitation.

Thus in Hyperstress; there is high stress which leads to panic or exaggerated reactions.

- After much preparation, Anagha is ready for her stage performance. She is experiencing **Eustress**.

According to Greek prefix "EU" means good and therefore it is **"good stress"**. According to Merriam Webster (1975), eustress is a positive form of stress having a beneficial effect on health, motivation, performance and emotional well-being. It is a state when an individual is excited, determined, inspired and energized and "ready to go". When we experience eustress, the body is temporarily, intensely and quickly flooded with hormones like Dopamine and Oxytocin. Both these hormones are associated with positive feelings.

- Sujay meets with an accident and has become partially handicapped. Now he is dependent on others for assistance. Sujay will experience **distress** as he is facing this unwanted situation.

Distress is negative type of stress. Individual experiences it when the normal routine is constantly adjusted and altered. While experiencing distress, our body is flooded with emergency response hormones such as Adrenaline and Cortisol. Adrenaline increases heart rate, elevates blood pressure and boosts energy supplies. Cortisol, the primary stress hormone, increases sugar (glucose) in the bloodstream, enhance brain's use of glucose and increase the availability of substances that repair tissues.

There are two types of distress :

Acute and chronic distress :

1. Acute distress is intense, short term negative stress. It occurs when there is sudden change in routine or when we experience panic or threat. For example, traffic jam, accident, sudden water shortage etc.

2. Chronic distress is long lasting, recurrent negative stress. It causes constant changes in routine for a long period of time. This is the worst type of stress. Chronic distress is the cause of most people's problems. Example: illness of a family member, suffering from a chronic illness oneself.

Hans Selye (1907 - 1982) :

Hans Selye, who is the father of stress research says, that stress of creative and successful work is beneficial whereas that of failure and humiliation is harmful.

He introduced the General Adaptation Syndrome model in 1936 showing the three phases of what the alleged effects of stress has on the body. In his work, Selye, developed the theory that stress is a major cause of disease because chronic stress causes long term chemical changes.
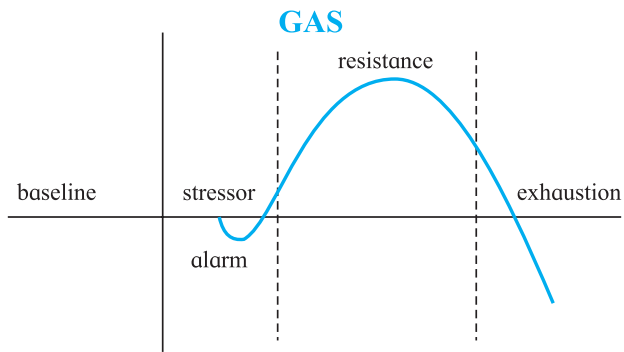
Fig. 6.2 General Adaptation Syndrome

He observed that the body would respond to any external biological source of stress with a predictable biological pattern in an attempt to store the body's internal homeostasis.

GAS may be defined as the manifestation of stress in the whole body, as they develop in time. GAS consists of three stages : the alarm reaction stage, the stage of resistance and the stage of exhaustion.

(A) Alarm Stage :

It is the first reaction to stress. At this stage the organism recognizes that there is a danger and prepares to deal with the threat by "fight or flight" response.

If this energy is repeatedly not used for physical activity, it can become harmful.

This natural reaction prepares provide energy to the body to deal with stressful situation.

(B) Resistance Stage :

After the initial shock, the body begins to repair itself. In this recovery phase, it remains on high alert for a while. If you overcome the stress, your the body continues to repair itself until your hormone level, heart rate and blood pressure comes to normal.

If the stress continues, the body remains in state of arousal and it can lead to exhaustion. Signs of Resistance Stage are : irritability, frustration, poor concentration etc.

(C) Exhaustion Stage :

If the stree is not resolved in the Resistance stage, the person enters into exhaustion stage. In this stage the body's ability to cope up becomes less. At this stage and individual may collapse

quickly. The body's immune system, ability to resist stress diminishes. Signs of exhaustion includes fatigue, burn out, depression, anxiety.

Activity 4 :

Fill up the following questionnaire to estimate your own stress level.

The Undergraduate Stress Questionnaire

TRY THIS. Here are some sample items from the undergraduate stress Questionnaire which asks students to indicate whether various stressors have occurred during the previous week. (Crandall, Preisler, & Assuprung,1992). Check off the items that apply to you, and then make a list of other stressful events you have encountered recently that are not on this list. Keep these stressors in mind as you read the list of this chapter, and consider whether any of them have lead you to experience any of the physical and psychological stress responses described later.

- Assignment in several classes due the same day
- Roommate conflict
- Lack of money
- Trying to decide on a major subject
- Difficulty understanding a professor
- Staying up late for writing a paper
- Sitting through a boring classes
- Going into a test unprepared
- Parents getting divorced
- Problems at the registrar's office

Are you in a state of distress? Do you need help? Talk to your teacher about it.

6.3 Stressors and their types

Stressor is an environmental condition, external stimulus or event that causes stress to an organism.

There are two types of stressors : internal stressor and external stressor.

6.3.1 Internal stressors

If a child is hungry, or not well, does not have same level of intelligence as per the requirement of the course, it may act as internal stressor. Internal stressors are stressors within us and we have to deal with them by ourselves.

6.3.2 External stressors

Noise, crowding, strict teacher or parents, weak economic condition or lack of space may act as external stressors. External stressors are stressors resulting from outside environment. External stressors results in frustration.

For example : a student is prepared for the exam but is not able to recall the answer when required. Secondly, forgetting PIN while using ATM machine or forgetting password while you need to use your email id urgently. All such goal directed activities, if blocked, lead to **frustration**. It is a common emotional response related to anger and disappointment. When an individual is highly motivated to achieve something and when his goal directed behaviour is blocked by an obstacle, it results in frustration.

Conflicts of motives

When an adolescent has more than one goal to choose, he experiences **conflict of motives.** If he finds it difficult to resolve, he experiences stress. Conflict is a Latin word which means **'striking two things at the same time'**

Conflict of motives refers to the clash between two or more equally strong and incompatible motives occurring at the same time that compels an individual to make a choice.

Lewin talked about valance or value of the goal which is attractive or unattractive because of which an individual either wants to achieve or avoid the goal

http://www.psychologydiscussion.net/ conflicts/conflictsnotes-on-3-types-of- conflicts psychology/688

Activity 5 :

Analyse the following examples. Can you find the different types of conflict of motives in the four examples given below?

1. Reshma has to choose between participating in skating competition or singing competition, both of which fall on the same day and same time and she likes both of them.

2. Mahmood has to choose between cleaning the dishes and sweeping the floor and he doesn't like to do either.

3. Sikandar loves to watch movies all the time, but he also realizes that he will fail his exams if he keeps on doing it.

4. Kulwant has to choose between using cycle or motorcycle for commutation. He likes cycling because it is eco-friendly but it is very time consuming. On the other hand he likes motorcycle also because it is fast, but then it causes pollution.

1. Approach - Approach conflict :

In Reshma's example, she has to choose between goals she likes. This is approach-approach conflict. Imagine a teen who wants to go for a party and a picnic on the same day and he has to choose between one of the goals. He is experiencing approach- approach conflict. Here, there is a conflict between two positive and attractive goals. The decision will depend on attractiveness of the goal, and its valance may change. For e.g : while going for a party with friends and picnic with parents an adolescent can make a choice depending on whether he gives importance to his parents or peers. Here, an individual may become happy with his choice he has made and he may give up the other goal.

Goal + ←→ **Person** ←→ **Goal +**

Fig. 6.3 Approach - Approach conflict

2. Avoidance - Avoidance conflict :

In Mahmood's case, he is repelled by both the goals but he has to choose one. This is avoidance-avoidance conflict. A student does not want to study nor does he want to fail in the exam. He has to accept one of the goals and he does not have choice between them. He is experiencing avoidance-avoidance conflict. This conflict involves two goals with negative values. An individual is forced to make choice between two negative and unattractive goals. In the example of Mahmood who does not want to study nor does he want to fail in the exam. He has to make a choice between them. Here, a person can get relief that he can avoid at least one.

Fig. 6.4 Avoidance-Avoidance conflict

3. Approach - Avoidance conflict :

In Sikander's case, Sikander is attracted and yet repelled by the same goal of watching movies. This is approach- avoidance conflict. A teenager likes to eat pastries, cakes, pizza but she doesn't want to gain weight. She is experiencing approach-avoidance conflict. This type of conflict is very difficult to resolve as an individuals is attracted and repelled by the same goal. There is only one goal and it has both positive as well as negative value. There are three possible reactions in such situation, like she gives importance to positive value and relishes the cake or she is too cautious about negative value and avoids heavy food or she leaves the goal all together to avoid the situation. In such case, vacillation between the positive and negative valances of the same goal is common. This type of conflict is most difficult to resolve as an individual doesn't have any choice. He has to accept the consequence of his choice.
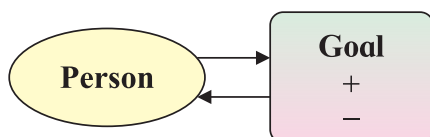

Fig. 6.5 Approach - Avoidance conflict

4. Double-Approach- Avoidance conflict :

Kulwant has to choose between riding the bicycle and the motorcycle. Both the choices have positive and negative values. Here, a double-approach avoidance conflict results. A girl wants to get married to a boy who is not approved by her parents. If she listens to her parents and doesn't get married to the boy, the boy will be disappointed. And if she marries to that boy, her parents will be disappointed. In either case she has to lose one of the relations. She is facing double-approach-avoidance conflict. Here an individual faces conflict between two or more goals which have equal positive or negative valance. However, an individual is always disappointed with the choice he/she makes as he/she has to lose the other goal.

Fig. 6.6 Double Approach - Avoidance conflict

Activity 6 :

Try to find examples of the given types of conflicts in your own life or around you. How are these types of conflicts resolved? Are they? How does one deal with the resulting stress?

Let us find out more about the answers to these questions in the next part of this chapter.

Activity 7 :

Discuss any two events of your life where you faced conflicts or frustration.

1.   How did you face the situation?

2.   How will you face the situation?

Let us find out the answer together.

6.4 Coping with stress - strategies

Every individual tries to deal with the internal and external stressors and resolve the conflicts he/she faces because if they are not dealt with, it leads to stress.

From the above example, we can see that there are two broad strategies of coping with stress.

6.4.1 Problem focused coping

Problem focused coping is also known as a direct way of reducing the stressors or direct way of resolving conflict. When an individual focuses her efforts on her problem/conflict, she is using direct way of resolving conflict. Here she accepts the reality as it is and tries to solve the problem.

In this strategy, stress is reduced by trying to resolve the conflict by working on the task at hand. Problem focused coping targets the causes of stress in practical ways.

1. Sumi, a football player, wants to be selected for the state level match. She gets negative feedback about her performance during practice matches. She focuses on diet, practice and techniques for better performance. Sumi is directly attacking the conflicts to resolve it. Thus she is using the direct way of resolving conflict called as **Attack**.

2. Sumi is not selected for the state level competition. So she chooses to work as a coach or a commentator. She is using the direct conflict resolving strategy called as **Compromise**. If a person can't achieve the goal because she lacks the capacity, she readjusts the goal to the nearest possible goal.

3. Sumi may leave football altogether and may indulge into something else which she prefers the most. She is using the direct conflict resolving strategy called as **Withdrawal**. When a person can't achieve a particular goal after putting best efforts, she may indulge into 'beating retreat' or withdraw herself from the goal.

6.4.2. Emotion focused coping

Emotion focused coping involves trying to reduce the negative emotional responses associated with stress. Here, one does not work on reducing the stressors or resolving the conflict by working on the task itself. Work is done to reduce negative emotional responses that occur due to exposure to stressors. Here an individual tries to ward off negative emotions by keeping his mind stable with meditation or stuff down negative emotions by quarrelling with others.

When a person, instead of centering her efforts on the goal, focuses on the emotions resulting from stress, she is using emotion focused coping. For example : If Sumi indulges into overeating or meditation or writing poems or blogs to reduce her stress or blames, she is using emotion focused coping.

> **Activity 8 :**
>
> Sneha while attending a class is feeling very hungry. She has following choices. She can eat even when the lecture is going on or she can wait till the lecture gets over. She should not eat because it is wrong to eat when the teacher is teaching in the class.
>
> What do you think should be done by Sneha?

The choice Sneha will make can be understood with the help of Freud's theory of Psychoanalysis is which is the base of Defense Mechanisms. We will also learn and understand various Defense Mechanisms.

6.4.3 Freud's theory of psychoanalysis

According to Freud's theory of psychoanalysis, our personality is controlled by three aspects.

ID, Ego and Superego.

When Sneha feels like eating even when the teacher is in the class it show ID.

1. ID :

Id has psychic energy. ID is the most primitive storehouse of our biological energy. It operates on pleasure principle and demands immediate gratification of desires. ID operates on **primary process thinking** where logical rules are not applied. For example : if you like someone, he or she has to like you in the same way. **ID** operates on two energies, **libido** which is the sexual energy and **thanatos** which is the destructive energy. A boy who is under the control of ID and if he likes someone, he would either compel that girl to like him back (libido) or it could be one sided affair or if she does not like him then he could indulge into any other unacceptable behaviour (thanatos).

2. Ego :

Ego operates on reality principle. It has better problem solving abilities compared to ID. As per ego, immediate satisfaction of urges by ID needs to be controlled as it is unacceptable. For example : having strong desire to copy during exams to get better grades. But it needs to be avoided because if a student is caught copying, he will be suspended and will waste his year. Secondly, next year, he will be a failure as his foundation will remain weak. Ego indulges into secondary process thinking, as it knows how and when to satisfy the desires.

3. Superego :

Superego internalizes moral values of society through parents, friends and schools. These are 'do's and don'ts' of the society.

It is a social right and wrong we pick up unknowingly from our role models. The super ego helps us to control impulses coming from ID, making our behaviour less selfish and more virtuous.

The part of Sneha if she decides to eat even when the teacher is in the class is called as ID.

The part of Sneha which decides not to eat while the lecture is going on and wait until the recess is the Ego.

The part of Sneha which decides not to eat in the class because it is morally not correct and it may hurt her teacher, is called as superego.

According to this theory, our reaction in a particular situation will depend upon interaction of these three systems. For example : Apeksha indulges into copying even when her Ego tries to control her. So she will experience anxiety. Anxiety is a state where a person may feel that something is wrong and will get symptoms like palpitation, rapid heart rate, sweaty palms, dried throat etc. For example : If Apeksha tries to copy in the exam, she is going to experience **neurotic anxiety**, as her ID and Ego are in conflict with each other and she may become worried about its consequence. She may experience **moral anxiety** if her Superego and Ego conflict with each other, as she thinks that she is ditching her family values and she has to pay for this sin.

Here, the defense mechanisms play important role. If the situation is very painful for the person to accept or if it brings anxiety and leads to stress, she may use defense mechanism to protect her Ego from harsh reality.
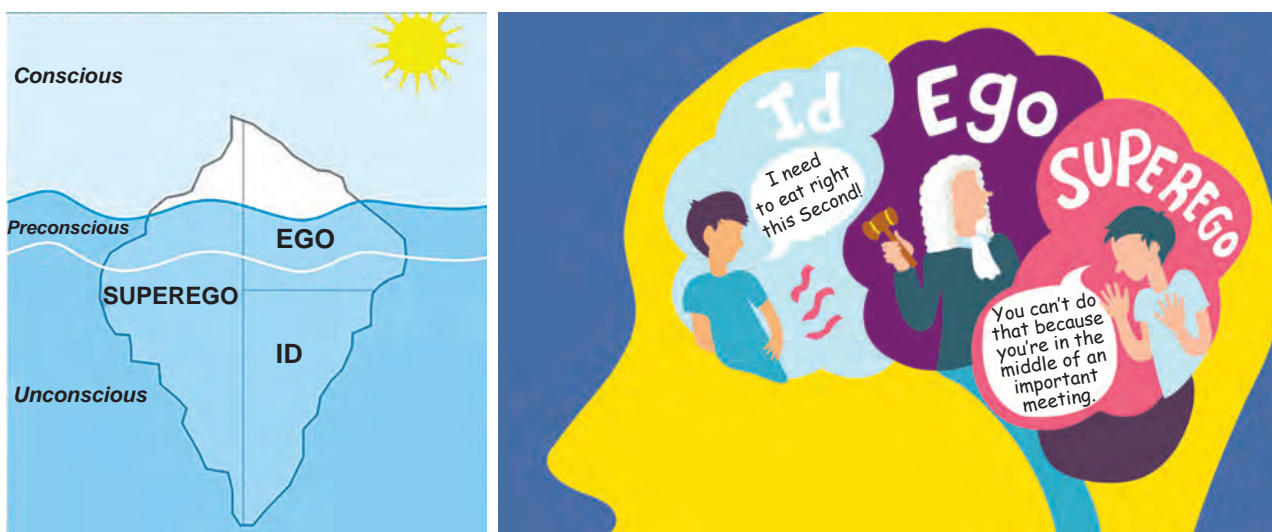
Let's have a look at defense mechanisms

Fig. 6.7 Theory of Psychoanalysis

6.4.4 Defense Mechanisms

Activity 9 :

Following are the examples of different types of defense mechanisms. Go through them.

1. Azhar went to a fair against his father's wish and got lost when he was a child. He slept on streets for three days. He went through a lot of stress during that period. But he does not remember the incident at all in his adulthood.

2. Robert was scolded by his boss in the office. After coming home he scolded his wife for no reason.

3. Pritam has a lot of anger towards his boss. Instead Pritam denies being angry and feels that his boss has a lot of anger towards him.

4. Mitali likes a boy but the boy does not like Mitali. Mitali likes to write poetry and diverts her mind towards poetry.

5. Radhika's mother has a violent temper. Radhika starts imitating mannerisms of her mother.

6. Parminder is poor and can not fulfil his desires. Parminder day dreams of living a luxurious life.

7. Zubin can not afford a car. He says cars are not environment friendly.

Defense mechanisms are the unconscious strategies used to protect the Ego from shattering due to unacceptable and harsh reality. It is a face saving device. It functions as a shock absorber. It is a stop-gap arrangement that provides some time to the person to come to terms with reality. However, it should be used moderately.

Excessive use of defense mechanisms leads to a habit of escaping from reality and indulgence in falsehood about one's own self. However, reality chases and sooner or later one has to face it as reality does not change. At such point of time, the ego is no longer protected and it may lead to symptoms, of mental disorders. Defense mechanism is indirect way to combat stress. Some of the defense mechanisms described by Dr. Sigmund Freud are as follows.

1. Repression :

As seen in Azhar's case, Azhar has unconsciously repressed the traumatic incident. This defense mechanism is called as Repression. Repression is an unconscious mechanism employed by the ego to keep disturbing or threatening thoughts outside our conscious awareness. Thoughts that are often repressed are those that would result in feelings of guilt from the superego. Repression is different from suppression where in the material can be recalled up to a certain extent whereas in repression the person forgets those memories completely and can't retrieve them back. It is different from actual forgetting as after the break up, a person may just forget about his girlfriend altogether. (Refer to fig. 6.8)

Fig. 6.8 Repression

2. Displacement :

As seen in Robert's example, Robert displaced his own feelings of anger on to his wife. This is known as Displacement. Displacement is the redirection of an impulse (usually aggression) onto a less powerful target. In this, as a person can't retaliate against the actual source of anger, the person redirects his anger on a less threatening object. If the principal gets angry with the teacher, she may come to class and start scolding students without any strong reason. (Refer to fig. 6.9)

Fig. 6.9 Displacement

3. Projection :

As seen in Pritam's case, Pritam projected his own feelings of anger on to his boss. This is called projection. This involves individual attributing their own thoughts, feeling, and motives to another person. Rakesh could not write his paper well as he had not studied, he will not accept that he is the one responsible for it. He may say that most of the questions were out of syllabus. (Refer to fig. 6.10)

Fig. 6.10 Projection

4. Sublimation :

As seen in Mitali's case, Mitali diverted her pain and energy towards a constructive and attractive cause. This is called sublimation. Sublimation is considered to be a more adaptive defense mechanism in that it can transform negative anxiety into a more positive energy.

Instead of converting this energy into socially unacceptable behaviour, a person may use sublimation to redirect this motivation into more acceptable, even productive endeavours.

Freud believed that artists' creative energies were often a refocusing on carnal impulses or other anxieties, through sublimation. (Refer to fig. 6.11)

Fig. 6.11 Sublimation

5. Identification :

As seen in Radhika's case, Radhika subconsciously adopts the manners of her mother whom she is afraid of. This is called identification. In this, by adopting other person's mannerism, repeating phrase and language patterns a person tries to use and mirror his character traits and starts behaving like another person, trying to control one's anxiety level.

6. Daydreaming :

As seen in Parminder's case, Parminder resorted to day dreaming in order to escape the reality of poverty. When life appears to be distressing, people often use fantasy as a way of escaping reality. An adolescent may daydream about standing first in the exam or getting most popular person as his friend. It is dangerous for adolescents mental health. If they day dream excessively they may lose touch with reality. (Refer to fig. 6.12)

Fig. 6.12 Daydreaming

7. Rationalization :

As seen in Zubin's case, because Zubin could not fulfil the expectation, he gives false excuse. This is called rationalization.

Rationalization occurs when a person attempts to explain or create excuses for his failure. In doing so, an individual is able to avoid accepting the true cause or reason of his failure.

https://psychologenie.com/common-psychological-defese-mechanisms

https://www.psychologistworld.com/freud/defece-mechanisms-list

Besides the defense mechanisms we have discussed, there are few more which are depicted in fig. 6.13.

Activity 8 :

Can you think of stressful situations in your life? How did you cope with them? Was it a problem focused coping or emotion focused coping? If it was emotion focused, was it positive or negative? Do you think you make use of any of the defense mechanisms mentioned in this chapter? When and how?

In this chapter we have seen some general methods of how people cope with stress. We hope that this awareness will definitely make you to understand the causes of stress in your life and give you some idea of dealing with them by using a more realistic approach.
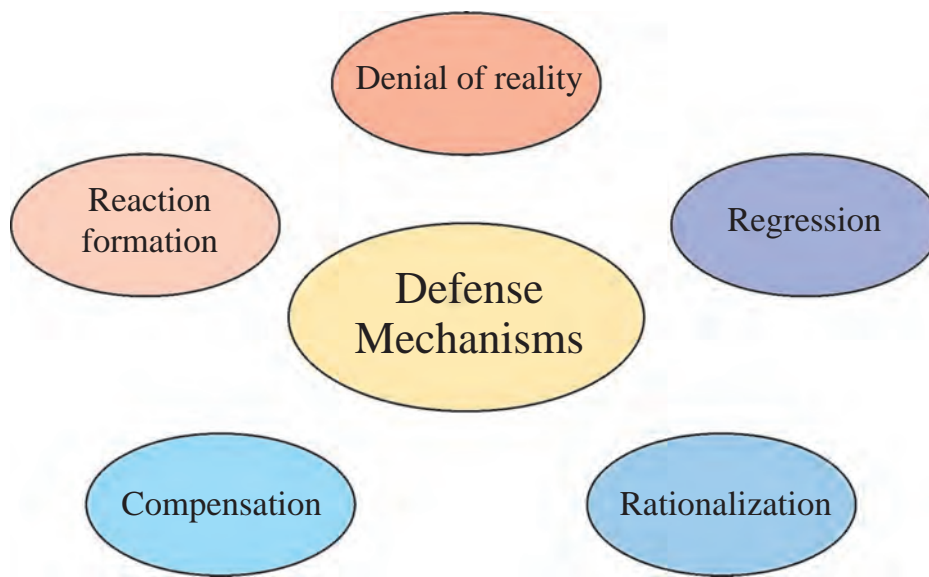
Fig. 6.13 Defense Mechanisms

❖ ❖ ❖

Summary :

- Stress is a feeling experienced when an individual feels that the demands exceed his personal and social resources that he can mobilize. Individual responses to stress can be different. It determines the effects of stress upon him. Too intense or too less levels of stress affects an individual's performance negatively. Moderate level of stress leads to optimum performance.

- There are four types of stress: Hypostress, Hyperstress, Eustress and Distress.

- Stressors can be internal or external.

- Conflicts of motives can become internal source of stress. There are four types of conflicts namely, Approach-approach conflict, Approach- avoidance conflict, Avoidance-avoidance conflict and Double approach-avoidance conflict.

- Every individual tries to cope up with stress. There are two ways to cope up with stress : Problem focused coping and Emotion focused coping.

Key Terms :

- Stress
- Hypostress
- Hyperstress
- Eustress
- Distress
- Conflicts of motives
- Approach- approach conflict
- Approach- avoidance conflict
- Avoidance-avoidance conflict
- Double Approach-avoidance conflict
- Psychoanalysis
- Defense Mechanism
- Repression
- Displacement
- Projection
- Sublimation
- Identification
- Day dreaming
- Rationalization
- Frustration

Key Psychologists :

Richard Lazarus was a psychologist who proposed that the effects of stress depend upon an individual's appraisal of the situation.

Sigmund Freud was an Austrian neurologist and the founder of psychoanalysis. He found a clinical method for treating psychopathology through dialogue between a patient and a psychoanalyst which is called as free association.

Kurt Lewin was a German - American psychologist, known as one of the pioneers of social, organizational, and applied psychology.

Hans Selye was a pioneering Hungarian - Canadian endocrionologist who worked on response of an organism to stressors.

Q. 1. (A) Complete the following statements

1. When the demand of a situation exceeds personal and social resources an individual can mobilize, it leads to ....

   a. Worries   b. Stress

   c. Depression

2. .... leads to boredom.

   a. Eustress   b. Hypostress

   c. Distress

3. .... is necessary for better performance.

   a. High stress   b. Moderate stress

   c. Low stress

4. Low level of intelligence may act as .... stressor while facing a difficult exam.

   a. Internal   b. External

   c. Imposed

5. .... results when a goal-directed activity is blocked by some obstacle.

   a. Frustration   b. Anger

   c. Conflict.

(B) State whether the following statements are True or False. If false, correct them, if true explain why.

1. Well-adjusted person does not experience stress at all.
2. Stress can be good some times.
3. Hyperstress leads to the best performance.
4. Hypostess is a bliss.
5. Hyperstess leads to panic and exaggerated response.
6. Conflict of motives is an internal stressor.
7. Approach-Avoidance conflict is extremely difficult to resolve.
8. Compromise is Emotion focused coping strategy.

C. Identify the odd item from the following.

i. Unchallenging job, unemployment, leisure, lack of purposeful activity.

ii. Eustress, hyperstress, frustration, distress, hypostress.

iii. Attack, Withdrawal, Defense mechanism, Compromise.

iv. Withdrawal, Projection, Sublimation, Rationalization, Displacement.

(D) I. Match the following pairs.

	A		B
1.	Two negative goals	a)	Defense mechanism
2.	Problem focused coping	b)	Hypostress
3.	Vacation after sufficient work	c)	Avoidance-avoidance conflict
4.	Lack of challenging work	d)	Direct way of coping with stress
5.	Emotion focused coping	e)	Approach-Avoidance conflict
		g)	Leisure.

Q. 2. Answer the following questions in 35-40 words each.

i) What are the ill effects of distress?

ii) Explain the relationship between level of stress and performance with the help of appropriate diagram.

iii) Explain the internal and external stressor with examples.

iv) What are the effects of hypostress?

v) Why the Approach-Avoidance conflict is most difficult to resolve?

Q. 3. Compare and contrast with example

i.   Eustress-- Distress

ii.   Hypostress-- Hyperstress

iii.   Emotion focused coping--problem focused coping

iv.   Attack-- Withdrawal

v.   Compromise-- Withdrawal

vi.   Projection -- Rationalization.

Q. 4. (1) What are the possible consequences of

a)   Mehul is sufficiently prepared for his exams but feels tremendously stressed.

b)   Sujata has nothing to do as her husband is a multimillionaire, nor does she have any hobby.

c)   Kalpesh sets his goals similar to his top ranker brother, without considering his ability.

d)   Mohsin resorts to blame others every time he fails.

(2) Identify the defense mechanism used in each of the following examples.

a)   Rahul who is interested in football, was not selected for the college football team. He says he never wanted to be a part of the college football team

b)   Vipasha comes from extremely poor family. She sleeps into imagining herself as driving her own car.

c)   Arnav got scolding from his teacher and he could not answer back. After coming home he started beating his younger brother for no reason.

d)   Ajay loved a girl who turned down his proposal. Later he became a successful composer.

3) Identify the conflict of motive that is experienced by the person in the following situation.

a)   Rashmi has got promotion in her company and so has to go abroad. She wants to take this opportunity but at the same time she is not willing to leave her parents.

b)   Yogesh has got selected by two reputed companies at the same time and both are his dream offers.

c)   Julius doesn't want to go for a wedding ceremony with his family as it's too boring there but doesn't want to stay alone at the same time.

d)   Shanaya is very conscious about her figure, but she is also very tempted to eat sweets.

e)   Vishal has got invitation from his school friends for reunion party on the same day as his fresher's party in his college.

Q. 5. Write short notes in 35-40 words each.

1.   Types of stress.

2.   Relationship between stress level and performance

3.   Direct ways to cope up with stress.

4.   Defense mechanisms

Q. 6. Answer the following questions in 150-200 words each.

1.   Give definition of stress and explain different types of stress.

2.   What is meant by conflict of motives? Explain the different types of conflicts with examples. Illustrate your answer with appropriate figures.

7 ⟩⟩ Nervous System

Learning objectives

This chapter aims at facilitating students to

1.   understand the human Nervous System.

2.   understand the structure and functions of the neuron.

3.   understand the important parts of the brain and the spinal cord.

4.   understand the functions of the endocrine glands.

5.   understand the behavioural implications of the endocrine functioning.
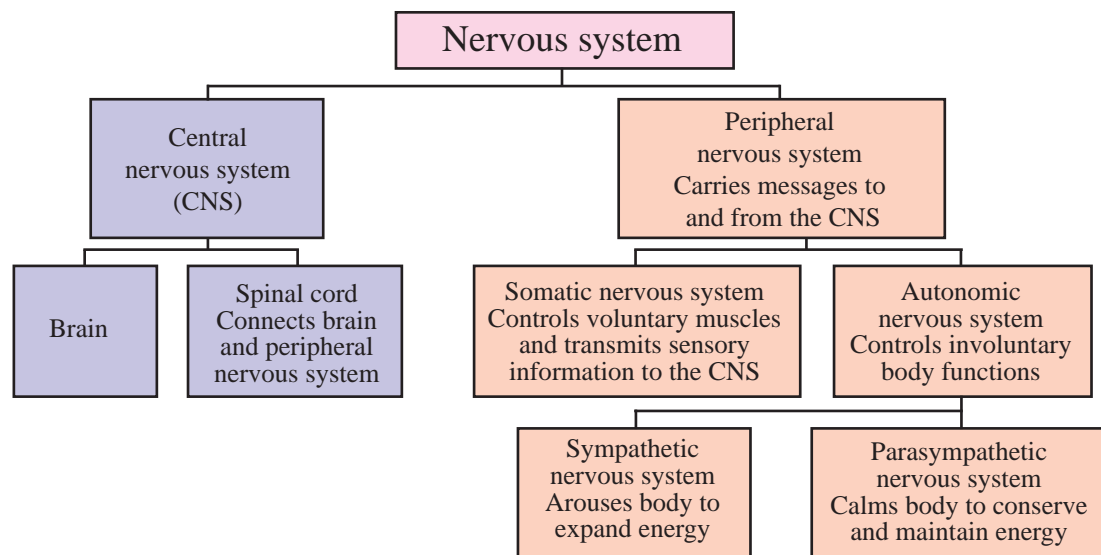
Fig. 7.1 Nervous system

7. 1 Nervous system

Nervous system is the complex network of neurons that carry signals from brain to body and body to brain. Human nervous system is most complicated yet highly developed among all living creatures.

Our nervous system consists of two major parts and the division of the nervous system is as follows :

Central Nervous System and Peripheral Nervous System.

Central Nervous System consists of Brain and Spinal Cord. We will discuss it later on.

Peripheral Nervous System consists of Somatic and Autonomic Nervous System.

Somatic Nervous System is further divided into sensory and motor system of the body. Somatic Nervous System consists of sensory nerves (afferent nerves) and motor nerves (efferent nerves). Sensory nerves sends messages from body to brain and motor nerves messages from brain to body.

Autonomic Nervous System is further divided into Sympathetic and Parasympathetic Nervous System.

Autonomic Nervous System controls internal activities of human body including heart rate, breathing, digestion, disposal of waste products and toxins.

Sympathetic nervous system prepares our body to face stressful and threatening situations. It prepares us for "flight or fight" reaction. For example : when you are chased by a dog, that time your heart beat, palpitation increases and you start sweating. The job of the system is just opposite to it's name.

Parasympathetic Nervous System takes over when the situation becomes normal. When this system takes over, your heart rate, palpitation and sweating becomes normal. We regain our cool and composed state. It directs our body to store energy for emergencies.

Activity 1 :

Few activities are given below. Identify the system which dominates during these activities.

1. Picking up an object from the ground.

2. Shivering when we sense danger.

3. Feeling composed when we feel safe.

4. Increase in heart rate when we sense that we are going to meet with an accident.

Before discussing about Central Nervous System, we have to first introduce ourselves with basic unit of nervous system, that is Neuron. Neurons are the " Building Blocks" of nervous system.

7.1.1 Neuron

When a person sees a tiger, the image of the tiger falls on his retina and is further convert into electrical signals.

This electrical signal reaches the brain with the help of optic nerve. The brain identifies the image as Tiger which is ferocious animal. When this message reaches to the particular part of brain, brain sends message to run away and to execute this, neural message will be sent to his legs. These are specialized network of cells that transmits messages from brain to body and from body to brain. These cells are known as neurons. Neuron consists of Dendrites, Axon, Cell body and Terminal Button or Telodendria. Cell body is the body of neuron. Nucleus of the neuron absorbs the food and keep the cell alive. The neural message comes in through the dendrites which are branches like structure of the neuron. The neural message goes out from Axon of the neuron. At the end of Axon there are end buttons, it is a bulb like structure which contains chemicals called as **neurotransmitters**. Neuro transmitters are the chemical messengers. The neural message jumps across the synapse in order to reach to dendrite of another neuron. When the neural message is passing through, it excites or inhibits the neurotransmitter in it. This chemical reaction decides our reaction to various situations of our life.
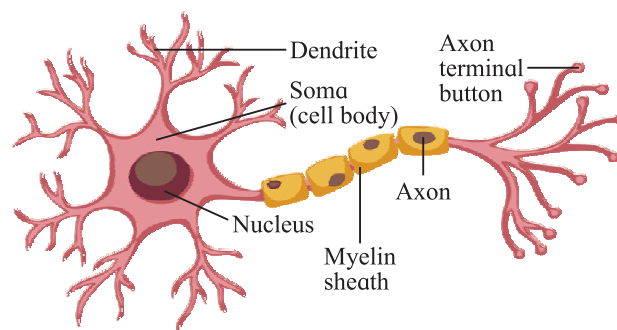

Fig. 7.2 Neuron

7.1.2 Synapse

Is a gap between two neurons. When neural message passes from end buttons to dendrite of another neuron, it has to cross this chemical gap. As neurons are not directly connected to each other, we don't have fixed reactions to every situation. We get various reactions to variety of situations. From here, we get observable reactions.
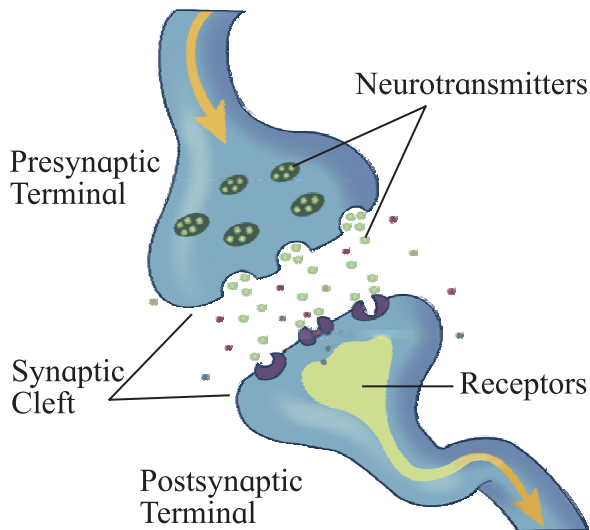

Fig. 7.3 Synapse

7.1.3 Neurotransmitters

We have already learnt about neurotransmitters.

The important neurotransmitters are-

1. Acetylcholine :

It is a chemical that motor neurons of nervous system releases to activate muscles.

2. Dopamine :

It is released by the brain which plays a number of roles. If the level of dopamine is normal, we experience happy, pleasant feeling. It also plays important role in motivational process.

3. Norepinephrine :

It increase force of skeletal muscles especially during fight or flight response.

4. Serotonin :

It plays a role mainly in cognition, reward, learning, memory and also controls wakefulness, sleep, hunger, thirst, liking.

5. Glutamate :

It helps in learning, memory and maintaining sugar level.

6. GABA (Gama Amino Butyric Acid) :

If it is less, it leads to convulsions and body cannot control body movements.

It is chief inhibitory neurotransmitter i.e. it's principal role is to reduce excitability of neurons throughout the nervous system.

After knowing about the basic structure of nervous system, let us now move to Central Nervous System. Central nervous system includes Brain and Spinal Cord.

As you might have realized by now, study of Psychology can't be completed without studying brain. Our brain plays important role in whatever we do, and also in higher order mental processes like thinking, reasoning and emotions. In this part, we will look at the basic structure and function of the brain.

7. 2 Brain

Brain helps to adapt to the environment and it tries to analyze, store and synthesize the information it receives. Brain plays important role in every aspect of our lives like decision making, emotional experience and social interactions.

Brain consists of three major parts. Hind brain, Mid brain and Fore brain.

7.2.1 Hind brain

Important parts of hind brain are Cerebellum, Brain stem and Reticular Activation System.

1) Cerebellum :

It consists of two parts and helps in maintaining body posture and body balance. It helps in coordination of the movements.

2) Brain stem :

It is divided into two parts namely Medulla oblongata and Pons.

A) Medulla oblongata :

it is 'vital center' of the brain. As it controls functions as breathing rate, pulse rate, blood pressure and digestion, it receives messages from higher centers of the brain.

> **Do you know this?**
>
> Why are we suppose to wear helmet while riding a bike?
>
> While riding a bike, if someone meets with an accident, the person falls back on his head. Most of the time Hind brain or to be specific Medulla oblongata is damaged which will lead to instant death. So we are suppose to wear helmet while riding a bike.

B) Pons :

It is a bridge between two hemispheres. It sends and receives information from lower parts of the brain. It helps relaying messages between cerebellum and cortex.

3) Reticular Activation System :

This is "Alarm clock" of the body. We are awake before time if we have to catch early morning train. It happens as our reticular activating system elicits this response.

It is also called as Reticular Formation which contains a bunch of neurons and it's main function is to maintain wakefulness, concentration and alertness.

7.2.2 Mid brain

It is a bridge between forebrain and hindbrain. It consists of two parts: superior and inferior Colliculus. Its function is to send information to the upper part of the brain and to control eye movements.
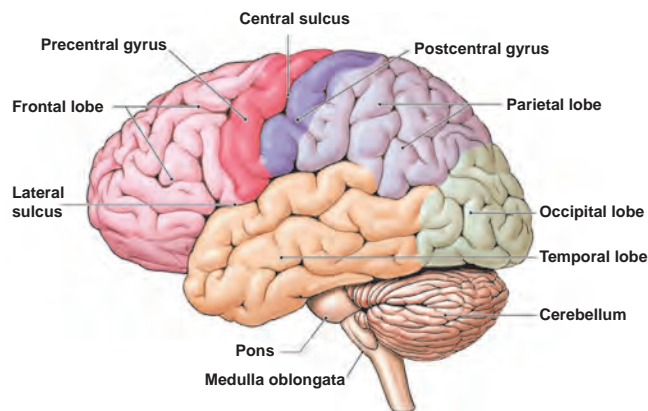

Fig. 7.4 Human Brain

7.2.3 Fore brain

The main parts are

Cerebrum :

It is the largest part of the brain. It's outside cover is of grey colour and is called as cerebral cortex. Cerebral cortex controls higher order menal processes such as attention, perception, learning, memory. The surface of cerebral cortex is divided into two halves: right hemisphere and left hemisphere. Neurons from right hemisphere controls left side of body and vice versa. Left hemisphere controls language, spatial relation and pattern recognition. They are connected by bundle of fibres called as corpus callosum.

> **Try this**
>
> We have neurons which jump across the hemisphere and controls another part of the body. If a person's right side of the body is paralyzed, nurons from the left side of his body stop functioning and the person becomes handicapped even if he has another set of healthy neurons in the other side of his body. If we train ourselves to use both parts of our body equally, we will not be dependent on others for help even if we get paralysis attack. So try to use both sides of your body while performing daily routine tasks like brushing teeth, combing hair etc.

Each hemisphere is divided into four lobes.

1) Frontal lobe :

It controls motor actions, thinking, memory and reasoning. It has Broca's area which helps us in speech production.

2) Parietal lobe :

It helps us in understanding information regarding skin like touch, pressure, pain and temperature.

3) Occipital lobe :

It controls our vision. It is visual processing center. The information regarding shape, colour, depth, speed of the object is received and interpreted in occipital lobe.

4) Temporal Lobe :

It controls sense of hearing, smell and taste. It has Wernicke's area which helps in understanding of language.

Just above the ears, in the cortex is temporal lobe. Hearing, understanding language, memory for language take place because of temporal lobe.
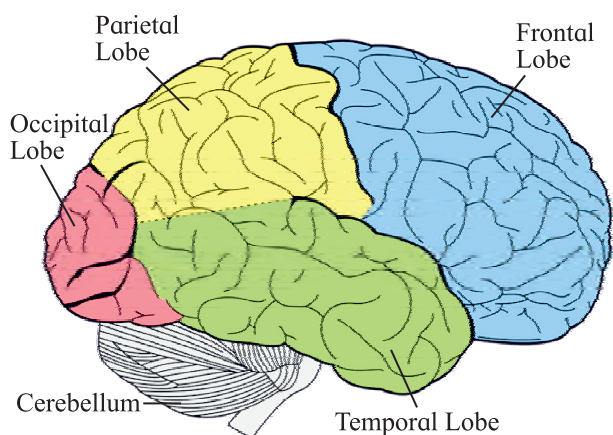
Fig. 7.5 Human Brain Lobes

7.2.4 Limbic System :

Another important part of the brain is limbic system. Parts of limbic system are

a) Hippocampus :

This is storage of our long term memories. If a person gets Alzheimer's disease, his hippocampus is mainly affected.

b) Amygdala :

It stores emotional memories of our experiences. We experience emotions due to this part, especially fear.

c) Thalamus :

It is called as relay station of the brain. It receives all the information from the body and sends it to various parts of brain.

d) Hypothalamus :

It controls major bodily needs like hunger, thirst, sex and temperature regulation and sleep. (Primary needs of any individual). It is also called as the pleasure center of our body.
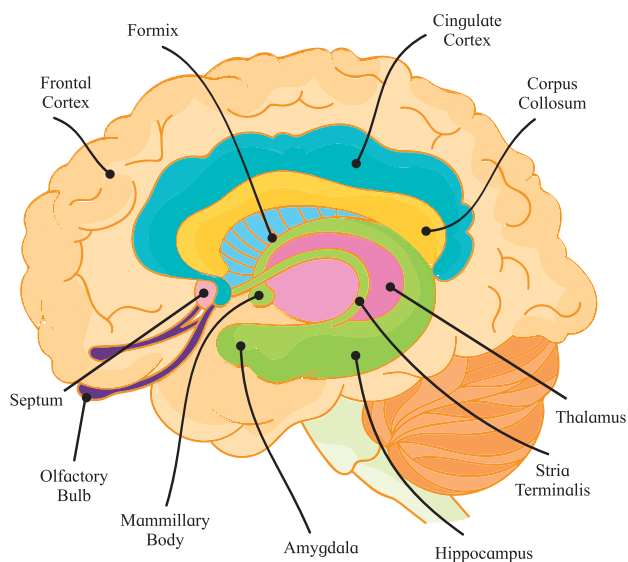
Fig. 7.6 Limbic System

7.2.5 Pillars of better brain functioning

1. Physical and mental exercise :

People who exercise regularly have lower risk of developing Alzheimer's disease. Exercise improves blood flow and memory. It also stimulates chemical changes in the brain that improves learning, mood, and thinking.

2. Brain and nutrition :

Nutrition plays important role in brain functioning. Nutritional deficiency may lead to some neurological problems so understanding the need of nutrition for brain is essential.

Human brain consumes enormous amount of energy. Despite representing only 2% of body's total mass, human brain consumes 20% of body's total energy because of increased metabolic need of human beings. As evolution took place, human life became more complicated and demanding. As a result, need for nutrition by the brain kept on increasing to face these challenges.

Nutrition plays important role during developing years so to optimize the functions of brain. It is also essential during old age to avoid degeneration of cells. Nutrition for brain will enhance brain functioning. It will prevent as well as help in treating neurological disorders.

Today human brain is exposed to high level of stress which results in the process called as oxidation. Any food which is high in Antioxidants like almonds, dark chocolate, onions, berries, mangoes, sea food can help to control ill effects of oxidation.

3.   Tackle your medical problems :

Hypertension, diabetes, obesity, depression, head trauma, higher cholesterol and smoking increases the risk of dementia. You can control and reduce these risks by going for regular health check ups and taking medication whenever necessary.

4.   Sleep & Relaxation :

Sleep energizes the brain, improves mood and immune system by clearing wastage and toxins from the body. This may reduce abnormal protein of the brain called beta-amyloid plaque, which is related to Alzheimer's disease. Practicing meditation and managing stress will help to control age-related decline in brain health.

5.   Mental Fitness :

Brain exercises improve your brain's functioning and promote new brain cell growth, decreasing chances of developing dementia. A person can keep his brain simulated by solving puzzles, problems, watching stimulating movies, by thinking about different issues or by learning something new.

6. Social Interaction :

Spending time with others, participating in stimulating conversation, and staying in touch and connected with family and friends is good for your brain health. Studies have shown that those who interact more with others show less decline in their memory.

After brain, let us discuss about Spinal cord

7. 3 Spinal Cord

It is second important part of the central nervous system. It extends from neck to waist. It's main function is to send information from brain to body and from to body to brain and to control reflex actions like salivation, knee jerk, blinking of eyes etc. **Reflex action is an involuntary and nearly instantaneous movement in response to stimulus.** Spinal cord is connected to the periphery through 31 pairs of spinal nerves. Each spinal nerve is joined to spinal cord through two routes: dorsal and ventral route. If dorsal routes are injured we will not have sensations and if ventral routes are injured, we will not be able to move our body and control reflex actions also. These are quick and simple patterns of behaviour without the involvement of brain. For example: knee jerk, sneezing, blinking of eyes.

Activity 2 :

Think of the following actions. Which of them would be reflex actions and which of them will not be reflex actions?

1) Throwing a ball in a cricket match.

2) Closing the eyes if someone brings a finger too close to them.

3) Removing the hand when you accidently touch a thorn.

4) Immediate movement of the knee when tapped just below it.

5) Touching a hot object and pulling back your hand.

7.4 Glands

You must be aware of the physical and psychological changes you are experiencing at the stage of puberty. For boys, your body mass increases, facial hair, pubic hair develop, your voice become hoarse. In case of girls, your body structure changes, pubic hair develop, mood swings occur and you experience your first menarche. Both sexes, develop curiosity and liking towards opposite sex. You can't understand these changes and as a result, you may find it difficult to adjust with them. There is lack of concentration and mood swings occurring along with these changes. You are aware of these facts that these changes are taking place due to glandular system of your body.

So now you may be curious to know about the glands .

Glands are specialized groups of cells or organs that secrete chemical substances. There are many glands and they all fall into two categories : endocrine and exocrine.

7.4.1 Exocrine Glands

Exocrine glands directly release their secretions into the organ or tissue. Exocrine glands have separate ducts for it's secretion. Therefore they are also called as duct glands. For example : sweat gland, tear gland etc.

7.4.2 Endocrine Glands

Endocrine glands secrete chemical substances into the bloodstream. They are called as ductless gland as they don't have separate duct.

The chemical substances secreted by endocrine glands are called hormones. Hormones are like messengers that are responsible for certain behaviours or absence of reactions.
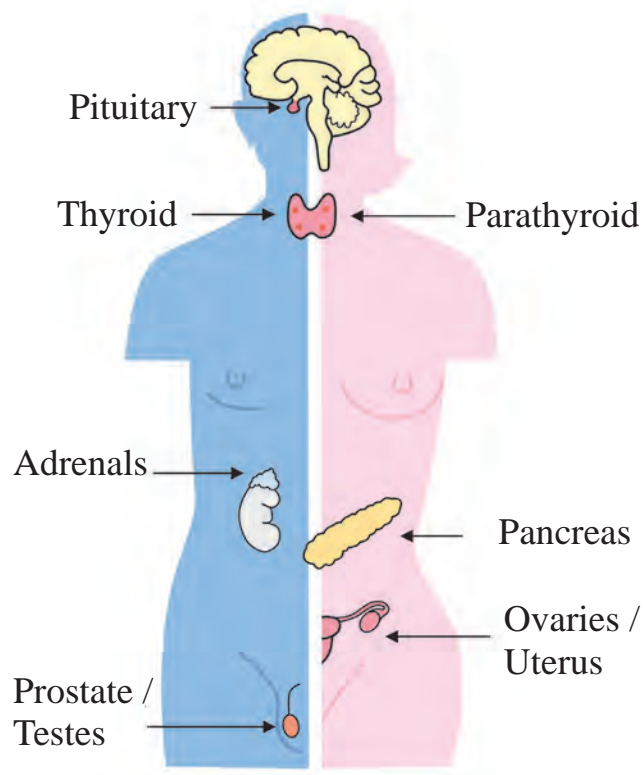
Fig. 7.7 Endocrine Glands

Name of Gland	Hormone	Function/Effects	Hypersecretion	Hyposecretion
1) PITUITARY (a) ANTERIOR LOBE : It is also called as master gland as it helps other glands to produce their secretions and secretes majority of hormones.	Somatotropin, Growth Hormone, Adrenocortico-tropic Hormone.	1) Helps growth of the body 2) Helps adrenal gland 3) Required for nourishment of foetus.	1) Gigantism - person becomes very huge 8-9 feet tall. 2) Acromegaly - the person has features of chimpanzee, large bones, big face with huge jaw, very long hands with long fingers	1) Dwarfism- a person is very short 2-3 feet tall but with normal intelligence.
(b) POSTERIOR LOBE	Oxytocin Pituitrin Thyrotrophic Follicle stimulating Luteinizing hormone Endorphins	Creates feeling of happiness, helps smooth muscle functioning of stomach helps thyroids Helps nourishment of fetus Helps to create neurotransmitters		
2) Thyroid	Thyroxin	Maintains rate of metabolism	Grave's disease- person loses his weight, irritated mood, sleeplessness and sweating palms,	1) Cretinism among children- the child is mentally and physically slow 2) Myxedema among adults - a person becomes very huge, lacks motivation and energy, complains about weakness

Name of Gland	Hormone	Function/Effects	Hypersecretion	Hyposecretion
3) Parathyroid	parathyroxin	Maintains calcium and phosphate balance	Person feels nauseated, vomiting sensation, feels sleepy and relaxed.	Person lacks motivation, energy, weakness and muscle cramps, spasms.
4) Adrenal (cortex)	Cortin or cortisone	Maintains level of water, sugar and sodium	Increase in sexual drive, females start looking like males, heavy bones, moustache, hoarse voice.	Very lazy, lacks sexual drive and hunger, weight loss.
(medulla)	Adrenalin (fear) Noradrenaline (anger)	Plays important role in emotional excitement	Increase in heart beat, blood pressure and breathing rate.	
5) Gonads (sex gland) (a) Testes in males	Androgen and testosterone	Secondary sex characteristics in males, voice becomes hoarse. They get moustache and beard.	Development of bones and muscles, tendency towards sexual behaviour, very energetic and aggressive behaviour.	Males do not have desire for sex, voice remains childlike.
(b) Ovaries in females	Estrogen and progesteron	Secondary sex characteristics in females, feminine looks develop, menarche starts.		
6) pancreas	Insulin and glycogen	Maintains blood sugar level	Reduces blood sugar. Hyperglycaemia, person lacks energy and motivation, may faints and go to coma.	Person gets diabetes, quite hungry, very tired, restless and irritated behaviour, frequent and uncontrolled urination.

Summary :

- Human behaviour can not be understood without the study of the nervous system. The nervous system is subdivided into Central and Peripheral Nervous System. The CNS consists of Brain and the Spinal Cord. The brain consists of the fore brain, mid brain and the hind brain.

- The PNS includes the Somatic and the Autonomic Nervous System (ANS)

- The Autonomic Nervous System consists of Sympathetic and Parasympathetic Nervous System.

- Glands are of two types: Exocrine and Endocrine glands.

- Endocrine glands secrete vital chemical substances called hormones. There is a strong impact of the hormones upon human behaviour.

Key Terms :

- Nervous System
- Neuron
- CNS
- PNS
- Cerebral Cortex
- Frontal lobe
- Parietal lobe
- Temporal lobe
- Occipital lobe
- Midbrain
- Superior Colliculus

- Inferior Colliculus
- Hind brain
- Hypothalamus
- Hippocampus
- Amygdala
- Pons
- Spinal cord
- Exocrine glands
- Endocrine glands
- Hormones

Q. 1. (A) Complete the following statements with appropriate options.

1. Brain is a part of .... nervous system.

   a. Central   b. Peripheral

   c. Somatic

2. .... are the building blocks of the nervous system.

   a. Cells   b. Neurons

   c. Tissues

3. .... nervous system prepares us for the fight or flight responses.

   a. Somatic   b. Parasympathetic

   c. Sympathetic

4. The gap between two neurons is called ....

   a. Synapse   b. Joint

   c. Vacuum

(B)   I. Match the following pairs.

	A		B
1.	Thyroxin	a)	Pituitary
2.	Epinephrine	b)	Parathyroid
3.	Parathormone	c)	Thyroid
4.	Androgen	d)	Adrenal gland
5.	Somato tropic hormones	e)	Salivary gland
		f)	Sex glands

(C)   Identify the odd item from the following series of words.

1. Frontal lobe, Parietal lobe, Thalamus, Occipital lobe

2. Dopamine, Serotonin, Norepinephrine, Uric Acid, GABA

3. Dendrite, Nucleus, Tectum, Axon, Synapse

4. Knee jerk, Sneezing, Thinking, Blinking of eyes

5. Thyroid, Sweat glands, Adrenal gland, Gonads, Pituitary gland

(D)   Identify which hormones with hypo secretion or hyper secretion would lead to the following conditions.

1. Abnormal height, gigantism

2. Hyper activity, speedy metabolism

3. Cretinism

4. Stunted growth, dwarfism.

5. Myxedema, fatigue, sluggishness, depression

6. Increased appetite, over activity, restlessness, lack of concentration

Q. 2. Which part of the brain is involved in processing the following information.

1. Smelling a flower

2. Maintaining balance while standing upright

3. Comprehending a speech

4. Memorizing a childhood experience

5. Feeling touch

6. Seeing a picture

7. Feeling hungry

8. Feeling afraid

Q. 3. Answer the following questions in 35 to 40 words.

1. Explain the functions of hypothalamus.

2. Describe the functions of each of the four lobes.

3. Explain the functions of: Amygdala and Hippocampus.

4. What is a synapse? How does a nerve impulse travel from one to another neuron?

5. Which are the important parts of the hind brain? Explain their functions.

6. How do endocrine glands affect our behaviour?

Q. 4. Write short notes.

1. Autonomic Nervous System

2. Limbic System

3. Neurotransmitters

4. Pituitary gland

Q. 5. Compare and contrast.

1. Sympathetic Nervous System and Parasympathetic Nervous System

2. Exocrine glands and Endocrine glands

Q. 6. Answer in 150 to 200 words.

1. Explain the functions of various parts of the human brain.

2. Explain the significance of endocrine glands in human behaviour.

   State the functions of any five endocrine glands in detail.

Learning objectives

This chapter aims at facilitating students to

1. understand the process and nature of memory.
2. understand various methods of measuring memory.
3. understand various causes of forgetting.
4. understand the strategies of improving memory and relate the same to day to day experiences.

8.1 Introduction : What is memory?

We have looked at the different parts of the brain as well as the mechanism of how signals are transferred to and fro from the brain and various parts of the body. In this chapter, let us now look at how information and experiences are stored and recalled in the brain.

Activity 1 :

Do you remember your first picnic from your school? Do you remember your primary school teacher? Now can you remember what food you ate last Monday? Why you can remember some incidents from the past clearly while you cannot remember some things which happened yesterday?

Activity 2 : Why this happens?

25 workers used to work in Thomas Edison's Bulb and Phonogram unit of industries. There was a huge tree near his company. After 6 months, Edison asked his workers about the huge tree but not a single worker could give information about that tree. Why do you think this happened despite seeing the tree everyday?

All of us are aware of the tricks that memory plays with us throughout our lives. Have you ever felt embarrassed because you could not remember the name of a known person you were talking to?

Memory is indeed a very fascinating, intriguing human ability. It functions to preserve our sense of identity, interpersonal relationships, solving problems and making decisions.

Memory has been a theme of research in Psychology over a hundred years.

What is Memory?

Memory is an ability by which information is encoded, stored and retrieved when needed. It is the retention of information over time for the purpose of future action. In the last chapter, we've seen that hippocampus plays an important role in storage of memory.

According to Tulving (2000) "Memory is the means by which we draw on our past experiences in order to use that information in the present". Memory is the term given to the structure and processes involved in the storage and subsequent retrieval of information.

8.1.1 Basic processes in memory

- Encoding / Acquisition
- Storage
- Retrieval

Fig. 8.1 Basic processes in memory

We can think of these processes as analogous to the functions of computer.

1. Acquisition / Encoding

Acquisition is the process of acquiring information from our sense organs. The process of transforming the information received through our sense organs into suitable symbols like pictures, figures, words & numbers.

2. Storage

The information acquired and encoded is preserved over a period of time. The process of storage is essential for using that information in future.

3. Retrieval

We can sometimes remember the poem which we had learned in first or second standard and we can recall it after our school days also. The process of recalling the stored information for the purpose of its actual use is known as Retrieval. We tend to retrieve mobile numbers, names etc. in our daily life.
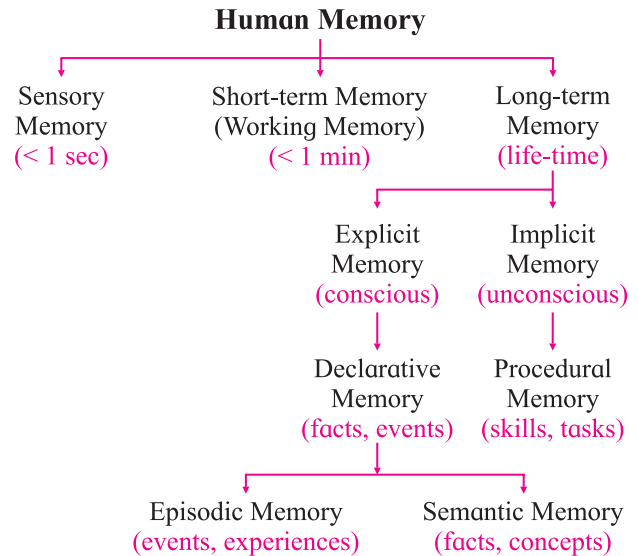
Fig. 8.2 Types of Human Memory

8.1.2 Stages of memory

The environmental stimulus is received with the help of our sense organs which is called as sensory memory. When we pay attention to the sensations coming in, they are transferred to STM. If the information is not rehearsed in STM, it is not retained. If it is rehearsed or appears frequently, then it is transferred to the LTM. When we encounter any problem, we bring the information from our LTM to STM so that it's available to us for solving that problem.
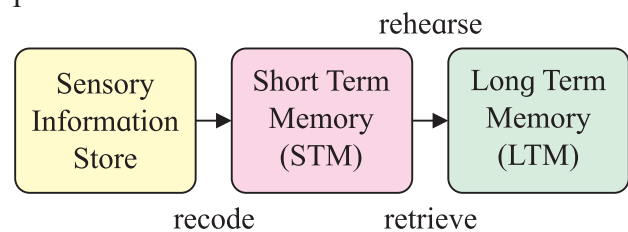
Fig. 8.3 Stages of memory

1. Sensory memory

Sensory memory is the shortest element of memory. It is the ability to retain impressions of sensory information after the original stimulus has ended. Sensory memory retains information received through the five senses of sight, hearing, smell, taste and touch for a brief period of time.

2. Short term memory

We are constantly bombarded with sensory inputs, however, only if they are significant they enter the Short Term Memory (STM). To retain the information in STM, maintenance rehearsal is required. STM holds the information between 15 to 30 seconds and the capacity of STM is about 7 items at a time.

The magical number 7 +/- 2 provides the evidence for the limited capacity of the STM. Most adults can store between 5 and 9 items in the STM. This idea was put forward by George Miller in 1956 and called as magical number 7.
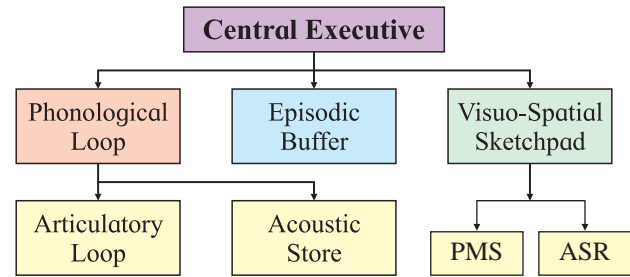
Working Memory

Baddeley called STM as working bench of memory, because according to him STM is the most important stage of our memory which is used most of the time for problem solving.

Working memory term was coined by Miller, Galanter and Pribram around 1960.

It was formerly known as "short term store".

Short term memory is also known as -

  primary memory.

  immediate memory.

  operant memory.

  provisional memory.

Fig. 8.4 Working Memory Model

The working memory model given by Baddeley can be explained as follows :

Central Executive

Central executive is a supervisor responsible for the co-ordination of the subsystems and the selection of reasoning and storage strategies.

Phonological loop (PL)

Phonological loop is responsible for verbal information. It has two subsystems, namely, phonological / acoustic store and articulatory loop.

Phonological / acoustic store

It is passive component of phonological loop. It holds on verbal information. This information is forgotten if it is not rehearsed.

Articulatory loop

It involves rehearsing and refreshing the information, just like our inner voice.

Episodic buffer

It holds information that is not covered by all other slave systems. It is link between working memory and long term memory.

Visuo-spatial sketch pad (VSSP) - handles visual and spatial information.

Is one of the two passive systems. It is responsible for storing speech based information.

It has 2 components -

1)   Phonological memory store :

That can hold traces of acoustic or speech based information.

2)   Articulatory Subvocal Rehearsal :

Material in short term store is maintained through this component. Prevention of articulatory rehearsal leads to rapid forgetting.

3. Long term memory

Some items enter the Long Term Memory (LTM) after rehearsal. Elaborative rehearsal is making that information meaningful and connecting the same with the information that already exists in the LTM. Once entered, the information is retained for more or less permanently. It is an organized system and a store house of encoded experiences. The amount of information stored here is unlimited.

Activity 3 :

Think about this -

How many people do you recognize? How many flowers you can name? How many places do you know? It is amazing that we can store an enormous amount of information, thanks to our Long Term Memory.

Types of Long Term Memory.

Explicit Memory

Conscious memories of facts and events are called as explicit memory. It is also known as Declarative memory.

Episodic memory is a memory of experiences and specific events which we recall step by step where we can reconstruct the actual events. It is the memory of autobiographical events with times, places and associated emotions.

Semantic memory is a more structured record of facts, meanings, concepts and knowledge. Semantic memories have personal context. It includes vocabulary, mathematics, rules of logic etc.

A type of declarative memory is **auto-biographical memory**. Autobiographical memory refers to episodes recollected from an individual's own life.

One type of autobiographical memory is known as **flashbulb memory**, which is a highly detailed, exceptionally clear "snapshot" of mostly a traumatic moment.

Implicit Memory

It is also known as procedural memory. Procedural memory is the unconscious memory of skills and how we do things, regarding the use of objects or movements of the body, such as tying a shoelace, playing harmonium or riding a bicycle. These memories are developed through repetition and practice.

8.2 Measurement of memory

As we've seen various stages of memory, let's see now how our memories can be measured. These are major ways of measuring memory -
Recall,

Recognition,

Relearning.

Recall can be in the written form or it can be oral. Again recall can be free recall or serial recall.

8.2.1 Recall

Recall is retrieval of information from our LTM with few / no cues. The essay type questions which appear in your exams is the example of recall. Recall involves remembering a fact, event or object that is not currently physically present and require the direct uncovering of information from memory. Murdock (1962) did one experiment to check the recall of the subjects. He asked subjects to learn a list of words. Later their recall was tested by a free recall method. Murdock (1962) found that subjects could recall first few (primacy effect) and last few (recency effect) words prominently, but they got confused with the words in the middle part (serial position effect).
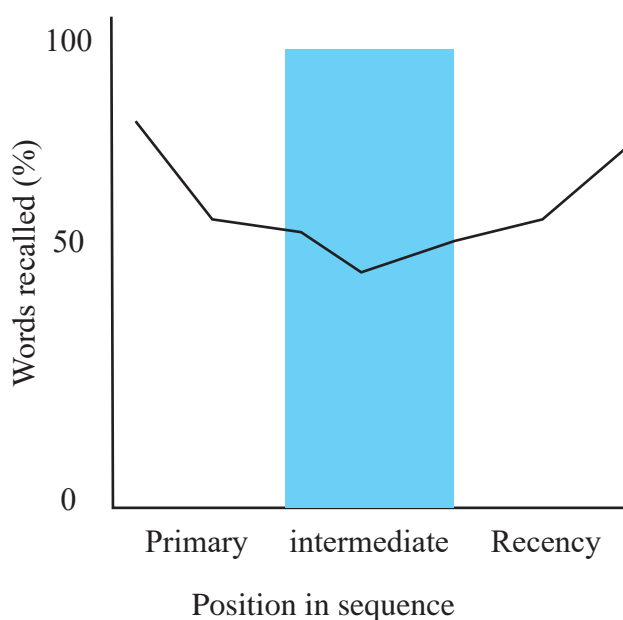

Fig. 8.5 Serial Position Effect

Activity 4 :

Note down the problems you face while learning a long answer.

Try linking your points to one another while learning in order to reduce the effect of serial position.

Recall is of two types.

Free recall :

It is recollection of the items in the list without its serial order. Memory for free recall is always better than if the subjects are asked to recall in a serial order. Free recall is effective in studying primacy effect and recency effect. Primacy effect occurs when the subject is able to recall items which are presented at the starting point of the list and recency effect occurs when the subject is able to recall the items which are presented at the end. Example of free recall is : we may listen to a lecture and afterwords recall few important points irrespective of the order in which they were presented.

Serial recall :

Here, material is recalled in the exact order in which it was presented. For example : if you are watching a dance show and if you are asked about who presented first and who was second performer and so on. Here, your answer will be in serial order. When you solve a mathematical problem, like 2+2= 4* 4= 16 you are doing steps one after the other so it is serial recall.

> Recall is greatly affected by emotions and motivation at the time of learning and subsequently at the time of retrieval also.

8.2.2 Recognition

In this method the individual has to point out or recognise previously learnt material which is presented to him in a different context. The already learned material is present and the learner has to recognise it. It becomes relatively easier than the recall method. Usually score of memory by recognition method is more than recall method. Example : Multiple choice questions or match the columns.

8.2.3 Relearning

It measures retention by measuring how much faster one learns a previously learnt material after an interval of time. The comparison of retention scores at the time of first learning and the second learning shows that there is improvement in terms of time (no. of trials taken). Thus by relearning; there is saving of time taken to learn the same material.

This method is also known as saving method. The same material is learned by the same subject up to same learning criterion on two different occasions separated by some time interval.

It measures memory by comparing which includes performance on the same task on two different occasions.

8.3. Some phenomena related to memory

8.3.1 Flashbulb memory

Can you remember where you were and what you were doing when you first learned about an earthquake or tsunami taking place? If you can, you now have flash bulb memories – a term coined by Brown and Kulik.

Flash bulb memories are vivid memories of what we were doing at the time of an emotion provoking event because they seem to be preserved in autobiographical memory in considerable detail, almost like a photograph. Flashbulb memories illustrate a more general phenomenon about memory. Exceptional memories are easily retrieved.

8.3.2 Tip of the tongue phenomenon

One way to study organisation of information in long term memory is to see what happens when we search through our library of experiences to retrieve a memory. Suppose you are trying to retrieve a person's name but you cannot remember it. The name is on the tip of the tongue, but you cannot recall it. For example if you want to recall a name XYZ. Instead of this name you may utter similar names starting with the same letter and having nearly similar names,

So tip of the tongue phenomenon is the evidence for the organisation of long term memory.

8.4 Forgetting

Activity 5 :

Think of the following situations...

Have you ever experienced the feeling that you had studied well before the exam but you did not remember the answers in the exam?

After a long time you meet your old school mate but you don't remember his name.

You hear your favourite song tune but you don't remember the words.

All these are the experiences of forgetting. Let's understand now what is forgetting...

Forgetting is simply the inability to remember the things which we want to remember at that moment. In other words, Forgetting is the failure to retrieve the material from our long term memory which we had already stored.

The pioneer of experiments on forgetting was Hermann Ebbinghaus. He created several lists of "nonsense syllables". Nonsense syllable is set of three alphabets two on both the sides are consonants and middle one is vowel like GEX, WOL, MUV etc and learnt it. He checked his own recall at various periods of time. He found out that he forgot most of whatever he had learnt in the first 20 minutes (40%). Following that after 1 hour (20%) till 9 hours (10%) again he forgot further and after one day he could recall only around 30% of the material he had learnt. After that his recall was steady for a long period of time. This experiment proved that we forget most of the things we learn in a short span. Therefore you should revise the study material on the same day again when you finish studying it to avoid forgetting.
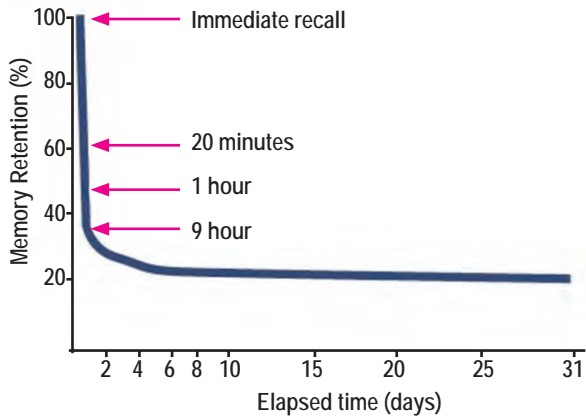
Fig. 8.6 Forgetting curve

Now let's see various causes of forgetting and how we can use some memory improvement techniques to reduce the forgetting.

Causes

1) If you keep a book on a shelf for over 6 months without touching it, what will happen to that book? How will it start looking? You will realize that after 6 months period, there will be dust on that book. Similarly our memories fade out when we don't use them for longer period. These traces get decayed over a period of time if they are not used and so we forget.

2) Have you ever played the game Chinese whispers? What happens in that game? Does the message remains the same as it was told by the first person who started the message? You can try it in the class or with your friends. You will see that the message in the beginning and message which is given by the last person is not the same. What do you think why does this happen? It is because we have a tendency to distort our memories. The game Chinese Whispers is the crude example of this type of forgetting. Some researchers believe that our memory traces are not decayed but they are distorted over a period of time and forgetting occurs.

3) Have you gone through some similar situations in your day to day life, think. You studied Psychology yesterday and you studied Sociology today. Now you end up forgetting either Psychology or Sociology. This kind of forgetting is due to interference of material. Some researchers believe that we forget due to the interference of the materials with each other which we learn one after the other. There are two type of interference namely retroactive interference and proactive interference.

a) Retroactive interference :

As the name suggests Retro means backward interference. It is the partial or complete forgetting of the previously learnt material due to the new memories which get mixed up with the older ones. So in the earlier example if we forget Psychology due to the study of Sociology, it will be due to retroactive interference.

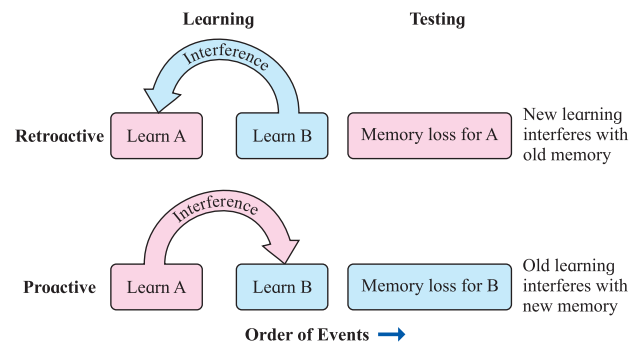**b) Proactive interference :**

As the name suggests Pro means forward interference. It is the partial or complete forgetting of the newly learnt material due to the old material. So in the example given, if we forget Sociology due to the study of Psychology, it will be proactive interference.

Retroactive and Proactive interference

Fig. 8.7 Forgetting due to interference

4) Motivated Forgetting :

It is a behaviour in which people may forget unwanted memories either consciously or unconsciously. It is also called as a conscious coping strategy but it should not be confused with defense mechanisms.

There are two levels of motivated forgetting :

a) Repression :

Sigmund Freud's Psychoanalytic model states that we subconsciously push unwanted thoughts and memories into our unconsciousness. Person thinks that such repressed memories are completely forgotten. For example a girl who had experienced sexual abuse during childhood may completely forget about it but she may have difficulty while forming romantic relationship.

b) Thought suppression :

It is a conscious effort where we forget the memories of unwanted incidents and experiences of our lives. For example : if your friend has experienced a break up recently he may change the topic if you want to discuss about it. Thought suppression can be time consuming and quite difficult also, because such suppressed thoughts will reoccur. So your friend may try to suppress the thoughts about his ex-girlfriend but he may not be successful as she is your classmate.

8.5 Techniques of improving memory

After knowing the reasons of forgetting, now let us move ahead with how we can improve our memory.

1) The Keyword Method :

The Keyword Method is an effective method for remembering definitions, learning foreign language vocabulary with their meaning etc. Any two different pieces of information can be linked together by using this method. e.g. In Japanese "ki" means tree. A person can remember similar sounding word like "key" from English and can remember as "there is a key on the tree".

2) Encoding Specificity :

The encoding specificity of memory (Tulving & Thomson, 1973) provides information about how context can affect memory. According to this principle, memory is improved when information available while learning is also available at the time to recall.

3) Method of Loci :

It is creating imaginary route so that things can be remembered in better way. e.g. things to be picked up while going home or steps to solve mathematical problem. By using this method, a person with average intelligence also can form a route, club things in such a way that person can remember associated images for long period.

4) Mnemonic Devices :

These are the memory tools which help you to remember words, information or concepts. 'Mnemonic' in Greek means "of memory or related to memory". Mnemonics will include acronyms or first letter technique such as VIBGYOR which includes colours of rainbow. It will also include visualization like imagining face of a friend to remember your meeting

with him or her. Another example is, you don't repeat the same mistake if you remember the punishment you got before. Another technique is chunking where you can place large information into small chunks. For example "Vina's Nervous Mother was running slowly and peacefully'. this could be divided into chunks for 7 primary mental abilities given by Thrustone. The sentence includes verbal, numerical, memory, word fluency, reasoning, spatial and perceptual speed as factors of intelligence.

5) Practice and rehearsal :

Relearning the same material for a number of times will lead to better retention and better recall. For small size of material like definitions or easy material, if we use our time fully and learn the entire material, it will be more effective. For large size of material or difficult material we must take breaks in between and also learn the material in parts.

6) Minimizing interference :

We have already learnt about retroactive and proactive interference. Therefore we must not learn similar subjects together as they might interfere with each other. Also rest is necessary for minimizing interference.

7) One can also use POWER method for improving memory.

a) Prepare :

Before starting our studies, we must prepare ourselves for it by setting our goals i.e. why are we studying that particular topic. We should be aware of the reason.

b) Organize :

While reading we must organize the material appropriately and plan for the time we will require to learn it. If the material is easy and familiar, we can dedicate less time for it and if the material is unfamiliar, complicated or technical, we have to devote more time to it. We must learn difficult and technical material when we are fresh and when are tried we must go for the subject we enjoy.

c) Work :

You have to work towards your goal, put efforts while learning so to achieve the goal. You must associate new information with something which you have already learnt. Learn with motive to remember. Form chunks, form new associations so that you can remember the material.

d) Evaluate :

Try to evaluate quality of your learning by solving questions and find out the quality of your knowledge. Here, you will come to know about how much you have gained.

e) Rethink :

This final stage involves reanalyzing, reviewing, questioning and challenging our assumption. Here you can associate new material with whatever you already know.

This chapter must have provided you enough insight into the working and organisation of your memory as well as some hands on tips to improve your retention which could aid you in your academic performance. Make sure you apply the methods mentioned in this chapter while studying next time!

❖   ❖   ❖

Summary :

- Memory is a process of receiving, storage and retrieval of information when required.

- The basic processes of memory include acquisition (encoding), storage and retrieval.

- The stages of memory include : Sensory memory : retention of sensation (sensory impression) for a very brief time, Short Term Memory: the working memory that has limited capacity and retains information for limited time, Long Term Memory: After elaborative rehearsal the information from STM enter the LTM which is a highly organized system. Information retained almost permanently. LTM can be Explicit (Declarative) or Non declarative. Declarative memory can be episodic i.e. relating to life experiences OR semantic--for information encoded in signs and symbols. Non declarative is implicit or procedural i. e. for skills like riding a bike.

- Methods of Measurement of memory : Recall, Recognition and Relearning.

- Forgetting is inability to retrieve the stored information due to : Trace Decay, Trace Distortion, Interference or Retrieval failure.

- Memory can be improved by certain techniques. These techniques are called Mnemonic devices.

Key Terms :

- Memory
- Sensory memory
- Short term memory
- Working memory
- Elaborative rehearsal
- Long term Memory
- Explicit Memory
- Implicit Memory
- Episodic Memory
- Semantic Memory
- Flashbulb Memory
- Recall
- Recognition
- Relearning
- Trace Distortion
- Trace Decay
- Interference
- Retroactive Interference
- Proactive Interference
- Mnemonic device
- Method of Loci

Key Psychologists :

Hermann Ebbinghaus :

From 1880 to 1885, he conducted a limited, incomplete study on himself and published his hypothesis in 1885 as Über das Gedächtnis (later translated into English as Memory: A Contribution to Experimental Psychology). Ebbinghaus studied the memorization of nonsense syllables, such as "WID" and "ZOF".

Q. 1. (A) Complete the following statements

1. One of the important processes for storage of information in the LTM is ....

   a. Perception   b. Elaborative rehearsal

   c. Encoding

2. Memory is a/an ....

   a. Activity   b. Process

   c. Performance

3. .... memory has the shortest duration.

   a. Sensory   b. Short Term

   c. Long Term

4. .... memory is also known as Working Memory.

   a. Long Term   b. Accidental

   c. Short Term

5. .... memory has unlimited capacity.

   a. Sensory   b. Short Term

   c. Long Term

6. The span of Short Term Memory is ....

   a. 5+/- 2   b. 7+/-2   c. 9+/-2

(B) State whether the following statements are True or False. If False, correct them. If True, explain why.

1. Our sense organs also have memory.

2. Short term memory has an unlimited capacity.

3. Conscious memory of facts and events is called explicit memory.

4. Implicit memory is memory of skills.

5. When we memorise meanings, concepts and principles, it is called episodic memory.

6. The method of relearning is also known as saving method.

7. The most vivid memory is flashbulb memory.

8. Very often forgetting is due to unconscious processes like repression.

(C) Identify the odd item from the following.

1. Encoding, storage, Tip of the tongue (TOT), retrieval

2. Keyword method, method of Loci, Chunking, Rote learning, First letter technique

3. Sensory register, STM, Flashbulb memory, LTM

4. Recall, recognition, relearning, trace decay

(D) Match the following pairs.

A	B
1. A technique to improve memory	a. Short Term Memory
2. The most vivid memory	b. Declarative Memory
3. Working memory	c. Implicit Memory
4. Most organized memory	d. Flash Bulb Memory
5. Playing a harmonium after a long time	e. Method of Loci
6. Writing an essay on perceptual process	f. LTM
	g. recall method
	h. relearning method

Q. 2. Answer the following questions in around 35-40 words each.

1. Explain any one example of Flashbulb memory from your life.

2. Explain the model of working memory proposed by Baddeley.

3. Explain the Tip of the tongue (TOT) phenomenon with an example.

4. Give an example of Episodic memory.

5. What is motivated forgetting?

Q. 3. Compare and contrast

1. STM - LTM

2. Implicit Memory - Explicit Memory

3. Semantic memory - Episodic memory

4. Storage failure - Retrieval failure

5. Recall method - Recognition method

Q. 4. What will you do if...

1. You have to prepare a long speech covering all the activities in your college and present at the annual function.

2. How will you apply "POWER" to prepare for the final exam of Psychology.

Q. 5. Short Notes.

1. Characteristics of Memory

2. Techniques to improve memory

3. Motivated forgetting

4. Causes of forgetting

Q. 6. Answer the following question in 150 to 200 words.

1. Explain the process of human memory in detail.

2. Explain the theories of forgetting in detail.

Q. 7. Arrange the following elements in concepts of memory in ascending order.

1. Elaborative rehearsal, Short Term Memory, receiving information from the environment, Long Term Memory, Retrieval.

Glossary

Abnormal behaviour : The behaviour that produces distress or disability and maladaptive, disruptive or harmful for the person or the society.

Abnormal psychology : A branch of psychology that studies unusual patterns of behaviour.

Allocentrism : An ability to see a situation from other people's perspective.

Approach Approach conflict : A conflict experienced when a person is attracted by two or more equally strong and incompatible positive motives at the same time.

Approach avoidance conflict : A conflict experienced when an individual is confronted with a goal that has equally strong positive as well as negative aspect in itself. This leads to a conflict whether to go for it or avoid it.

Ashtang yoga : A theory proposed Pantanjali which has 8 aspects like yama, niyam, aasan, pranayam, pratyahaar, dharana , dhayn, samadhi.

Avoidance Avoidance conflict : A conflict experienced when an individual encounters two or more situations having equally strong negative aspects but is compelled to choose one of them.

Behaviour : Responses of an organism to various stimuli either internal or external.

Bullying : A form of aggressive behaviour displayed by individuals to gain power and prestige.

Central nervous system : A part of nervous system consisting of the brain and spinal cord.

Child psychology : A branch of Psychology that studies biological, psychological and emotional changes occurring during childhood.

Clinical psychology : An applied branch of psychology that deals with diagnosis and treatment of mental illnesses.

Cognitive psychology : A branch of Psychology that studies higher order mental processes such as thinking, reasoning, language development.

Conflicts of motives : A clash between two or more equally strong and incompatible motives occurring at the same time that compels an individual to make a choice.

Conception : The beginning of life , with fertilization of an ovum with sperm.

Counselling psychology : A branch of Psychology dealing with milder behavioural problems such as adjustment problems in workplace and family.

Covert behaviour : Includes responses which are not directly observable but can be inferred from behaviour like thinking, feeling etc.

Criminal psychology : A branch of Psychology dealing with identifying the causes of crime, suggesting preventing measures to control criminal behaviour and criminal rehabilitation.

Daydreaming : A defense mechanism that involves escaping unpleasant, boring and frustrating situation by imagining that he/she is doing something else that is interesting and pleasant.

Defense mechanism : A face saving device to protect Ego from shattering due to harsh reality, functions as a shock absorber and stop gap arrangement that provide time to the person to deal with the challenging situation.

Development : The progressive series of changes that occur in a predictable pattern as a result of maturation and learning.

Developmental psychology : A study of changes resulting from maturation and learning in behaviour from conception to death.

Developmental task : A set of social expectations about developmental changes at a particular developmental stage.

Deviance : The extent to which a said behaviour is away or deviated from established norms.

Diffusion : An identity status, according to James Marcia, of an adolescent who neither

explores nor commits to alternatives in reference to his self identity. There is a lack of commitment.

Displacement : A defense mechanism in which there is a redirection of an impulse onto some other object or person that is not a source of that impulse.

Distress : A negative type of stress accompanied by emergency response hormones such as adrenalin and cortisol.

Educational psychology : A branch of psychology that deals with teaching and learning process and aims at creating effective teaching learning methods.

Elaborative rehearsal : A process of making information meaningful and connecting the same with the information that already exists in the LTM.

Egocentrism : A tendency of a child to be self centered and the child's inability to see a situation from another person's point of view.

Embryonic stage : The prenatal stage that starts from the third week and continues till the ninth week after conception.

Emotional intelligence : A set of skills to process emotional information accurately.

Endocrine glands : The ductless glands which secrete hormones which are released directly into the blood.

Episodic memory : A memory of experiences and specific events associated with time and places.

Eustress : A positive form of stress having a beneficial effect on motivation, performance and emotional well being.

Exocrine glands : The duct glands secreting chemical substances and dispose them outside the membrane. Their secretions don't get mixed with the blood.

Experimental psychology : A branch of Psychology that deals with methods of conducting experiments to study the fundamental causes of human behaviour.

Explicit memory : The conscious memories of facts and events, also known as declarative memory.

Fetal stage : A prenatal stage that begins from the 28th week after conception till birth.

Flashbulb memory : A vivid memory of past experience which is mostly associated with a traumatic incident.

Foreclosure : An identity status typical of adolescent who accepts other's decision about himself and how others expect him to be.

Gender identity : A perception of one's own gender which may or may not correspond to their birth sex. Affected by gender role expectations from society.

Germinal stage : The prenatal stage that ranges from conception to two weeks.

Hormones : The chemical substances secreted by endocrine glands considered to be vital for growth, development and emotional adjustment.

Hyperstress : An intense physiological as well as psychological reaction to excessive demands of situation.

Hypostress : A type of stress experienced when an individual has no challenging activity to do.

Identity crisis : A stage of confusion about identity of self. A typical crisis experienced by adolescents.

Identification : A defense mechanism of trying to become like someone else to deal with anxiety.

Ideal self : A type of self as described by Carl Rogers that represents an ideal image developed by an individual as he would like to be.

Implicit memory : Also known as procedural memory, a type of memory that holds information of skills and procedures.

Impression management : A way of consciously monitoring one's own behaviour to lay the desired impression upon others in a situation.

Industrial psychology : An applied branch of psychology concerning with the factors affecting behaviour of people at workplace such as selection, placement, motivation, job satisfaction etc.

Infancy : The period from the second week after birth till two years.

Interference : A theory that explains forgetting the currently required information as a result of interference from previous or later learning.

Kapha prakruti : In Ayurveda, kapha is one of the three doshas. Those who are with kapha prakruti exhibits traits like calmness, flexibility, patience and care.

Long term memory : An organized system that retains information for more or less permanently.

Maturation : A natural unfolding of the genetic potentials at appropriate time in the course of development.

Memory : A process associated with storage, retention and retrieval of information about past experience.

Method of loci : A method to memorize or remember by creating imaginary route associated to actual places or locals.

Moratorium : An identity status of an adolescent who explores alternatives but does not make any commitment with reference to his self identity.

Mnemonic devices : A collective name for memory tools which helps to remember information and concepts.

Neonatal stage : In includes the period of two weeks after birth.

Nervous system : A system that constitutes all the nerves carrying nerve impulses.

Neurons : The special kind of cells composing the nervous system. They receive and transmit nerve impulses to and from the brain and the peripheral organs.

Normal behaviour : A common pattern of behaviour observed in majority of people in a given society. A behaviour pattern adhering to societal norms to a fair degree.

Openness : A characteristic of people who are intellectually curious, appreciative of art and who can think in nonconforming way.

Overt behaviour : The behaviour that includes directly observable responses like walking, talking, dancing etc.

Personal distress : A subjective feeling of an individual in response to persons and events creating extreme discomfort.

Peripheral nervous system : A system that connects the sensory organs as well as other organs in the body to the brain and the spinal cord.

Pitta : In Ayurveda, pitta is one of the three doshas. Those who are with pitta prakruti exhibits traits like sharp and short tempered.

Prenatal stage : The gestation period from conception to birth

Proactive interference : A partial or complete forgetting of the newly learnt material due to previously learnt material.

Projection : A defense mechanism of placing one's own unacceptable thoughts on to others as if the thoughts belong to others and not to oneself.

Psychoanalysis : A theory proposed by Dr. Sigmund Freud emphasizing upon the unconscious aspects of self.

Psychology : A science of human behaviour and mental processes.

Rationalization : A defense mechanism of justifying an otherwise an unacceptable situation with logically sound but false reasons. Also known as 'sour grapes attitude'.

Real self : The self that one is in reality.

Realistic perception : A perception that consists of expectations from self as well as others after considering reality in objective terms.

Recall : A method of measuring memory in which retrieval of information is with few or no cues.

Recognition : A method of measuring memory in which one has to recognize previously learnt material that is presented in a different context.

Relearning : A method of measuring memory in which retention is measured by comparing the original retention score and the score of retention after relearning the same material after an interval of time.

Repression : The basic defense mechanism in which an individual pushes down the unacceptable and painful memories into the unconscious with an impact that it appears to be forgotten altogether.

Retroactive interference : A partial or complete loss of information of the previously learnt material due to newly learnt material.

Self : The totality of perceptions each person has of themselves.

Self actualization : The term was originally introduced by the organismic theorist Kurt Goldstein for the motive to realize one's full potential.

Self awareness : It is the quality or trait that involves conscious awareness of one's thoughts, feelings, behaviours and traits.

Self concept : Self concept is defined as the totality of perceptions each person has of themselves or The totality of complex organized and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence.

Self efficacy : Self efficacy is a person's belief in their ability to accomplish some specific goal or a task.

Self esteem : Self esteem is 'your overall evaluation of your worth as a person, high or low, based on all positive and negative self perceptions'.

Self image : A personal view or mental picture that one has of him/herself.

Self regulation : Is being able to control our thoughts, feelings and actions so to suit the social norms. Self regulation involves monitoring our

actions and reactions because we can predict or imagine it's consequence.

Semantic memory : A more structured record of facts, meanings, concepts and knowledge.

Sensory memory : A capacity of a sense organ to retain the sensory impression for a very short time even after the source stimulus is withdrawn.

Short term memory : A stage of memory when information is retained only for 15 to 30 seconds. It has limited capacity also known as working memory.

Social psychology : It deals with understanding how individuals are affected by others and vice versa.

Stimulus : Is anything that gives rise to a response. It can be internal or external.

Stress : A physical or psychological reaction to demanding situation that one is compelled to pool resources to fulfil the demands.

Stress diathesis model : According to this model, a particular disorder results from genetic factors as well as life experiences. The word diathesis refers to vulnerability of an individual towards a particular disorder.

Sublimation : It refers to giving a vent to unacceptable urges into socially acceptable behaviour.

Trace decay : Also known as leaky bucket hypothesis, it explains forgetting as a result of passage of time during which the information is not used.

Trace distortion : A theory of forgetting that proposes that there are changes in the memory traces and therefore forgetting takes place.

Vaat prakruti : In Ayurveda, vaat is one of the three doshas. Those who are with vaat prakruti exhibits traits like unpredictability, fluctuating mood, thoughts.

Zygote : A single fertilized egg cell as a result of fertilization.

Field visit

Suggestions :

visit to blind and physically handicapped schools, deaf and mute schools, schools for mentally challenged, Rehabilitation centers, jails, mental hospitals, families affected by suicides, national players, politicians, social workers, actors. Everything that will enhance personality of students.

Important points to be noticed during field visits.

1) Whom are you planning to visit? Or which place you are planning to visit?

2) Information related to the place, historical importance / current information. Detailed Information related to the person.

3) Why this place or a person became famous ?

4) Analyse the place or a person from your point of view.

5) Which points you noticed? What makes you motivated or inspired about the place or about a person.

GUIDELINES ABOUT FIELD VISITS

1) Place / person.

2) Aim / motivating factor behind visiting the place or a person.

3) Collect information about geographical / social / educational / psychological / economical factors.

4) Narrate the place / take interview of a person.

5) Collect the information and analyse.

6) How this information can be utilized by you for the society .

7) Name the drawbacks / weaknesses you have noticed.

8) Suggest remedial actions.

9) Your comment. (Positive / negative feedback)

Prepare a report considering all the above mentioned points.

Marks distribution - 20 marks

1) Field visit   -   5 marks.

2) Narration/interview -   5 marks

3) Write up   -   5 marks

4) Presentations   -   5 marks.

Important suggestion :

teacher should plan for field visit by taking into consideration factors like permission of the college and deputy director of education. Teacher should make plan by taking local rules and regulations into consideration.

Suggestion for 20 marks

Evaluation Suggestions :

Activity 1 : Seminar

Group of 4-5 students will be given a topic related to syllabus? Ask them to present it with help of PPT, oral presentation, poster etc.

Activity 2 : Film Review / Book review

Screening of films

Discussion

Write up

Example : Taare Zameen Par (Learning Disability), Devrai (Schizophrenia)

Activity 3 : Interview of a counsellor, Psychologist or therapist.

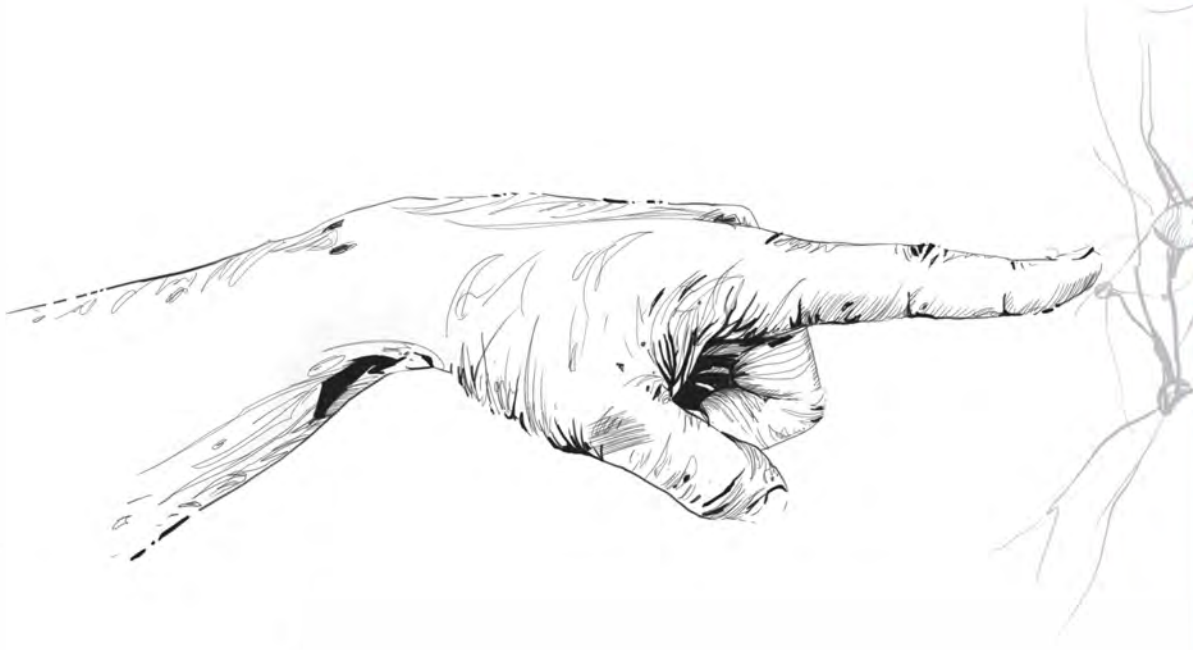**Activity 4 :** Mental Health Awareness Campaign, Exhibition, Poster presentation, skits etc.

Activity 5 : Administration of standardized tests related to syllabus.

Example : Self esteem, Emotional Intelligence, Stress, Adjustment etc.

Activity 6 : Theme based model - making.

Activity 7 : Role plays to develop soft social skills.

Activity 8 : Case Study.