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- Early Childhood- physical, cognitive, and socio emotional development- development of gross and fine motor skills- brain development.
- Middle childhood- physical and cognitive- growth patterns, child obesity, ADHD, and concrete operational stage of cognitive development.
- Social development- peer relations, divorce, and moral development.

**Unit-3: Basic Concepts**

**Unit-4: Physical Development**
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**Unit-6: Adolescence**
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**Unit-8: Middle adulthood**
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- Emotional imbalance: Fear and Phobic Problems
- Anxiety and Stress: Coping Style
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- Mental Peace: Life satisfaction

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- Emotional problems of childhood: identity crisis in adolescence, relationship with parents and peers, sexual identity: Teenage problems

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- Intimate relationship and personal life styles: work/life
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INTRODUCTION

Life span psychology is the study of how people grow and change. These changes traditionally looked at how people's thoughts, feelings, behaviours and physical bodies changed and grew in childhood and adolescence. For a very long time, experts thought that development only happened up to a certain point. Once a person reached adulthood, psychologists believed, they were pretty much done with growth and change. Now, though, we know better. This book, Life Span Psychology, will cover the entire gamut of human life experiences and problems, beginning from infancy right up to old age.

This book is divided into fourteen units that follow the self-instruction mode with each unit beginning with an Introduction to the unit, followed by an outline of the Objectives. The detailed content is then presented in a simple but structured manner interspersed with Check Your Progress Questions to test the student's understanding of the topic. A Summary along with a list of Key Words and a set of Self-Assessment Questions and Exercises is also provided at the end of each unit for recapitulation.
1.0 INTRODUCTION

Developmental psychology is that branch of psychology which studies the development of children, both mental and social. It studies the changes that human beings undergo over their whole lifespan, from infancy to old age. The information derived from studying developmental psychology can be applied to the fields of educational psychology, forensic developmental psychology and child psychology.

1.1 OBJECTIVES

After going through this unit, you will be able to:

- Prepare an introduction to development in lifespan
- Discuss the theoretical perspectives in developmental psychology and human development
1.2 AN INTRODUCTION TO DEVELOPMENT IN LIFESPAN

From the moment we are first conceived, to the day we die, we are constantly changing and developing. While some of the changes we undergo are a result of chance incidents and personal choices, the vast majority of life changes and stages we pass through are due to our common biological and psychological heritage as human beings shared by all people.

Thus, the study of lifespan development provides an overview of the important common developmental stages that human beings pass through: birth, infancy, adolescence, adulthood, old age and finally death. Along the way we learn how to use our bodies, to communicate, to form relationships, to work and to love. Knowledge about how human lifespan development is supposed to unfold is important because it serves as the base upon which our life problems sit. If we are not properly nurtured as an infant, we may have difficulty trusting in relationships at all as an adult. Knowing something about how people typically develop themselves over time thus helps us to place our problems and illnesses into context, and also suggests ways through which our problems can be fixed.

How people grow and change over the course of their lives is the focus of lifespan development.

Lifespan development is the field of study that examines patterns of growth, change, and stability in behaviour that occur throughout the entire lifespan. Lifespan development focuses on human development. Although there are developmentalists who study the course of development in nonhuman species, the vast majority examines growth and change in people. Some seek to understand universal principles of development, whereas others focus on how cultural, racial, and ethnic differences affect the course of development. Still others aim to understand the unique aspects of individuals, looking at the traits and characteristics that differentiate one person from another. Regardless of approach, however, all developmentalists view development as a continuing process throughout the lifespan. As developmental specialists focus on the ways people change and grow during their lives, they also consider stability in people’s lives. They ask in which areas, and in what periods, people show change and growth, and when and how their behaviour reveals consistency and continuity with prior behavior.

Finally, developmentalists assume that the process of development persists throughout every part of people’s lives, beginning with the moment of conception and continuing until death. Developmental specialists assume that in some ways
people continue to grow and change right up to the end of their lives, while in other respects their behavior remains stable. At the same time developmentalists believe that no particular, single period of life governs all development. Instead, they believe that every period of life contains the potential for both growth and decline in abilities, and that individuals maintain the capacity for substantial growth and change throughout their lives.

1.2.1 Scope of Lifespan Development

The definition of lifespan development is broad and the scope of the field is extensive. Consequently, lifespan development specialists cover several quite diverse areas, and a typical, developmentalist will choose to specialize in both a topical area and an age range.

**Physical development**: Some developmentalists focus on physical development, examining the ways in which the body’s makeup—the brain, nervous system, muscles, and senses, and the need for food, drink, and sleep—helps determine behavior. For example, one specialist in physical development might examine the effects of malnutrition on the pace of growth in children, while another might look at how athletes’ physical performance declines during adulthood (Fell & Williams, 2008).

**Cognitive development**: Other developmental specialists examine cognitive development, seeking to understand how growth and change in intellectual capabilities influence a person’s behavior. Cognitive developmentalists examine learning, memory, problem-solving skills, and intelligence. For example, specialists in cognitive development might want to see how problem-solving skills change over the course of life, or whether cultural differences exist in the way people explain their academic successes and failures. They would also be interested in how a person who experiences significant or traumatic events early in life (Alibali, Phillips, & Fischer, 2009; Dumka et al., 2009).

**Personality and Social development**: Finally, some developmental specialists focus on personality and social development. Personality development is the study of stability and change in the enduring characteristics that differentiate one person from another over the lifespan. Social development is the way in which individuals’ interactions with others and their social relationships grow, change, and remain stable over the course of life. A developmentalist interested in personality development might ask whether there are stable, enduring personality traits throughout the lifespan, whereas a specialist in social development might examine the effects of racism or poverty or divorce on development (Evans, Boxhill, & Pinkava, 2008; Lansford, 2009).

These four major topic areas—physical, cognitive, social, and personality development—are summarised in Table 1.1.
Table 1.1 Approaches to Lifespan Development

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Orientation</th>
<th>Defining Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Physical development</td>
<td>Emphasises how brain, nervous system, muscles, sensory capabilities, needs for food, drink, and sleep affect behavior.</td>
</tr>
<tr>
<td>2.</td>
<td>Cognitive development</td>
<td>Emphasises intellectual abilities, including learning, memory, problem solving, and intelligence.</td>
</tr>
<tr>
<td>3.</td>
<td>Personality and social development</td>
<td>Emphasises during characteristics that differentiate one person from another, and how interactions with others and social relationships grow and change over the lifetime.</td>
</tr>
</tbody>
</table>

Each of the broad topical areas of lifespan development—physical, cognitive, social, and personality development—plays a role throughout the lifespan. Consequently, some developmental experts focus on physical development during the prenatal period, and others during adolescence. Some might specialise in social development during the preschool years, while others look at social relationships in late adulthood and still others might take a broader approach, looking at cognitive development through every period of life.

1.3 THEORETICAL PERSPECTIVES IN DEVELOPMENTAL PSYCHOLOGY AND HUMAN DEVELOPMENT

A teacher needs to study the growth and development of learners, as he/she has to deal with learners of different socio-economic and cultural backgrounds. The teacher as an agent of the society is responsible for bringing desirable changes in the behaviour of learners so that they may shoulder the responsibilities of a good citizen to accelerate the process of national development. The other reason to study development is its continuity from the past to the present, and present can be understood better in terms of its past history.

Prior to joining a school, the child accumulates enormous experiences in his home and neighbourhood environment, which are very useful to start formal education in an effective way. Individual differences among children play an important role in education. The teacher must know the potentials and capacities of every child he or she teaches so that he may exploit them to the maximum for the benefit of the individual and the society. The teacher must know the basic principles of growth and development and the characteristics, which emerge at different age levels in various developmental dimensions to provide effective guidance for the harmonious development of children.

Child psychology has been an area of great importance and interest for the researchers since the 1950s. Researchers have devoted most of their time to
explore this neglected field and developed several theories of child development. Here we will describe some of the major theories, which explain child development from different angles. All theories of development can be classified into three broad categories:

1. **Psychoanalytic theory** has been largely derived from the works of Sigmund Freud and Erikson. It emphasizes the importance of early childhood experiences on later development of the child and gives importance to unconscious motivation.

2. **Behaviouristic theory of child development** lays importance on learning of stimulus response associations. The associations may result from either classical or operant conditioning procedure. It attempts to be more scientific than other theories of development by concentrating only on scientifically observable and measurable behaviour.

3. **Cognitive theory of development** lays emphasis on perception and its organization. It is a molar approach to human development.

### 1.3.1 Psychoanalytic Theory: Freud and Erikson

Here we will briefly describe the theories of Freud and Erikson.

**Freud’s Psychosexual Stages of Development**

According to Freud, a child passes through five major stages of psychosexual development. Each stage is characterized by certain behavioural changes. The stages are given as follows:

1. **The oral stage:** The focus of pleasure in the oral stage is mouth.
2. **The anal stage:** It refers to the stages when the focus of pleasure shifts from mouth to the anus.
3. **Phallic stage:** This stage refers to around the age of three to six. The focus of pleasure shifts from anus to the sexual organs.
4. **Latency stage:** During this stage, infantile sexuality becomes less important. The child engages himself in learning skills and in the development of values.
5. **Genital stage:** The focus of pleasure shifts to the member of the opposite sex.

**Erikson’s Psychosocial Stages of Development**

Erikson has proposed another theory on the stages of child development. He stressed upon the epigenetic principle, according to which new properties, which were not contained in the original situation, develop because of environmental influences and the interaction between the former (original situation) and the latter (environmental factors). He divides stages of development into eight phases marked by specific developmental characteristics. The stages are mentioned in Table 1.2.
Table 1.2 Eight Phases of Development

<table>
<thead>
<tr>
<th>S. No</th>
<th>Stage</th>
<th>Psychosocial Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Birth to first year</td>
<td>Trust vs. mistrust</td>
</tr>
<tr>
<td>2</td>
<td>1 to 2 years</td>
<td>Autonomy vs. shame, doubt</td>
</tr>
<tr>
<td>3</td>
<td>3 to 5 years</td>
<td>Initiative vs. guilt</td>
</tr>
<tr>
<td>4</td>
<td>6 to 12 years</td>
<td>Industry vs. inferiority</td>
</tr>
<tr>
<td>5</td>
<td>Adolescence</td>
<td>Identity vs. Identity diffusion or Role confusion</td>
</tr>
<tr>
<td>6</td>
<td>Early adult</td>
<td>Intimacy vs. Isolation</td>
</tr>
<tr>
<td>7</td>
<td>Young and middle adult</td>
<td>Generativity vs. Stagnation</td>
</tr>
<tr>
<td>8</td>
<td>Later adult</td>
<td>Integrity vs. Despair</td>
</tr>
</tbody>
</table>

1.3.2 Behavioural Theory

Under behavioural theory, you will learn about the theories propounded by Robert Sears and Albert Bandura.

(i) Robert Sears’ development theory

Sears, an American child psychologist, provides a behavioural approach to the study of child development. Behavioural approach lays emphasis on learning experiences of the child, which involve stimulus–response associations that may result from either classical or operant conditioning procedures. Sears’ theory of child development suggests that development is a process of observable social interaction. He derived the main concepts from Hull’s learning theory. He emphasized the importance of reinforcement and secondary drive behaviour. He divided human development into three broad phases. A brief description of the phases is given as follows:

Phase I: Rudimentary behaviour (Innate needs and initial behaviour learning): Phase I starts from birth and continues up to sixteen months. During this period, the behaviour of the infant is activated by innate needs, which create tension, and in order to reduce tension, the infant is motivated for action, which gratifies his needs. The infant’s behaviour operates purely on an altruistic level unrelated to any social world but gradually social events become the prime motivator of behaviour, for example, hunger motivates the infant for action (crying) and he requires the bottle or breast for the gratification of his need and his actions become more learned and goal-directed. He strives to imitate previously successful actions and thus socialization begins.

Phase II: Secondary behavioural systems: The training for socialization of the child begins in this phase in the family. The child is motivated by the basic requirements of life and secondary dependency needs. Parents and other members of the family continue to be the major reinforcing agents of the child’s behaviour. Parents should reinforce desirable behaviour of children. The child begins to imitate the behaviour of his parents. Therefore, it is very important that parents should present a role model before the child. Social learning depends upon replacing previous learning with newer experiences based upon satisfaction that is more appropriate rather than upon fearing and avoiding unpleasant consequences.
Punishment should be avoided because it creates behaviour problems. During this phase, children begin to satisfy their dependency need themselves. They start imitating spontaneously the behaviour of parents and the other person who works as model. Dependency decreases with age and unfolds in the process of identification with peers. Formerly, the dependence was on parents but now it extends to many persons.

Phase III: Secondary motivational system: During this phase, the social boundary of the child expands beyond the four walls of home. The child meets other families and the process of socialization is accelerated. Dependency becomes reduced to a specific sphere of family living. The teacher becomes a new support for dependence in school.

(ii) Albert Bandura’s theory
Albert Bandura (1977) is a social learning theorist who is most concerned with social and moral developments. He emphasizes the importance of reward and punishment in the development of behaviour. Behaviour is learned through conditioning and observational learning. Children’s responses that are reinforced are more likely to recur than responses that are not reinforced. There is positive correlation between reward or punishment and their effect on the behaviour of the child. According to Bandura, the child’s behaviour is affected by satisfaction and pleasure. In early childhood parental approval and fear or anxiety associated with punishment influence the moral and social development of the child.

1.3.3 Cognitive Theory
Under the Cognitive Theory, we will discuss the theories propounded by Jean Piaget, Kohlberg and Havighurst.

(i) Jean Piaget’s theory of moral development
Jean Piaget is a cognitive theorist who has been working on child development for the last four decades. He has produced enormous literature on developmental psychology. According to him, there are four stages of child development. The first stage is called the sensorimotor period when the infant learns and develops sensorimotor skills by manipulating objects in his environment. In the second stage which runs from two to seven years, the child begins to acquire vocabulary with which he represents objects and experiences he perceives. The child can extract concepts from experience and can manipulate objects in his mind. This stage is called pre-operational thought. The third stage is called concrete operation period, which begins from seven and continues up to twelve years of age. The child begins to think logically and rationally about problems, which he faces. The fourth stage is known as formal operations period and begins from twelve years of age and continues till the end of adolescence. The adolescent can think, give reasons and analyse beyond the realm of concrete experiences. He can generalize or form opinion about abstract concepts like love, honour, truth and justice, etc.
(ii) Lawrence Kohlberg’s theory of moral development

Kohlberg’s theory, like Piaget’s, emphasizes that moral development proceeds in sequential stages. There are three levels of moral development: (i) pre-conventional level; (ii) conventional level; and (iii) post-conventional level. At the pre-conventional level, the child follows the rules set down by others. At the conventional level, he adopts rules and sometimes subordinates his own needs to the needs of others. At the post-conventional level, people define their own values in terms of ethical principles they have chosen. According to Kohlberg, a child passes through six distinctive stages of moral development (Figure 1.1).

![Kohlberg's Stages of Moral Development]

(iii) Robert J. Havighurst’s theory of development

Havighurst developed a specific task model of development. According to him, at each new stage of development, there are certain tasks, skills, attitudes and understanding that must be met before a person can move on to a higher level of development. He says:

‘... at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society and difficulty with later tasks.’
Table 1.3 lists the development tasks identified by Havighurst.

### Table 1.3 Havighurst’s List of Developmental Tasks

<table>
<thead>
<tr>
<th>S. No</th>
<th>Birth to 6 years</th>
<th>6 to 12 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning to walk</td>
<td>Learning physical skills, ordinary games</td>
</tr>
<tr>
<td>2</td>
<td>Learning to take solid food</td>
<td>Building wholesome attitudes towards oneself as a growing organism</td>
</tr>
<tr>
<td>3</td>
<td>Learning to talk</td>
<td>Learning to get along with age mates</td>
</tr>
<tr>
<td>4</td>
<td>Learning to control the elimination of body wastes</td>
<td>Learning an appropriate masculine or feminine role</td>
</tr>
<tr>
<td>5</td>
<td>Learning sex-differences</td>
<td>Developing fundamental skills in reading, writing and calculating</td>
</tr>
<tr>
<td>6</td>
<td>Achieving physiological stability</td>
<td>Developing concepts necessary for everyday living</td>
</tr>
<tr>
<td>7</td>
<td>Forming simple concepts of social and physical reality</td>
<td>Developing conscience, morality, and values</td>
</tr>
<tr>
<td>8</td>
<td>Learning to relate oneself emotionally to parents, siblings and other people</td>
<td>Achieving personal independence</td>
</tr>
<tr>
<td>9</td>
<td>Learning to distinguish right and wrong and developing a conscience</td>
<td>Developing attitudes towards social groups and institutions</td>
</tr>
</tbody>
</table>

### 1.3.4 Paul Baltes’ Lifespan Development Approach

As per this approach, development is a lifelong process of change, adaptability and self-exploration. Also, development involves both gain and loss as it is multidimensional and multi-directional. Some other points outlined in this theory are:

1. Relative influences of biology and culture may shift over lifespan, as the equilibrium between the two keeps changing.

2. Development involves change in allocation of resources: Since resources like time, money, energy etc. are invested primarily into three issues: growth, maintenance or recovery, and dealing with loss when maintenance or recovery is not possible.

3. Modifiability of development: In order to reach its maximum potential — any particular ability, say, reading — can be improved by training.

4. Historical and cultural influences play an important role in development.

### 1.3.5 Urie Bronfenbrenner’s Bioecological Theory

This theory claims that five categories of systems affect development in an individual. These systems are micro as well as macro in nature. The five systems are described below:

- **Microsystem**: Refers to the institutions and groups that most immediately and directly impact the child’s development, including family, school, religious institutions, neighbourhood, and peers.

- **Mesosystem**: Refers to the link between two or more micro-systems. Examples are the relation of family experiences to school experiences, school
experiences to church experiences, and family experiences to peer experiences. For example, children whose parents have rejected them may have difficulty developing positive relations with teachers.

- **Exosystem**: Involves links between a social setting in which the individual does not have an active role and the individual’s immediate context. For example, a husband’s or child’s experience at home may be influenced by a mother’s experiences at work.

- **Macrosystem**: Describes the culture in which individuals live. Members of a cultural group share a common identity, heritage, and values. The macrosystem evolves over time, because each successive generation may change the macrosystem, leading to their development in a unique macrosystem.

- **Chronosystem**: The patterning of environmental events and transitions over the life course, as well as socio-historical circumstances. For example, wars, mass-migrations etc. that impact an individual’s life.

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**Fig. 1.2 Five Systems as Given by Urie Bronfenbrenner**

Major influences in Developmental Psychology are as follows:

1. Type of family structure – nuclear/joint
2. Socio-economic status
3. Culture, race and ethnicity
4. Historical context of the era in which the person lives
1.4 THEORIES OF LEARNING

Stimulus-response theories of learning can be divided into two broad categories: S-R theories without reinforcement and S-R theories with reinforcement. J.B. Watson and Edwin R. Guthrie come under the first category of theorists. They are the two foremost contiguity theorists who assigned no role to the intervening variables of pleasantness or unpleasantness of the consequences of response in learning. According to them contiguity alone was enough to establish connection or bond between stimulus-response (S-R). Whenever a stimulus links with element of behaviour (response), a connection is established in the nervous system. Contiguity theory was simplest because it gave no place to effect in learning.

J.B. Watson (1878–1958)

Great revolution occurred in the field of psychology in the early years of the present century. People were fed up with traditional psychology of consciousness and its method of introspection. J.B. Watson (1878–1958) revolutionized the theory and practice of psychology by his radical ideas. Being convinced by his research on maze learning by rats, he rejected the consciousness and introspection as methods of study of human behaviour as they could not be verified. He closed the gap between the study of animal and man. He defined psychology as the study of overt and observable behaviour which can be measured objectively. He had strong conviction that behaviour can be explained in terms of stimulus-response (S-R) connections in the brain. He published his first book *Psychology As the Behaviourist Views It* in 1913 in which he advocated his points of view regarding behaviour.

Watson’s Theory of Learning

Watson developed a simple theory of learning. He proposed that when a stimulus and response occur at the same time in close contiguity, the connection between them is strengthened. The strength of connection between stimulus-response (S-R) depends upon the frequency of S-R repetitions. This theory was like Thorndike’s theory in respect of its claim that learning consists of strengthening S-R connections but there was one difference that for Watson there was no law of effect, there was no reinforcement but there was a very important law of frequency. He emphasized the importance of frequency or exercise in learning.

Watson’s theory was primarily a protest against Thorndike’s theory. He considered Thorndike’s law of effect mentalistic in nature, nothing but an updated version of the old hedonistic principle of behaviour.

The second law which he proposed is of recency. The most recent response is strengthened more by its frequent occurrence than is an earlier response. He made conditioning the basis for learning. Learning for him is the shifting of old responses to new stimuli. Watson had great influence on psychology. He developed an objective method of studying behaviour. He convinced psychologists that the
real explanation of behaviour lies in the nervous system. He popularized the theory of conditioning in America.

Watson’s Contribution

J.B. Watson had great influence on American psychology. His greatest contribution to psychology is that he brought psychology out from mechanistic and mentalistic warfare. He emphasized the objective study of behaviour. He accelerated the pace of behaviourism. He popularized the concept that nervous system can really explain all types of behaviour. He convinced all psychologists that for the explanation of learning, understanding of brain and its functioning is very essential. He emphasized that all our behaviour is learned by interacting with external environmental stimuli. He over emphasized the importance of environment. His theory of learning is based on the principle that Stimulus-Response (S-R) bondage is the basis of learning and all types of learning can be reduced to S-R connections. He spread and motivated researches on conditioning in America. His theory of learning had a great impact on the educational system in America. For example, emphasis was laid on providing a conducive environment in schools for efficient and permanent learning. Sufficient practice and exercise were given to make the bondages between S-R permanent.

B.F. Skinner—Operant Conditioning

(S-R Theory with Reinforcement)

History of operant conditioning begins with Professor B.F. Skinner (1904–1990) of Harvard University. When he was a graduate in the department of Psychology of Harvard University, he wrote his dissertation in 1931 entitled *The Concept of the Reflex in the Description of Behaviour*. He made historical survey of previous studies and an operational analysis of the concept of the reflex. He emphasized that the basic datum for the student of behaviour is simply an observed correlation between stimulus-response (S-R) connection. Reflex was adopted by him as the basic unit for analysing behaviour of the organism. He held that it is necessary to study something simpler, *i.e.*, the relationship of a part of behaviour (a response) to a part or modification of the part of environment (stimuli).

B.F. Skinner is a practical psychologist who conducted several experiments on different reflexes in rats and pigeons. Finally he selected eating as the subject of his experiments because of its simplicity and ease of collecting huge data in short period of time.

He developed his own apparatus and method of observation to study and analyse behaviour in a systematic objective way. After some time his approach to analyse behaviour became so increasingly visible and viable force within psychology that most of the American psychologists adopted his method of research in their studies.
Two Types of Learning

Skinner found that the procedure he was using to conditioning lever pressuring in rat did not conform to the paradigm used by Pavlov to condition the secretion of saliva in dogs. He recognized two types of conditioning that are produced by different experimental procedures. In Pavlovian conditioning, the reinforcing stimulus was paired with a neutral stimulus that acquired properties of natural stimulus. This procedure was referred by Skinner as type ‘S’ conditioning or respondent conditioning. He called his own procedure as type ‘R’ conditioning or operant conditioning in which a response occurs spontaneously in the absence of any stimulation with which it may be specifically correlated. He called his procedure operant conditioning which can be defined as any learning which is based on response contingent reinforcement and does not involve choice among experimentally defined alternatives. The term operant emphasizes the fact that behaviour operates upon the environment to generate its own consequences.

An operant is a response which is emitted by ‘S’ without any particular forcing stimulus rather than elicited by a reinforcing stimulus (U.C.S.) as in Classical Conditioning. An important distinction between two types of learning is that classically conditioned reflex may have zero strength in the beginning but the operant cannot have zero strength because it has to occur at least once before it can be reinforced. Operant behaviour is external. It can be observed. Respondent behaviour is internal and personal.

A System of Behaviour

Prof. B.F. Skinner is known for his researches of collecting facts and description of purely empirical relations. He is specifically interested in controlling those responses that seem to occur with no direct stimulation. Such responses are emitted rather than elicited by obvious environmental stimulus.

He was interested in developing a science of behaviour. He had made frequent references to science of behaviour in his writings as the object of his efforts. His published work in the beginning was highly technical and was beyond the understanding of ordinary reader. It was just after the Second World War that he made his findings and theory of behaviour non-technical. During the same period he was making attempts to spell out some of the implications of principles of operant conditioning for the society. He wrote a novel ‘Walden Two’, a fictional description of a Utopian society in which education and social regulations were based on positive reinforcement rather than on the technique of aversive control. The same year, he came to Harvard University and taught a course dealing with human behaviour. He wrote a book Science and Human Behaviour in 1953. The book summarizes the basic principles arising from the laboratory experiments conducted by him. His findings generated a number of research activities in the USA. By the middle of forties, research using operant methods had become more
than one man’s enterprise. Skinner at Minnesota and Indiana Universities worked with some talented students on the theory of operant conditioning. So huge amount of research data was produced in a short period that it needed some medium of communication to coordinate the findings of research studies conducted at various centres in the Universities. The first conference was convened in Indiana in 1946 on the theme of “Experimental Analysis of Behaviour”. Every year annual conference is held to exchange views and to co-ordinate research findings of various centres. Many researches are being conducted on operant conditioning in USA and other countries of the world.

The Operant Experiment

Skinner developed his own method and apparatus to study Operant Conditioning. He developed a simple apparatus, commonly known as Skinner box. This apparatus was devised to study a lot of behaviour in short time in an objective way. A simple response of pressing a lever/bar was chosen as a unit of behaviour. The movements of the rat were electrically recorded and cumulative records of the behaviour of the rat were obtained. The figure of Skinner box explains the mechanism of operant conditioning.

Operations in Operant Conditioning

Several operations are involved in the process of Operant Conditioning. Some of the important operations are briefly described as follows:

1. Shaping (generalization, chaining and habit competition)
2. Extinction
3. Spontaneous recovery
4. Concept of reinforcement

1. Shaping

Shaping is the most important mechanism used in Operant Conditioning. It refers to the judicious use of selective reinforcement to bring certain desirable changes in the behaviour of the organism. The basic process in shaping is successive approximation to the desired behaviour. The experimenter shapes or moulds the behaviour of the organism as clay is moulded by a potter in a definite form of a pot. The most striving and significant contribution of Skinner is the development of a technique to shape the complex behaviour by systematically reinforcing closer approximations to the desired behaviour. Let us explain it with the help of an example. Suppose we wish to shape behaviour of an untrained pigeon in the Skinner
box to learn a particular instrumental response, say pecking a particular disk. We may accomplish this shaping of the behaviour of the pigeon through a process of series of successive approximations. Instead of waiting until the pigeon makes a full and correct pecking response, we would reinforce some bit of the pigeon’s behaviour that forms part of the chain, the terminal link is the disk pecking act. At first we would give the pigeon reinforcement when he merely turns slightly in the direction of the disk. Once a definite tendency to turn toward the disk has been established, we would hold further reinforcement until the pigeon made a definite approach movement toward the disk. By reinforcing those responses that make the pigeon come closer and closer to the disk and then those that bring his beak near it. We would be sure finally to induce the pigeon to peck the disk and we would reinforce this behaviour. It has been reported by Skinner that by using this shaping technique, a hungry pigeon can usually be made to peck at the disk within a period of about three minutes.

Let us understand shaping with the help of an example from human behaviour. Suppose we want to toilet-train a child. Simply putting the child on the toilet is not successful because as soon as the child is placed on the stool, he begins to cry. To shape his behaviour, the child is given a chocolate whenever he is placed on the toilet. It has been observed that successful elimination follows. Other techniques may also be used as mother may read or entertain the child when he is placed on toilet. Chocolate as reinforcer may be withheld following failure. Such type of training may be started from the age of ___ years. It has been reported by psychologists that toilet-training behaviour may be shaped within a period of a fortnight.

**Principles involved in shaping.** There are three important psychological principles which are involved in the process of successful shaping of behaviour. They are as follows:

- (a) generalization,
- (b) habit competition,
- (c) each segment in the chain must be linked to the other.

These have been described in brief below:

- (a) **Generalization:** Human beings and to some extent animals are capable of generalizing experiences and knowledge acquired in one training situation to other situations. Had we not been endowed with this unique ability, we would repeat the learning process each time whenever there was slightest alteration in the stimulus. Generalization may be of two types which are mentioned below:

  - (i) **Response generalization:** The first psychological principle involved in shaping is response generalization. It refers to the fact that when responses are repeated, they are likely to vary over a range of more or less similar acts. It is important that response generalization does occur, otherwise...
shaping would be impossible. If the pigeon could only rigidly repeat his previously reinforced response in exactly the same form he would never get closer to the disk (example cited above). Among the responses possible under the principle of response generalization is the one that allows him to get nearer. This closer approach is then reinforced and the ground-work laid for response generalization to get the pigeon even closer later on.

(ii) Stimulus generalization: The famous study of Albert is an example of stimulus generalization. Stimulus generalization occurs when a particular response elicited by a particular stimulus becomes also elicited by other similar stimuli. There are a number of examples of stimulus generalization as a boy who fears the presence of a tyrant teacher may generalize fear to other teachers.

(b) Habit competition: The second principle in shaping is successful habit competition. At each point of the chain, the correct habit must attain dominance over competing habits. This is accomplished by reinforcing the correct habit alone.

(c) Chaining: The last and the third principle involved is that each segment in the chain must be linked with the succeeding segment. Cues produced by one response must be linked with the next response. Let us illustrate this point with the help of a concrete example. Suppose, we want to train a pigeon to turn around in a circle. This training is started by reinforcing the pigeon for making even a slight movement in the right direction. After this habit is, thus, strengthened, other responses that are part of the chain of responses required in turning around are successively reinforced. By this shaping technique, the response chain of turning around, one that a pigeon normally rarely makes, can be made to occur over and over again at a high rate of frequency.

It has been experimentally proved that secondary reinforcers are more effective in shaping behaviour than primary reinforcers because primary reinforcers interfere with the smooth flowing sequence of responses. As food, the eating movements will confuse the association between the cues produced by one response and the succeeding response. Whenever we want to take the advantage of psychological technique of shaping in training animals and children, we should first develop a strong secondary reinforcing agent.

Needless to mention that by using technique of shaping we can change the behaviour of the organism. We can bring those changes in the behaviour which we want to install in the repertoire of the organism. Effective shaping requires thorough understanding and control of the reinforcing mechanism and effective arrangement of several or many behaviour segments that comprise the learning task.

2. Extinction

It consists simply of withholding the reinforcer when the appropriate response occurs. Withholding of reinforcer means extinction of previously established
Introduction

relationship. Suppose in the Skinner box the rat presses the bar but does not get pellet of food. If this is repeatedly done, the bar pressing behaviour of the rat will be extinguished.

3. Spontaneous Recovery

The phenomenon of spontaneous recovery has almost similar characteristics in Pavlovian and Operant Conditioning (Skinnerian). It refers to the fact that if an organism is removed from the situation for a while after extinction and then returned and again presented with S1, his performance will be better than would be predicted from his performance at the end of preceding extinction. Spontaneous recovery occurs in operant conditioning situation and is affected by all those variables which operate in Pavlovian conditioning. Grahm and Gagne in their study showed that the amount of spontaneous recovery of an operant habit is directly related to the length of period since the termination of extinction. Other factors that influence the amount of spontaneous recovery are the spacing of reinforced occurrences of trial training, the spacing of non-reinforced occurrences (extinction trial) and the combination of these two factors. The number of reinforced occurrence of training trials prior to extinction also affects the degree of spontaneous recovery; more reinforcements are associated with greater recovery.

4. The Concept of Reinforcement

The concept of reinforcement is central in Operant Conditioning theory of Skinner. It is a fundamental problem for every learner of theory of Operant Conditioning to study it thoroughly. A reinforcer (a reinforcing stimulus) is any event which changes subsequent behaviour when it follows behaviour in time. Empirically we can define a reinforcer as: “Any environmental event that is programmed as a consequence of a response that can increase the rate of responding, is called a reinforcer.” B.F. Skinner used reinforcement as a procedure for controlling behaviour, not a hypothetical device, that produces Stimulus-Response (S-R) connection. Reinforcers are events that raise the rate of responding.

1.4.1 Jean Piaget’s Theory of Cognitive Development

A Brief Life Sketch of Jean Piaget (1896–1980)

Piaget is regarded as one of the pioneers in psychological investigation of children. However, he neither undertook formal study nor passed any examination in psychology. He was actually a biologist by training. At an early age of 22, he obtained his Doctorate Degree in Zoology on Mollusks of Valais. He worked on child development for more than 50 years and produced enormous literature on developmental psychology. He read philosophy, psychology and sociology etc. He pursued clinical research at the Alfred Binet Laboratory at Paris. By observing, dissecting and experimenting with children, he developed his educational theory regarding cognitive development or learning by children. His work as a Professor of Child Psychology at the University of Geneva (Switzerland) made him famous throughout the world.
Piaget began his study of child development with the observation of his own three children. From this beginning, his investigations were gradually extended to other children. These investigations resulted in the publication of a large number of papers and books which are often quoted by eminent psychologists and other thinkers on education.

**Basic Concepts**

Piaget introduced four concepts in the building of his theory. These are the following:

(i) Schemes

Schemes (Cognitive structures): Piaget called ‘schemes’ as cognitive structures or the patterns of behaviour that children and adults use in dealing with objects in their environment. These patterns can be simple as well as complex. As the development proceeds, each pattern enlarges and changes. It is coordinated with other patterns to form more complex patterns. For instance, the infant sucks the breast of his mother, he looks at the objects of his environment, listens different voices in his environment and finally he tries to comprehend, conceptualize the articles, animals, space and many other behaviour patterns or structures.

(ii) Assimilation

It implies incorporation of something from the environment. New ideas, concepts and stimuli are taken in and incorporated into one’s ‘existing set of scheme.’ A scheme is the organized pattern of behaviour which the child develops when he is engaged in any activity. For example, when a child is engaged in sucking, there is a certain pattern of movements of the cheeks, lips and hands. When a child is confronted with a new object, he will try to understand the new object by applying his old scheme to it. He grasps. He adapts himself to a new object by assimilating it. His old scheme does not change in the process.

(iii) Accommodation

It involves modification or change of some elements of an old scheme or learning a new scheme which is more appropriate for the new object. A baby who has already got a scheme of sucking mother’s breast accommodates to the object placed in the mouth—finger, nipple, pencil, a toy—depending on its shape, form and the size. The baby develops a new scheme or a modified scheme. This is called ‘accommodation’

Thus a baby assimilates when he understands and perceives the new in the light of his old perceptions. A baby forms a new scheme when he modifies or changes his old perception to suit the new. This implies adjusting or accommodating. In this way, a baby forms new structures or new schemes and consequently develops cognitively.
(iv) Equilibration: The structures or the schemes change from one stage to another by the process of equilibration—maintaining the balance between the child and his changing environment. According to Piaget, when by the existing scheme, the new situation is not fully handled, then there is created a state of disequilibrium or an imbalance between what is understood and what is encountered. In such a case, the individual tries to reduce such imbalances. This is done by him by focussing his attention on the stimuli that has caused the disequilibrium and developing new schemes or adapting old ones until equilibrium is restored. This process of restoring balance is called equilibration. Piaget believes that learning depends on this process.

Stages of Child Development

Piaget divides the stages of cognitive development of the child into the following categories.

1. Sensori motor Stage: This stage covers the period from birth to two years. This stage is marked by sensation. Simple learning occurs but the child does not think at this stage. These early sensori-motor experiences of the child have a great bearing on the development of his later intellectual abilities. In the world of the child, an object exists when it is physically present. He then gains some consciousness about the stability of the object. He starts comprehending casually. It is sometimes said that the child’s mental development at this stage is equal to that of an intelligent animal. By the end of two years, the child develops the concept which is characterized by relationship among objects and between objects and his own body.

2. Pre-conceptual stage: This stage is roughly between two years and six years. The child develops ways of representing events and objects through symbols, including verbal symbols of language. He can now think about things that are not immediately present. The child now becomes egocentric, i.e., primarily concerned himself.

3. Intuitive Stage: This is covered between the ages of four to eight years. The reason of the child is not logical and is based on intuition rather than systematic logic. The intuitive thought is primarily concerned with static conditions but the child is able to use concepts as stable generalization of his past and present experiences. He, however, cannot adequately link a whole set of successive conditions into an integrated totality.

4. Concrete Operations Stage: The stage of development is usually between the age of six and eleven or twelve years. At this stage a child is concerned with the integration and stability of his cognitive system. The child develops logical operations from simple associations. He learns to add, subtract, multiply and divide. He is in a position to classify, concrete objects. These operations are called concrete because they relate directly to objects. These operations do not involve abstract thinking. Piaget has coined a new term—
"grouping", to describe a set of operations. Piaget has given a long list of operations which make it possible to handle numbers in various relations to each other, the arrangement of objects into classes and subclasses and the ordering of objects according to one or more attributes.

5. **Formal Operations Stage**: This stage is roughly from 12 years to adolescence. At this stage, the thought process of the child becomes quite systematic and reasonably well integrated. The child is in a position to free himself from the concrete operations related directly to objects and to groups. He is capable of reasoning with propositions removed from the concrete. He develops an experimental spirit. Now he solves problems more systematically and the bases of action are not trial and error. The youngsters at this stage are able to organize information, reason scientifically, build hypotheses based on understanding to causality and test their hypothesis.

### 1.5 SOCIO-CULTURAL THEORIES

Sociocultural theory is a prominent theory in psychology that provides a detailed description of the important contributions that society makes to individual development. This theory lays emphasis on the interaction between developing people and the culture in which they live. Sociocultural theory also suggests that human learning is largely a social process.

**Vygotsky’s Socio-cultural Theory**

Vygotsky (1962) believed that children are active seekers of knowledge, but emphasized that rich social and cultural contexts profoundly affect their thinking. The main points of Vygotsky’s theory are the following:

- Rapid growth of language leads to profound change in thinking.
- It broadens pre-schoolers’ participation in social dialogues with more knowledgeable individuals, who encourage them to master culturally important tasks.
- Young children start to communicate with themselves in the same way as they converse with others.

Hence, basic mental capacities are transformed into uniquely human and higher cognitive processes.

### Check Your Progress

1. Name the broad topical areas of lifespan development.
2. State the major stages of psychosexual development as propounded by Sigmund Freud.
3. What are the major influences in developmental psychology?
1.6 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The broad topical areas of lifespan development are physical, cognitive, social and personality development—play a role throughout the lifespan.

2. The major stages of psychosexual development as propounded by Sigmund Freud are the following:
   - Oral stage
   - Anal stage
   - Phallic stage
   - Latency stage
   - Genital stage

3. The major influences in developmental psychology are the following:
   i. Type of family structure—nuclear/joint
   ii. Socio-economic status
   iii. Culture, race and ethnicity
   iv. Historical context of the era in which the person lives

1.7 SUMMARY

- Study of Lifespan Development is providing with an overview of the important common developmental stages that human beings pass through: birth, infancy, adolescence, adulthood, old age and finally death.
- Lifespan development focuses on human development. Although there are developmentalists who study the course of development in nonhuman species, the vast majority examines growth and change in people.
- The definition of lifespan development is broad and the scope of the field is extensive. Consequently, lifespan development specialists cover several quite diverse areas, and a typical, developmentalist will choose to specialize in both a topical area and an age range.
- A teacher needs to study the growth and development of learners, as he/ she has to deal with learners of different socio-economic and cultural backgrounds.
- Child psychology has been an area of great importance and interest for the researchers since the 1950s.
- According to Freud, a child passes through five major stages of psychosexual development. Each stage is characterized by certain behavioural changes.
Sears, an American child psychologist, provides a behavioural approach to the study of child development.

Albert Bandura (1977) is a social learning theorist who is most concerned with social and moral developments. He emphasizes the importance of reward and punishment in the development of behaviour.

Kohlberg’s theory, like Piaget’s, emphasizes that moral development proceeds in sequential stages. There are three levels of moral development: (i) pre-conventional level; (ii) conventional level; and (iii) post-conventional level.

Stimulus-response theories of learning can be divided into two broad categories: S-R theories without reinforcement and S-R theories with reinforcement. J.B. Watson and Edwin R. Guthrie come under the first category of theorists.

B.F. Skinner is a practical psychologist who conducted several experiments on different reflexes in rats and pigeons. Finally, he selected eating as the subject of his experiments because of its simplicity and ease of collecting huge data in short periods of time.

Piaget is regarded as one of the pioneers in psychological investigation of children. However, he neither undertook formal study nor passed any examination in psychology.

Vygotsky (1962) believed that children are active seekers of knowledge, but emphasized that rich social and cultural contexts profoundly affect their thinking.

1.8 KEY WORDS

- Lifespan development: It is the field of study that examines patterns of growth, change, and stability in behaviour that occur throughout the entire lifespan.
- Assimilation: It implies incorporation of something from the environment.

1.9 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Prepare an introduction to lifespan development.
2. Name the broad categories of theories of human development.
3. Write a brief note on Erikson’s theory of child development.
4. Mention Vygotsky’s socio-cultural theory.
Long Answer Questions

2. Examine the various cognitive theories of human development.
3. Discuss the theories of learning.
4. Explain Jean Piaget’s theory of cognitive development.

1.10 FURTHER READINGS


UNIT 2   STAGES OF DEVELOPMENT

Structure

2.0 Introduction
2.1 Objectives
2.2 Infancy, Newborn and Infant
   2.2.1 Prenatal Diagnostic Tests
2.3 Genetic-Environment Interactions
   2.3.1 Determination of the Sex of the Child
2.4 Timelines for Prenatal Development
   2.4.1 Germinal Stage
   2.4.2 Embryonic Period
   2.4.3 Foetal Period
   2.4.4 Influences on Prenatal Development
   2.4.5 Teratology
   2.4.6 Stages of Childbirth
2.5 Newborn Reflexes and Newborn Needs
   2.5.1 Newborn Baby
   2.5.2 Newborn Reflexes
   2.5.3 Postpartum Period in Mothers
   2.5.4 Emotional and Psychological Adjustment
2.6 Patterns in Infant Physical Development and Infant Temperament
2.7 Early Childhood: An Overview
   2.7.1 Physical Development
   2.7.2 Cognitive Development
   2.7.3 Language Development
   2.7.4 Intellectual Development
   2.7.5 Social Development
   2.7.6 Emotional Development
2.8 Middle Childhood: Physical Development and Cognitive Development
   2.8.1 Physical Development
   2.8.2 Intellectual Development
   2.8.3 Emotional Development
   2.8.4 Growth Patterns and Obesity
   2.8.5 Attention-Deficit/Hyperactivity Disorder (ADHD)
   2.8.6 Concrete Operational Stage of Cognitive Development
   2.8.7 Social Development: Peer Relations, Divorce and Moral Development
2.9 Answers to Check Your Progress Questions
2.10 Summary
2.11 Key Words
2.12 Self Assessment Questions and Exercises
2.13 Further Readings
2.0 INTRODUCTION

Although conception is a very complex process, it is essential for understanding human development. Conception, also known as fertilization, begins with the fusion of an egg cell and a sperm cell, or gametes.

This unit will cover the significant developments during the prenatal stage and also during infancy. Infancy is the period that follows the neonatal period and includes the first two years of life. During this time, tremendous growth, coordination and mental development occur. The developmental process during infancy occurs in the first 24 months of living and is the foundation of an individual’s physiological and psychological development. Childhood follows infancy, which is further divided into early childhood and later childhood, during which physical, intellectual, emotional and social development takes place at its peak.

2.1 OBJECTIVES

After going through this unit, you will be able to:

- Explain the conception process
- Analyse the impact of heredity and environment on human development
- Describe the timelines for prenatal development
- Identify newborn reflexes and needs of the newborn
- Discuss the patterns in infant physical development and infant temperament
- Examine physical, cognitive and socio-emotional development during early childhood and middle childhood

2.2 INFANCY, NEWBORN AND INFANT

The conception process is very complex and important for understanding human development. Conception, also known as fertilization, begins with the fusion of an egg cell and a sperm cell, or gametes. At birth, a female has all the immature eggs that she will use throughout the course of her life. A male human being starts producing sperm when he reaches puberty (around 1,000 sperms in a second, but this rate slows as the male ages).

From 200 to 600 million sperms are released in the average ejaculation but a rare few make it to the actual egg, and only one sperm is needed to form a zygote (or a fertilized single-celled egg, the earliest form of human beings). As soon as that one lucky sperm begins to penetrate the jellylike outer coating of the egg cell, the egg becomes defensive and the surface of the egg cell hardens to block out any other sperm cell from penetration. The sperm uses digestive enzymes to work its way through the egg’s surface.
Though a female is born with all her eggs, not all these eggs will reach maturity. Approximately only 1 in 5,000 of a female’s eggs reach maturity. When an egg reaches maturity, that egg is then able to produce offspring.

**Cell division**

Once the zygote is formed, the cell goes into the division process. The first division is called mitosis. In mitosis, the zygote divides to form two identical daughter cells. Later, the cell begins another form of division called meiosis. Meiosis produces four daughter cells, each daughter cell containing half the chromosomes of each original parent cell. Meiosis is necessary to keep the chromosome number constant from generation to generation. The divisions will continue, until a human being is formed. The cells move, or migrate, in relation to other cells, forming the first shape of the embryo; this migration is called morphogenesis.

**Gene codes**

Each gamete (egg and sperm) has twenty-three chromosomes, and when the human is completely developed, she will have forty-six chromosomes. Your genes are located on your chromosomes. A gene is a small piece of one chromosome; it is a code for a specific sequence of amino acids in a protein. Each code is different and very complex, which brings about many different traits.

Most people are familiar with genes as a transportation of hereditary traits. Genes can affect whether or not you will be born with attached earlobes, freckles, or a widow’s peak. Genes are the hereditary codes that are passed on to an offspring. Traits, which are caused by your genotype (or genes for a particular trait), can be dominant or recessive. Dependent upon the alleles carried on the chromosomes you received from your parents, your appearance will develop accordingly.

**2.2.1 Prenatal Diagnostic Tests**

There are three purposes of prenatal diagnosis: (1) to enable timely medical or surgical treatment of a condition before or after birth, (2) to give the parents the chance to abort a fetus with the diagnosed condition, and (3) to give parents the chance to “prepare” psychologically, socially, financially, and medically for a baby with a health problem or disability, or for the likelihood of a stillbirth. Having this information in advance of the birth means that healthcare staff as well as parents can better prepare themselves for the delivery of a child with a health problem. For example, Down Syndrome is associated with cardiac defects that may need intervention immediately upon birth. Many expectant parents would like to know the sex of their baby before birth. Methods include amniocentesis with karyotyping, and prenatal ultrasound. In some countries, healthcare providers are expected to withhold this information from parents, while in other countries they are expected to give this information.
Prenatal diagnosis and prenatal screening are aspects of prenatal care that focus on detecting anatomic and physiologic problems with the zygote, embryo, or fetus as early as possible, either before gestation even starts (as in pre implantation genetic diagnosis) or as early in gestation as practicable. They use medical tests to detect problems such as neural tube defects, chromosome abnormalities, and gene mutations that would lead to genetic disorders and birth defects, such as spina bifida, cleft palate, Tay-Sachs disease, sickle cell anemia, thalassemia, cystic fibrosis, muscular dystrophy, and fragile X syndrome.

The screening focuses on finding problems among a large population with affordable and noninvasive methods, whereas the diagnosis focuses on pursuing additional detailed information once a particular problem has been found, and can sometimes be more invasive. Screening can also be used for prenatal sex discernment.

Common testing procedures include amniocentesis, ultrasonography including nuchal translucency ultrasound, serum biomarker testing, or genetic screening. In some cases, the tests are administered to determine if the foetus will be aborted, though physicians and patients also find it useful to diagnose high-risk pregnancies early so that delivery can be scheduled in a tertiary care hospital where the baby can receive appropriate care.

Diagnostic prenatal testing can be performed by invasive or non-invasive methods. An invasive method involves probes or needles being inserted into the uterus, e.g., amniocentesis, which can be done from about 14 weeks gestation, and usually up to about 20 weeks, and chorionic villus sampling, which can be done earlier (between 9.5 and 12.5 weeks gestation) but which may be slightly more risky to the fetus. One study comparing transabdominal chorionic villus sampling with second trimester amniocentesis found no significant difference in the total pregnancy loss between the two procedures. However, trans cervical chorionic villus sampling carries a significantly higher risk, compared with a second trimester amniocentesis, of total pregnancy loss (relative risk 1.40; 95 per cent confidence interval 1.09 to 1.81) and spontaneous miscarriage (9.4 per cent risk; relative risk 1.50; 95 per cent confidence interval 1.07 to 2.11).

Non-invasive techniques include examinations of the woman’s womb through Ultrasonography and maternal serum screens (i.e. Alpha-fetoprotein). Blood tests for select trisomies (Down syndrome in the United States, Down and Edwards syndromes in China) based on detecting cell-free placental DNA present in maternal blood, also known as non-invasive prenatal testing (NIPT), have become available. If an elevated risk of chromosomal or genetic abnormality is indicated by a non-invasive screening test, a more invasive technique may be employed to gather more information. In the case of neural tube defects, a detailed ultrasound can non-invasively provide a definitive diagnosis.
2.3 GENETIC-ENVIRONMENT INTERACTIONS

Heredity is significant in all living organisms because it heredity that determines which traits are passed from the parents to their offspring. It is seen that successful traits are more easily passed along and may even manage to change a particular species over time. Such changes in traits can lead to organisms adapting to certain environments to ensure that survival rates are better.

Heredity is observed in all living organisms. When a cell manages to create an identical copy of itself, the process is called mitosis. As a result, two duplicate cells are created. As a result of this duplication, all traits are passed on. Meiosis, on the other hand, is a different process wherein chromosomes from two parents are combined to form a new organism. As a result, the new organism acquires characteristics from both parents. This combination leads to several variations between individuals and provides an opportunity for more successful traits to be passed on. Over time, these successful traits become dominant and end up being passed on more often than the recessive traits.

You have already learned in the first lesson that both heredity and environment play a major role in the development of an individual. The roles, however, are different. You learned that heredity and environment complement as well as supplement each other. One may be dominant at one time and the other may be dominant at another time. An individual will develop in a balanced manner only if there is a balanced and harmonious interaction between heredity and environment.

All children are born with some traits, physical as well as mental, which have been inherited from their parents. His physical appearance, the manner in which he grows and certain mental tendencies are all reflective of heredity. While we are sure that a human being will produce another human being and not a cat, we cannot ignore the fact that human beings are born with so many variations even if they are born from the same parents. This section will explain how this happens.

Meaning of heredity

According to Robert S. Woodworth heredity the factors that exist in the individual includes at the time of conception, that is, before birth.

According to O.B. Douglas and B.F. Holland heredity comprises all the structures, characteristics, functions or capacities an individual derives from parents, ancestors or species’.

Some basic principles of heredity are:

1. Like tends to beget like: Black-coloured parents generally have black children, tall parents tall children, bright parents bright children, and so on. This holds good of all other characteristics and racial differences. ‘Nature sees to it that each species or genus breeds true to type, except where there are laws governing occasional deviations.’
2. **Principle of variance**: Only certain traits follow hereditary laws. Common observation shows that although like tends to beget like, the resemblances of parents and their offsprings are never perfect. Black-eyed children may be born to brown-eyed parents. Even twins may not exactly look alike.

3. **Principle of convergence of two life streams**: A portion of inheritance comes from the maternal side and the remaining portion is contributed by the paternal side, i.e. the child’s maternal and paternal lines, both contribute about fifty per cent each of his inheritance. More specifically, it is generally assumed that 1/2 comes from parents, 1/4 from grand-parents, 1/8 from great grand-parents and so on from all the other even more remote ancestors.

4. **Principle of chance**: Chance plays an important role, making absolute predictions almost impossible. This is on account of several reasons:
   (i) The pairing of the chromosomes in the state of flux
   (ii) Cell to which the set of maternal or paternal chromosomes goes during the reduction division
   (iii) The particular cell which unites with another in the maternal and paternal lines
   (iv) The pattern of genes in any chromosome
   (v) Genes carried in any particular chromosome
   (vi) Crossing over of genes from one paired chromosome to another
   (vii) How dominant and recessive traits will be distributed according to the three to one ratio, according to Gregor Mendel’s Law (1866), especially if there are less than four children in the family
   (viii) Determination of sex

5. **Principle of dominant and recessive traits**: Some traits are dominant while others are recessive causing apparent exceptions to the principle of like produces like. The union of the best traits of the father with the best traits of the mother produces talented children. Therefore, a talented father or mother must be the offspring of the best combination of the determiners in the germ cells of his or her parents. But such gifted parents may carry on the determiners of genes which are average. There are many chances that when they produce a child, their average traits combine and a child of average calibre may be the result.

   The reasons of variation are still a mystery. All that can be said about variations is that it is a fact.

**Hereditary traits**

Hereditary traits may be divided into two categories: **physical traits** and **mental traits**.
Physical traits include eye-colour, white forelock of hair, colour-blindness, blood type, skin colour, height and several other bodily features. Mental traits include intelligence and musical talents, etc.

It must be remembered that each parent is the inheritor in equal parts from both parents who, in turn, inherit equally from their parents. The stream of life flows on and the child inherits his capital not from his parents but through his parents. This fact explains why a child has the chin of his mother, the forehead of his father, the blue colour of eyes from his grandfather, the hair from his uncle, the nose from his aunt and so on. This also the reason why no two individuals of the same family are absolutely identical!

A number of observations have shown the presence of some sort of determiners in the human life-producing cell, which determine, even before birth, certain traits of the individual. It, however, does not mean that a child must always be exactly like his parents — father or mother. Actually, we observe often that children do not inherit some of the most distinguishing traits of their parents. For example, the parents are of black colour while the child is white. The parents are extraordinary geniuses while the child is an idiot. The child does not resemble his brothers and sisters. According to one view, this happens because the characteristics of the child depend not only upon the parents alone but also grandparents and even great grandparents. Variations are also on account of the chance factor.

It is purely by chance that a particular sperm fuses with a particular ovum to form a zygote. Moreover, in a zygote there are 23 pairs of chromosomes, 23 of which are contributed by the sperm of the father and 23 by the ovum of the mother. Which chromosomes from the ovum will pair with which chromosomes from the sperm is sheer chance. Millions of permutations and combinations are possible for the union of chromosomes, which contain genes. That explains why no two individuals are perfectly identical.

The traits of the ancestors besides those of immediate parents are also transmitted to the offspring through these genes. Therefore, it is possible that the child will possess certain traits that are traceable to one or more of the ancestors, even though they may not be found in either of the parents.

Recent researches

Revolutionary discoveries in genetics have been made in recent years. Even artificial or synthetic genes have been produced under laboratory conditions. After the test tube baby, there has occurred a phenomenal advancement in genetic surgery. The task of controlling the production of future human beings involves the control of two genetic chemicals — DNA (Deoxyribonucleic acid which molecule is the throbbing centre of life) and RNA. The DNA molecule governs our past, our present and our future and controls all aspects of body formation. It is like a computer containing in its arrangement of atoms, the key to heredity, ageing, disease, mind and memory. Any control of the genetic material in DNA will involve the synthesis in the laboratory of artificial DNA with the atoms arranged in a specific order to produce a particular type of individual, the new man.
2.3.1 Determination of the Sex of the Child

Of the twenty-three pairs of chromosomes, one pair is responsible for determining the sex of the child. This pair is called the sex chromosome. In the male, one member of the pair is an X chromosome, while the second member, which is smaller in size, is called a Y chromosome. Females have two X chromosomes. At the time of conception mother has no alternative but to contribute X sex chromosome while the father may contribute X or Y chromosome. If a child receives the same chromosomes X from the parents, she will be female child, if father's contribution is in the form of Y chromosome, it will be a male child. From this, we may easily conclude that it is totally incorrect to blame either of the parents for the sex of the child. If at all there is some role, which may be considered dominating, it is of the father not of the mother as she is neutral in providing the X chromosome always for the conception.

Identical and fraternal twins

Normally at the time of fertilization, a sperm of the male fertilizes a single ovum. It results in the birth of a single offspring at one time. But sometime this normal function is disturbed and there are cases of multiple births—the birth of two or more offspring at a time. There are two distinctly different types of twins, namely, identical twins and fraternal twins.

**Identical twins:** Usually the fertilization of one ovum by one sperm produces the offspring. Sometimes, however, it so happens that when the ovum splits, because of fertilization the two parts fail to unite. The result is that each part develops into a complete individual. The twins formed thus are called identical because they, exactly, carry the same genes. They possess almost the same characteristics and are definitely of the same sex.

**Fraternal twins:** Normally in the ovary of the human female during each menstrual period, only one ovum is matured but it may happen that two or more ova may mature simultaneously and be fertilized at the same time by two different sperms. The result is that two different zygotes are produced. The individuals thus produced are known as fraternal twins. They have different combinations of chromosomes and genes as both ova are fertilized by different sperms. Fraternal twins, therefore, are sure to differ in many traits. Like the identical twins, they need not belong to the same sex. They may belong to the same or opposite sex.

2.3.2 Influence of Environment

In a broad sense, environment means cultural, economic, intellectual, moral, physical, political, religious and social factors which influence the development of the individual. All these factors influence and mould the behaviour of a person from time to time. Two individuals born with the same biological heritage differ because of differing environments. Sometimes, it is said that environment is nothing but a process under suitable conditions to change the shape of raw material just as
a potter does while making toys of mud. But this analogy is not exactly applicable to a human being who is an animate one. He is not only influenced by the environment but also influences the environment. Environment includes the home, the neighbourhood, the peers, the school and a host of other agencies. No individual is the same at maturity as he was when he was born. The environment changes him. Everything that influences the child apart from himself what he inherits from his parents and ancestors is his environment. In this context, we may note the following definitions of environment.

O B Douglas and B F Holland (1947) defined environment as, ‘a word which describes, in the aggregate, all of the extrinsic (external) forces influences and conditions, which affect the life, nature, behaviour and the growth, development and maturation of living organisms’.

R S Woodworth and D G Marques (1948) stated, ‘Environment covers all the outside factors that have acted on the individual since he began life’.

E G Boring, H S Longeld and H P Fed wrote, ‘The environment is everything that affects the individual except his genes’.

**Is Heredity Important or Environment?**

**Heredity is all in all.** According to A E Wiggam (quoted by G W Allport in 1948), ‘Nearly all the misery and nearly all the happiness in the world are due not to environment. Differences among men are due to differences in the germ cells with which they are born’.

**Environment is all in all.** J B Watson (1925) considered environment all in all in human development. He wrote, ‘There is no such thing as inheritance of capacity, talent, temperament, mental constitution and characteristics. There is nothing from within to develop. You do not need anything else in the way of raw material to make a man, be that man a genius, a cultured gentleman, a rowdy or a thug’.

Many psychologists agree with the view that, ‘inborn nature is the sole determining factor of the possibility to which the child can be educated’. They do not find any weightage for the influence of environment. They give all importance to nature or heredity which determines the development of the young ones.

Another school of thought believes otherwise. It gives all credit to nurture. The adherents of this school think that a child may be developed to any level according to the upbringing he receives. They claim to make Gandhis and Jawahars of any babies given into their charge from birth provided the children live in the selected environment for a long time.

The problem is very important for education. If heredity is everything and we get a ready-made personality by birth and it is to develop according to its own inborn tendencies which are already there in the little child and if all the influences of environment are meaningless, then why establish so many schools and other institutions for the reform and guidance of children? On the other hand, if it is all about nurture, then why should we tolerate anybody less than Gandhi or Nehru in
calibre? In the words of Woodworth, 'shall the gardener pin his hope on careful cultivation of the soil or on selection of the best seed?'. Both the schools have their own claims and arguments.

### 2.4 TIMELINES FOR PRENATAL DEVELOPMENT

Over a relatively brief nine-month period, a single-celled zygote transforms into a fully formed foetus made up of around 1 trillion cells. This period of astonishing growth consists of three distinct phases: the germinal stage, the embryonic stage, and the foetal stage.

The entire zygote is contained within the **zona pellucida**, a delicate envelope that forms its boundaries.

#### 2.4.1 Germinal Stage

The germinal stage is sometimes referred to as the zygotic period and represents the first two weeks of development from the time of conception through the development of the cluster of cells known as the embryo. First, the zygote begins to divide and become a blastocyst, which will attach itself to the uterine wall during a process known as implantation.

This process takes place over 8 to 10 days to 2 weeks and ends with egg attachment to uterine wall. **Cleavage** — the mitotic division of the zygote into several cells; begins at 24 hours after conception. Division rates are different and this yields **heterogeneity** — variability in the rate of change of different parts.

1. As cleavage occurs, a cluster of cells called the morula take shape in the zona pellucida. After the 5th day post-conception, the cells begin taking in nutrients; this is the first interaction with the environment (the fallopian tube).
2. A fluid filled cavity forms in the morula thus facilitating the change into a blastocyst — hollow sphere of cells. The blastocyst has two kinds of cells. One set of small cells are the inner cell mass, which gives rise to the organisms, whereas the other set of flat cells surrounding the inner cell mass called the trophoblast, form a protective barrier b/w the inner cell mass and the environment.
3. As the blastocyst moves further into the uterus, the trophoblast cells branch out into the mother’s uterus to the blood vessels. This begins implantation, the process by which the blastocyst becomes attached to the uterus. This action marks the transition to the embryonic period.

#### 2.4.2 Embryonic Period

The embryonic period lasts from fertilization to the beginning of the third month. The human being begins to develop very distinctly after morphogenesis. Cells begin to take on specific functions and structures in a process called differentiation. For the first time, the actual size of the daughter cells begins to grow. Till this point...
the cells that were divided were hardly larger than the parent cells, causing no growth in size.

The cells begin to develop into layers. The upper layer is the ectoderm, which later becomes the skin and nervous system; the middle layer is the mesoderm, which becomes the muscles, circulatory system, and connective tissue; and the lower is the endoderm, which becomes the linings of the digestive and respiratory tracts.

At this point, the foetus also has developed a circulatory system; however, it is slightly different from adults in that it shunts blood away from its unused lungs. Organs like the spinal cord and heart have developed. The effect of the embryonic period on the mother is significant. This is the period when the mother may experience ‘morning sickness’ symptoms such as nausea, fatigue, and loss of appetite. The uterus at this time develops from the size of a hen’s egg to bigger than an orange and can be felt above the pubic bone. Up to 8 weeks; ends when all major organs have formed. The embryo is surrounded by the amnion, a thin, tough, transparent membrane that holds the amniotic fluid, which protects the embryo from damaging movements.

1. Surrounding the amnion is the chorion, the precursor to the placenta, a complex organ of tissue from mom and embryo that acts as a filter allowing oxygen, nutrients, and waste to be exchanged. Waste is filtered through the mother’s kidneys and excreted.

2. While the trophoblast is forming the placenta and other membranes, the inner cell mass is busy evolving into organs. Then the inner cell mass separates into two layers:
   a. Ectoderm – outer; skin, nails, teeth, eye lens, inner ear, and nervous system
   b. Endoderm – inner; digestive system and lungs
      Then a third layer develops between these two:
   c. Mesoderm – Middle; muscles, circulatory system and inner skin

3. Organogenesis – Process of organ formation that takes place during first two prenatal months

4. Human growth follows two patterns from now until adolescence:
   a. Cephalocaudal – Head to toe (arms then legs)
   b. Proximodistal – Inside to outside (shoulder before wrists)

2.4.3 Foetal Period

The foetal period lasts from the third to the ninth month of pregnancy. From 9 weeks to birth (30 weeks); bones harden and the infant is able to survive outside the mother. At 17 to 18 weeks, foetal activity declines as the higher regions of the brain develop. This period of inhibited activity persists until six months. Then activity
increases. At this point, the foetus experiences endogenous (internal to foetus) and exogenous (external) movement. Movement is essential for limb development.

The foetus is now looking more human-like and grows to resemble a baby more every day. The growth of the body begins to speed up to catch up with the large size of the already developed head (from the embryonic period). The epidermis (outer layer of skin) begins to be polished, developing eyelashes, eyebrows, head hair, and fingernails.

**Month-by-month breakdown**

During the third month of pregnancy, the difference between sexes is visible. By the fourth month, the foetus begins to look more human. By the fifth month, the mother is able to feel the movements of the foetus. By the end of the seventh month, the foetus weighs about three pounds and its eyes open. Toward the end of the foetal period, the foetus usually begins to shift in position, with its head nearing the cervix of the mother. Fat accumulation beneath the skin causes weight gain in the foetus; it should weigh around seven pounds by the end of the ninth month.

**Prenatal care**

Appropriate prenatal care includes the following:

- Screening for conditions/disease
- Providing educational literature
- Spreading information on social services
- Offering information on immunizations and future medical care
- Providing information on delivery and nursing

**Sensory capacities**

1. **Motion**: The vestibular system controls balance and develops and functions at five months. This helps the foetus sense changes so that it can adjust.
2. **Vision**: It is said that at twenty-six weeks (6.5 months) the foetus senses light.
3. **Sound**: At 4 months, the foetus responds to sound; foetuses prefer to hear the mother’s voice postnatally because they are already familiar with it while in the womb.
4. **Learning**: Studies show that newborns prefer their mother’s heart rate over other heart rates whatever was read to them prenatally managers to comfort them after they are born.

**2.4.4 Influences on Prenatal Development**

Miscarriage/spontaneous abortion

- Pregnancy terminates before developing organism is mature enough to survive outside the womb.
Embryo separates from uterine wall and is expelled by the uterus.

- 15-20 per cent of all pregnancies end in spontaneous abortion, most in first 2-3 months (some before even the mother had knowledge of pregnancy)

- Elected abortions yield risk to the mother as well.

**Maternal characteristics**

1. The mother’s conditions (physical, emotional, psychological) can affect the growing foetus.
2. Evidence shows that the mom’s attitude about pregnancy affects the child in the long run; anxious mothers give birth to hyperactive and irritable infants.
3. Malnutrition – if the foetus does not receive enough nutrients before birth, malnutrition or death can take place. Not just 3rd-world countries, there are many instances of poor prenatal care in the US.

   Nowadays, mothers are unusually concerned about their ‘weight/figure’
4. Mother’s age is a factor. Prime child-bearing age is 22-28. Teenage mothers and women over 40 are more likely to have labor complications.

### 2.4.5 Teratology

Teratology is defined as the study of gross structural malformations which are observed at birth and can be alluded to some developmental disturbance.

**Teratogens:** These are environmental agents that ‘can’ affect normal development and lead to abnormalities or death. There are many types of teratogens:

1. **Disease:** Illness and infections can affect the foetus prenatally and perinatally.
   a. **Rubella:** German measles; it’s the fever that causes blindness in infants.
      We have vaccine.
   b. **AIDS:** 50 per cent of infants born to HIV positive moms acquire the disease; via prenatal barrier or during delivery.
   c. **Rh incompatibility:** Rh complex exists on surface of red blood cells. Mom and baby need to have same, either Rh+ or Rh-. If not, second child will be harmed b/c mom’s body created antibodies to fight off the second child that mom’s body perceives as an antigen (foreign substance). Only when mom is negative and infant is positive.
   d. **Fever:** If mother has high fever, foetus’ core body temperature may get too high, thus, brain damage occurs; if foetus or infant gets fever, may result in MR or death.

2. **Drugs:** Nearly 60 per cent of all women consume some form of drug during pregnancy. Here are 5 types of drugs and their known effects:
   a. **Prescriptions:** Thalidomide given for nausea to pregnant women; effects included no limbs, vision and hearing defects. Aspirin can also cause abnormalities.
b. Tobacco: 26 per cent higher chance of stillborn child or death at birth. Infants have lower birth weight and more likely to die of SIDS or Sudden Infant Death Syndrome.

c. Alcohol: A heavy drinker may take up to 3 ounces of pure alcohol per day. If so, 71 per cent of these infants were abnormal and/or have foetal alcohol syndrome – small head, underdeveloped brain, congenital heart disease, facial malformations and joint anomalies.

d. Cocaine: Addictive stimulant, infants of cocaine using mothers are irritable, liable to react excessively to stimulation, uncoordinated, and slow learners.

e. Methadone/heroin: Infants are born addicted to these and must receive it after birth to aid with withdrawal; these infants are premature, underweight, prone to respiratory problems, and have low attention spans.

3. Environment
   a. Abuse: Any trauma that mom receives (e.g., get kicked in stomach) can damage foetus and result in death.
   b. Radiation: High doses can cause prenatal death, spontaneous abortion, and/or MR.
   c. Pollution: what mom breathes, foetus receives as well.

2.4.6 Stages of Childbirth
Let us now look at the birth process, the stages and interventions.

A. Three Stages of Labour:
   1. First – from first intense contraction until cervix (opening b/w uterus and vagina) is fully dilated.
   2. Second – begins when baby is pushed headfirst into vagina; contractions = 1 minute in duration and 1 minute apart.
   3. Third – when baby emerges from vagina and uterus contracts, contractions expel placenta and other membranes

B. Perinatal hazards (Delivery Complications)
   1. Forceps/suction
   2. Oxygen deprivation (anoxia)
   3. Long contractions
   4. Infection
   5. Precipitate delivery – takes place too rapidly; too much force
   6. Trauma (breech = butt first; transverse = lateral)
C. Use of Drugs
1. Different drugs are used during childbirth including: anaesthetics, analgesics and sedatives.
2. Effects on infant may occur because drugs pass through the placenta barrier, blood brain barrier, and through the umbilical cord. Long-term effects are not supported empirically (1992).
3. Administration methods:
a. IV
b. IM
c. Epidural (spinal block)

D. Childbirth strategies
1. **Standard** – hospital; waiting room; to be mother is strapped in; ailation is monitored; fully effaced cervix shows ready for delivery; doctor examines; woman in labour wheeled to delivery room; baby is delivered; taken and cleaned up; returned; mother and baby wheeled to recovery room.
2. **Leboyer method** – Named after the French obstetrician Frederick Leboyer; the characteristics of this method are as follows:
   - No violence to infant
   - Doctor places infant on mother’s stomach
   - Uses warm lights and/or bath
   - Mother caresses infant before cutting cord
3. **Natural or prepared** – based on parent confidence
   - Usually no drugs involved
   - Flexible; lots of variance
4. **Lamaze method** – Named after the French obstetrician Ferdin and Lamaze; strategies (mainly breathing) to help cope with pain during delivery so as to use less or no medication
5. **Douls** – Greek word for woman helper. They are part of the birthing team and serve as midwives.

E. Family participation: Traditional childbirth methods keep family members out of the delivery process.
   However, today fathers go to regular doctor appointments, attend prenatal and Lamaze classes, receive labour ‘coaching’ and are present in delivery room.

F. Prematurity and Low Birth Weight
These are two very different concepts. Premature baby is not the same as a baby with low birth weight.
1. **Prematurity**: When the infant is born before the 38th week of gestation, it is said to be premature. Leading cause of death to preterm babies is immature lungs; second is weak immune system.
2. Low birth weight: when the infant weighs 2500 grams (83 oz; 5.5 lbs) or less at birth whether premature or not it is a low birth weight baby. Such babies experience fetal growth retardation.

2.5 NEWBORN REFLEXES AND NEWBORN NEEDS

Postnatal period is the period immediately after the birth of a child and extending for about six weeks. Another term would be postpartum period, as it refers to the mother (whereas postnatal refers to the infant). Less frequently used is puerperium. It is the time after birth, when the mother’s body, including hormone levels and uterus size, returns to the normal state as before pregnancy.

In scientific literature, the term is abbreviated to P X. So that ‘day P5’ is read as ‘the fifth day after birth’. This is not to be confused with medical nomenclature that uses G P to stand for number of pregnancy and outcome of pregnancy.

2.5.1 Newborn Baby

Upon its entry to the air-breathing world, without the nutrition and oxygenation from the umbilical cord, the newborn must start adjusting to life outside the uterus. The infant starts adapting to extra uterine life, the most significant physiological transition until death.

Measures of Neonatal Health

An infant may look deformed at first. The average weight of the newborn in India = 2.3 to 3 kg.

1. Infant’s viability: After birth, the hospital staff evaluate infant’s vital signs: heart rate, lung capacity, startle response, and other reactions.

2. Physical state: Apgar scale is used to check heart rate, respiratory effort, muscle tone, reflex responsiveness and colour. This scale is used at 1 and 5 minutes after birth. The rating scale means indicates good health.

3. Behavioural state: Brazelton Neonatal Assessment Scale – used to assess physical, psychological and neurological functioning; 20 reflexes are assessed. Low scores can mean brain damage.

2.5.2 Newborn Reflexes

The infant is born with basic reflexes that are genetically carried survival mechanisms. Some reflexes – coughing, blinking and yawning are persist throughout life.

There are four primary reflexes which vanish with 3-4 months:

1. Sucking reflex – To fulfill nutritional needs
2. Rooting reflex – To turn towards touch it suck
3. Moro reflex – To alert parent and convey discomfort
4. Grasping reflex – To grasp finger on being touched in the palm
2.5.3 Postpartum Period in Mothers

Birth marks the beginning of the parent-child relationship.

1. **Appearance**: How the infant is shaped and looks can determine the parents’ response to it.

2. **Attachment**: Primary, physical, emotional and psychological bond between infant and primary caregiver (usually mother) that is thought to need to take place immediately after birth. This is yet another critical period of development.

3. **Adjustment**: The postpartum period is the adjustment period after delivery. Varies from person to person but on average, lasts 6 weeks till return to normal pre-pregnancy state (more like 9 months). Changes occur very quickly.

   A woman delivering in a hospital may leave the hospital as soon as she is medically stable and chooses to leave, which can be as early as a few hours postpartum, though the average for spontaneous vaginal delivery (SVD) is 1–2 days, and the average caesarean section postnatal stay is 3–4 days. During this time, the mother is monitored for bleeding, bowel and bladder function, and baby care. The infant’s health is also monitored.

**Physical Adjustments**

a. **Involution**: It is the process by which the uterus returns to its pre-pregnancy size 5-6 weeks after birth. Nursing helps to contract the uterus at a fast rate.

b. Sudden and dramatic hormone production changes; if not nursing, will menstruate 4-8 weeks after birth. If nursing, menses are delayed.

c. On average, sexual intercourse is avoided for 6 weeks (or even longer)

   The mother is assessed for tears, and is sutured if necessary. Also, she may suffer from constipation or hemorrhoids, both of which would be managed. The bladder is also assessed for infection, retention and any problems in the muscles.

   The major focus of postpartum care is ensuring that the mother is healthy and capable of taking care of her newborn, equipped with all the information she needs about breastfeeding, reproductive health and contraception, and the imminent life adjustment.

   Some medical conditions may take place in the postpartum period, such as Sheehan’s syndrome and peripartum cardiomyopathy.

   In some cases, this adjustment is not made easily, and women may suffer from postpartum depression, posttraumatic stress disorder or even puerperal psychosis.

   Postpartum urinary incontinence is experienced by 23.4 per cent to 38.4 per cent, likely higher during pregnancy.
2.5.4 **Emotional and Psychological Adjustment**

Due to all the changes involved with a newborn, many women experience anxiety, depression, and/or difficulty coping with stress. Postpartum depression affects as many as 70 per cent of women; less often long-term with working moms who return to work.

Early detection and adequate treatment is required. Approximately 25 per cent - 85 per cent of postpartum women will experience the ‘blues’ for a few days. Between 7 per cent and 17 per cent may experience clinical depression, with a higher risk among those women with a history of clinical depression. Rarely, in 1 in 1,000 cases, women experience a psychotic episode, again with a higher risk among those women with pre-existing mental illness. Despite the widespread myth of hormonal involvement, repeated studies have not linked hormonal changes with postpartum psychological symptoms. Rather, these are symptoms of a pre-existing mental illness, exacerbated by fatigue, changes in schedule and other common parenting stressors.

Postpartum psychosis (also known as puerperal psychosis), is a more severe form of mental illness than postpartum depression, with an incidence of approximately 0.2 per cent.

Psychological adjustments are also delayed in terms of:

a. Your time; newborns are extremely demanding
b. Your lifestyle changes; activities revolve around child
c. Budget changes
d. Network of friends may change.

2.6 **PATTERNS IN INFANT PHYSICAL DEVELOPMENT AND INFANT TEMPERAMENT**

Infancy is the period that follows the neonatal period and includes the first two years of life. During this time, tremendous growth, coordination and mental development occur. The developmental process during infancy occurs in the first 24 months of living and is the beginning foundation to an individual’s physiological and psychological development. Humans experience rapid growth during this period in which many physical changes often take place. Newborns are essentially immobile and have very little voluntary control over many behaviors.

The infant’s motor skills continue to evolve as muscles develop in the body. Psychologists believe the motor skill of an infant is a developmental process supported by the elements of nature and nurture (Santrock, 2004). They also theorize that infants who are constantly encouraged and stimulated by their caregiver are likely to achieve certain milestones at a much more expedient rate. Infants are born with certain reflexes such as grasping, sucking, coughing, yawning and blinking.
In the first three months, the infant is unable to roll over and support or control head movement. The infant’s ability to stretch and kick is also more vigorous at this time. At four to six months, the baby should be able to roll over and hold its chest and head up. By seven to nine months, they should be able to sit and possibly stand. Walking capabilities should develop between twelve or thirteen months.

Brain development is also part of the physical process. Infants are not born with all the interconnections formed in their brains. ‘At birth and in early infancy, the brain’s 100 billion neurons have minimal connections’ (Santrock, 2004, p. 85). The synaptic connections within the brain begin to increase as the infant develops and responds to its environment. The infant’s brain dramatically changes each time it learns a new skill or encounters a new experience. ‘Infants are born not only with a brain ready to respond to critical features of the environment, but that the brain can react to particular features of the particular, individual environment’ (Keller, 2007, p.6).

Within a few weeks of birth, the infant is able to respond to loud noises by blinking, or waking from sleep. The newborn can focus on objects 12 inches in distance and by three months, the infant should be able to examine visuals that are more complex as well as a variety of colours, sizes and shapes. By the end of three months they may even be able to mimic facial expressions. Infants are born with the ability to cry in order to communicate discomfort. Babbling, squealing, cooing, gurgling and laughing become their added means of communication around four months of age. As their attention span increases, they will begin to decipher certain sounds and also recognize his or her name.

Piaget’s theory of cognitive development suggests that humans have an innate concept or framework that already exists at a given moment in order to organize and interpret information through the construction of schemas, which involves the two processes of assimilation and accommodation. From this standpoint, an individual can incorporate new information into existing knowledge and accommodate their schemas to new information. It is also through this theory that the human cognitive process is separated into gradually evolving stages. The time frame between birth and two years is known as the sensorimotor stage. In this stage the infant begins to construct an understanding of the world by correlating sensory experiences with physical actions. This theory also suggests that infants have a limited ability to understand that objects and events continue to exist even when they cannot be seen, heard or touched directly (object permanence).

The socio-emotional process of infants begins to develop from the responsiveness and sensitivity of their caregivers. It is during this process that the infant formulates an attachment to their caregiver from the establishment of trust. Since the infant’s first experience is usually with its mother they can distinguish the mother’s voice because of their abstract memory of being inside the womb ‘based on prenatal experiences, newborns prefer their mother’s voices to the voice of another woman’. Thus a nurturing and trusting relationship with the mother is vital to this process of development and helps to establish good temperament in
childhood. A loving environment also promotes a sense of well-being within the infant, which makes them more tolerant to having new experiences with other strangers. The learning of other relationships in the future is based on infant’s inherent curiosity and motivation to learn.

**A baby’s exposure to experiences affects his development**

Every experience an infant is exposed to affects his developmental process. The elements of nature and nurture intertwine and shape the outcome of each experience. It is also the result from these early experiences that influence the later stages of human development. Ultimately it is safe to conclude that heredity, nutrition, health, stimulation and environment are the sustaining factors, which determine whether or not an infant can achieve optimal physical, cognitive and socio-emotional growth, which will be carried over into the next stage of human development.

Most infants learn to walk, manipulate objects and can form basic words by the end of infancy. Another characteristic of infancy is the development of deciduous teeth.

During this period the behaviour of the infant is activated by innate needs which create tension and in order to reduce tension, the infant is motivated for action which gratify his needs. The infant’s behaviour operates purely on an altruistic level unrelated to any social world but gradually social events become the prime motivator of behaviour, for example, hunger motivates the infant for action (crying) and he requires the bottle or breast for the gratification of his need and his actions become more learned and goal-directed. He strives to imitate previously successful actions and thus socialization begins.

The child depends on someone for the fulfilment of his basic needs. “Dependency is a type of operant behaviour that has as its required environmental events affectionate and nurturant behaviour performed by another person.”

In early infancy, the behaviour of the child is controlled by the principle of operant conditioning. Social environment in which an infant is born has a great influence on his later development. The sex of the child, ordinal position in the family and socio-economic condition of the parents have bearing on the development of personality. In our country, a male child is preferred to a female and discriminative treatment is given right from the birth of the child.

According to Sears, “a child is allocated to one sex or the other, and society begins to implant in him motives, interests, skills and attitudes appropriate to such membership.”

The first phase, as a matter of fact, interlinks the biological endowment of the child with his social environment where through the process of constant interaction his personality develops. Conducive social environment is very essentially required for the development of a harmonious personality.
Deciduous teeth

Deciduous teeth, also called milk teeth, baby teeth, or primary teeth, are the first set of teeth in the growth development of humans and many other animals. They develop during the embryonic stage of development and erupt - become visible in the mouth - during infancy. They are usually lost and replaced by permanent teeth, but in the absence of permanent replacements, they can remain functional for many years.

Milk teeth start forming during the embryo phase of pregnancy. The development of milk teeth starts at the sixth week of development as the dental lamina. This process begins at the midline and then spreads back into the posterior region. By the time the embryo is eight weeks old, there are ten areas on the upper and lower arches that will eventually become the milk teeth. These teeth will continue to form until they erupt in the mouth. In the deciduous dentition there are a total of twenty teeth: five per quadrant and ten per arch. In most babies the eruption of these teeth begins at the age of six months and continues until twenty-five to thirty-three months of age. The first teeth seen in the mouth are the mandibular centrals and the last are the maxillary second molars. However, it is not unheard of for a baby to be born with teeth.

2.7 EARLY CHILDHOOD: AN OVERVIEW

Let us go through the different phases of development during early childhood.

2.7.1 Physical development

Growth in physical dimension during the period of 2 to 6 years of age is not as accelerated as that experienced in infancy. The child begins to assume the body proportions of an adult. Growth of legs is rapid and the legs represent about half of one’s total height. The head growth is slow and trunk growth is intermediate. Generally the weight of a three-year-old male child is about 33 pounds and is 38 inches tall. The girls are a bit lighter and shorter. By age of five years the average height for boys is 43 inches and the average weight is 43 pounds. The height and weight are affected by a number of variables such as height of parents, nutrition, and illness, etc.

In addition to size and weight, the child undergoes other physical and physiological changes. The muscles develop at a very rapid speed. Larger muscles are far better developed than the small and fine ones. Physiological changes occur in respiration, heart rate slows down and blood pressure goes up steadily. Brain has developed 90 per cent of its adult weight. Nerve fibres in the brain areas come close to maturity level by the end of preschool period.
2.7.2 Cognitive development

The child in early childhood develops a variety of motor skills which are repeated. Self-feeding, self-dressing, bathing, brushing the hair, playing with toys, use of pencil, jumping, hopping, etc. develop at the age of 5 to 6 years.

The perceptual development begins from mass movements to differentiation and integration. Following is the table of norms for children from 2 years to 5 years of age.

The term gross motor development denotes physical skills that use large body movements, generally involving the entire body. Fine motor skills are necessary to engage in smaller, more precise movements, normally using the hands and fingers. Fine motor skills are different than gross motor skills which require less precision to perform.

It is to be noted that fine motor skills and gross motor skills have been discussed in detail in Unit 4.

### Developmental Norms (Bulher, Gessell Terman)

<table>
<thead>
<tr>
<th>Motor</th>
<th>2 years</th>
<th>3 years</th>
<th>4 and 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walks without Skips, helps, jumps, runs.</td>
<td>Free and active movement, responds to music.</td>
<td></td>
</tr>
<tr>
<td>Fine motor coordination</td>
<td>Copying.</td>
<td>Can match shapes, sees similarities and differences</td>
<td>Can name colours.</td>
</tr>
<tr>
<td>Perceptual</td>
<td>Identifies self, matches colours.</td>
<td>Can fit nets, boxes.</td>
<td>Matches shapes and colours, distinguishes names.</td>
</tr>
<tr>
<td>Vocalization</td>
<td>200 words, uses few words. commands.</td>
<td>900 words, follows 2000 to 3000 words, can define familiar words.</td>
<td>Can repeat 4 digits—</td>
</tr>
<tr>
<td>Adaptive behaviour</td>
<td>Bowel control. Builds blocks, can draw a man.</td>
<td>4 digits, draws body with details.</td>
<td></td>
</tr>
</tbody>
</table>

2.7.3 Language Development

The language development of the infant begins from birth cry. The ten-month-old child is able to use one word but by the end of the first year, his vocabulary increases to 3 or 4 words. Good home environment and early childhood training help in the development of vocabulary. It has been reported by several studies that there is positive correlation between intelligence and language development. The following table shows the development of vocabulary:
### 2.7.4 Intellectual Development

The intellectual development of the child is accelerated after the age of two because now he begins to explore his social environment and acquires new experiences.

Following are the major characteristics of intellectual development:

- **(a)** Child begins to form concepts of physical and social reality.
- **(b)** By the age of six the child develops perception of size, shape, colour, time and distance, etc.
- **(c)** Memory increases at a very rapid speed. The child can learn by rote memorization.
- **(d)** Creativity develops in children and imagination begins to grow.
- **(e)** Thinking and reasoning develops in relation to concrete material.
- **(f)** Span of attention increases from seven minutes to twenty minutes and interest in exploring the environment increases.
- **(g)** The child is now able to use symbols in language, draw symbolic play and engage in problem solving.
- **(h)** The child asks questions about his environment.

### 2.7.5 Social Development

A child is born in a social environment where his personality development is shaped in accordance with the norm of the society:

- **(a)** Sense of trust and mistrust develops in children themselves and their environment.
- **(b)** Feeling of autonomy develops in children. They begin to explore their environment independently.
- **(c)** Social environment expands beyond home.
- **(d)** Children of both sexes play together without any discrimination. They actively participate in group games in which physical energy is used such as hide and seek.
(e) They learn to cooperate with others and make friends on shared interests and similar personality traits.

(f) Children take interest in fairy tales and animal stories.

(g) Negativism increases between the years three to six. It is a product of social situations. It is said that the more the child is frustrated by adult interference, the more negativistic his behaviour will be.

(h) Girls are more dominating than boys in play situations.

(i) The child seeks social approval of his action.

2.7.6 Emotional Development

Emotions play an important role in life and contribute in the personal and social adjustment of the individual provided they are directed into wholesome expression. Emotions have the following effects on the developing individual:

(a) Emotions give us energy to face a particular situation in life.

(b) They work as motivators of our behaviour.

(c) Emotions add pleasure to our everyday experiences in life.

(d) They maintain our interest in work.

(e) They influence our adjustment in the society.

(f) Highly emotional conditions disturb our mental equilibrium; our reasoning and thinking are disrupted.

(g) Emotions serve as a media of communication between individuals and guide the individual to modify in order to conform to the social standard.

(h) Emotional deprivation leads to personality maladjustment.

2.8 MIDDLE CHILDHOOD: PHYSICAL DEVELOPMENT AND COGNITIVE DEVELOPMENT

Let us go through the different phases of development during middle childhood.

Middle childhood is an important phase of life. Redl has characterized this period as the time, “when nicest children often begin to behave in the most awful way”. The parents and teachers are annoyed with children and vice-versa. It is a period which requires proper guidance and counselling by parents and teachers for the adequate adjustment of children in the society.

G. Stanley Hall in his book Adolescence has given the following description of children from 8 to 12 years of age.

“The years from 8 to 12 years constitute the unique period of human life ... the brain has acquired nearly its adult size and weight, health is almost at its best, activity is greater and more varied than even before or than it will ever be again..."
and there is peculiar endurance, vitality, and resistance to fatigue. The child develops a life of his own outside the home circle and its natural interests are never so independent of adult influence.”

### 2.8.1 Physical Development

There is slow increase in weight and height during late childhood. Girls are ahead of boys by two years. Changes are shown in all general proportions of the body. Children are free from diseases at this age. Physiologically, the girls at the age of 11 are a full year ahead of the boys. Shedding of milk teeth and growth of permanent teeth changes the appearance of mouth; flattening of forehead, sharpening of the nose, broadening of the chest, and motor skills develop through play. Following are the marked changes:

- **(a)** increased manual dexterity;
- **(b)** increased strength;
- **(c)** increased resistance to fatigue; and
- **(d)** accuracy and endurance increase in relation to games.

W.F. Dearborn writes, “There is organic need for strenuous physical activity. Skeletal muscles are developing and require exercise. Nine to eleven years old dash breathlessly from place to place, never walk when they can run, never run when they can jump or do something more strenuous.”

### 2.8.2 Intellectual Development

The following changes in the intellectual development occur during the period—six years to twelve years of age.

- **(a)** The child begins to make clear distinction between himself and the outer world. He seeks reality in his environment.
- **(b)** The concept of natural laws becomes almost fully developed by 12 years of age.
- **(c)** It is the time for eager absorption of information and ready accumulation of ideas. Learning and memory become more efficient because the child enters formal schooling.
- **(d)** Capacity for logical thinking increases. The child becomes increasingly efficient in selecting, developing and applying cognitive operations in relation to concrete objects.
- **(e)** Interest in science stories and mechanical operations reaches its height at this age.
- **(g)** Imaginative plays are given preference to.
- **(h)** Use of reading of factual material, scientific and mathematical information and fiction, with a realistic theme increases.
(i) Use of causal relationship in thinking about physical, mechanical and natural phenomena in the environment increases.

(j) Early imaginative fears disappear by the age of 12.

(k) High ability to generalize is shown by children of ten to twelve years of age. Children are more concerned with immediate cause-and-effect relationship and current happenings.

(l) Flavell (1977) has suggested that the mind of the child during this period has a better general understanding of problems. He has a much better sense of what a conceptual problem is. He can rationally analyse a problem. He is able to deal with the environment in a flexible, efficient and symbolic manner. He has at his disposal a set of operations or rules that are logical although concrete.

2.8.3 Emotional Development

Emotions are very important for life. Without emotions life becomes monotonous and dull. They change with the age of the child. Following are the characteristics of emotional changes during this period:

(a) Early pattern of emotional expression changes. By the end of late childhood the child learns to control his emotional expression in social situations.

(b) The emotional responses of the child become less diffuse, random and undifferentiated.

(c) Emotions are expressed even in the absence of concrete objects.

(d) Emotions are most contagious during childhood, because children are highly suggestible and dependable on others.

(e) Early childhood fears of animals, high places and noise disappear and fear of supernatural, imaginary creatures, fear of failing, being ridiculed and being different appear.

(f) Anger is caused by thwarting, teasing, making unfavourable comparisons with other children, interruption of activities in progress, ridicule by peers or elders, and negligence, etc.

(g) Parental favouritism causes jealousy in childhood.

(h) Girls are more jealous than boys in their classes because of preferential treatment given to boys.

(i) Joy, pleasure, love, curiosity, grief and affection appear in childhood.

2.8.4 Growth Patterns and Obesity

It has been observed that brain and nervous system developments continue during middle childhood. As the central nervous system develops gradually, the individual becomes exhibiting complex behavioral and cognitive abilities.
A growth spurt takes place in the brain early in middle childhood. Brain development during middle childhood is denoted by growth of particular structures, that too, the frontal lobes. These lobes, located in the front of the brain just under the skull, facilitate planning, reasoning, social judgment, and ethical decision making, including others. In case, the frontal lobes get damaged then the individual is unable to plan and take decisions. The most anterior (front) portion of the frontal lobes is the prefrontal cortex, which appears to be responsible for personality.

As the size of the frontal lobes increases, children are able to engage in increasingly difficult cognitive tasks, such as performing a series of tasks in a reasonable order.

Lateralization of the two hemispheres of the brain, also takes place during middle childhood, along with maturation of the corpus callosum (the bands of neural fibers connecting the two cerebral hemispheres), and other areas of the nervous system. It is remarkable to note that children can perform concrete operations around 7 years of age when the brain and nervous systems have developed a certain amount of neural connections. With the development of these neural connections, a child’s ability to perceive and think about the world advances from an egocentric perspective to a more tangible and systematic way of thinking.

Motor skills

Motor skills refer to behavioural abilities. These are further divided into gross motor skills and fine motor skills. Gross motor skills involve the use of large bodily movements, and fine motor skills involve the use of small bodily movements. Both gross and fine motor skills continue to improve during middle childhood.

Children more often indulge in physical activity like running, jumping, skating and so forth. As a result, children become more adept at gross motor activities.

From early in preschool, children learn and practice fine motor skills. Preschool children indulge in various curricular activities like cutting, pasting, drawing, painting, writing and so forth. Some children even learn playing musical instruments which further refines their fine motor skills and develops their sense of confidence and competency.

Health

Minor illnesses may help children learn psychological coping skills and strategies for dealing with physical discomforts.

Major illnesses for school age children are the same as major illnesses for younger children such as influenza, pneumonia, cancer, human immunodeficiency virus (HIV), and acquired immunodeficiency syndrome (AIDS). But obesity, or being 20 percent or more above one’s ideal weight, is a special health problem that occurs during the school years. India is also increasingly encountering the problem of child obesity due to high consumption of junk food.
2.8.5 Attention-Deficit/Hyperactivity Disorder (ADHD)

Children with disruptive behaviour disorders are commonly impulsive and are unable to make proper decisions. The most common disorder in this group is attention deficit hyperactivity disorder (ADHD). Such children are indecisive, aggressive and act without giving any thought to the results of their actions. They appear to be insensitive, heartless, and nasty to others, but the truth is that they are not thinking clearly at all. Children with conduct disorder (CD) are hateful, insensitive and malevolent on purpose. Unlike the child with ADHD, they are aware of their actions and indulge in hurtful behaviour intentionally.

2.8.6 Concrete Operational Stage of Cognitive Development

Jean Piaget is a cognitive theorist who has been working on child development for the last more than forty years. He has produced enormous literature on Developmental Psychology. Here only the names of stages have been given. The first stage is called the sensorimotor period when the infant learns and develops sensorimotor skills by manipulating objects in his environment. In the second stage which runs from two to seven years, the child begins to acquire vocabulary with which he represents objects and experiences he perceives. The child can extract concepts from experience and can manipulate objects in his mind. This stage is called preoperational thought. The third stage is called concrete operation period which begins from seven and continues up to twelve years of age. The child begins to think logically and rationally about problems which he faces.

The fourth stage is known as formal operations period and begins from twelve years of age and continues till the end of adolescence. The adolescent can think, reason and analyse beyond the realm of concrete experiences. He can generalize or form opinion about abstract concepts like love, honour, truth and justice, etc. According to Piaget, the child moves from one stage to the next in an established pattern. The rate of development may vary in different individuals and cultures but the sequence of development is universal.

2.8.7 Social Development: Peer Relations, Divorce and Moral Development

The process of socialization confines to home and neighbourhood environment in early childhood but as the child enters school his social circle widens. Following are the major changes:

(a) It is the period when children form peer group of their own sex and remain outside the home. Peer group becomes an important agent of socialization.
(b) It is the period of peak unruliness in school and home.
(c) Complaints of disobedience are highest in percentage during this period.
(d) Children reject adult standards and circle of friends widens.
(e) Delinquency begins more during this period than adolescence.
Stages of Development

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(f) Sex differentiation becomes sharp. Girls play with girls and boys play with boys. There is sex difference in play activities. Girls are more antagonistic towards boys.

(g) Boys are more rebellious than girls and their groups are more organized than the groups of girls.

(h) Children take interest in group games. Boys and girls form their own groups. Group consciousness develops and the child becomes less selfish, self-centred and aggressive but more cooperative and outgoing.

(i) Social consciousness develops very rapidly. It is called “gang age” period when the child associates himself with the peer group of the same age who feel and act together. The child shows great loyalty to his gang. He conforms to the stand of his gang.

Divorce brings about a drastic change in the life of a child irrespective of his/her age. When a child witnessing his parents breaks their marriage, leading to the continuous absence of one parent in the household—all leads to creating a difficult circumstance to live.

Children in the age group 7-11 years of age respond differently to this situation because at this stage of their life they are vulnerable to the developing life relationships and self-esteem during this stage.

Moral development alludes to the formation of values which determine the ‘right’ and ‘wrong’ for an individual. Values are underlying assumptions about standards that govern moral decisions.

Piaget’s cognitive stages of development and Erikson’s psychosocial stages of development discussed in Unit 1 are substantially helpful in understanding the concept of **moral development** in middle childhood.

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Check Your Progress

1. How does fertilization begin?
2. What is meiosis?
3. Why are prenatal diagnostic tests conducted?

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2.9 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Conception, also known as fertilization, begins with the fusion of an egg cell and a sperm cell, or gametes.

2. In mitosis, the zygote divides to form two identical daughter cells. Later, the cell begins another form of division called meiosis. Meiosis produces four daughter cells, each daughter cell containing half the chromosomes of each original parent cell.
There are three purposes of prenatal diagnosis: (1) to enable timely medical or surgical treatment of a condition before or after birth, (2) to give the parents the chance to abort a fetus with the diagnosed condition, and (3) to give parents the chance to “prepare” psychologically, socially, financially, and medically for a baby with a health problem or disability, or for the likelihood of a stillbirth.

2.10 SUMMARY

- The conception process is very complex and important for understanding human development. Conception, also known as fertilization, begins with the fusion of an egg cell and a sperm cell, or gametes.
- Once the zygote is formed, the cell goes into the division process. The first division is called mitosis. In mitosis, the zygote divides to form two identical daughter cells. Later, the cell begins another form of division called meiosis.
- Each gamete (egg and sperm) has twenty-three chromosomes, and when the human is completely developed, she will have forty-six chromosomes. Your genes are located on your chromosomes.
- There are three purposes of prenatal diagnosis: (1) to enable timely medical or surgical treatment of a condition before or after birth, (2) to give the parents the chance to abort a fetus with the diagnosed condition, and (3) to give parents the chance to “prepare” psychologically, socially, financially, and medically for a baby with a health problem or disability, or for the likelihood of a stillbirth.
- Heredity is significant in all living organisms because it heredity that determines which traits are passed from the parents to their offspring. It is seen that successful traits are more easily passed along and may even manage to change a particular species over time.
- Hereditary traits may be divided into two categories: physical traits and mental traits.
- Over a relatively brief nine-month period, a single-celled zygote transforms into a fully formed foetus made up of around 1 trillion cells. This period of astonishing growth consists of three distinct phases: the germinal stage, the embryonic stage, and the foetal stage.
- Postnatal period is the period immediately after the birth of a child and extending for about six weeks. Another term would be postpartum period, as it refers to the mother (whereas postnatal refers to the infant). Less frequently used is puerperium.
- Infancy is the period that follows the neonatal period and includes the first two years of life. During this time, tremendous growth, coordination and mental development occur.
Stages of Development

NOTES

- Deciduous teeth, also called milk teeth, baby teeth, or primary teeth, are the first set of teeth in the growth development of humans and many other animals. They develop during the embryonic stage of development and erupt - become visible in the mouth - during infancy.
- Jean Piaget is a cognitive theorist who has been working on child development for the last more than forty years. He has produced enormous literature on Developmental Psychology.

2.11 KEY WORDS

- Postnatal period: It is the period immediately after the birth of a child and extending for about six weeks.
- Involution: It is the process by which the uterus returns to its pre-pregnancy size 5-6 weeks after birth.
- Infancy: It is the period that follows the neonatal period and includes the first two years of life.

2.12 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Write a short note on cell division.
2. How does heredity and environment influence development of an individual?
3. List the stages of childbirth.
4. Mention the measures of neonatal health.
5. Briefly mention postpartum period in mothers.
6. List the salient features of physical and cognitive development during middle childhood.
7. Identify the concrete operational stages of cognitive development.

Long Answer Questions

1. What is the significance of prenatal diagnostic tests?
2. Explain the timelines for prenatal development.
3. Discuss the patterns in infant physical development.
4. Explain physical, cognitive and socio-emotional development in early childhood.
2.13 FURTHER READINGS


UNIT 3  BASIC CONCEPTS

3.0 INTRODUCTION

In this unit, you will study about the various aspects of development, the stage of lifespan development, the advantages and disadvantages of the experimental and non-experimental methods of research, Erik Erikson’s theory of psychosocial development, Jean Piaget’s theory of intellectual (cognitive) development, the basic principles of growth and development in children, the stages of the prenatal period, the significance of the neonatal period and the main features of adolescence, adulthood and old age.

3.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the various aspects of development
- Explain the stage of lifespan development
- Analyse the advantages and disadvantages of the experimental and non-experimental methods of research
• Describe Erik Erikson’s theory of psychosocial development
• Identify the stages of intellectual (cognitive) development as propounded by Piaget
• Examine the basic principles of growth and development in children
• List the stages of the prenatal period
• Analyse the significance of the neonatal period
• State the main features of adolescence, adulthood and old age

3.2 ASPECTS OF DEVELOPMENT

Aspects of development refer to the physical, mental (or cognitive), emotional and social development which take place from conception to childhood. All aspects of development are inter-related. It is very important to understand the different facets of the development of the child so that necessary care can be taken by parents, teachers and others. An adequate understanding of the difficulties associated with the children at different stages, would enable one to provide right kind of facilities for the overall development of the child. The four major aspects of development are physical growth, motor development, cognitive development and social-emotional development.

1) Physical growth: It refers to the physical and psychomotor changes that take place in an individual over the course of its development. It is studied through the speed and pattern of development, mechanics of developmental change and individual variations seen in the process of development.

The psychical development is very rapid in the early infancy years (birth to 2 years). At the time of birth, a baby is usually 18 to 20 inches long and weighs around 3 kg. Within a year, the growth is seen to multiply three fold. By the time the child is 2 years old, his length becomes 33 inches approximately and weight roughly around 25 pounds. The weight of brain at the time of birth is almost ¼ of its final weight.

The upper part of the body is well developed at birth while a significant degree of growth is seen in the lower part of the body after birth, where an increase in the length of the arms, legs and trunk is seen. A rapid growth is seen in the first 9 months. For instance, postural changes are seen in the first 2 months. The baby learns to sit by 7 months, begins to creep by 10 months, is able to stand by self around 13 months and tends to walk by 13 to 15 months. Around 6 months, milk teeth appear. This development follows a proximo-distal sequence.

The rate of growth during the early childhood stage (2 to 6 years) is much slower as compared to the infancy stage. At the age of 6 years, the child becomes approximately 43 to 45 inches tall and an average increase
of 3 to 5 pounds of weight takes place annually. Boys are found to be slightly taller than girls and the head grows at a much slower rate. By the age of 6 years, the child attains 90 percent of adult size. Hands and feet grow bigger and hand skills used for brushing, painting and drawing get established. A child begins to acquire a gender identity around the age of 6 years.

During the later childhood stage (6 to 12 years), the overall appearance of the child changes and the physical growth is initially slow. The arms and legs grow faster than the trunk and the child appears tall and thin, loses his milk teeth, permanent teeth begin to appear and the sense organs, muscles and brain are more or less mature. Around the age of 12 years, sex differences begin to appear and the child continues to grow in strength, speed and coordination needed for motor development.

During the adolescence stage (12 to 18 years), all types of changes like biological, physical, social, intellectual, moral and so forth take place. In the early adolescent years, a sudden growth spurt that usually lasts for 2 years, in terms of a rapid increase in height and weight is seen. Usually this growth spurt takes place 2 years earlier in girls compared to boys. By the time girls become 17 years old and the boys becomes 18 years old, majority of them attain 98 percent of their final height. In addition, sex differences become prominent and primary and secondary sexual characteristics appear. For instance, pubic hair grows, voice of boys becomes rough but the voice of girls becomes sweet. Both boys and girls begin to become quite conscious of their body and attraction towards the opposite gender begins to occur. Due to increased hormonal activity an increase in sexual drive is seen but the capacity to establish mature heterosexual relationships and true intimacy develops only by late adolescence.

2) Mental development: It refers to development of various cognitive abilities such as attention, perception, observation, memory, imagination, thinking, problem solving ability, intelligence, language and so forth. The development pattern of all these abilities tends to vary at different stages of development.

At the infancy stage, a child is seen to react to external stimuli like light, colour, sound, temperature and others. In the first year, perceptual skills develop and child learns to imitate, discriminate and recognize to some extent. This stage is also known as the sensory motor period where the child is mostly engaged in manipulation of objects and he or she tends to seek physical satisfaction from immediate sensory experience. By the time child is 1 year old, he begins to speak one or two words and tends to respond to simple questions or requests. The child gradually acquires the sense of form, shape, size and colour through imitation, manipulation and play. The child is quite inquisitive and can differentiate between people known to him and people who are strangers but is unable to understand the difference between fact and fiction.
By the time, child reaches the early childhood stage he/she begins to explore things and begins to ask the ‘why’ question. This stage marks the beginning of development of general intelligence, perception, memory, learning and problem solving and language skills. This stage also marks the natural shift from the sensorimotor stage to logical and social egocentricity. The child seems to have little understanding of reversibility of operations and may find it difficult to understand another’s point of view. The child is also seen to regard everything that moves to be alive unless it is broken or damaged (Animism).

In the later childhood stage, mental development takes place rapidly. A significant growth in his imaginative skills and thinking capacity is seen. This is also the Piaget’s stage of concrete operations, where the child begins to establish cause and effect relationship and develops a better understanding of the concept of length, distance, time, area and volume. In addition, significant improvement is seen in the child’s vocabulary, social communication skills, creativity, understanding, reasoning, memory and attention span.

By the time the child reaches the adolescence stage, he/she attains intellectual maturity as a result of interaction between maturation, experience, education and training. Their decision-making skills, imagination and logical thinking skills improve significantly. By the end of adolescence, children become fairly prepared mentally to live a full-fledged adult life.

3) Emotional development: Emotional development refers to development of various emotions like anger, fear, joy, grief, disgust and others. In simple words, this term refers to the pattern of emotional development at various different stages of life.

For instance, at the infancy stage children start displaying different emotions like fear, anger and love and so forth but these reactions are diffuse and gross. When a baby is almost a week old, the infant starts smiling and gurgling to show his/her feeling of pleasure and contentment. By the age of 2, it is easy to differentiate a child’s emotion that is whether they are sad, angry, happy or feeling hungry.

At the early childhood stage the emotions children display become more definite along with their intensity. They become curious and keen on asking questions and feel satisfied, when someone answers their questions. Also in early childhood children become more mature as compared to infancy in forms of their emotional reactions. Emotions like fear and jealousy become increasingly specific.

During late childhood children show intense feelings of love, hate and fear. At this stage their emotional responses are more rational and they can even control them. Around 10 years of age, they become more obedient and friendly. For instance, they can display their anger when they do not like someone or have had a fight.
During adolescence children become emotionally sensitive as they experience change in their roles at home, school and society. They also go through many physical, emotional and social changes. Society and parents expect them to behave in a more mature manner like an adult. Adolescents also get attracted to members of the opposite sex, if they fail to make friends or perform well at school they get affected emotionally and also have conflicts with their friends and family.

4) **Social development:** Children at the time of birth are neither social nor unsocial. In the process of growing up, they develop social skills and learn to engage in behaviour that make them socially acceptable in the society. A child’s social and emotional behaviour is closely linked.

During, the first few months, the child begins to make active social contact with people in his social environment like his parents, care takers, grandparents and others. They begin to differentiate between family members and strangers. Social responses in terms of smiling and laughing occur and by the time they become 18 months old, they become increasingly interested in their playmates. Ability to obey commands and draw other people’s attention appears around the age of 2 years.

During the early childhood stage, the child has one or two friends of his own choice with whom he identify and play for short intervals and at times engage in quarrels and fights. The need for recognition, approval, praise and to help others and to be able to better express themselves develops.

In school, the child begins to increasingly engage in group activities and desires to be in the same gender groups. The strong desire for friendship leads to cooperative behaviour. The child also shows interest in the outside world and develops different qualities like taking responsibility, self-control, self-reliance, obedience and others.

In the adolescence stage, the influence of peer group over them and their decisions is strongly seen. The adolescents end up acquiring many habits, attitudes, ideals and social skills. Friendship with opposite gender, hero-worship, growth of patriotic spirit, development of a sense of sacrifice and leadership are seen in adolescence.

### 3.3 LIFESPAN PERIODS

The term lifespan development refers to age-related changes that occur from birth, throughout a person’s life till old age. The study of how humans grow and change throughout their entire life is called lifespan development. Developmentalists have broken lifespan into the following nine stages:

1. **Prenatal development:** Prenatal development takes place from the time of conception. Formation of the body begins and during this time proper
nutrition and an environment free from teratogens such as lead, radiation and other factors, needs to be provided to the child in order to avoid any difficulties or concerns during the time of birth. During prenatal development, both the mother’s mental and physical health and adequate fetal development is of key concern to ensure smooth labour and delivery.

2. **Infancy and toddlerhood:** The body goes through many changes during the first 2 years of life. An infant starts walking and talking within a short span of time. The caregivers see changes in their behaviour from erratic feeding and sleep schedules to be able to gain some control and move around as a mobile and energetic child.

3. **Early childhood:** At the age of 3 to 5 years, a child starts going to preschool followed by a formal school. He/she starts learning language, gaining a sense of self and greater independence. The child also gains a better understanding about the workings of the physical world.

4. **Middle childhood:** At the age of 6 to 11 years, children start learning about social relationships through interaction with friends and fellow students which are beyond their family environment. The children learn about their abilities, acquire academic skills and also how to compete with others. They tend to compare themselves with others and end up having a strong need for recognition. The rate of growth slows down and their motor skills get refined at this stage of life.

5. **Adolescence:** It is considered as a period of dramatic change marked by various physical, mental and socio-emotional changes that take place during puberty. Puberty is marked by an overall physical growth spurt and sexual maturation. The adolescent also experiences cognitive changes as they start thinking about new possibilities and their understanding of abstract concept like love, fear and freedom improve. Children at this stage are quite impulsive, are high on risk taking behaviour, carry a sense of invisibility and are at a high risk of having sexually transmitted infections. They are high on sexual experimentation and promiscuous behaviour.

6. **Early adulthood:** The early twenties to thirties are considered as the early adulthood years. Love and work are the most important things at this stage of life. At this stage of life, one often tries to put in lot of effort to make a better future and to earn a good status in society for self. However, at this stage of life, there is always a high risk of people getting involved in violent crimes and substance abuse.

7. **Middle adulthood:** The late thirties to the mid-sixties is considered as middle adulthood years. At this stage, people become more productive and are at their peak in their love and work related aspects of life. At this stage of life, people try to gain expertise in their fields and respective careers. They are also able to better understand a problem and find solutions for the same. An increase in their ability to think more rationally, logically and
realistically is seen and they seem capable of making more informed decisions in life.

8. **Late adulthood:** Late adulthood is sometimes subdivided into two or three categories such as the “young old” and “old old” or the “oldest old”. Young old are the people between 65 and 79 and the “old old” or those who are 80 years and above. The main difference between these groups is that “young old” are similar to midlife adults who are working and are healthy, productive and active. But the “old old” refers to people who remain active and productive and are largely living independently but due to old age always run the risk of developing various health problems like arteriosclerosis, cancer, cerebral vascular disease, and dementia to name a few.

10. **Death and dying:** This stage is the inevitable part of one’s life, where one realizes that each one of us is a mortal being. Although the thought of death or dying makes one uncomfortable and anxious. But a deeper and a more meaningful understanding of death and dying can make one feel more confident, in control and it may enhance one’s acceptance of this stage of life.

### 3.4 EXPERIMENTAL AND NON-EXPERIMENTAL METHODS

Experimental method is one of the most widely used method of research as it is considered as the most scientific and objective method of studying the effect of one variable over the other. In this method, the researcher tries to study the effect of an independent variable (predictor variable) over the dependent variable by manipulating it under various conditions in order to establish a cause and effect relationship.

An experimental research can be conducted in a lab in which one group is called as an experimental group and the other group is called the control group. It is only the experimental group that is being manipulated unlike the control group, which is given a placebo. The control group is also called the placebo group or the inert condition or the non-manipulative group. A laboratory-based experiment usually gives a high level of control and reliability, thus, making it more objective and scientific. This method is usually used to establish a cause and effect relationship between two or more variables.

True experiments are used in human growth and development research whenever they are feasible. This is because they are the only way to prove the existence of a cause and effect relationship between two variables. A true experiment will include all parts of the experimental process. In this method, the researchers make a hypothesis and set down to prove or disprove it by comparing the scores obtained using the experimental and the control group and statistically checking for the difference of significance.
There are several advantages of experimental method over the non-experimental method:

- Researchers have high level of control.
- There is no limit to the subject matter or industry involved.
- It provides conclusions that are specific.
- Results of experimental research can be replicated.
- It helps in determining cause and effect.
- This method can be used easily in combination with other research methods.

There are several disadvantages of experimental method over the non-experimental method:

- Results are highly subjective due to the possibility of human error.
- It can create situations which are not realistic.
- This method involves a lot of time.
- It can involve ethical or practical problems over which one can have only some degree of control.
- It is not possible to always control extraneous variables.
- Often human responses are difficult to measure using the experimental research method.

Compared to the experimental research design, in the non-experimental research, a researcher has no control over the independent or predictor variable or subjects, but can only rely on interpretation, observation or interactions to arrive at a conclusion. This research method is better suited to study correlations, surveys or case studies and cannot be used to establish a cause and effect relationship. It has high validity and can be generalized on a large population. It does not involve as much manipulation, assignment, or control as does a true experiment. Data obtained using non-experimental research can be used to formulate theories or hypothesis that can be more rigorously tested later.

Non-experimental research falls into three broad categories: single-variable research, correlational and quasi-experimental research, and qualitative research. Single variable research aims to study a particular variable in depth instead of conducting a statistical relationship between the two variables. In correlational research, the researcher tries to study how the two variables of interest are related to each other. In quasi-experimental research, the researcher tries to study the effect of an independent variable that has already taken place and cannot be manipulated. In qualitative research, the researcher deals with qualitative data and tries to study those variables that cannot be analysed using statistical techniques.
There are **several advantages of non-experimental method** over the experimental method.

- The effort required in a non-experimental method is relatively less as compared to the experimental method. For instance, survey can also be conducted using shallow data gathering.
- The cost involved in conducting such an experiment is also relatively low.
- When dealing with ethical concerns, non-experimental method has a clear advantage over the experimental method.
- To gain a better understanding of human behaviour, anthropological studies are often used. It helps the researcher to preserve the natural, observable activities of a population.
- When one wishes to study a correlational study or undertake case studies then non-experimental method is the right choice.

There are **several disadvantages of non-experimental method** over the experimental method.

- This method does not allow for the gathering of data post-treatment and does not give us in-depth results as compared to experimental research.
- This method is not suitable if one wishes to find cause and effect relationships; or manipulate predictor variables.

### 3.5 STAGES OF DEVELOPMENT

Erik Erikson and Piaget have studied the various stages of development in children in great depth. Erik Erikson propounded the theory of psychosocial development. The details of this theory are given as follows:

#### 3.5.1 Erik Erikson’s Theory of Psychosocial Development

Erik Erikson’s (1959) theory of psychosocial development has eight distinct stages. In each stage, a person experiences a psychosocial crisis which can be positive or negative. If an individual successfully completes each stage, then it would result in a healthy personality. But if an individual is unable to complete a stage then his ability to complete further stages will be reduced and it is likely to result in an unhealthy personality. The details of all the 8 stages are as follows:

1. **Trust vs Mistrust**

   The first stage of Erikson’s psychosocial development is trust vs. mistrust which takes place during the first year of life. In this stage an infant is uncertain of the world around him/her. In order to resolve the feeling of trust vs. mistrust proper care should be provided by the primary caregiver. The infant require care which should be reliable and consistent, in order to develop a sense of trust and to feel secure in threatening situations. Success in this stage will lead to hope.
Once an infant has developed trust then he/she has hope that whenever a crisis will come there will be someone to support.

Failing to acquire the virtue of hope will lead to the development of fear. If the care provided by the caregiver has been harsh or inconsistent, then the infant will develop a sense of mistrust, is likely to be high on anxiety and insecurities. The infant is not likely to have confidence in the environment surrounding him or in his abilities to influence any event. Researches by Bowlby and Ainsworth have also emphasized the effect of quality of early experiences of attachment on the kind of relationships children have with others in later stages of their life.

2. Autonomy vs Shame and Doubt

The second stage of Erikson’s psychosocial development is autonomy vs. shame and doubt. It occurs between 18 months to approximately 3 years. During this time the child starts developing physically, begins to move around on his own and acquires more skills such as the skills involved in eating, dressing, moving around and so forth. This shows that the child is becoming more independent and is gaining autonomy. For example, walking away from their mother, picking a toy to play with and making choices about what they like to wear, to eat and others.

Parents should allow their children to explore the limits of their abilities by providing an encouraging environment which is tolerant of failure. That is instead of working for them, they should work with them. For example, parents can allow and encourage the child to try to remove and wear clothes on his own and assist him as and when required; thus, giving him the sense that the child is capable of doing several things by himself. It is important for the parents to create a balance. They must not do everything for the child, but if the child fails at a particular task they must not criticize the child for any failure. The main aim of this stage is to enable children to gain a sense of self-control without loss of self-esteem.

Being able to successfully resolve the conflict at this stage leads to the development of the virtue of will. If at this stage, the child is encouraged and supported and is allowed to execute as much independence as is possible, then they feel more secure and become more confident in their own ability to survive in the world.

But, if they are often criticized and are over controlled by their parents and are not given enough opportunity to assert themselves, then they are likely to feel more insecure and inadequate. These children tend to become overly dependent on others even for little things, shirk away from responsibility, may lack self-esteem and may feel a sense of shame or doubt in their abilities.

3. Initiative vs Guilt

The third stage of Erikson’s psychosocial development is initiative vs. guilt. In this stage, children try to assert themselves. Children develop quite fast and parents may see them as being aggressive. During this period children tend to interact with other children at school, begin to plan activities, make up games and initiate activities
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with others. Play is very central at this stage of development as through play children develop interpersonal skills. If given this opportunity, children will develop a sense of initiative and feel secure in their ability to lead others and make decisions.

But if this tendency is hampered, either through criticism or control then children develop a sense of guilt. They may feel like a nuisance to others and will remain as followers who lack self-initiative. Children also start asking many questions at this stage as their thirst for knowledge grows. If the parents treat the child’s questions as a nuisance or see them as embarrassing in nature, then the child may feel guilty for “being a nuisance”. Too much guilt can make the child slow to interact with others and this may inhibit his creativity.

Some degree of guilt is necessary as it enables the child to exercise self-control and have a conscience. Thus, a healthy balance between initiative taking and ability to deal with guilt is essential and this leads to the virtue of purpose.

4. Industry vs Inferiority
The fourth stage of Erikson’s psychosocial development is industry vs. inferiority. It occurs between 5 and 12 years. At this stage children learn to read and write, do sums and do things on their own. Teachers start playing an important role in the child’s life as they inculcate specific skills. Peer groups become important for children and become a major source of their self-esteem. At this stage children try to win approval of the society by showing that they are competent enough and start developing a sense of pride in whatever they accomplish. If children are encouraged and reinforced for their initiative, they start feeling confident but if this initiative is not encouraged or is restricted by parents or teachers, then the child begins to feel inferior and doubts his own abilities and, therefore, may not reach his or her potential.

The ability to deal with failure is an essential skill as it helps children to develop a sense of modesty. The right balance between competence and modesty leads to the development of the virtue of competence.

5. Identity vs Role Confusion
The fifth stage of Erikson’s psychosocial development is identity vs. role confusion. It occurs during adolescence, which is 12-18 years. Children become more independent and begin to think about their future in terms of career, relationships, families, housing and so forth. During this stage, adolescents try to search for a sense of self and personal identity, by exploring their personal values, beliefs and goals. At this stage the child will have to learn the roles he/she will occupy as an adult, and the adolescent will re-examine his identity and will try to find out exactly who he or she is.

According to Erikson, this stage involves the development of two identities namely, the sexual and the occupational. Sexual identity refers to developing a reintegrated sense of self regarding what one wants to do and be and begin to behave in appropriate sex roles. Initially, children may feel uncomfortable in their body and later they learn to adapt and grow with these changes.
Ability to successfully resolve the conflicts inherent in this stage, leads to the development of the virtue of infidelity, which refers to one’s ability to commit oneself to others even when there are significant differences in thinking styles.

Inability to establish a sense of identity within society can lead to role confusions. Children who face role confusions are usually not sure about themselves and their role in the society. This role confusion leads to identity crisis and may make children experiment with different lifestyles, for example, work, education and political activities. If children are pressurized to adopt a particular kind of attitude or develop one-sided perspective, then it can lead to rebellion and formation of a negative identity. It can also make one feel quite unhappy and dissatisfied.

6. Intimacy vs Isolation
The sixth stage of Erikson’s psychosocial development is intimacy vs. isolation. It occurs during young adulthood between 18 to 40 years. In this stage, the major conflict is regarding forming intimate and loving relations with others. These relationships are formed with people outside the family where we begin to share ourselves more intimately with others and look for long-term commitments with someone other than the family. If a person successfully completes this stage then he/she will be able to form a good, safe and caring relationship. He/she is likely to have happy relationships and may carry a sense of commitment, safety and care within a relationship. Avoiding intimate relationships and fearing commitment will lead to isolation, loneliness and can also lead to depression. Being able to successfully resolve the conflicts inherent in this stage are likely to lead to the virtue of love.

7. Generativity vs Stagnation
The seventh stage of Erikson’s psychosocial crisis takes place during middle adulthood (40 to 65 years) and is termed as generativity vs. stagnation. Generativity refers to “making your mark” by creating positive changes that will benefit other people in the society. We give back to society by raising our children, being productive at work, and also by getting involved in community activities. When we are successful in contributing to society we feel useful and accomplished, but if a person fails to contribute then he/she feels stagnant, shallow and unproductive. Such people tend to feel disconnected or uninvolved with their community and with society as a whole. Being able to successfully resolve the conflicts inherent in this stage are likely to lead to the virtue of care.

8. Ego Integrity vs Despair
Ego integrity vs. despair is the eighth and final stage of Erik Erikson’s stage theory of psychosocial development. It begins around 65 years of age and ends at death. At this stage, an individual’s productivity reduces and they start exploring life as a retired person. They tend to evaluate their life whether they have accomplished something or not. If we see our lives as unproductive, we tend to feel guilty about
or our past, or feel that we did not accomplish our life goals and become dissatisfied with life and develop despair. This often leads to depression and hopelessness. If one sees his life as a success then he/she is likely to feel content, happy and complete and will have the courage to accept death without fear. Being able to successfully resolve the conflicts inherent in this stage are likely to lead to the virtue of wisdom.

3.5.2 Piaget’s Stages of Intellectual (or cognitive) Development

Piaget focused more on understanding various aspects of intellectual or cognitive development. The details of the four stages of cognitive development given by him as follows:

1. Sensorimotor Stage (Birth through ages 18-24 months)

This is the first stage of Piaget’s theory of cognitive development. It starts from birth and carries on till 18-24 months. At this stage, infants are only aware of what is around them and tend to focus on what they see, they are doing, and the physical interactions with their immediate environment. As they do not know how things react, they are constantly experimenting with activities such as shaking or throwing things, putting things in their mouths, and learning about the world through trial and error. Soon these children try to engage in goal-oriented behaviours with the idea of obtaining desired results.

As the physical mobility of children increase in terms of crawling, standing and walking, it leads to increased cognitive development. Around the end of the sensorimotor stage, language development takes place which later facilitates development of symbolic abilities.

2. Preoperational- Toddlerhood (18-24 months) through early childhood (age 7)

This is the second stage of Piaget’s theory of cognitive development. It begins from toddlerhood to 7 years of age, where they begin to think about things symbolically. In this stage, children become more mature, they start engaging in make-believe play activities. Their thinking is based more on intuition and they find it difficult to understand complex concepts like cause and effect, time and comparison. They also develop memory and imagination which helps them to differentiate between past and future.

3. Concrete operational- Age 7 to 11

This is the third stage of Piaget’s theory of cognitive development. In this stage children start thinking more logically. It begins around 7 years of age and continues until approximately 11 years of age. This stage is quite important as during this stage there is a shift from earlier stages of development, that is, now children start being more abstract and hypothetical in their thought. Although children are able to think more logically about concrete and specific things but they still experience some difficulty in dealing with abstract ideas.
4. **Formal operational—Adolescence through adulthood**

This is the fourth stage of Piaget’s theory of cognitive development, which begins at the age 11-plus. Children by this stage are able to logically use symbols related to abstract concepts, such as algebra and science. They can also form hypotheses, think about multiple variables in a systematic way, and are able to see things from a multiple perspective. They also develop the capacity to deal with abstract concepts and relationships like justice. According to Piaget, formal operational stage is the final stage of cognitive development and continuation of intellectual development in adults depends to a great deal on accumulation of knowledge over time.

### 3.6 **PRINCIPLES OF DEVELOPMENT**

There are twelve main principles of growth and development in children. These principles have been discussed briefly here.

1. **Development follows a pattern:** Development takes place in a sequential orderly manner, for example, a person can stand before he walks and can draw a circle before he can draw a square. That is, the control of the body and also the improvement in structure first develops in the head and then moves to the other parts of the body. This is known as cephalocaudal sequential development that takes places in physical aspects of body. Children learn to gain control over the trunk muscles before they learn to gain control of the muscles of arms and legs. A similar pattern of development is seen in motor and social development and play of children. Children initially engage in self-centered play activities followed by group play. When it comes to language children learn to babble first and learn to talk later.

2. **Development proceeds from general to specific responses:** Development moves from general to specific. This can be seen in the behaviour of infants and young children. For example, a baby first makes random movements before he/she is capable of holding a specific object. He makes random kicking with his legs before he can coordinate the leg muscles well enough to crawl or to walk. Similarly, in emotional spheres of development, a baby responds to all the strange objects with a general sense of fear and later the child learns to give a fear response to specific stimuli only. Much in the same manner, the child initially tries to reach for the object as a whole and later learns to hold its specific parts.

3. **Development is a continuous process:** Development is a continuous process, although there are stages of development. But still the growth is continuous, that is, it starts from the time of conception and continues until the person matures. Development of both physical and mental traits continues until the traits reach their maximum growth. However, illness, starvation,
malnutrition, environmental factors or some abnormal conditions in the child’s life affect the growth process. Let us understand this with the help of an example. Speech does not come over-night. It develops from the cries and other sounds made by the baby at birth.

4. Although development is continuous process, yet the tempo of growth is not even.

5. Different aspects of growth develop at different rates: Different aspects of growth develop at different rates, that is, all parts of the body do not grow at the same rate, nor do all aspects of mental growth take place equally. Creative imagination develops rapidly in childhood, but reaches its peak during youth. Also, rote memory and memory for concrete objects and facts develop more quickly than memory for abstract and theoretical materials.

For example, the brain attains its mature size around the age of 6 to 8 years. It gains much in organization after that age. The feet, hands and nose reach their maximum development early in adolescence. Children learn new things mostly in the first five years of life rather than throughout their life. Adolescence is the time when genital systems develop.

6. Most traits are correlated in development: Most of the traits are correlated in development. Children whose intellectual development is above average tend to be more healthy and social, but those who have mental defectiveness have a smaller stature than normal children. A correlation is seen between high intelligence and sexual maturity.

7. Growth is complex. All its aspects are closely inter-related: All aspects of growth are inter-related that is mental development of a child is related to his physical growth and needs. Any physical defect in our body will affect our attitude and social adjustment. For example, there is a close relationship between a child’s total adjustment at school and his emotions, his physical health and his intellectual adequacy. If someone is emotionally disturbed then they may have difficulty in eating and sleeping.

8. Growth is a product of the interaction between heredity and environment: Our growth is influenced by heredity and environment; they work together and play an important role in the growth of an individual. Heredity and environment start having their influence right from conception. From the beginning, the environment plays an important role in the life of a new organism. For example, climate, the conditions at home and the type of social organization in which the individual lives influences his growth.

9. Each child grows in his own unique way. There are wide individual differences: Each child grows in a unique way and each child is different
from the other. Differences in individuals are influenced by the environment and hereditary. The differences in the rate of development of an individual remain constant. For example, a child who is slow at learning in early childhood will continue to do so in later years as well. The aspects from the environment which influence the growth of an individual are climate, health conditions, opportunities for learning, motivation to learn and social relationship.

10. **Growth is both quantitative and qualitative:** Growth is both quantitative and qualitative that is a child not only grows in size but also matures in structure and functioning. When a person is young his/her emotions are simple. But when a person grows, the number of experiences in his life, keep on increasing and they start producing complex emotional reactions to complicated situations.

11. **Development is predictable:** The rate at which each child develops is fairly constant. However, we can always predict the range within which the mature development of a child is likely to fall during the early age of the child itself. But compared to all types of development, mental development cannot be predicted with the same accuracy. It can, however, be better predicted when mental development falls within the normal range than when the development shows noticeable deviation from the average.

12. **Principle of spiral versus linear arrangement:** The pace of development during the growing years of child is not constant or steady. Significant advancement in development is seen during a particular period followed by a period of rest.

### 3.7 PRENATAL PERIOD

Development happens quickly during the prenatal period, which is the time between conception and birth. This period is generally divided into three stages: the germinal stage, the embryonic stage and the fetal stage.

**Stage 1: The Germinal Stage**

It is the first stage and it exists for only two weeks. In the fallopian tube when an ovum is fertilized by a sperm to form a zygote (day 0), then the germinal stage continues as the zygote undergoes several initial cell divisions to form a solid ball of cells called a morula (days 3-4). It then undergoes additional changes to become a hollow ball of cells called a blastocyst (days 5-7). The germinal stage ends when the blastocyst implants in the endometrium of the uterus (days 8-9).

**Stage 2: The Embryonic Stage**

It is the second stage which starts from germinal stage and continues till two months after conception. All the major organs start forming at this stage and the embryo forms and is quite delicate. Since the embryo is delicate there are changes that
Basic Concepts

Stage 3: The Fetal Stage

It is the last stage of prenatal development and it starts two months after conception and continues till birth. The bones of the fetus start growing, muscle start forming and the fetus begins to move inside the uterus. Sex organs start developing and the size of the brain increases rapidly. The respiratory and digestive systems start working independently.

3.8 BIRTH

Birth is the act of bearing an offspring. When the fetus reaches its full-term, it is time to make first big appearance in the world.

In a normal birth which is uncomplicated, the fetal brain first signals the release of hormones which then goes into the mother’s bloodstream. These hormones cause the mother’s uterine muscles to contract and relax, first in an irregular pattern but gradually it becomes regular.

During this first stage of labour, the uterine contractions push the fetus downward, placing pressure on the cervix and causing it to dilate until it opens to about 10 centimeters (about 4 inches), so that the head of the fetus can pass through. The next stage is a brief period known as transition in which the baby’s head moves into the birth canal.

Finally, in the second stage of labour, the baby’s head crowns at the opening of the vagina. The head emerges completely in less than an hour after crowing. Since the head is the largest part of the body, the rest of the infant’s body follows quickly.

3.9 NEONATAL STAGE

The neonatal period (birth to 1 month) this is the time when many changes take place ranging from the uterine environment to the external world. It includes the initial period after birth which is referred to as the perinatal period. During this period changes are not visible, but the child is busy absorbing and learning about the five senses. The baby connects with the mother (closest to him) and the world around him through these senses. At birth, the senses of smell and taste are the strongest, while others develop in the next several months.

1. The smelling sense: It is the first sense that emerges. The odours pass through the placenta. For example, if a child is placed on the abdomen of the mother immediately after birth, then the newborn can crawl up to the breast, through the fine-tuned sense of smell.
2. **Sight:** At birth, the size of the eye is usually adult size, but eyesight develops as the baby grows in the next several months. The eyelids may look swollen or puffy, but this is so to protect the sensitive developing eyes.

3. **Sense of touch:** All babies are born with a sensitive skin, the sense of touch and emotional engagement plays an important role in the child’s development. The sense of touch starts developing around six weeks of pregnancy. They touch their face, push around with the hands and feet, and even discover the uterine wall. This sense will keep on developing after delivery and also after first year of birth. Many research studies have associated skin-to-skin contact with brain development.

4. **Hearing:** This sense is usually well-developed and by birth the child will recognize the mother’s voice. But the part of the brain which is responsible for hearing complex sounds and attaches meaning to sound keeps on developing throughout infancy. Most hospitals conduct a hearing screen test within the first month of birth. Babies with hearing loss can be diagnosed within this duration.

5. **Taste:** This sense is usually well-developed, but the quantity of taste buds and reactions to different types of substances increases as the baby grows. At the time of birth, the taste buds are generally quite sensitive and they can easily differentiate between sweet and sour. Reactions to salty foods and other things come later after five months.

### 3.10 FIRST YEAR OF LIFE

The first year in a baby’s life is very important, as all the developments take place in the first year after birth. Children who develop and grow at a regular pace do not face any difficulty in later life as compared to children whose development gets delayed. If the movement starts at the right time then it leads to better coordination, concentration, memory, behaviour and perception as the child gets older. The brain grows most rapidly in the first twelve months of life and this is a critical period for learning. A baby’s brain reaches nearly half its adult size in the first three months. A baby’s vision also undergoes a series of significant developments in the first year after birth. At 6 months of age babies can construct a 3D view of the world.

**Baby’s development during 1 to 3 months:** Between 1 to 3 months a baby can raise his head and chest while on his tummy, track objects with eyes, open and shut hands, bring hands to mouth and grip objects in hand. A baby starts smiling but first to himself/herself and within three months starts smiling in response to other’s smile.

**Baby’s development during 4 to 6 months:** Between four to six months babies start rolling from front to back and vice versa, babble, laugh, sit up with support, have great head control, try to reach out and grab objects, manipulate toys. This is the time when babies actually learn how to reach out and manipulate the objects around them.
Baby’s development during 7 to 9 months: Between 7 to 9 months babies start crawling like scooting, standard crawling on hands and knees and sitting without support. They start responding to familiar words like their name, may respond to “no” by stopping for a brief time, and may start babbling “Mama” and “Dada.”

Baby’s Development during 10 to 12 months: Between 10 to 12 months children start feeding themselves, they can hold small objects such as O-shaped cereal between their thumb and forefinger, can move around in the room by holding the furniture, start saying one to two words, and can point on objects in order to get someone’s attention. They start engaging in “pretend play”, for example, pretending to talk on the phone.

3.11 EARLY CHILDHOOD

In psychology, the term early childhood is defined as the time period between birth till 8 years of age. It is a stage of human development and it is the time when a child experiences physical, mental, emotional, social and language development. Children also develop basic understanding, moral values and some common interest. It is a period of slow growth and rapid development.

A period of physical development: Children generally have a height of 3 feet and 6 inches at the end of this stage, there weight increases and body proportions change. Each child’s body build is different; some have a fat body build, some have a muscular body build and some others having a thin body build. In the last half year of early childhood, the baby teeth begin to be replaced by permanent teeth and coordination of the finer muscles begins. The child acquires various motor skills like catching, throwing, running, jumping, climbing, riding a tricycle, self-feeding, dressing, balancing, colouring, drawing and so forth.

A period of language development: In early childhood children can speak easily, they no longer babble and crying also reduces. They sometimes use gestures, instead of speech. During this period children are highly motivated to learn how to speak, as learning is important for socializing and achieving independence.

A period of emotional development: Emotions are quite intense during early childhood and children find it difficult to control their emotions. Children experience many common emotions like anger, fear, jealousy, curiosity, envy, joy, grief, affection and others.

A period of social development: Children also develop socially and this foundation is laid by the family, neighbourhood and pre-school. Family inculcates social qualities in children and if they are good then children develop healthy social habits. The child starts visiting the neighbourhood where the atmosphere is different from home and try to adjust in it and also make friends. The child starts playing with friends, which at times leads to quarrels. In this way, the child learns to adapt himself in a new and different environment and experiences kinds of emotions.
A period of development of understanding: The intellectual abilities start enhancing and improving by age, so children start understanding relationships, people, objects and situations. This increase in understanding comes from new meanings which children associate with meanings learned during babyhood. Children come to know about the simple relationships, like parents, siblings, relatives and so forth. By the age of three children know their sex, their full names, and names of different parts of their bodies.

A period of development of interests: Early childhood is also a period when some common interests develop. These include interest in play, human body, self, clothes, religion, sex and other aspects.

3.12 MIDDLE CHILDHOOD

By middle childhood, kids become more competent and confident. Parents start trusting their children; allow them to do their daily tasks. Family does play an important role but at this stage their peers are more important and they also listen to teachers and follow directions.

Along with cognitive growth, social and emotional growth also plays an important role. When the children start going to school, their exposure to the social world increases. Earlier social interactions used to be with family, but when the child goes to school new relationships start developing. This provides the kids good social experiences with both familiar and unfamiliar people.

The developing social self: When children enter school they start paying attention to those around them and also compare themselves to their peers. Children’s self-concept start developing and they realize that they are now independent individuals. They begin to understand who they are and what they like and also develop a sense of how they fit into their social environment.

Making friends in middle childhood: Friendships become very important in middle school years. The skills which children develop are largely governed by the environment at home and the way they are brought up by their parents. Children now start enjoying spending time with siblings; they also become more interested in building relationships with other people outside the family unit. It is very important for every child to learn how to make friends and maintain good relationship with them. Parents become troubled when their children face social rejection or are bullied by other kids.

3.13 ADOLESCENCE

Adolescence is the time when a child begins to have his own identity and his own views and perceptions which at times might be different from their parents. When adolescents have their own identity, rebelliousness and peer influence may sometimes cause conflict with parents. This can be the period of both disorientation
Adolescence is also the time when the child starts maturing, and many physical and psychological changes take place between childhood and adulthood. An adolescent experiences changes biologically, socially, cognitively, physically and emotionally. Biologically, adolescents experience onset of puberty that is change in height, weight, sex organs and brain.

Socially, adolescents have different roles to play like a friend or a romantic partner. Cognitively, adolescents experience improvement in abstract thinking, knowledge and logical reasoning, understanding abstract concepts and questioning values. Physically both boys and girls experience changes in their body.

3.14 ADULTHOOD

Adulthood is the period when an individual attains full maturity. Adulthood is divided into three phases: young adulthood (begins at 20 or 21 years), middle adulthood (at 40 years) and late adulthood (around 60 years). In early and middle adulthood body functioning decreases but at a slow rate as compared to old age. In adulthood, cholesterol starts depositing in the arteries and heart muscles grow weaker even in the absence of detectable disease. The production of both male and female hormones also reduces with age. Adulthood is not about how old a person is but it is when a person becomes physically and emotional independent.

There are twenty defining characteristics of an adult and these are the following:

1. Maturity is an ongoing process, not a state in which the individual is continuously striving for self-improvement.
2. The adult becomes able to manage personal jealousy and feelings of envy.
3. The adult has the ability to listen to and evaluate the viewpoints of others.
4. The adult is able to maintain patience and bring flexibility in his daily routine.
5. The adult begins to learn from mistakes instead of expressing resentment about the outcome.
6. The adult does not over analyse negative points, but instead looks for the positive points in the subject being analysed.
7. The adult is able to differentiate between rational decision-making and emotional impulsiveness.
8. The adult develops an understanding that no skill or talent can overshadow the act of preparation.
9. The adult becomes capable of managing temper and anger.
10. The adult becomes considerate of the feelings of other people.
11. The adult is able to distinguish between ‘needs’ and ‘wants’.
12. The adult exhibits confidence without being overly arrogant.
13. The adult is able to handle pressure without losing his self-composure.
14. The adult begins to takes ownership and responsibility of his actions.
15. The adult can manage personal fears.
16. The adult is able to analyse a specific situation and understand both the positive and negative aspects of a situation.
17. The adult accepts negative feedback as a tool for self-improvement.
18. The adult is aware of personal insecurities and self-esteem.
19. The adult is able to separate true love from transitory infatuation.
20. The adult develops an understanding that open communication is the key to progression.

### 3.15 OLD AGE

It refers to the age nearing life expectancy of human beings and is called as the end of the life cycle. This is the last stage of life which comprises of the oldest members of the population. The social aspects of old age are majorly influenced by relationship of the physiological effects of aging, the collective experiences and shared values of that generation. There is no universally accepted age that is considered old among or within societies. At old age, people are more prone to disease, syndromes, injuries and sickness than younger adults.

People face many problems at old age like retirement, loneliness and ageism. Old age is not a definite biological stage, as the chronological age denoted as “old age” varies culturally and historically.

1. Old, aged, elderly all mean well along in years. An old person has lived long, nearly to the end of the usual period of his life.
2. An aged person is very far advanced in years, and is usually afflicted with the infirmities of age.
3. An elderly person is somewhat old, but usually has the mellowness, satisfactions and joys of age.

#### Check Your Progress

1. Name the four major aspects of development.
2. State the broad categories of non-experimental research.
3. What is neonatal period?
4. What are the main phases of adulthood?
3.16 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The four major aspects of development are physical growth, motor development, cognitive development and socio-emotional development.
2. The broad categories of non-experimental research are single-variable research, correlational and quasi-experimental research and qualitative research.
3. The neonatal period (birth to 1 month) is the time when many changes take place from the uterine environment to the external world.
4. The main phases of adulthood are young adulthood (begins at 20 to 21 years), middle adulthood (at 40 years) and late adulthood (around 60 years).

3.17 SUMMARY

- Aspects of development refer to the physical, mental (or cognitive), emotional and social development which take place from conception to childhood.
- The four major aspects of development are physical growth, motor development, cognitive development and socio-emotional development.
- At the infancy stage, a child is seen to react to external stimuli like light, colour, sound, temperature and others. In the first year, perceptual skills develop and child learns to imitate, discriminate and recognize to some extent.
- Emotional development refers to development of various emotions like anger, fear, joy, grief, disgust and others. In simple words, this term refers to the pattern of emotional development at various different stages of life.
- The term lifespan development refers to age-related changes that occur from birth, throughout a person’s life till old age. The study of how humans grow and change throughout their entire life is called lifespan development.
- Experimental method is one of the most widely used method of research as it is considered as the most scientific and objective method of studying the effect of one variable over the other.
- An experimental research can be conducted in a lab in which one group is called as an experimental group and the other group is called the control group. It is only the experimental group that is being manipulated unlike the control group, which is given a placebo.
- Erik Erikson and Piaget have studied the various stages of development in children in great depth. Erik Erikson propounded the theory of psychosocial development.
• Piaget focused more on understanding various aspects of intellectual or cognitive development.
• There are twelve main principles of growth and development in children.
• Development happens quickly during the prenatal period, which is the time between conception and birth. This period is generally divided into three stages: the germinal stage, the embryonic stage and the fetal stage.
• The neonatal period (birth to 1 month) is the time when many changes take place ranging from the uterine environment to the external world. It includes the initial period after birth which is referred to as the perinatal period.
• The first year in a baby’s life is very important, as all the developments take place in the first year after birth. Children who develop and grow at a regular pace do not face any difficulty in later life as compared to children whose development gets delayed.
• By middle childhood, kids become more competent and confident. Parents start trusting their children; allow them to do their daily tasks.
• Adolescence is the time when a child begins to have his own identity and his own views and perceptions which at times might be different from their parents.
• Adulthood is the period when an individual attains full maturity. Adulthood is divided into three phases— young adulthood (begins at 20 or 21 years), middle adulthood (at 40 years) and late adulthood (around 60 years).
• It refers to the age nearing life expectancy of human beings and is called as the end of the life cycle. This is the last stage of life which comprises of the oldest members of the population.

3.18 KEY WORDS

• Lifespan development: It refers to age-related changes that occur from birth till old age in the life of an individual.
• Placebo: It is a substance or treatment of no intended therapeutic value.

3.19 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions
1. Write short notes on the following:
   (a) Physical growth
   (b) Emotional development
2. Briefly mention Erik Erikson’s theory of psychosocial development.
3. What are the developments that take place in the neonatal period?

4. List the developments which take place during the first year of a baby's life.

5. What is the significance of the adolescence period?

6. Identify the main characteristics of an adult.

7. What are the basics concepts associated with old age?

**Long Answer Questions**

1. Explain the various stages of lifespan development.

2. Discuss the advantages and disadvantages of the experimental method.

3. Describe the main principles of growth and development in children.

4. Examine the various stage of the prenatal period.

5. Differentiate between early childhood and middle childhood.

### 3.20 FURTHER READINGS


UNIT 4  PHYSICAL DEVELOPMENT

Structure
4.0 Introduction
4.1 Objectives
4.2 Motor Skills
   4.2.1 Fine Motor Skills
   4.2.2 Gross Motor Skills
   4.2.3 Growth Rate
4.3 Physical Health During Adulthood
   4.3.1 Physical Fitness and Energy
4.4 Motor functions in Old Age
4.5 Intellectual Development
4.6 Answers to Check Your Progress Questions
4.7 Summary
4.8 Key Words
4.9 Self Assessment Questions and Exercises
4.10 Further Readings

4.0 INTRODUCTION
When a baby is born, he/she goes through various physical and biological changes right from infancy till adulthood. Physical development refers to the process of growth and development. It is further divided into fine motors skills and gross motor skills. In this unit, you will study about motor skills, physical health during adulthood, significance of physical fitness, motor functions in old age and an overview of intellectual development.

4.1 OBJECTIVES
After going through this unit, you will be able to:
- Define motor skills
- Differentiate between fine motor skills and gross motor skills
- Discuss physical health during adulthood
- Analyse the significance of physical fitness
- Examine motor functions in old age
- Prepare an overview of intellectual development

4.2 MOTOR SKILLS
Motor skills help in the movement and tasks that we do on a daily basis. Fine motor skills are those which require a high degree of control and precision in the
small muscles of the hand (such as using a fork). Gross motor skills use the large muscles present in the body and this includes broader movements such as walking and jumping.

Children tend to develop certain motor skills at specific ages, but not every child is able to reach milestones at the same time. Those who have motor impairments will have trouble moving in a controlled, coordinated and efficient way.

Motor skills play a very important role in a child’s development and each child should know how to use his fine and gross motor skills. Without good motor control a child cannot be independent, will face difficulty in understanding the world and cognitive development will also be affected. Babies learn each day while playing by experiencing new textures, sounds, colours and patterns. For instance, colouring and cutting enables one to learn how to colour and cut different shapes. This is not only an important part of art and craft but also helps in the development of motor skills of a child. Similarly, many children who have a habit of sitting in W position for a long time while they are playing, tend to have problems in their gross motor development.

4.2.1 Fine Motor Skills

Fine motor skill activities require manual dexterity, coordination of hands and fingers with the eyes which is called hand-eye coordination. Children should know how to hold and manipulate objects, use both hands for a task, and use just the thumb and one finger to pick something up, rather than the whole hand. Children develop different milestones at different ages. The details of the same are given below:

0 to 3 months: During this stage, the child watches his hand movements and brings them to his mouth. The child can also use arms to swing or “bat” at objects.

3 to 6 months: During this stage, the child can reach for toys using both arms. He or she begins to transfer objects from one hand to another and can hold his own hands together.

6 to 9 months: During this stage, the child begins to grasp and hold onto objects, such as a bottle. They can use a raking grasp to move objects with fingers and they can squeeze objects.

9 to 12 months: During this stage, the child begins to feed himself finger foods. He or she can turn pages in a book a few pages at a time; can put small objects in a cup or container. They develop pincer grasp (using index finger and thumb to grasp objects) and begins to show a preference for one hand over the other.

12 to 18 months: During this stage, the child can build a tower two blocks high. They can clap using their hands, wave a goodbye, can scoop objects with a spoon or small shovel and can scribble with crayons on paper.

18 months to 2 years: During this stage, the child can put rings on pegs, begin to hold a crayon with fingertips and thumb, can build a tower three to four blocks
high, can open loosely wrapped packages or containers and can turn pages in a
book one page at a time.

2 years: By the time, the child becomes two, he begins to manipulate clay or play
dough, can stack a block tower 9 blocks high, can turn doorknobs, can wash
hands independently and can zip and unzip large zippers.

3 years: Around the age of 3, the child can draw a circle after being shown an
example, can cut a piece of paper in half and can fasten and unfasten a large
button.

4 years: At 4 years of age, the child can touch the tip of each finger to the thumb,
can use a fork correctly and can get dressed and undressed without help.

5 years: At this age, the child can grasp a pencil correctly, copy a triangle, can
cut out a circle and tie shoelaces.

6 years: By the time the child becomes 6 years old, he can build a small structure
with blocks, can put a 16 to 20 piece puzzle together, use a knife to cut food and
can cut well with scissors.

4.2.2 Gross Motor Skills

Gross motor skills require large muscle groups and are comparatively broader
and energetic than fine motor movements. These include walking, kicking, jumping,
and climbing stairs. Some milestones for gross motor skills also involve eye-hand
coordination such as throwing or catching. Here are some examples of gross motor
skills that typically occur at different phases of development:

3 to 6 months: During this time, the child learns to support his own head when he
or she is in a sitting position, can raise arms and legs when placed on stomach and
can roll over.

6 months to 1 year: Around this age, he or she learns to sit without support, can
crawl, pull self from a sitting to a standing position.

1 year: When the child becomes 1 year old, he or she can walk unassisted, climb
onto low furniture, climb stairs with assistance and can pull or push toys with
wheels.

2 years: Around the age of 2 years, he or she begins to run very stiffly on toes,
can jump using both feet simultaneously and can walk upstairs holding the banister.

3 years: At 3 years of age, he or she can throw a ball to an adult standing five feet
away, can run without falling, and can ride tricycle using pedals unassisted by an
adult.

4 years: At 4 years of age, the child can walk upstairs by alternating feet, can run
smoothly with changes in speed and can catch a ball with arms and whole body.
5 years: Around this time, the child can hop on one foot, can perform jumping jacks and toe touches, can walk up and down the stairs while carrying objects and can catch a ball with two hands.

6 years: By this age, the child can jump over objects 10 inches high, can ride a bicycle with training wheels, can throw with accurate placement and can kick a rolling ball.

4.2.3 Growth Rate

Growth rate refers to the process of progressive development by which the body reaches its point of complete physical development. Normal growth rate refers to the speed at which normal growth occurs in length before birth and in height after birth.

Growth at the time of a fetus is important for a person in order to attain a proper height. Before birth, the key measure is the crown-rump length the distance from the top of the head (the crown) to the buttocks (the rump). The fastest growth rate for a human is during embryonic life. If sustained, it would provide 50-60 cm (close to 2 feet) of growth per year.

There are three components of postnatal growth—infancy, childhood and puberty. The growth rate during infancy is rapid but sharply decelerating and is highly dependent on nutrition. Growth hormone and thyroxine hormone is seen to play an important role in growth during the childhood years. By the time, the child reaches 6 years of age, the child grows by 5cm or 5.5 cm on an average every year. No significant sex differences are seen in the growth rate till the child reaches puberty. At puberty, a spurt in growth in both the genders is seen. This is further enhanced by the secretion of growth hormones and sex steroids. A significant increase in height by 14 to 15 cm in boys and girls is seen at this time.

4.3 PHYSICAL HEALTH DURING ADULTHOOD

Physical activity or exercise helps to improve our health and also reduces the risk of developing diseases like type II diabetes, cancer and cardiovascular disease. If we exercise regularly, it will have an immediate and long-term health benefits for us. We should exercise regularly in order to improve our quality of life. In order to enjoy a good quality of life we should exercise daily for 30 minutes. Below is given a brief account of various benefits of regular physical activity as follows:

- Reduction in the risk of a heart attack
- Helps in better management of weight
- Lowered blood cholesterol level
- Lowered risk of type-II diabetes and some forms of cancer
- Lowered blood pressure
• Stronger bones, muscles and joints and lower risk of developing osteoporosis
• Lowered risk of falling ill
• Better and a speedy recovery from periods of hospitalization or bed rest
• Makes one feel better
• Keeps one’s mood better, and makes one feel relaxed, energetic and sleep better

Children and young adults who exercise on a regular basis are more likely to seek physical activity and fitness throughout their lifespan. Those who regularly exercise in childhood and adolescence have better chances of staying physically active and healthy during adulthood. There are different types of physical activity like walking, dancing, gardening, hiking, swimming, walking or cycling.

4.3.1 Physical Fitness and Energy

Physical fitness refers to one being physically fit. There are several benefits of regular physical activity as enlisted as follows:
• Reducing stress
• Improving sleep
• Boosting your energy
• Reducing symptoms of anxiety and depression
• Increasing your self-esteem
• Making you feel proud for taking good care of yourself
• Improving how well one does at school

There are two components of fitness that is primary and secondary. There are various primary components that are required to improve physical health for example, cardiorespiratory capacity, muscular capacity, flexibility and body composition. The details of the same are given as follows:

1. **Cardiorespiratory capacity:** is the ability of the body to take in oxygen (respiration), deliver it to the cells (circulation), and use it at the cellular level to generate energy (bioenergetics) for physical work (activity). It is also known as aerobic capacity which includes aerobic endurance (how long), aerobic strength (how hard) and aerobic power (how fast).

2. **Muscular capacity:** refers to the muscular capability which includes muscular endurance, muscular strength and muscular power. If our muscle capacity improves then our strength will increase the basal metabolic rate, improved joint strength and overall posture.

3. **Flexibility:** refers to the capability of a joint to perform—— every joint has different flexibility. If a joint is flexible then it reduces the risk
of injury, improves range of motion, improves bodily movements and posture also improves.

4. **Body composition**: refers to the proportion of fat-free mass to fat mass. If our body composition is in a good state then it will reduce the risk of cardiovascular disease and improvement in basal metabolic rate, bodily function and improved Body Mass Index (BMI).

The secondary components of fitness are involved in physical activities which are important for our daily functioning. Both primary and secondary components are important and they should not be ignored. The secondary components include the following:

1. **Balance**: the ability to maintain a specific body position in either a stationary or dynamic (moving) situation.
2. **Coordination**: the ability to use all body parts together to produce smooth and fluid motion.
3. **Agility**: the ability to change direction quickly.
4. **Reaction time**: the time required to respond to a specific stimulus.
5. **Speed**: the ability to move rapidly. Speed is also known as velocity (rate of motion).
6. **Power**: the product of strength and speed. Power is also known as explosive strength.
7. **Mental capability**: the ability to concentrate during exercise to improve training effects as well as the ability to relax and enjoy the psychological benefits of activity (endorphins).

We need energy for everything like eating, bathing, grooming, working or engaging in one’s passion; for doing all these activities our body requires energy which we get from our diet in the form of calories. Energy fuels one’s body’s internal functions, repairs, builds and maintains cells and body tissues and supports the external activities. Water is the most important nutrient and helps in the chemical reactions that produce energy from food.

### 4.4 MOTOR FUNCTIONS IN OLD AGE

In old age the ability to perform daily tasks such as walking, rising from a chair and climbing stairs reduces. These age-related changes in daily activities involve changes in the neuromuscular system that is muscle strength, power and endurance of limb muscles, these changes become visible around 60 years of age.

Age-related changes in the motor unit will reduce the strength, slower velocity of contraction and movement and reduce the muscle power. These changes occur more rapidly in the lower limb muscles than the upper limb because of relatively larger reductions with aging in activity levels of the lower limbs. The decline in motor function appear to accelerate markedly from 75-80 years of age.
The functional age-related reductions occur because older adults tend to lose motor units, they have smaller muscle fibres and the contractile proteins of muscle fibres change more slowly than in young adults.

When motor coordination declines in old age it leads to problem in walking, inability to maintain proper balance which may lead to injuries. This decline in motor skills also reduces the general quality of life; and leads to difficulty in performing simple tasks, such as typing on a keyboard or picking up small objects, which the younger individuals can easily do.

### 4.5 INTELLECTUAL DEVELOPMENT

Intellectual development refers to the changes that take place in an individual due to growth and experience. These developments take place in thinking, reasoning, relating, judging, conceptualizing and so forth. It also measures how individuals learn to think and reason for themselves in relation to the world around them.

It starts from the time a child is born although it is not visible but intellectual development keeps on happening with the growth and development of the child. It is important to foster intellectual development all throughout life.

By keeping an eye on the child’s activities we can monitor his/her intellectual development. In children, it happens very fast and with time and experience, their memory, problem-solving skills, reasoning and thinking abilities develop. The rate of development of each child is different.

In intellectual development we learn about various things like how to organize our mind, ideas and thoughts in order to make sense of the world we live in. There are many ways by which individuals develop like trial and error, copying, exploring, repeating, doing, experimenting, talking, looking, role play, listening and playing.

Children learn through different areas of development:

1. Physical development: This is through the senses by touching, tasting, listening and playing.
2. Emotionally and socially: This is through playing with other children and being with people.

According to Jean Piaget there are four stages of intellectual development. These four stages are the following:

1. **Sensory-Motor Stage**: In this stage, motor movements like sucking and grasping take place between 0 to 2 years of age. This is also known as the reflexive stage. The next two months repetitive motions take place which is known as the primary circular reaction.

   Between 4 to 8 months the child starts repeating movements with consequence like making a hanging toy over the crib move by touching or kicking. This phase is known as the secondary circular reaction.
In the next 6 months, a child discovers new ways of doing things, for example, you may find your child pulling a pillow to take a toy kept on it without directly taking it. This is known as tertiary circular reaction. When the child turns 2 years old, he/she starts solving simple problems mentally rather than doing it physically.

2. **Pre-Operational Stage:** This stage lasts from 2 to 7 years of age and many developments take place in this stage.

   Between 2 to 4 years language skills of a child start developing, but speech is not highly logical. Children can easily recall and talk about objects even if it is not present in front of them. Between 4 to 7 years children start developing speaking skills, they can recognize and use simple logic and also what they speak starts making sense.

3. **Concrete Operational Stage:** In this stage mental growth takes place between 7 to 12 years of age and the child is now able to understand logical patterns and also how to use them. Children now can categories things and are able to solve problems logically and correctly.

4. **Formal Operational Stage:** This period of development takes place starting from 12 years and more. At this stage, children begin to think and understand about abstract concepts. His/her logical reasoning improves and they are able to apply complex, logical and abstract sequence while solving their problems.

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**Check Your Progress**

1. Name the two kinds of motor skills.
2. State any two benefits of regular physical activity.
3. State the components of postnatal growth.

---

**4.6 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS**

1. The two kinds of motor skills are fine motor skills and gross motor skills.
2. Two benefits of regular physical activity are the following:
   (i) It helps to reduce stress.
   (ii) It boosts the energy levels.
3. There are three components of postnatal growth—infancy, childhood and puberty.
4.7 SUMMARY

- Motor skills help in the movement and tasks that we do on a daily basis. Fine motor skills are those which require a high degree of control and precision in the small muscles of the hand (such as using a fork).
- Gross motor skills use the large muscles present in the body and this includes broader movements such as walking and jumping.
- Fine motor skill activities require manual dexterity, coordination of hands and fingers with the eyes which is called hand-eye coordination.
- Gross motor skills require large muscle groups and are comparatively broader and energetic than fine motor movements. These include walking, kicking, jumping, and climbing stairs.
- Growth rate refers to the process of progressive development by which the body reaches its point of complete physical development. Normal growth rate refers to the speed at which normal growth occurs in length before birth and in height after birth.
- There are three components of postnatal growth—infancy, childhood and puberty.
- Physical activity or exercise helps to improve our health and also reduces the risk of developing diseases like type II diabetes, cancer and cardiovascular disease.
- There are two components of fitness that is primary and secondary. There are various primary components that are required to improve physical health for example, cardiorespiratory capacity, muscular capacity, flexibility and body composition.
- In old age the ability to perform daily tasks such as walking, rising from a chair and climbing stairs reduces.
- These age related changes in daily activities involve changes in the neuromuscular system that is muscle strength, power and endurance of limb muscles, these changes become visible around 60 years of age.
- Intellectual development refers to the changes that take place in an individual due to growth and experience. These developments take place in thinking, reasoning, relating, judging, conceptualizing and so forth.

4.8 KEY WORDS

- **Growth rate**: It refers to the process of progressive development by which the body reaches its point of complete physical development.
Physical Development

- **Cardiorespiratory capacity**: It is the ability of the body to take in oxygen (respiration), deliver it to the cells (circulation), and use it at the cellular level to generate energy (bioenergetics) for physical work (activity).
- **Agility**: It is the ability to change direction quickly.

4.9 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short-Answer Questions
1. What are motor skills?
2. State the differences between fine motor skills and gross motor skills.
3. Why is physical activity essential for the individual?

Long-Answer Questions
1. Analyse the significance of physical fitness.
2. Evaluate motor functioning in old age.
3. Describe the stages of intellectual development as devised by Jean Piaget.

4.10 FURTHER READINGS


UNIT 5  APPROACHES

Structure
5.0  Introduction
5.1  Objectives
5.2  Psychometric Approach
5.3  Piagetian and the Information Processing Approach
5.4  Language Development
   5.4.1  Acquisition of Language
5.5  Memory
5.6  Intelligence
5.7  Moral Development
   5.7.1  Kohlberg’s Levels of Morality
5.8  Answers to Check Your Progress Questions
5.9  Summary
5.10  Key Words
5.11  Self Assessment Questions and Exercises
5.12  Further Readings

5.0  INTRODUCTION

The approaches in life span examines development of individual which takes place from birth to death and is a complex process which involves dying and death. This is a multi-disciplinary approach which is related to disciplines like psychology, psychiatry, sociology, anthropology and geriatrics. There are three important subjects which lifespan developmental approach deals with; these are nature vs nurture, continuity vs discontinuity and change vs. stability. This approach also provides us a framework for understanding human aging. Lifespan is defined by multiple aspects and frameworks.

In this unit, you will study about the psychometric approach to intellectual development, Piaget and Information processing approach, the concept of language acquisition and development of language, cognitive development, memory, intelligence and moral development.

5.1  OBJECTIVES

After going through this unit, you will be able to:

- Explain the psychometric approach
- Discuss Piagetian and Information processing approach
Approaches

- Describe the concept of language acquisition and development of language
- Define cognitive development, memory, intelligence and moral development

5.2 PSYCHOMETRIC APPROACH

Psychometrics is the study of the theory and technique of psychological measurement. According to the National Council on Measurement in Education (NCME), psychometrics is concerned with psychological measurement. It is the field of psychology and education dedicated to testing, measuring, assessing, and so on.

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It deals with the objective measurement of skills and knowledge, abilities, attitudes, personality traits, and educational achievement. Certain psychometric researchers concentrate on creating and validating assessment instruments — questionnaires, tests, raters’ judgments, and personality tests. Yet others are involved in research pertaining to measurement theory (e.g., item response theory; intraclass correlation).

Psychometricians have created many measurement theories including the classical test theory (CTT) and item response theory (IRT). A method which appears to be mathematically similar to IRT yet is rather unique, when it comes to its origins and features. It is represented by the Rasch model for measurement. The development of the Rasch model, and the broader class of models to which it belongs, was explicitly founded on requirements of measurement in the physical sciences.

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Psychometricians have also come up with techniques for working with large matrices of correlations and covariances including factor analysis, a technique of determining the fundamental dimensions of data; multidimensional scaling, a technique to find a simple representation for data with many latent dimensions; and data clustering, a model for seeking objects similar to one another. All these multivariate descriptive techniques attempt to distill huge amounts of data into simpler structures. Modern structural equation modelling and path analyses offer more sophisticated approaches to working with large covariance matrices. These techniques permit statistically sophisticated approaches to be fixed to data and tested to determine whether they fit adequately.

Psychometric theories have usually attempted to comprehend the structure of intelligence — its forms and parts. Theories such as this have usually been founded on and tested using data received from paper-and-pencil tests of mental abilities including analogies. Underlying the psychometric theories is a psychological approach as per which intelligence is an amalgamation of abilities measured by mental tests. This model is frequently quantified based on the assumption that each test score is a weighted linear composite of scores on the fundamental abilities. For instance, performance in a number-series test may be a weighted composite
of number, reasoning, and memory abilities for a complex series. Since the mathematical model is additive, it assumes that less of one ability can be made up for by more of another ability in test performance. For instance, two people could gain equivalent scores on a number-series test if a deficiency in number ability in one individual relative to the other is compensated for by superior reasoning power.

British psychologist Charles E. Spearman was the first of the main psychometric theories. He published his first chief article on intelligence in 1904. Spearman noticed that individuals who performed well on one mental ability test ended up performing well in others too. Individuals who failed to perform well on one test ended up doing well on others too. Spearman came up with a method for statistical analysis, which he termed factor analysis. It studies patterns of individual differences in test scores and provides an analysis of the underlying sources of these individual differences.

A majority of the early theoretical and applied work in psychometrics was done to try and measure intelligence. The origin of psychometrics is linked to the field of psychophysics. Spearman was the pioneer who developed approaches to measure intelligence. Having been taught by Wilhelm Wundt, he was trained in psychophysics. The psychometrician, L. L. Thurstone later developed and applied a theoretical approach to the measurement, which is referred to as the law of comparative judgment. This approach is closely connected to the psychophysical theory developed by Ernst Heinrich Weber and Gustav Fechner. Also, Spearman and Thurstone contributed significantly to the theory and application of factor analysis, a statistical technique that has been used expansively in psychometrics.

Not long ago, psychometric theory was applied to measure personality, attitudes and beliefs. It has also been successfully used in academics and healthcare.

Originally psychometric instruments were created to measure intelligence. The most popular historical approach involves the Stanford-Binet IQ test by the French Psychologist Alfred Binet. While there is no concrete proof that innate intelligence and learning capacity can be measured through such instruments, IQ tests are widely used for various purposes. It is used in academics to measure the abilities in various domains, such as reading, writing, and mathematics. The primary approaches in the application of tests in these domains have been Classical Test Theory and the more modern Item Response Theory and Rasch measurement models. These recent approaches allow joint scaling of persons and assessment items, which creates the foundation for mapping of development through descriptions of the skills exhibited at various points along a continuum. Such approaches offer powerful information about the nature of developmental growth within various fields.

Psychometrics has also focussed on personality testing. There have been a range of theoretical approaches that conceptualise and measure personality. Some of the popular instruments include the Minnesota Multiphasic Personality Inventory and the Myers-Briggs Type Indicator. Psychometrics has also been used to study
attitudes. The Likert scale has commonly been used to measure attitudes. An alternative approach involves the application of unfolding measurement models, the most general being the Hyperbolic Cosine Model (Andrich & Luo, 1993).

Robert Sternberg—the founder of the Triarchic Theory of Intelligence—and other critics of the psychometric model, observe that individuals in the general population have a kind of different conception of intelligence than most experts. Their argument is that the psychometric approach measures only a part of what is commonly understood as intelligence. Other critics argue that the equipment used in an experiment often governs the results and that proving, for example, that intelligence exists does not prove that the present equipment measures it accurately. Sceptics often argue that so much scientific knowledge about the brain is still to be discovered that claiming the conventional IQ test methodology to be infallible is just a small step towards claiming that Craniometry was the sure shot technique for the measurement of intelligence (which had scientific advantages on the basis of knowledge available in the nineteenth century).

5.3 PIAGETIAN AND THE INFORMATION PROCESSING APPROACH

Information processing approaches have become an important alternative to Piagetian approaches.

According to Piaget, there are four stages to cognitive development:

(i) Sensorimotor stage: birth to 2 years
(ii) Preoperational stage: ages 2 to 7
(iii) Concrete operational stage: ages 7 to 11
(iv) Formal operational stage: ages 12 and up

While the rate may vary, the sequence does not. Information-processing theory considers cognitive development as an ongoing process wherein people increase their short-term memory capacity, long-term knowledge, as well as make use of strategies throughout their life.

Both these theories admit that children are limited in their thinking abilities throughout their cognitive development. However, children are adept at obtaining mechanisms that lead to the expansion of their way of thinking.

Information-processing approaches to cognitive development seek to identify the ways individuals take in, use, and store information. Information processing approaches grew out of developments in the electronic processing of information, particularly as carried out by computers. They assume that even complex behaviour such as learning, remembering, categorizing, and thinking can be broken down into a series of individual, specific steps.

In stark contrast to Piaget’s view that thinking undergoes qualitative advances as children age, information-processing approaches assume that development is
marked more by quantitative advances. Our capacity to handle information changes with age, as does our processing speed and efficiency. Furthermore, information processing approaches suggest that as we age, we are able to control the nature of processing better and that we can change the strategies we use to process information. An information processing approach that builds on Piaget’s original work, which viewed cognition abilities, neo-Piagetian theory considers cognition as being made up of different types of individual skills. Using the terminology of information processing approaches, Neo-Piagetian theory suggests that cognitive development proceeds quickly in certain areas and more slowly in others. For example, reading ability and the skills needed to recall stories may progress sooner than the sorts of abstract computational abilities used in algebra or trigonometry. Furthermore, neo-Piagetian theorists believe that experience plays a greater role in advancing cognitive development than traditional Piagetian approaches claim.

5.4 LANGUAGE DEVELOPMENT

A major feature that distinguishes human beings from animals is their ability to use speech as a means of communication. Sometimes, the words ‘speech’ and ‘communication’ are used as if they mean the same thing. Actually, speech is only a form, or medium, of communication in human beings, though the most important one. Other forms of communication are: (i) facial and other bodily movements that show different emotions, (ii) touch, (iii) sign language used by the deaf, (iv) written symbols of words, and (v) arts such as music, dance and painting.

Broadly speaking, the tools of communication may be categorised under two heads—signs and symbols. Symbols are unique to human beings. Language permits the communication of information from one generation to the other. It passes wisdom to future generations. It performs the following main functions:

- Language helps to communicate ideas to others.
- Language helps in the formation of concepts.
- Language helps in the analysis of complexities.
- Language helps us to focus attention on ideas which would otherwise be difficult to keep in mind.

A psychologist is instrumental in structuring a language because in it he finds some aspects of the human structure of thinking.

Stages in Language Development

Sounds, words and sentences are the stages in the development of a language. The first cry or sound uttered by a child is its cry of birth. Crying, babbling and gestures are all important forms of ‘pre-speech’ communication. A mother starts talking to her child right from the moment of its birth. She talks to the child when
she feeds it. She talks to it when she changes its clothes. She talks to it when she
bathes it. This infuses and reinforces the sound making behaviour in the child. It is
pleasant for the entire family to hear and listen to the sounds made by the infant. It
becomes a rewarding experience for the child.

Crow and Crow (1962) pointed out the following sequential steps in the
progress of language development:
1. Feeble gestures and sounds,
2. Babbling,
3. Use of simple spoken vocabulary,
4. One-word sentences,
5. Combination of words into sentences,
6. Development of skill in reading,
7. Handling the tools of communication.

Gessel and Thompson (1934) reported about language growth as babies
coo when they are 12 to 16 weeks old. They are able to combine some vowels
and consonants and repeat them in succession when they are 5 to 6 months old.
They can speak a word or more when they are one year old.

A W Lynip (1951) recorded voice samples of an infant for 56 weeks
beginning with its birth cry. With a sound spectrograph, he analysed these records
and noted that the infant did not produce a single vowel or consonant sound
comparable to adult vowels or consonants until about the age of one year.

E L Thorndike and I Lorge spent a number of years in counting the words
which were used in popular magazines and children’s books in the USA. It was
found that the word ‘I’ was used most often. The following table shows the numbers
of times a word is used. A word’s choice was made from nearly 2,00,00,000
words. The count of each word is from text bunches of 10,00,000 words.

<p>| Table 5.1 Showing the number of times a word is used per 10,00,000 words. |
|-----------------------------|-------------------|</p>
<table>
<thead>
<tr>
<th>Word</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>19,886</td>
</tr>
<tr>
<td>have</td>
<td>5,434</td>
</tr>
<tr>
<td>about</td>
<td>2,204</td>
</tr>
<tr>
<td>father</td>
<td>719</td>
</tr>
<tr>
<td>remember</td>
<td>374</td>
</tr>
<tr>
<td>position</td>
<td>168</td>
</tr>
<tr>
<td>contain</td>
<td>83</td>
</tr>
<tr>
<td>headquarters</td>
<td>23</td>
</tr>
</tbody>
</table>

According to Piaget, a child grows from ego-centric speech to socialised
speech. In ego-centric speech, the child is concerned with himself and with talking
to himself. In socialised speech, he tries to exchange ideas.
Growth of vocabulary with age

Studies show that the first word uttered by the child is when she or he is about one year of age (or 10 months). There may be delay in speech when the reinforcement is slack. The comprehension and speech depend on a number of factors, particularly the socio-economic background and parental education. Verbal interaction between parents and children is less in lower class homes. Educated middle-class parents stimulate their children linguistically by reading to them or discussing events with them.

By one year, the child knows about three words, by two years of age he knows nearly 300 words, by three years he knows nearly 1,000 words, and by five years he knows about 2,000 words.

Study conducted by Smith (1926) revealed the following:

<table>
<thead>
<tr>
<th>Years</th>
<th>Months</th>
<th>No. of words acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>118</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>272</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>446</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>896</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>1,222</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1,540</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>1,870</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>2,072</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>2,289</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>2,562</td>
</tr>
</tbody>
</table>

Competence in Language

Two kinds of competence in language must be identified. There is, first of all, the ‘linguistic competence’. *Linguistic* competence involves the increase of one’s vocabulary and improvement of the ability to construct proper sentences by using the rules of grammar. The other kind of competence is *communication* competence. This competence is developed through specialized courses on ‘public speaking’, ‘group discussion’ etc.

Order of Priority in the Teaching of Languages

The order of priority in language learning must be:
Of course, learning to speak a language has the shortest road in the whole process of learning a language. Language learning must be made appealing to the pupil in as many ways as possible. This appeal in the early stages may lie in the sense of sight and hearing. The visual appeal (sense of sight) demands maximum use of pictures, sketches and diagrams. The auditory sense (sense of hearing) is stimulated naturally by the reproduction of sounds, their musicality and rhythm.

Improvement in Speaking

There are four major tasks in learning to speak. They are: (i) pronouncing words correctly, (ii) learning new words, (iii) connecting meanings with words, and (iv) weaving words together into sentences. All the four tasks undergo improvement during the early years of childhood. The amount of improvement depends upon chances of learning and guidance.

For improving pronunciation, four things matter. With a good model to imitate and with good guidance to copy it, children improve their pronunciation. Children should be taught to pronounce shorter and simpler words. They may be asked to say the words over and over again. Faulty pronunciation should be corrected immediately.

Speech Difficulties

Young children may develop incorrect speech habits on account of slow maturation or inadequate environment stimulation. It may be of omission of letters, faulty pronunciation, or incorrect use of grammar. Lisping, slurring and stammering are some common forms of speech defect. In lisping, the child finds it difficult to sound certain words correctly. Slurring is caused by running words together. The rapidity of speech interferes with distinct enunciation. Stammering is caused by emotional difficulties such as anxiety, failure, frustration, hostility and insecurity. Correction should concentrate more on emotional nature of the problem.

Factors Influencing Language Development

Some factors that influence the development of language in a child are rather important, such as imitation of the language of parents, other adults and teachers; cultural factors; environmental factors; degree of maturity; level of intelligence and physical conditions; number of children in the family; socio-economic status of the family; child’s emotional development and the teacher’s own command of the language.

D McCarthy (1920) noted consistent difference in favour of the upper social class children in language maturity. M Deutsch (1963) found that the home of the lower class child had few objects to provide variety of stimulation. R Hess and V Shipman (1966) taped samples of the mother’s language. It was found that middle-class mothers used more complex sentences than the low-class mothers.
In India, a study on language development of children was conducted in 1971 by B Kuppuswamy. The responses of 480 children studying in Kindergarten, first, third and fifth grades speaking Kannada were considered. Rural children were found to be definitely inferior to the urban children. The child in the village or in the slum of urban India had fewer things to observe and play with. Moreover, he lacked facilities like television. This provided opportunity to the middle-class child to learn more words and have a good vocabulary by the time he goes to school.

5.4.1 Acquisition of Language

Language is our primary means of communicating our thoughts. Everyone can master and use an enormously complex linguistic system.

Human beings use the language acquisition process to acquire the ability to perceive and understand language, as well as to produce and use words and sentences for communication.

By the time they are six years old, children usually master maximum basic vocabulary and grammar of their first language.

Second language acquisition is the process by which a person learns a language other than his or her mother tongue.

Irrespective of the language they are exposed to, children achieve linguistic milestones in parallel fashion.

Stage 1 Screaming or Crying (0-6 months)
Stage 2 Babbling (6-9 months)
Stage 3 Sound Imitation or echo reaction stage
Stage 4 Verbal understanding
Stage 5 Verbal utterances

At about 6-8 months, all children begin to babble. They make repetitive sounds, such as dada, baba, and so on. At about 10-12 months they speak their first words, and between 20 and 24 months they begin to put together words.

Kids between the ages of two and three speak a wide variety of languages and manage to use infinitive verbs in main clauses or even omit subjects in sentences, even though the language they are familiar with may not have such an option. Children tend to over-regularise the past tense or other tenses.

At the age of nine months babies begin uttering to a bit of a beat. They reflect the rhythm of the language they are learning. The melody of intonation of language becomes distinct.

As toddlers begin to learn more words, they use them in combination to come up with more complex ideas. Vocabulary and grammar grow hand in hand. It is observed that English-speaking children actively use about 3000 words by the time they turn five. By the age of thirteen, the figure goes up to 20,000 and by the age of 20, it goes up to 50,000.
Language use has two aspects—production and comprehension. In the production of language, we start with a thought, somehow translate it into a sentence, and end up with sounds that express the sentence. In the comprehension of language, we start by hearing sounds, attach meanings to the sounds in the form of words, combine the words to create a sentence, and then somehow extract meaning from it. Language use seems to involve moving through various levels. At the highest level are sentence units, including sentences and phrases. The next level is that of words and parts of words that carry meaning (the prefix or the suffixes, for example).

The lowest level contains speech sounds; the adjacent levels are closely related. The phrases of a sentence are built from words and prefixes and suffixes, which in turn are constructed from speech sounds. Language is therefore a multilevel system for relating thoughts to speech by means of word and sentence units (Chomsky, 1975). The following are the levels of language:

- **Level 1: Speech sounds**: We would not perceive the person’s speech as a continuous stream of sound but rather as a sequence of phonemes, or discrete speech categories. For example, the sound corresponding to the first letter in ‘boy’ is an example of a phoneme symbolized as ‘b’. Every language has a different set of phonemes.

- **Level 2: Word units**: Unlike phonemes, words carry meaning. However, they are not the only small linguistic units that convey meaning. Suffixes, such as ‘ly’, or prefixes such as ‘un’ also carry meaning. They can be added to words to form more complex words with different meanings. The term morpheme is used to refer to any small linguistic unit that carries meaning. The most important aspect of a word is its meaning. Some words are ambiguous because they name more than one concept.

- **Level 3: Sentence units**: As listeners, we usually combine words into sentence units, which include sentences as well as phrases. An important property of these units is that they can correspond to parts of a thought, or proposition. Such correspondences allow a listener to extract propositions from sentences.

- **Level 4: Phrases and prepositions**: Analysing a sentence into noun and verb phrases, and then dividing these phrases into smaller units like nouns, an adjective, and verbs, is syntactic analysis. Syntax deals with the relationships between words in phrases and sentences. Syntax primarily serves to structure the parts of a sentence.

**Understanding Sentences**

Development occurs at all three levels of language. It starts at the level of phonemes, proceeds to the level of words and other morphemes, and then moves on to the level of sentence units, or syntax.
Phonemes and combinations of phonemes

Although children learn which phonemes are relevant during their first year of life, it takes several years for them to learn how phonemes can be combined to form words. When children first begin to talk, they occasionally produce difficult words like dumber for lumber. By age four, however, children have learned most of what they need to know about phoneme combinations.

Words and concepts

At about one year of age, children begin to speak. One-year-olds already have concepts for many things (including family members, household pets, food, toys, and body parts), and when they begin to speak, they are mapping these concepts onto words that adults use. The beginning vocabulary is roughly the same for all children. Children who are 1 to 2 years old talk mainly about people (dada, mama, baby, etc.). Thereafter, the child’s vocabulary development virtually explodes. At a year and a half, a child might have a vocabulary of twenty-five words, at six years, the child’s vocabulary grows; children have to learn new words at the rate of almost ten per day (Miller and Gildea, 1987). Children seem to be attainted to learning new words.

From primitive to complex sentences

Between the ages of a year and a half and two and a half years, the acquisition of phrase and sentence units, or syntax begins. Children start to combine single words into two-word utterances. Children progress rapidly from two-word utterances to more complex sentences that express propositions more precisely.

Learning process

Innate factors must also play a role. That is why children raised in English-speaking households learn English whereas children raised in French-speaking households learn French.

Imitation and conditioning

One possibility is that children learn language by imitating adults. Although imitation plays some role in the learning of words (a parent points to a telephone says, ‘phone’ and the child tries to repeat the word), it cannot be the principal means by which children learn to produce and understand sentences. A second possibility is that children acquire language through conditioning. Adults may reward children when they produce a grammatical sentence and correct them when children make mistakes. For this to work, parents would have to respond to every detail in a child’s speech. However, Brown, Cazden, and Bellugi (1969) found that parents do not pay attention to how the child says something, as long as the statement is comprehensible. Also, attempts to correct a child (and, hence, apply conditioning) are often futile.
Hypothesis testing
The problem with imitation and conditioning is that they focus on specific utterances. However, children often learn something general as a rule. They seem to form a hypothesis about a rule of language, test it, and retain it if it works.

Innate factors
Some of our knowledge about language is inborn or innate. If our innate knowledge is very rich or detailed, the process of language acquisition should be similar for different languages, even if the opportunities for learning differ among cultures unique to the human species?

The richness of innate knowledge
All children, regardless of their culture and language, seem to go through the same sequence of language development, which is as follows:

- When children are one; they speak a few isolated words.
- At about two years of age, they speak two- and three-word sentences.
- At three years, sentences become more grammatical.
- At four years, the children’s speech sounds much like that of an adult.

Cultures differ markedly in the opportunities they provide for children to learn from adults. In some cultures, parents are constantly speaking to their children, whereas in others parents verbally ignore their children. The fact is that this sequence is so consistent across cultures which indicate that our innate knowledge about language is very rich. Indeed, our innate knowledge of language seems to be so rich that children can go through the normal course of language acquisition even when there are no language users around them to serve as models or teachers.

Critical periods
More recent research indicates that there is also a critical period for learning syntax. With respect to understanding and producing words with multiple morphemes, such as ‘untimely’, which consists of the morphemes ‘un’, ‘time’, and ‘ly’, native signers did better than those who learned ASL when entering school, who in turn did better than those who learned ASL after age twelve (Meier, 1991; Newport)

Symbols and concepts as different components of thought formation of concepts
Thought can be conceived of as a ‘language of the mind’. Actually, there may be more than one language. One mode of thought corresponds to the stream of sentences that we seem to ‘hear in our mind’. It is referred to as propositional thought because it expresses a proposition or claim. Another mode, imagined thought, corresponds to images, particularly visual ones that we can ‘see’ in our minds.
Teacher—the Architect of the Child’s Language Development

All teachers engaged in the teaching work in general and language teachers in particular greatly influence language development of children. This is all the more important at pre-school and elementary stages. The most important point to be noted is that their form of communication is correct and simple. They should speak very clearly and in a modulated voice. Their pronunciation should be very distinct and free from faults. They should connect meaning when they use new words. In the earlier stages concrete objects and charts, etc. may be used. A balanced and judicious repetition strengthens learning.

Guidelines for improving young children’s comprehension:

1. Short sentences should be used.
2. Whenever a new word is spoken, it must be explained properly.
3. Facial expressions and gesture may be used to explain words and sentences.
4. It should be kept in view that the speech to which children are subjected to on a daily basis should be correct so that they have an ideal model for imitation.
5. Children should be asked to question to make sure that they understand.
6. Audio-visual aids may be used to develop children’s comprehension.
7. Children should be encouraged to speak in front of adults.
8. Teachers should be helpful and pleasant when correcting errors.
9. Children should be encouraged to listen carefully.
10. Teachers should talk to children about a wide range of interesting topics, partly to encourage listening and partly to add to their general knowledge of things to think and talk about.
11. Teachers should not wait for a child to outgrow poor speech.

Activities for understanding spoken and written language

1. Providing opportunities to children for free conversation to take place between themselves and the teachers.
2. Providing opportunities for listening to the recorded programs of songs, stories, dramas, etc.
3. Providing opportunities for participation in storytelling, dramatization, etc.
4. Providing opportunities for recitation of nursery rhymes and singing of songs.
5. Providing opportunities to children to associate sounds with appropriate pictures of trees, birds, animals, objects, etc.
7. Preparing a list of difficult words involving similar syllables or consonant clusters and helping children to correct pronunciation.
8. Asking children to practice repeated usage in different situations.
9. Providing opportunities to children with songs and choruses, dances and music to engage their interest.
10. Providing opportunities to children to listen to other media like radio.
11. Providing opportunities to children to read pictures.
12. Asking children to find out small differences in two or more similar pictures.
13. Asking children to name the particular action in pictures, e.g., whenever an animal is standing, sitting, running etc.

Activities for development of readiness for writing

The process of writing implies finer muscular coordination. It implies the development of small muscle control, eye span and then eye-hand coordination so that children are able to use their physical skills in written expression.

Introduction of activities pertaining to drawing of straight lines and curves to facilitate the skill of writing at a later stage is very helpful.

Art activities like easel painting, finer painting, crayoning, sand writing, clay modeling, tracing, cutting and pasting of various shapes should be introduced.

Tracing equipment in Montessori apparatus should be made use of in developing writing readiness.

At one time the study of moral development was considered to be on the fringe of psychology, but recently it has come to the fore as a worthy topic that has important implications.

The term moral is derived from the Latin word mores meaning customs and folk ways. Morality is indissolubly linked with the social system. The child has to learn what is good and what is bad, what is right and what is wrong. He must also to learn his duty. All these terms imply clearly that morality has reference to social relationship and social process. Morality has two dimensions which are closely interlinked. The rules of morality operate in the social context. Secondly it is used to mean the pursuit of good life—personal moral code.

5.5 MEMORY

Memory increases our efficiency. Memory enables us to remember important facts, ideas, names, etc., and other items of information. Memory in fact, is one of the best friends, guides and philosophers of an individual. Without memory, an individual becomes inaccurate and inefficient. Memory is the function of the mind by virtue of which it records, retains and produces ideas gained by its own activity.
One of the important aims of school instruction is to encourage learners to acquire and retain the knowledge imparted in school for future use both in school life and in meeting out-of-school problems of the present as well of the future. It is, therefore, essential to take proper steps so that students are able to retain and recall easily, the information acquired, even after a time gap.

Some of the definitions given below illustrate the various elements involved in memory.

1. **According to J A Adams** (1967), memory is the learning capacity for responding and its persistence over time is measured by the retention test. Memory is the “state of a subject that gives the capability for correct occurrence of a criterion response. There is an initial acquisition session in which the subject makes a discriminative response to a stimulus, followed by a period of time called the retentional interval when the criterion response does not occur.”

2. **James Drever observed**, “Memory is that characteristic which underlines all learning, the essential feature of which is reflection. In a narrow sense, it covers recall and recognition.”

3. **Ryburn explained**, “the power that we have to store our experiences, and to bring them into the field of consciousness sometime after the experiences have occurred, is termed as memory.”

4. **Spearman was of the view**, “Cognitive events by their occurrence establish dispositions which facilitate their recurrence.”

5. **Stout defined memory as** “the ideal revival, so far as field revival is merely reproductive in which the objects of past experience are reinstated as far as possible in the order and manner of their original occurrence.”

6. **Woodworth and Marquis stated**, “Memory is a mental power which consists of learning, retaining and remembering what has previously been learnt.”

Memory is the reproduction of past experience even without the presence of stimulus. Memory may be explained as under:

- **Stimulus—response—acquiring of an experience—retention—time gap—recall.**
- **According to Woodworth, four main elements of memory are:** Learning (acquisition), retention, recall and recognition.

**Learning:** It is the process of establishing association of the ideas in mind.

**Retention:** It is the process of relegation of the past experience in the subconscious mind of the individual in the form of a mental experience.

**Recall:** It is bringing again in mind the past experience on the basis of association of ideas.
Recall is of two types: (i) Spontaneous and (ii) Deliberate.

In spontaneous recall, no effort is made to recall but the experiences or ideas just flow in. In deliberate recall, an effort is made to recall something.

Recall is dependent on association of ideas. This association of ideas is dependent on these laws: (i) Law of similarity (ii) Law of contrast (iii) Law of contiguity (iv) Law of regency (v) Law of frequency (vi) Law of primacy and (vii) Law of vividness.

**Recognition:** It is the capacity to recognize or express knowledge of all—seeing a thing that has been seen earlier.

### Kinds of Memory

Memory may be categorized into five kinds: (i) Habit memory and true memory, (ii) Rote memory and logical memory, (iii) Passive memory and active memory, (iv) Personal and impersonal memory, and (v) Immediate memory and permanent memory.

1. **Habit memory and true memory:** Bergson was of the view that habit memory is dependent upon mere motor mechanism while true memory depends on independent recollections. According to him, “The past survives under two distinct forms, firstly in motor mechanism, secondly in independent recollections. The memory of a lesson remembered in the sense of learned by heart has all the marks of habit, of the memory of each successive readings has none of the marks of habit. Of these two memories, one is pure or true memory, the other is habit interpreted by memory.” For example, learning of mathematical tables by mere repetition is a type of habit memory. True memory depends upon association and interest and therefore it is liked by educators.

2. **Rote memory and logical memory:** Rote memory is the mechanical repetition of an experience without understanding. It is also termed as habit memory. Logical memory depends upon understanding. A child understanding the mathematical tables, repeating them a number of times and applying them on later occasions, is an example of logical memory.

3. **Passive memory and active memory:** In passive memory, the past experiences come to our consciousness without making any effort on our part. In active memory, we make deliberate efforts to recall some forgotten experience.

4. **Personal and impersonal memory:** In personal memory, we remember our past experiences. In impersonal memory, facts are remembered without any reference to oneself.

5. **Immediate memory and permanent memory:** When the material learnt is recalled immediately after learning it, it is called immediate memory. On the other hand, when a certain amount of time has passed and then we try to recall it and succeed in recalling, it is called permanent memory.
There is no unanimity among writers and psychologists regarding definition on intelligence. In fact, there are as many definitions of intelligence as there are writers on the subject.

P B Ballard (1913) observed, “While the teacher tried to cultivate intelligence and the psychologist tried to measure intelligence, nobody seems to know what intelligence was.” On account of the different ways in which intelligence is interpreted, it has become less acceptable and more exposed to criticism by psychologists. Nevertheless, it is traditionally acknowledged by parents and teachers that intelligence is the most important single variable which affects success in school and in life. In general terms, intelligence means the manner with which an individual deals with facts and situations. Intelligence is the aggregate or the global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment. According to Prof. R R Kumria, “Call it practical wisdom, call it commonsense, call it genius—it is just the same in different names and grades.”

Four-fold Classification of Definitions of Intelligence

A variety of definitions of intelligence have been suggested by the psychologists, which can be classified into at least four distinct groups.

The first group of definitions places the emphasis upon the adjustment and adaptation of an individual to his total environment or to its limited aspects. According to this group, intelligence is general mental adaptability to new problems and to new situations of life.

The second group of definitions stresses on the ability to learn. The more intelligent a person, the more readily and extensively he is able to learn and enlarge his field of activity and experience.

The third group of definitions maintains that intelligence is the ability to carry on abstract thinking. This implies the effective use of ideas and efficiency in dealing with symbols, specially numerical and verbal symbols.

The fourth category refers to the operational definitions.

These categories of definitions, are not, and perhaps cannot be, mutually exclusive. They intersect and overlap at many points.

I. Ability to Adjust

1. A Binet (1905) defined intelligence as, “The ability of an individual to direct his behaviour towards a goal.”

2. According to Boynton, “It is an inherent capacity of an individual which is manifested through his ability to adjust and reconstruct the factors of his environment in accordance with the most fundamental needs of himself and his group.”
Approaches

NOTES

3. Burt (1949) observed, “It is the power of readjustment to relatively novel situations by organizing new psycho-physical coordination.”

4. F.N. Freeman (1937) said, “Intelligence is represented in behaviour by the capacity of the individual to adjust himself to new situations, to solve new problems, to learn.”

5. According to Johnson, “It stands for an ability to solve the general run of human problems to adjust to new situations.”

6. J. Piaget (1926) defined intelligence as “Adaptation of self to physical and social environment.”

7. Peterson was of the view, “It is a mechanical means for adjustment and control.”

8. For Pinter (1921) intelligence meant, “The ability of the individual to adapt adequately to relatively new situations to life.”

9. According to Stern (1941), “Intelligence is a general capacity of an individual, consciously to adjust his thinking to new environment.”

10. Van Wagemen was of the view, “It is the capacity to learn and to adjust to relatively new and changing conditions.”

11. William James (1907) observed, “It is the ability to adjust oneself successfully to a relatively new situation.”

12. William McDougall (1923) defined, “It is the capacity to improve upon native tendency in the light of past experience.”

II. Ability to Learn

13. According to Buckingham (1921), “Intelligence is the learning ability.”

14. Calvin believed “It is the ability to learn.”

15. Spearman (1927) said, “Intelligence may be thought of in terms of two abilities, i.e., ’g’ or general and ’s’ or specific.”

16. L.L. Thurstone (1946) defined intelligence in terms of five primary abilities.

17. Woodrow observed, “It is the capacity to acquire.”

III. Ability to Do Abstract Reasoning

18. For C. Spearman (1927) intelligence was the “General intelligence which involves mainly the education of relations and correlates.”

19. E.L. Thorndike (1931) said, “We may define intelligence in general as the power of good responses from the point of view of truth or fact.”

20. Gates and Others (1955) observed, “It is a composite organization of abilities to learn, to grasp broad and subtle facts, especially abstract facts, with alertness and accuracy, to exercise mental control and to display flexibility and sagacity in seeking the solution of problems.”
21. Henry Garrett (1946) was of the view, “The abilities demanded in the solution of problems which require the comprehension and use of symbols, i.e., words, numbers, diagrams, equations, formulae.”


23. L M Terman (1921) pointed out, “An individual is intelligent in proportion as he is able to carry on abstract thinking.”

24. According to Mann, “Intelligence is the flexibility or versatility to the use of symbolic processes.”

25. P E Vernon (1927) defined intelligence as, “All round thinking capacity or mental efficiency.”

IV. Operational Definitions

26. In the words of Boring (1948) “Intelligence is what intelligence tests.”

27. Dockell (1970) observed, “Intelligence might be taken to mean ‘ability’, i.e., what a person can do at a moment.”

28. D O Hebb (1949) described three situations in which the term intelligence could be used.

29. According to D W Wechsler (1950), “Intelligence is the aggregate or the global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment.”

30. G D Stoddard (1943) said, “Intelligence is the ability to undertake activities.”

31. According to Hein, “Intelligence is the activity consisting in grasping the essentials in a situation and responding approximately to them.”

32. P E Vernon (1927) defined, “Intelligence is what intelligence test measures.”

33. Well observed, “Intelligence is the property of recombining our behavioural pattern as to act later in novel situations.”

Brief Historical Review and Evaluation of Definition of Intelligence

Alfred Binet (1905), a French psychologist, was the first to take interest in the concept of intelligence. He defined intelligence as the “ability of an individual to direct his behaviour towards a goal, to make adaptation in his goal-oriented behaviour when necessary, to know when he reached the goal.” Comprehension, invention, direction and censorship: intelligence lies in these four words. Terman (1916) defined intelligence as “an individual’s ability to carry on abstract thinking.” In the words of Thompson, “The definition presented by Terman probably reflects most adequately our present functional definition of intelligence.” Thorndike (1926) further elaborated the definition given by Terman. He defined intelligence in terms of three somewhat independent dimensions: (i) Attitude, (ii) Breadth, and (iii) Speed.
In 1946, Thurstone identified the following, more or less, mutually exclusive components of intelligent behaviour.

**S, or space factor:** The ability to visualize flat or solid objects, heavily involved in mechanical aptitude.

**N, or number factor:** Ability in the carrying-out of the rather simple numerical exercise similar to those used by a cashier.

**V, or verbal comprehension factor:** Ability to deal with verbal concepts, e.g., verbal reasoning, and vocabulary availability.

**W, or word fluency factor:** Ability to produce words in a restricted context, i.e., a child may be fluent even though he has a small vocabulary.

**M, or memory factor:** Ability to store and reproduce perceptual-conceptual materials.

**Induction factor:** Facility in discovering the principle or rule that applies to a series of problems.

**Deduction factor:** Only a small amount of evidence for—ability to apply a given principle to a series of specific problems.

**Flexibility and speed to closure:** Ability to interpret instructions quickly, facility to size up a problem situation quickly; flexibility is the ability to abandon one configuration in favour of a more promising one.

G D Stoddard and B L Wellman (1934) offered a seven-category definition of intelligence. According to them, “Intelligence is the ability to undertake activities that are characterized by:

- (a) Difficulty,
- (b) Complexity,
- (c) Abstractness,
- (d) Economy,
- (e) Adaptiveness to a goal,
- (f) Social value, and
- (g) The emergence of originals and to maintain such activities under conditions that demand a concentration of energy and a resistance to emotional force.”

J P Guilford (1950) was of the view that these definitions ignore the important concept of creativity and thus provide a narrow approach to intelligence.

D Wechsler (1950) concluded that general intelligence is more than a combination of the cognitive functions identified by Thurstone and others. He said, general intelligence is influenced by certain cognitive factors like drive, will, perseverance and persistence; by certain emotional factors like anxiety and impulsiveness; and by other more general personality characteristics.
G Thompson (1975) summed it up as, “There is no absolute definition of intelligence. A theoretical construct may be changed any time. According to the law of parsimony, the simplest yet most fruitful definition will eventually prevail. Thurstone’s approach to the definition and measurement of children’s intelligence is challenging. Whether this approach will be more valuable than those of Binet and Terman, is of course unknown.”

Scholars of Intelligence in Ancient India

Kautilya defined intelligence ‘as the ability to work’. Visnusarma called it the ‘power which enables human beings to control the world’. The Brahma sutra tells us that intelligence is the gift of God and it is fixed at birth. The Agnipurana prescribes diet for infants to help the growth of their intelligence. Agadabuddhi is the intelligence that cannot be measured or superior intelligence. Mahabuddhi is great intelligence, malin buddhi is dull intelligence. Sthirabuddhi is calm intelligence. Alpabuddhi is little intelligence.

In ancient India, intelligence was measured through conversation, physical features, gestures, gait, speech, changes in the eye and facial expression.

5.7 MORAL DEVELOPMENT

Baqer Mehdi and B.P. Gupta in an NCERT publication entitled, Psychology of the Child and Curriculum (1983) observe, ‘Moral development of the child implies inculcation in the child of a number of qualities for which curriculum provides ample opportunities’. According to them, following are some of the important moral qualities which need to be attended to in schools:

- Honesty in words and deeds
- Truthfulness
- Self-respect and a desire to respect others
- Righteousness
- Self-control
- Duty consciousness
- Compassion.

Piaget’s Views on Moral Development

Jean Piaget (1932) used the interview method to find out the various stages of moral development of the child. According to him, there are four stages: (i) Anomy-the first five years (ii) Heteronomy - Authority (5-8, years) (iii) Heteronomy - Reciprocity (9-13 years) and (iv) Autonomy - Adolescence (13-18 years).
1. **Anomy** (First Five Years): Piaget called the first stage *anomy*, the stage without the law. At this stage the behaviour of the child is neither moral nor immoral but *non-moral* or *amoral*. His behaviour is not guided by moral standards. The regulators of behaviour are pain and pleasure. This is the ‘discipline of natural consequences’ as advocated by Rousseau.

2. **Heteronomy (a) Discipline of Authority** (5-8 years): The second stage of moral development may be called the *discipline of artificial consequence* imposed by adults. Moral development at this stage is controlled by external authority. Rewards and punishments regulate moral development.

3. **Heteronomy (b) Reciprocity** (9-13 years): At the third stage, there is the morality of cooperation with peers or *equals*. This stage is regulated by the norm of reciprocity which implies that ‘we should not do to others what will be offensive to us.’ Conformity with the group becomes imperative.

4. **Autonomy - Adolescence** (13-18 years): Piaget calls this stage *equity* stage also. As Piaget puts it, while reciprocity demands strict equality, autonomy develops equity, taking into account such factors as motive, circumstance, etc. The individual at this stage is fully responsible for his behaviour. J. A. Hadfield (1964) observes as, ‘The goal of moral authority is to know ourselves, accept ourselves, be ourselves.’ The rules governing moral behaviour come from *within* the individual. Such autonomy is the ideal of moral development.

The different levels of moral development associated with the different age levels must not be looked upon as fixed stages for all children. Further it should not be assumed that each succeeding stage makes the child give up the preceding stages.

In the past the study of moral development was considered to be on the fringe of psychology. It has now become a worthy independent topic of study that has important implications.

The term *moral* is derived from the Latin word *mores*, meaning manners, customs and folk ways. Morality is indissolubly linked with social system. The child has to learn what is *good* and what is *bad*, what is *right* and what is *wrong*. He has also to learn his *duty*. All these terms clearly imply that morality has reference to social relationship and the social process. Morality has two dimensions which are closely interlinked. Rules of morality operate in the social context. Secondly, it is used to mean pursuit of good life—personal moral code.

5.7.1 **Kohlberg’s Levels of Morality**

A L Kohlberg (1963) distinguished three levels of moral development. Pre-conventional, conventional and post-conventional, each divided into two stages.
Pre-conventional Level

Stage 1: Punishment and Obedience Orientation: The moral development is determined by the physical consequences of an action whether it is good or bad. Avoiding punishment and bowing to superior authority are valued positively.

Stage 2: Instrumental Relativist Orientation: Right action consists of behaviour that satisfies child’s own needs. Human relations are considered in reciprocity. It may be seen in a pragmatic way, i.e., “you scratch my back and I’ll scratch yours.”

Conventional Level

Stage 3: Interpersonal Concordance: At this stage, the child begins to like the goodwill of others and tries to please others to obtain their approval in the form of ‘good boy’, ‘nice girl’. Good moral behaviour always pleases others.

Stage 4: Orientation towards Authority: Focus is on authority or rules. One shows respect for authority.

Post-conventional Level

Stage 5: Social Contract Orientation: Right behaviour is defined according to the standards agreed upon by the group or society. These standards can be changed through a proper procedure.

Stage 6: Universal Ethical Principle Orientation: At this stage, the individual keeps in mind not only the norms of society but also the universal moral principles. To uphold these principles, an individual may be prepared to sacrifice his all, including his life.

Check Your Progress

1. Who is the founder of the Triarchic Theory of Intelligence?
2. List the main functions of language.
3. What are the major tasks involved in learning to speak?
4. Name the kinds of memory.

5.8 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Robert Sternberg is the founder of the Triarchic Theory of Intelligence.
2. The main functions of language are the following:
   - Language helps to communicate ideas to others.
   - Language helps in the formation of concepts.
   - Language helps in the analysis of complexities.
   - Language helps us to focus attention on ideas which would otherwise be difficult to keep in mind.
3. There are four major tasks in learning to speak. They are: (i) pronouncing words correctly, (ii) learning new words, (iii) connecting meanings with words, and (iv) weaving words together into sentences.

4. Memory may be categorized into five kinds: (i) Habit memory and true memory, (ii) Rote memory and logical memory, (iii) Passive memory and active memory, (iv) Personal and impersonal memory, and (v) Immediate memory and permanent memory.

5.9 SUMMARY

- Psychometrics is the study of the theory and technique of psychological measurement. According to the National Council on Measurement in Education (NCME), psychometrics is concerned with psychological measurement.
- Psychometricians have created many measurement theories including the classical test theory (CTT) and item response theory (IRT).
- Originally psychometric instruments were created to measure intelligence. The most popular historical approach involves the Stanford-Binet IQ test by the French Psychologist Alfred Binet.
- Robert Sternberg— the founder of the Triarchic Theory of Intelligence—and other critics of the psychometric model, observe that individuals in the general population have a kind of different conception of intelligence than most experts.
- According to Piaget, there are four stages to cognitive development:
  (i) Sensorimotor stage: birth to 2 years
  (ii) Preoperational stage: ages 2 to 7
  (iii) Concrete operational stage: ages 7 to 11
  (iv) Formal operational stage: ages 12 and up
- Information-processing approaches to cognitive development seek to identify the ways individuals take in, use, and store information. Information processing approaches grew out of developments in the electronic processing of information, particularly as carried out by computers.
- A major feature that distinguishes human beings from animals is their ability to use speech as a means of communication.
- Sounds, words and sentences are the stages in the development of a language. The first cry or sound uttered by a child is its cry of birth.
- Linguistic competence involves the increase of one’s vocabulary and improvement of the ability to construct proper sentences by using the rules of grammar. The other kind of competence is communication competence.
• Language is our primary means of communicating our thoughts. Everyone can master and use an enormously complex linguistic system.

• Language use has two aspects—production and comprehension. In the production of language, we start with a thought, somehow translate it into a sentence, and end up with sounds that express the sentence.

• All teachers engaged in the teaching work in general and language teachers in particular greatly influence language development of children.

• The process of writing implies finer muscular coordination. It implies the development of small muscle control, eye span and then eye-hand coordination so that children are able to use their physical skills in written expression.

• Memory increases our efficiency. Memory enables us to remember important facts, ideas, names, etc., and other items of information. Memory in fact, is one of the best friends, guides and philosophers of an individual. Without memory, an individual becomes inaccurate and inefficient.

• Alfred Binet (1905), a French psychologist, was the first to take interest in the concept of intelligence. He defined intelligence as the “ability of an individual to direct his behaviour towards a goal, to make adaptation in his goal-oriented behaviour when necessary, to know when he reached the goal.”

• Jean Piaget (1932) used the interview method to find out the various stages of moral development of the child. According to him, there are four stages: (i) Anomy- the first five years (ii) Heteronomy - Authority (5-8, years) (iii) Heteronomy - Reciprocity (9-13 years) and (iv) Autonomy-Adolescence (13-18 years).

5.10 KEY WORDS

• Psychometrics: It is the study of the theory and technique of psychological measurement.

• Second language acquisition: It is the process by which a person learns a language other than his or her mother tongue.

• Retention: It is the process of relegation of the past experience in the subconscious mind of the individual in the form of a mental experience.

• Linguistic competence: It involves the increase of one’s vocabulary and improvement of the ability to construct proper sentences by using the rules of grammar.
5.11 SELF ASSESSMENT QUESTIONS AND EXERCISES

NOTES

Short-Answer Questions

1. Briefly mention the psychometric approach to intellectual development.
2. What are the four stages to cognitive development as propounded by Jean Piaget?
3. Mention the stages in language development.
4. What are the factors influencing language development?
5. State the guidelines for improving young children’s comprehension.
6. Write a short note on Kohlberg’s level of morality.

Long-Answer Questions

1. Explain Piaget’s and Information processing approach.
2. Discuss the process of acquisition of language.
3. Examine the significance of memory.
4. Analyse Piaget’s views on moral development.

5.12 FURTHER READINGS


UNIT 6 ADOLESCENCE

Structure
6.0 Introduction
6.1 Objectives
6.2 History of Marking Adolescence and Puberty
   6.2.1 The Secular Trend Regarding Menarche and Social Implications for
          Pubertal Timing
   6.2.2 Eating Disorders
   6.2.3 Identity Status
6.3 Other Adolescent Problem Behaviour
   6.3.1 Juvenile Delinquency
   6.3.2 Depression
   6.3.3 Behaviour Disorders
   6.3.4 Suicide
6.4 Answers to Check Your Progress Questions
6.5 Summary
6.6 Key Words
6.7 Self Assessment Questions and Exercises
6.8 Further Readings

6.0 INTRODUCTION

The teenage years are also called adolescence. Adolescence is a time for growth spurts and puberty changes. An adolescent may grow several inches in several months followed by a period of very slow growth, then have another growth spurt. Changes with puberty (sexual maturation) may occur gradually or several signs may become visible at the same time. There is a great amount of variation in the rate of changes that may occur. Some teenagers may experience these signs of maturity sooner or later than others.

In this unit, you will study about the history of marking adolescence and puberty, the secular trend regarding menarche and social implications for puberty timing and adolescence problem behaviour.

6.1 OBJECTIVES

After going through this unit, you will be able to:

- Explain the history of marking adolescence and puberty
- Discuss the secular trend regarding menarche and social implications for pubertal timing
- Identify the eating disorders
- Discuss adolescent problem behaviour such as juvenile delinquency, depression and suicide
6.2 HISTORY OF MARKING ADOLESCENCE AND PUBERTY

Physiological growth refers to the growth and development of physical as well as mental features. Development of the cognitive, emotional, intellectual and social skills is as important as the development of different body parts. The simultaneous growths of physical attributes along with mental abilities are both signifiers of physiological development.

Sexual Maturation and Growth Spurt
Adolescence starts with puberty. Usually, puberty starts between ages 10–13 in girls and 12–15 in boys. During puberty, your body will grow faster than at any other time in your life, except when you were a baby. A boy or a girl at birth and before puberty can be distinguished from the sex organs. Sex organs are necessary for reproduction, therefore, they are called the primary sexual characteristics. At the onset of puberty, physical changes and development that are not directly part of the reproductive system, but distinguish the male from the female are called secondary sexual characteristics. The changes at puberty can be studied under three headings: (1) development of secondary sexual characteristics, (2) development of sex organs, and (3) intellectual, emotional and psychological development.

1. Development of secondary sexual characteristics: The development of secondary sexual characteristics can be discussed under the following headings:

- **Increase in height**: The height increases from birth to the end of puberty. During adolescence, the height increases by 15–20 per cent. The height depends on the genes that you have inherited from parents. Right kind of diet, exercise and general health during these years also contribute to height.

- **Increase in weight**: During adolescence, the weight of a teenager almost doubles as the amount of muscles, fat and bones in their bodies change.

- **Shoulders and chest**: During this stage, the boys develop broad shoulders and wider chests due to development of bones and muscles. This growth spurt might cause stretch marks on these areas.

- **Development of muscles**: During puberty, the muscles of the body increase in mass and strength, in both boys and girls.

- **Body hair pattern**: Both, boys and girls, grow a body hair pattern in the armpits (under the arms), in the pubic area (region above the thighs) and on the arms and legs. Boys also begin to grow facial hair, that is, moustache and beard and hair on chest.
• **Voice change:** Both girls and boys are affected by voice changes during their adolescence. In girls, the change in their voice is hardly noticeable because it becomes only slightly deeper. As compared to boys they have a high-pitched voice. In boys, changes that occur in the larynx cause their voices to deepen. The vocal cords of the larynx grow thicker and longer and when they vibrate the voices sound lower and deep. The larynx sticks out as a prominent Adam’s apple in males.

• **Distribution of fat tissue:** The distribution of fat in the body changes during adolescence. Boys add more fat to their trunks than to their limbs, whereas in adolescent girls there is increased distribution of fat in both. Among the limbs there is more fat added to their legs than to their arms as a result their waist becomes thin and the hips become more rounded. Adequate physical exercise should, therefore, be a part of daily life of an adolescent.

• **Increased activity of sweat and sebaceous glands:** During puberty, the sweat glands of both boys and girls become more active, especially those present in the armpits and groin and on the palms of the hands and soles of the feet. When the sweat comes in contact with bacteria on the skin, it can produce an odour. The body odour (or BO as people call it) may be stronger in some people than others. Taking bath or shower daily and looking after one’s personal hygiene is absolutely essential. Sebaceous glands secrete an oily substance called ‘sebum’ onto the surface of the skin. These are especially common on the face, back and chest. During puberty, the secretion of sebaceous glands increases due to which the skin of these body regions tends to be oily.

• **Acne:** Acne is a common problem among adolescents. It appears in boys and girls around the beginning of puberty. The hormonal changes that are happening inside your body cause the sebaceous (oil) glands to become more active. When the oil glands get infected with bacteria an outbreak of acne takes place. Most teenagers get acne on the face, neck, upper back, upper chest, shoulders and back.

• **Breast development:** The beginning of breast development is one of the earliest signs of puberty in girls. Breast is made up of fatty tissue and milk glands with ducts. The milk glands produce milk for the newborn child. Some adolescent boys also have breast development which is temporary. The swelling usually goes down within a year or so. In overweight boys, fat may also give the breasts an enlarged appearance.

2. **Development of sex organs:** During puberty in boys, the penis, the testes and the scrotum continue to grow and develop completely. Testes begin to produce sperms. In girls, the ovaries enlarge, eggs begin to mature and menstruation begins. Menstruation is a major stage of puberty in girls.
marks the stage when ovulation begins, that is, the ovaries begin to release mature egg cells.

**What triggers the changes during adolescence?**

The changes that occur during adolescence are initiated by hormones. You have read about the two hormones—estrogen, produced by the ovaries and testosterone, produced by the testes. At the onset of puberty, these hormones stimulate the growth and function of various organs like the bones, muscles, skin, breasts, brain and the reproductive organs and cause physiological changes. The secretion of these hormones is controlled by another hormone secreted into the bloodstream by the pituitary gland located in the brain. When this hormone from the pituitary gland stimulates the gonads (the ovaries and testes), they in turn secrete hormones that trigger off the changes in the body.

Hormones are chemical substances that are secreted by glands. Exocrine glands or duct glands secrete their products into ducts that open on to a surface. Examples include the sweat glands, sebaceous glands, salivary glands, digestive glands such as pancreas and mammary glands. Endocrine glands or ductless glands secrete their hormones directly into the bloodstream rather than through a duct. Examples include the pituitary gland, ovaries and testes.

The endocrine system is a system of glands that involves the release of specific chemical messengers called hormones into the bloodstream. Table 6.1 shows the position of some other endocrine glands which produce hormones other than sex hormones.

Let us learn about one hormone each, secreted by these endocrine glands and the diseases caused by an imbalance in the hormone levels. A hormonal imbalance occurs when secretion levels are not what they need to be.

**Table 6. Some Glands of the Endocrine System**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of the hormone and the endocrine gland which secretes it</th>
<th>Function of the hormone</th>
<th>Disease caused by imbalance in the hormone levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Growth hormone by pituitary gland</td>
<td>Promotes normal growth of bones, muscles and other organs.</td>
<td>Decreased levels of growth hormone cause decrease in height in children and adolescents. Increased levels may cause a condition called gigantism.</td>
</tr>
<tr>
<td>2.</td>
<td>Thyroxine by thyroid gland</td>
<td>Controls the rate of metabolism. Another hormone necessary for the synthesis of thyroxine.</td>
<td>Deficiency of iodine in the diet causes goitre which is a swelling of the thyroid gland.</td>
</tr>
<tr>
<td>3.</td>
<td>Adrenalin by adrenal glands</td>
<td>Released in the body to cope up with anxiety, vigorous exercise or fear.</td>
<td>The body is unable to adjust to stress caused due to anger, worry, embarrassment or vigorous activity.</td>
</tr>
<tr>
<td>4.</td>
<td>Insulin by pancreas</td>
<td>Controls the level of glucose in the blood. Insulin moves glucose into the cells to produce energy.</td>
<td>When there is insufficiency of insulin, glucose cannot get into the cells to produce energy. This leads to build up of excess glucose in the bloodstream. Such a condition is known as diabetes.</td>
</tr>
</tbody>
</table>
3. **Intellectual, emotional and psychological development**: Another area of physical development is in the brain, especially the frontal lobe, which is the area for impulse control, judgment, and the ability to plan. The frontal lobe develops during the teens and early 20s. An undeveloped frontal lobe helps explain impulsiveness, risky behaviours, and moodiness among adolescents. In mid to late adolescence, young people often feel the need to establish their sexual identity by becoming comfortable with their body and sexual feelings. Through romantic friendships, dating, and experimenting, adolescents learn to express and receive intimate or sexual advances.

As an adolescent boy/girl grows, he/she develops problem-solving skills and could be a part of decision-making in school or at home. He/She would be able to analyse information and experiences by critical thinking and handle a new situation through creative thinking. The adolescent boy/girl would indulge in planning and goal setting for long-term and short-term tasks. He/She would be able to analyse information and experiences by critical thinking and handle a new situation through creative thinking. The adolescent boy/girl would indulge in planning and goal setting for long-term and short-term tasks. Yet, the same hormones that cause changes in the appearance and intellect can also affect his/her emotions. One may feel awkward and self-conscious at times, confused and insecure at other times. All these are normal feelings and the adolescent boy/girl gradually gets used to such emotions and gets over them.

As discussed earlier, adolescents become stronger and more independent before they have developed good decision-making skills. A strong need for peer approval may entice a teenager to try dangerous feats, or take part in risk-taking behaviours. So for instance, motor vehicle safety should be stressed, focusing on the roles of the driver/passenger/pedestrian, the risks of substance abuse, and nowadays the importance of using protection (condoms) during a sexual act. It has been a common observation that adolescents are at increased risk for depression and potential suicide attempts, because of pressures and conflicts in their family, school or social organizations, peer groups, and intimate relationships.

6.2.1 **The Secular Trend Regarding Menarche and Social Implications for Pubertal Timing**

The term secular trend refers to the average age of puberty which decreases with the passage of time. Research conducted in the United States in the 1900 found that puberty was taking place four months earlier with each passing decade. Certainly the role of nutrition cannot be denied in the emergence of this trend. The beginning of puberty in Western nations such as the U.S., is generally years higher than it is in developing nations.

Nevertheless, in some cases, the age at which puberty occurs is highly abnormal. This is could be understood with the help of a 2015 report brought out in *Scientific American* which stated that breast development was taking place in seven-year-olds or preschool children.
Scientists debate whether the secular trend is continuing to occur. Some are of the opinion that the secular trend might have stopped increasing in the 1970s. There is evidence, however, that girls are currently experiencing breast development and other signs of precocious puberty quite early in age than in previous decades. Whether age of first period (menarche) is continuing to decrease remains debated.

Causes for puberty occurring earlier

Numerous factors are responsible for the early onset of puberty. One such factor is obesity. Psychosocial factors include the absence of a father or experiencing a traumatic event. Other factors are also responsible for the decrease in the secular trend.

Consequences

The secular trend has important biological and psychological implications that parents should be aware of. Early onset of puberty has been linked to cancer and other diseases. There are also chances that children who experience puberty at an early age tend to be more depressed because they might exhibit signs of maturity physically but emotionally they are still not mature.

Adults and peers, however, may treat them as if they are older than they actually are. Moreover, children who experience puberty at an early age may be more likely to abuse drugs and alcohol or have sex at young ages.

6.2.2 Eating Disorders

With the rapid emphasis on looks, physique and zero size popularized by media, more and more eating disorders are being seen in clinical practice. In one study it was estimated that the general practitioner encounters nearly 45 per cent of Anorexia Nervosa and 12 per cent of Bulimia Nervosa.

Eating disorders are disorders of eating behaviour deriving primarily from an overvaluation of the desirability of weight loss that result in functional medical, psychological, and social impairment. Eating disorders are usually characterized into two main categories namely Anorexia Nervosa and Bulimia Nervosa.

(i) Anorexia Nervosa: It is an eating disorder characterized by very low weight (defined as being 15 per cent below the standard weight or Body Mass Index (BMI) being 17.5 per cent or below); an extreme concern about weight and shape characterized by an intense fear of gaining weight and becoming fat; a strong desire to be thin and in women, amenorrhoea. It is a deliberate weight loss induced and or sustained by the patient. The disorder occurs most commonly in adolescent girls and young women, but adolescent boys and young men may be affected more rarely, as may children approaching puberty and older women up to the menopause.

The condition generally begins in adolescents with ordinary effort at dieting, which then get out of control. These individuals are seen to
have a distorted image of the body and may have overvalued ideas about body shape and weight. “If onset is pre-pubertal, the sequence of pubertal events is delayed or even arrested (for example, in girls, the breasts do not develop and there is primary amenorrhoea; in boys the genitals remain juvenile). With recovery, puberty is often completed normally, but the menarche is late.”

In order to keep themselves thin, these patients can engage in various activities such as eating little; avoiding fattening foods; setting very low daily calorie limits for themselves (often between 600 and 1000 Kcal); inducing vomiting; engaging themselves in excessive exercising and misusing laxatives, appetite suppressants or diuretics.

In these patients depression, anxiety, obsessive symptoms, lability of mood, and social withdrawal are usually seen. ‘The disorder is also associated with under-nutrition of varying severity, with resulting secondary endocrine and metabolic changes and disturbances of bodily functions. A widespread endocrine disorder involving the hypothalamic-pituitary-gonadal axis is manifest in women as amenorrhoea and in men as a loss of sexual interest and potency. They may be elevated levels of growth hormone, raised levels of cortisol, changes in the peripheral metabolism of the Thyroid hormone, and abnormalities of insulin secretion. Certain physical changes such as sensitivity to cold, slow gastric emptying, constipation, low blood pressure, bradycardia, hypothermia, abnormalities of water regulation, electrolyte disturbances, epileptic seizures and cardiac arrhythmia may be present.’

(ii) **Bulimia Nervosa:** It is an eating disorder characterized by an irresistible urge to over eat, extreme measures undertaken by the patient to control body weight and overvalued ideas concerning one’s body shape and weight. The episodes of uncontrolled excessive eating are known as binges.

Bulimia Nervosa can take two forms—the purging type and the non-purging type. In the purging type, the individual tries to control his or her weight by the use of self-induced vomiting, laxatives and diuretics. However, in the non-purging type, the individual tries to control his or her weight by using methods like excessive exercise, fasting etc. individuals suffering from bulimia nervosa usually have normal weight, are often females and these females usually report of having normal menses.

The binging episodes are usually seen to be precipitated by stress, or by the breaking of self-imposed dietary rules or may occasionally be planned. After engaging in an episode of binge eating, patients usually report relief from stress but the relief is soon followed by guilt and disgust. To deal with the feelings of guilt, the patient then is often seen...
to induce vomiting or take laxatives. Depressive disorders are quite common in individuals suffering from Bulimia Nervosa.

Repeated vomiting is associated with several complications such as potassium depletion, urinary infections, tetany, epileptic fits, electrolyte imbalance, cardiac arrhythmias, and renal damage.

6.2.3 Identity Status

The child continues to grow physically, cognitively, and emotionally, changing from a child into an adult during adolescence. The body grows rapidly in size and so do the sexual and reproductive organs. At the same time, as adolescents develop more advanced patterns of reasoning and a stronger sense of self, they seek to forge their own identities, developing important attachments with people other than their parents. It is seen in Western societies that as the need to forge a new independence is critical (Baumeister & Tice, 1986; Twenge, 2006), this period can be stressful for many children. This is a phase involving new emotions, the need to develop new social relationships, and an increasing sense of responsibility and independence.

Adolescence is seen as a time of stress for many teenagers. For example, the majority of adolescents experiment with alcohol during their high school years. Many teenagers develop long-lasting drinking problems that adversely affect their personal and academic life.

6.3 OTHER ADOLESCENT PROBLEM BEHAVIOUR

Let us now study about other adolescent problem behaviour such as juvenile delinquency, depression, behaviour disorders and suicide.

6.3.1 Juvenile Delinquency

It is very difficult to reach unanimity as regards the definition of the term delinquency because the term is an umbrella for a wide variety of socially disapproved behaviour that varies with the time, place and cultural variance in socio-economic and political conditions of a country. All agree that every society prescribes a set of norms which it expects that all its members should faithfully follow, but those who violate the social norms and behave in antisocial manner are called ‘delinquents’. Let us examine the various points of views on delinquency.

Approach of Psychologists

The psychologists approach delinquency from the point of view that it is deficiency in the formation of superego. The delinquent child is he who has failed to internalize the primitive taboos and code of conduct set by the family and society. He/She has failed to identify with the values of his parents and seeks pleasure at the cost of sacrificing the principles of reality and morality. Johnson and Szurek defined delinquency as holes in the superego when the id impulses are not controlled but
admitted to overt action. Functional psychiatric disorders are also viewed as basic causes of delinquency. The fundamental intrapsychic pathology is often attributed to faulty interpersonal relation between parents and children in the early years of life. Disturbances in these relations create neurotic, psychotic or character disorders some of which are antisocial. Mowrer in 1961, defined delinquency as moral deficiency because of weak conscience due to improper teaching of the child in early years of life.

Delinquency is aggression. Bandura and Walters attack the problem of delinquency from a different angle. They say that delinquency is the manifestation of frustrated needs of the child which ultimately lead to aggression. Some psychologists hold the view that delinquency is underactivity of the central nervous system. The individuals have genetically-based inability to learn clear responses to secondary situations. These persons cannot associate punishment with the behaviour which brought it about.

Herbert Quay, in his book *Juvenile Delinquency*, defines the delinquent as: “A person whose misbehaviour is relatively serious legal offence, which is inappropriate to his level of development, is not committed as a result of extremely low intellect ... and is alien to the culture in which he has been reared.”

According to Travis Hirsch: “Delinquency is defined by acts, the detection of which is thought to result in punishment of the person committing them by agents of the larger society.”

Richard, A. Cloward says: “The delinquent act ... is behaviour that violates norms of the society, and when officially known, it evokes a judgement by agents of criminal justice that such norms have been violated.”

C. Burt says: “A child is to be regarded as technically delinquent when his antisocial tendencies appear so grave that he becomes or ought to become the subject of official action.”

Prevention of delinquency

The goal of preventive measures is to develop skills, attitudes and other competencies in the individual so that antisocial behaviour may be checked in future. The task of prevention is a very complex one and requires the cooperation of home, school and the society. Parents and other members of the family can help the child to build good habits, attitudes and sound value system because the child remains in their company in early childhood when permanent impression can be created in the mind of the child. It is unfortunate that in India majority of the parents is illiterate who do not know the basic principles of behaviour modification and are conservative in their outlook. Most of the children become delinquents because of mishandling by parents. Parents, in big cities, who are educated have no time to look after their children properly.

There is immediate need of an agency that can educate parents. This work should be taken by social workers. Children should be provided with recreational facilities, individual guidance and an atmosphere of future security.
Walter and Erikson (1969) cited examples of the training of members of the community to provide behaviour modification guidance to their fellows.

Schools can do a great lot to prevent delinquency by providing the following facilities:

1. Atmosphere of the school should be free from emotional tensions.
2. Facilities for curricular activities like NCC, NSS, drama, debate, excursions, tours and scouting. Students should feel secure and closely affiliated with the school.
3. Teacher’s behaviour should be objective and headmasters/principals should make efforts to maintain conducive environment in the school.
4. Curriculum should fulfil the needs of children.
5. Developing good reading habits.
6. Moral and sex education should be given to children to check antisocial behaviour.
7. Educational and vocational guidance.
9. Recreational clubs.

6.3.2 Depression

Self-esteem refers to one’s attitudes about oneself. It is the evaluation we make of ourselves. It can be negative or positive. People with high self-esteem perceive themselves as good, competent, worthy and so forth, while those with a low self-esteem see themselves as unworthy and incompetent.

Self-concept is determined by significant opinion of others about us or the person concerned, for example, the views of parents, teachers, friends and others, contribute to the way we see ourselves. Self-evaluations are also affected by the characteristics of others with whom we compare ourselves. Therefore, comparison with those who are worse off, (downward comparison) tends to make us feel better about ourselves, while the opposite could hold true with upward comparison.

Low self-esteem affects feelings and behaviour negatively. It could lead to personal unhappiness and also interpersonal difficulties. Poor social skills could lead to loneliness and eventually to depression.

Depression could further result in a tendency to devalue oneself. Depression is not only the result of low self-esteem, but could also arise from variable self-esteem. This means even minor changes in life experiences can swing our self-esteem levels considerably. This occurs because self-worth is not based on stable sources.

Managing variable self-esteem: To begin with, it is important to elevate our own behaviour to match the ideals or goals that have been set. Alternatively, it is wise to lower our standards so that it meets with our own behaviour. For example,
if we wish to excel in anything that is to be undertaken, the chances of success are inherently low. So setting reasonable levels of perfection may be a winning solution. This would help keep the self-esteem intact.

Self-esteem is to be viewed largely as a factor determined by one’s experiences. Childhood experiences are important because these are the formative periods of self-esteem. Here, parental evaluation is crucial. Negative childhood experiences like parental divorce, chronic illnesses, death and other traumas have a telling effect in terms of how the self-esteem develops. Early experiences have long-lasting effects on self-esteem as compared to later-life experiences.

High self-esteem does act as a buffer against negative or threatening experiences. It is a form of protection for the ego state of the individual.

6.3.3 Behaviour Disorders

Many adolescents today have problems and are getting into trouble. After all, there are a lot of pressures for kids to deal with among friends and family. For some youth, pressures arise from poverty, violence, parental problems and gangs. Kids may also be concerned about significant issues such as religion, gender roles, values, or ethnicity. Some children have difficulty in dealing with past traumas they have experienced, like abuse. Parents and their teenagers are struggling between the youth’s wanting independence while still needing parental guidance. Sometimes all these conflicts result in behaviour problems. Any number of isolated behaviour problems can represent adolescent problems and delinquency—shoplifting, truancy, a fight in school, drug or alcohol ingestion. Sometimes, kids cannot easily explain why they act the way they do. They may be just as confused about it as the adults, or they simply see delinquent behaviours as appropriate ways to deal with what they experience. Parents and loved ones may feel scared, angry, frustrated, or hopeless. They may feel guilty and wonder where they went wrong. All these feelings are normal, but it is important to understand that there is help available to troubled kids and their families.

Adolescence is a time for developing independence. Typically, adolescents exercise their independence by questioning and sometimes breaking rules. Parents and doctors must distinguish occasional errors of judgment from a degree of misbehaviour that requires professional intervention. The severity and frequency of infractions are guides. For example, regular drinking, frequent episodes of fighting, truancy and theft are much more significant than isolated episodes of the same activities. Other warning signs include deterioration of performance at school and running away from home. Of particular concern are adolescents who cause serious injury or use a weapon in a fight.

Children occasionally engage in physical confrontation. During adolescence, the frequency and severity of violent interactions may increase. Although episodes of violence at school are highly publicized, adolescents are much more likely to be involved in violent episodes (or more often the threat of violence) at home and outside of school.
Behaviour Disorders during Adolescence

Behavioural disorders involve a pattern of disruptive behaviours in children that last for at least 6 months and cause problems in school, at home and in social situations. Nearly everyone shows some of these behaviours at times, but behaviour disorders are more serious.

Behavioural disorders may involve the following:
- Inattention
- Hyperactivity
- Impulsivity
- Defiant behaviour
- Drug use
- Criminal activity

A behavioural disorder can have a variety of causes. According to the University of North Carolina at Chapel Hill, the abnormal behaviour that is usually associated with these disorders can be traced back to biological, family and school-related factors.

Some biological causes may include the following:
- Physical illness or disability
- Malnutrition
- Brain damage
- Hereditary factors

These problems can result from temporary stressors in the child’s life, or they might represent more enduring disorders. The most common disruptive behaviour disorders include Oppositional Defiant Disorder (ODD), Conduct Disorder (CD) and Attention Deficit Hyperactivity Disorder (ADHD).

Some of the characteristics and behaviours seen in children who have an emotional disturbance include hyperactivity (short attention span, impulsiveness); aggression or self-injurious behaviour (acting out, fighting); withdrawal (not interacting socially with others, excessive fear or anxiety); immaturity (inappropriate crying, temper tantrums, poor coping skills); and learning difficulties (academically performing below grade level). Children with the most serious emotional disturbances may exhibit distorted thinking, excessive anxiety, bizarre motor acts, and abnormal mood swings.

Many children who do not have emotional disturbance may display some of these same behaviours at various times during their development. However, when children have an emotional disturbance, these behaviours continue over long periods of time. Their behaviour signals that they are not coping with their environment or peers.

Someone who has a behavioural disorder may act out or display emotional upset in different ways, which will also vary from person to person.
Emotional Symptoms of Behavioural Disorders: According to Boston Children’s Hospital, some of the emotional symptoms of behavioural disorders include the following:

- Easily getting annoyed or nervous
- Often appearing angry
- Putting blame on others
- Refusing to follow rules or questioning authority
- Arguing and throwing temper tantrums
- Having difficulty in handling frustration

Physical Symptoms of Behavioural Disorders: Unlike other types of health issues, a behavioural disorder will have mostly emotional symptoms, with physical symptoms such as a fever, rash, or headache being absent. However, sometimes people suffering from a behavioural disorder will develop a substance abuse problem, which could show physical symptoms such as burnt fingertips, shaking or bloodshot eyes.

Short-Term and Long-Term Effects of a Behavioural Disorder: If left untreated a behavioural disorder may have negative short-term and long-term effects on an individual’s personal and professional life. People may get into trouble for acting out, such as face suspension or expulsion for fighting, bullying or arguing with authority figures. Adults may eventually lose their jobs. Marriages can fall apart due to prolonged strained relationships, while children may have to switch schools and then eventually run out of options. According to Healthy Children Organization, the most serious actions a person with a behavioural disorder may engage in include starting fights, abusing animals and threatening to use a weapon on others.

Causes: No one knows the actual cause or causes of emotional disturbance, although several factors-heredity, brain disorder, diet, stress, and family functioning have been suggested and vigorously researched. A great deal of research goes on every day, but to date, researchers have not found that any of these factors are the direct cause of behavioural or emotional problems. According to NAMI, mental illnesses can affect persons of any age, race, religion, or income. Furthermore, mental illnesses are not the result of personal weakness, lack of character, or poor upbringing. Mental illnesses are treatable. Most people diagnosed with a serious mental illness can experience relief from their symptoms by actively participating in an individual treatment plan.

According to the CDC (Centers for Disease Control and Prevention), approximately 8.3 million children (14.5%) aged 4-17 years have parents who have talked with a healthcare provider or school staff about the child’s emotional or behavioural difficulties. Nearly 2.9 million children have been prescribed medication for these difficulties.
A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance. An inability to learn that cannot be explained by intellectual, sensory, or health factors. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. Inappropriate types of behavior or feelings under normal circumstances. A general pervasive mood of unhappiness or depression. A tendency to develop physical symptoms or fears associated with personal or school problems. As defined by IDEA, emotional disturbance includes schizophrenia but does not apply to children who are socially maladjusted, unless it is determined that they have “an emotional disturbance”. Emotional disturbances can affect an individual in areas beyond the emotional. Depending on the specific mental disorder involved, a person’s physical, social, or cognitive skills may also be affected. The National Alliance on Mental Illness (NAMI) puts this very well: Mental illnesses are medical conditions that disrupt a person’s thinking, feeling, mood, ability to relate to others and daily functioning. Just as diabetes is a disorder of the pancreas, mental illnesses are medical conditions that often result in a diminished capacity for coping with the ordinary demands of life.

6.3.4 Suicide

Suicide is the act of intentionally causing one’s own death. Risk factors include mental disorders such as depression, bipolar disorder, schizophrenia, personality disorders, alcoholism, or substance misuse. Others are impulsive acts due to stress such as from financial difficulties, troubles with relationships, or from bullying. Those who have previously attempted suicide are at higher risk for future attempts. Suicide prevention efforts include limiting access to method of suicide, such as firearms and poisons, treating mental disorders and substance misuse, proper media reporting of suicide, and improving economic conditions. Although crisis hotlines are common, there is little evidence for their effectiveness.

Suicide is the act of killing yourself, most often as a result of depression or other mental illness. Losing interest in work or school, giving away beloved possessions and withdrawing from friends can be signs someone is thinking of suicide. Learn how to recognize the danger signals.

The most commonly used method of suicide varies between countries, and is partly related to the availability of effective means. Common methods include hanging, pesticide poisoning, and firearms. Suicide resulted in 842,000 deaths globally in 2013 (up from 712,000 deaths in 1990). This makes it the 10th leading cause of death worldwide.

Approximately 0.5 per cent to 1.4 percent of people die by suicide, about 12 per 100,000 persons per year. Three quarters of suicides globally occur in the developing world. Rates of completed suicides are generally higher in men than in women, ranging from 1.5 times as much in the developing world to 3.5 times in the developed world. Suicide is generally most common among those over the age of...
70, however, in certain countries those aged between 15 and 30 are at highest risk. There are an estimated 10 to 20 million non-fatal attempted suicides every year. Non-fatal suicide attempts may lead to injury and long-term disabilities. In the Western world, attempts are more common in young people and females.

Views on suicide have been influenced by broad existential themes such as religion, honour and the meaning of life. The Abrahamic religions traditionally consider suicide an offence towards God due to the belief in the sanctity of life. During the samurai era in Japan, a form of suicide known as seppuku was respected as a means of making up for failure or as a form of protest. Sati, a practice outlawed by the British Raj, expected the Indian widow to kill herself on her husband’s funeral fire, either willingly or under pressure from the family and society. Suicide and attempted suicide, while previously illegal, is no longer illegal in most Western countries. It remains a criminal offence in many countries. In the 20th and 21st centuries, suicide has been used on rare occasions as a form of protest, and kamikaze and suicide bombings have been used as a military or terrorist tactic.

Suicide, also known as completed suicide, is the “act of taking one’s own life”. Attempted suicide or non-fatal suicidal behavior is self-injury with the desire to end one’s life that does not result in death. Assisted suicide is when one individual helps another bring about their own death indirectly via providing either advice or the means to the end. This is in contrast to euthanasia, where another person takes a more active role in bringing about a person’s death. Suicidal ideation is the thought of ending one’s life but not taking any active efforts to do so. There is discussion about the appropriateness of the term “commit”, and it is used to describe suicide. Those who object to the use of commit argue that it carries with it implications that suicide is a criminal, sinful or morally wrong act. There is growing consensus that it is more appropriate to use “completed suicide,” “died by suicide” or simply “killed him/herself” to describe the act of suicide, and this is reflected in mental health organization’s media guidance. Despite these efforts, “committed suicide” and similar descriptions remain common in both scholarly research and journalism.

While we all feel sad, moody or low from time to time, some people experience these feelings intensely, for long periods of time (weeks, months or even years) and sometimes without any apparent reason. Depression is more than just a low mood – it is a serious condition that affects your physical and mental health.

Depression is a state of low mood and aversion to activity or apathy that can affect a person’s thoughts, behaviour, feelings, and sense of well-being. People with a depressed mood can feel sad, anxious, empty, hopeless, helpless, worthless, guilty, irritable, angry, ashamed, or restless. They may lose interest in activities that were once pleasurable, experience loss of appetite or overeating, have problems concentrating, remembering details or making decisions, experience relationship difficulties and may contemplate, attempt or commit suicide. Insomnia, excessive...
sleeping, fatigue, aches, pains, digestive problems, or reduced energy may also be present. Depressed mood is a feature of some psychiatric syndromes such as major depressive disorder, but it may also be a normal reaction, as long as it does not persist long-term, to life events such as bereavement, a symptom of some bodily ailments or a side effect of some drugs and medical treatments. A DSM diagnosis distinguishes an episode (or ‘state’) of depression from the habitual (or ‘trait’) depressive symptoms someone can experience as part of their personality.

Adversity in childhood, such as bereavement, neglect, mental abuse, physical abuse, sexual abuse, and unequal parental treatment of siblings can contribute to depression in adulthood. Childhood physical or sexual abuse in particular significantly correlates with the likelihood of experiencing depression over the life course. Life events and changes that may precipitate depressed mood include childbirth, menopause, financial difficulties, unemployment, work stress, a medical diagnosis (cancer, HIV, etc.), bullying, loss of a loved one, natural disasters, social isolation, rape, relationship troubles, jealousy, separation and catastrophic injury. Adolescents may be especially prone to experiencing depressed mood following social rejection, peer pressure and bullying. As well as this, infants who were exposed to their depressed mothers showed growth and development delays at the age of 12 months.

Meta-analyses show that high scores on the personality domain neuroticism precede the development of depressive symptoms as well as all kinds of depression diagnoses, also after adjustment for baseline levels and psychiatric history. Depression is also associated with low extraversion. Depression may also be iatrogenic (the result of healthcare), such as drug induced depression. Therapies associated with depression include interferon therapy, beta-blockers, Isotretinoin, contraceptives, cardiac agents, anticonvulsants, antihypertensive drugs, anti-psychotics, and hormonal agents such as gonadotropin-releasing hormone agonist. Several drugs of abuse can cause or exacerbate depression, whether in intoxication, withdrawal, and from chronic use. These include alcohol, sedatives (including prescription benzodiazepines), opioids (including prescription pain killers and illicit drugs like heroin), stimulants (such as cocaine and amphetamines), hallucinogens and inhalants. Depressed mood can be the result of a number of infectious diseases, nutritional deficiencies, neurological conditions and physiological problems, including hypoandrogenism (in men), Addison’s disease, Cushing’s syndrome, hypothyroidism, Lyme disease, multiple sclerosis, Parkinson’s disease, chronic pain, stroke, diabetes and cancer.

A number of psychiatric syndromes feature depressed mood as a main symptom. The mood disorders are a group of disorders considered to be primary disturbances of mood. These include major depressive disorder (MDD) commonly called major depression or clinical depression, where a person has at least two weeks of depressed mood or a loss of interest or pleasure in nearly all activities; and dysthymia, a state of chronic depressed mood, the symptoms of which do not meet the severity of a major depressive episode. Another mood disorder, bipolar
disorder features one or more episodes of abnormally elevated mood, cognition and energy levels, but may also involve one or more episodes of depression. When the course of depressive episodes follows a seasonal pattern, the disorder (major depressive disorder, bipolar disorder, etc.) may be described as a seasonal affective disorder. Outside the mood disorders; borderline personality disorder often features an extremely intense depressive mood; adjustment disorder with depressed mood is a mood disturbance appearing as a psychological response to an identifiable event or stressor, in which the resulting emotional or behavioural symptoms are significant but do not meet the criteria for a major depressive episode; and posttraumatic stress disorder, an anxiety disorder that sometimes follows trauma, is commonly accompanied by depressed mood. Depression is sometimes associated with substance use disorder. Both legal and illegal drugs can cause substance use disorder.

Questionnaires and checklists such as the Beck Depression Inventory or the Children’s Depression Inventory can be used by a mental health provider to help detect and assess the severity of depression. Semi structured interviews such as the Kiddie Schedule for Affective Disorders and Schizophrenia (KSADS) and the Structured Clinical Interview for DSM-IV (SCID) are used for diagnostic confirmation of depression.

Depressed mood may not require professional treatment, and may be a normal reaction to life events, a symptom of some medical condition, or a side effect of some drugs or medical treatments. A prolonged depressed mood, especially in combination with other symptoms, may lead to a diagnosis of a psychiatric or medical condition which may benefit from treatment. Different sub-divisions of depression have different treatment approaches. In the United States, it has been estimated that two thirds of people with depression do not actively seek treatment. The World Health Organization (WHO) has predicted that by 2030, depression will account for the highest level of disability among the physical or mental disorders in the world (WHO, 2008).

The UK National Institute for Health and Care Excellence (NICE) 2009 guidelines indicate that antidepressants should not be routinely used for the initial treatment of mild depression because the risk-benefit ratio is poor. A recent meta-analysis also indicated that most antidepressants, besides fluoxetine, do not seem to offer a clear advantage for children and adolescents in the acute treatment of major depressive disorder.

Check Your Progress

1. Define menarche.
2. What is anorexia nervosa?
3. What is delinquency?
4. What are the two forms of Bulimia Nervosa?
6.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Menarche is the medical term for a woman’s first menstruation, commonly known as her first period.

2. Anorexia Nervosa is an eating disorder characterized by very low weight (defined as being 15 per cent below the standard weight or Body Mass Index (BMI) being 17.5 per cent or below); an extreme concern about weight and shape characterized by an intense fear of gaining weight and becoming fat; a strong desire to be thin and in women, amenorrhoea.

3. Delinquency refers to the behaviour, especially of a young person, that is illegal or not acceptable to most people.

4. Bulimia Nervosa can take two forms—the purging type and the non-purging type.

6.5 SUMMARY

- Physiological growth refers to the growth and development of physical as well as mental features. Development of the cognitive, emotional, intellectual and social skills is as important as the development of different body parts.
- A boy or a girl at birth and before puberty can be distinguished from the sex organs. Sex organs are necessary for reproduction, therefore, they are called the primary sexual characteristics.
- During puberty in boys, the penis, the testes and the scrotum continue to grow and develop completely. Testes begin to produce sperms. In girls, the ovaries enlarge, eggs begin to mature and menstruation begins.
- The changes that occur during adolescence are initiated by hormones. You have read about the two hormones—estrogen, produced by the ovaries and testosterone, produced by the testes.
- Another area of physical development is in the brain, especially the frontal lobe, which is the area for impulse control, judgment, and the ability to plan.
- With the rapid emphasis on looks, physique and zero size popularized by media, more and more eating disorders are being seen in clinical practice. In one study it was estimated that the general practitioner encounters nearly 45 per cent of Anorexia Nervosa and 12 per cent of Bulimia Nervosa.
- The binging episodes are usually seen to be precipitated by stress, or by the breaking of self-imposed dietary rules or may occasionally be planned. After engaging in an episode of binge eating, patients usually report relief from stress but the relief is soon followed by guilt and disgust.
• The child continues to grow physically, cognitively, and emotionally, changing from a child into an adult during adolescence. The body grows rapidly in size and so do the sexual and reproductive organs.

• The psychologist approaches delinquency from the point of view that it is deficiency in the formation of superego. The delinquent child is he who has failed to internalize the primitive taboos and code of conduct set by the family and society.

• Self-esteem refers to one’s attitudes about oneself. It is the evaluation we make of ourselves. It can be negative or positive. People with high self-esteem perceive themselves as good, competent, worthy etc., while those with a low self-esteem see themselves as unworthy, incompetent, etc.

• Self-esteem is to be viewed largely as a factor determined by one’s experiences. Childhood experiences are important because these are the formative periods of self-esteem. Here, parental evaluation is crucial.

• Many adolescents today have problems and are getting into trouble. After all, there are a lot of pressures for kids to deal with among friends and family. For some youth, pressures include poverty, violence, parental problems, and gangs.

• Someone who has a behavioural disorder may act out or display emotional upset in different ways, which will also vary from person to person.

• Unlike other types of health issues, a behavioural disorder will have mostly emotional symptoms, with physical symptoms such as a fever, rash, or headache being absent. However, sometimes people suffering from a behavioural disorder will develop a substance abuse problem, which could show physical symptoms such as burnt fingertips, shaking or bloodshot eyes.

• Suicide is the act of intentionally causing one’s own death. Risk factors include mental disorders such as depression, bipolar disorder, schizophrenia, personality disorders, alcoholism, or substance misuse.

• Adversity in childhood, such as bereavement, neglect, mental abuse, physical abuse, sexual abuse, and unequal parental treatment of siblings can contribute to depression in adulthood.

6.6 KEY WORDS

• Adolescence: It the period of time in a person’s life when he/she are developing into an adult.

• Puberty: It the period or age at which a person is first capable of sexual reproduction of offspring: in common law, presumed to be 14 years in the male and 12 years in the female.

• Hormones: These are chemical substances that are secreted by glands.
6.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

NOTES

Short-Answer Questions
1. What is physiological growth?
2. What brings about physical changes during adolescence?
3. Write a short note on intellectual, emotional and psychological development during adolescence.
4. What is juvenile delinquency? What are the steps taken to prevent this behavioural disorder?
4. How does low self-esteem result in depression?

Long-Answer Questions
1. Discuss sexual maturation and growth spurt during adolescence.
2. Critically analyse the social implications for puberty timing.
3. Explain the problem of eating disorders encountered as a part of adolescent behaviour.
4. ‘Adolescence is seen as a time of stress for many teenagers.’ Do you agree with this statement? Give reasons for your answer.
5. Describe behavioural disorders encountered during adolescence.

6.8 FURTHER READINGS

UNIT 7 EARLY ADULTHOOD

Structure
7.0 Introduction
7.1 Objectives
7.2 Emerging Adulthood: Timeframes for Physical Peak and the Physical Declines
7.2.1 Adult Sexuality and Relationships
7.3 Theories on Post-Formal Thought
7.3.1 Theory of Love
7.3.2 Early Theories of Love
7.4 Answers to Check Your Progress Questions
7.5 Summary
7.6 Key Words
7.7 Self Assessment Questions and Exercises
7.8 Further Readings

7.0 INTRODUCTION

The life stage called early adulthood defines individuals between the age of 20 and 35, who are typically vibrant, active and healthy, and are focused on friendships, romance, child bearing and careers. In early adulthood, our physical abilities are at their peak, including muscle strength, reaction time, sensory abilities and cardiac functioning. In this unit, you will study about the emerging adulthood which deals with the timeframes for physical peak and the physical declines, problems faced during adulthood, theories on post-formal thought and theories of love.

7.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the timeframes for physical peak and the physical declines
- Explain the problems faced during adulthood
- Evaluate the theories of post-formal thought
- Describe the theories of love
7.2 EMERGING ADULTHOOD: TIMEFRAMES FOR PHYSICAL PEAK AND THE PHYSICAL DECLINES

It will not be wrong to say that preparation for adulthood begins from infancy and continues through childhood and middle adolescence. It is during the late adolescence that it reaches its culmination which is in a way the point of growing into independence. It is difficult to say when adolescence ends and adulthood starts. In this process the individual passes many milestones, but one finds no mile mark which may indicate that the individual has passed over the road of childhood. At best, one may say that during late adolescence the individual looks like an adult. Many in society treat him/her as such. The parents very lately detect and acknowledge the adolescent’s growth into adulthood.

It is through the behaviour of parents, teachers, elder brothers, sisters, and other elders in the family, barbers, rickshaw and taxi-drivers, that the individual in late adolescence may know that he/she has reached adulthood. Such persons may behave with him/her in a way or say something which may be indicative of his/her adulthood. However, the adolescent passes into adulthood without being aware of the fact, although he/she has been straining for recognition. The adults can best help the adolescents into adulthood by treating them as an adult without burdening them with odd responsibilities to shoulder.

Parents are generally not consistent in their treatment towards adolescents. Sometimes they appreciate the growth of their adolescent children towards adulthood and the next day they criticize them for their so-called childish behaviour. This kind of behaviour is very likely to negate the young person’s growth towards maturity. The adolescents resent this type of behaviour on the part of their parents. The trouble lies on the parents’ insistence on teaching the adolescent lessons, principles, and other things. But the adolescents want to learn these things themselves and not from the parents. They want to learn from their teacher, friends, books, and elsewhere. In fact, adolescence should be regarded as a preparation for a new type of relationship between the young person and the parents based on reciprocal respect. The parents have to sense the generation gap between them and the adolescents. This sensing on their part is not escapable in the process of growing of adolescents.

The time between twenty-three to forty-five years of age may be roughly regarded as the period of adulthood. Several kinds of changes take place both in men and women during this period. The society expects many things from an adult. For example, it is expected of them that they should marry and raise a family, should take up a job which is personally satisfying and socially desirable. Furthermore, adults should be able to understand the rights and duties of a citizen and accept some social responsibilities accordingly. If the individual has not been
able to complete a work undertaken during adolescence, he/she has to complete it during the period of adulthood.

7.2.1 Adult Sexuality and Relationships

1. Problem of interests

An individual naturally develops some interests during adolescence. Some of these interests are also carried over to adulthood in some form or the other. However, some of them are left out also. Thus, their number continues becoming smaller and smaller as the years pass on. It has been estimated that during twenty-three to forty-five years of age, 55 per cent of interests are changed; between forty to fifty years of age the change touches the level of 25 per cent; and from fifty to sixty years of age the percentage of change is about 20. With growth in age one’s interest in sports, games, music, and other recreational activities is diminished to a great extent. An adult is generally very careful about his/her attire.

Adults want to dress themselves in such a way so as to appear younger. They are concerned about their social and professional prestige. Adults are keen to earn as much money as possible so that they are able to purchase things which they could not do earlier due to paucity of funds. Women also desire to earn some money in order to buy things they want. At the age of twenty-five years or so adults are prone to becoming more religious than before. After attaining fatherhood or motherhood the individual becomes more religious. The parents try to set good examples before their children and they want that good religious ideals should be imbibed by them (the children). Therefore, they too, try to be religious in their ideas and behaviours. Because of such a leaning in parents, the family atmosphere is charged with religious views and rituals at times. This feature presented by the parents is just to influence children so that they may not indulge in some antisocial activity.

The adult sometimes desires to become a member of some social organization. Of course, this desire is governed by the class to which he/she belongs. The selection of friends during adulthood depends upon community of interests. Generally, it is seen that friends of adults’ belong to a common religious faith or have professional and social interests. It is often seen that a more popular adult has more friends and a less popular one has fewer friends.

2. Vocational problems

The adults today are hit by their vocational problems. About half a century ago the son usually followed the profession of his father. But now due to the availability of a number of occupations in view of varying interests, maladjustment, and frustration ensue if the individual does not get a job for which he has prepared himself and for which he has an interest or liking. Since women, these days, are also entering various types of occupations, they also have to face the problem of maladjustment and frustration in their jobs. The stability of the adult in sticking to a job depends
upon professional experiences and the values that he/she attaches to the chosen profession. The professional stability increases with age. If an adult changes his/her profession, his/her interests also change. If this change of interests is very late, it brings about a revolutionary change in the personality of the adult, and generally it is not conducive to development of a healthy outlook towards life. With advancement in age the change of profession happens because of healthy outlook towards life. With advancement in age the change of profession becomes difficult, because it may be too late for the individual to switch over to new interests and to try for acquisition of new professional skills.

A profession may have varying values for different individuals. Some seek self-respect through it and some see social prestige in it. Social service, self-expression, internal satisfaction, or means of earning livelihood may be some other values which people of varying interests try to seek through the profession that they choose for themselves. The age is an important factor in feeling professional satisfaction. If a person succeeds in entering some profession between the age of twenty-two and twenty-seven years, he experiences a sense of satisfaction, because generally at this age he marries and he is expected to shoulder the responsibilities that are involved in raising a family. After entering a profession, adults expect some kind of promotion within a period of about five years—around about thirty years of age or so. If they do not get it, a feeling of frustration affects them. This feeling may continue till thirty-five years of age. After this age, in the absence of promotion, the adults may get adjusted to their job but may not love it.

The case of women is generally different from that of men. In fact, they want to get settled in married life. So for them the problem of a profession is secondary. However, some women do try to accept some profession in order to supplement the meager resources of their husbands, but really speaking, they prefer to engage themselves wholly in domestic duties. If a woman is not married by the age of twenty-eight or thirty, the mental tension in her goes on increasing. Then she begins to lose all hope of marriage and tries her best to enter into some profession in order to earn enough for a decent standard of living.

3. Problems of married life

For an adult it is very important to get adjusted to married life. Adults are unlike adolescents who may make castles in the air regarding their married life. The attitude of the adult regarding marriage is more realistic. First of all, they want to select a proper life companion, and strive to make desirable adjustments in life. An adult’s family, social, and professional achievements are directly related to his/her adjustment in married life. The marriage leads to form a new family unit, the whole life pattern undergoes a revolutionary change and it becomes necessary for the individual to effect a satisfactory adjustment in married life. It is easier when the adult is married around twenty-two or twenty-three years of age. Late marriage presents difficulties in adjustment, because habits get firmly rooted with advancement in age and adjustment demands transformation and modification in habits. Both husband and wife have to give up and sacrifice some of their idiosyncrasies for the sake of accommodating each other.
4. Problems of sexual adjustment

In many western countries a majority of adolescents have experiences of pre-marital sex, for such adolescents the sexual pleasure does not have much importance after marriage. Such adolescents, after marriage, do not experience the same pleasure in sex which they used to have before marriage. In such a situation, they generally get frustrated in sexual experience after marriage. Luckily, the case of most of adolescents in India is entirely different, because due to the existing social mores and taboos in India adolescents seldom get chance for indulging in sex before marriage. So for the adult in India the adjustment in sexual life after marriage occupies special importance. The male adult is usually at the peak of his sexuality around the age of thirty-three years and the peak period for the female adult is around twenty-three or twenty-four years. In case of any deviations in these matters the relations between the husband and wife may become embittered for some time. Hence the intelligent adult has to be careful about any temporary deviation in such a situation. In fact, this deviation or rise and fall in sexual desire should be regarded not only as natural but even inevitable. In India the adolescent after marriage, may have intense sexual desire for a few years. But after two, three, or four years some frigidity or indifference may occur both in husband and wife for some time (that is, for a few months or years). This indifference or frigidity sets in when one is satiated with sex. So this occurrence should be regarded as a common phenomenon, and one must not get alarmed. Of course, the timing for this in husband and wife may differ. The understanding of this timing and the necessary adjustment and allowance during this specified period is an important key to desirable adjustment in married life.

5. Problem of mutual relationship between husband and wife

Fulfillment of sexual desire must not be considered as the only important aspect of married life. Therefore, the adult, naturally, faces the problem on how to become an ideal husband and wife. Before marriage the male adult has his own concept of an ideal wife and the female one has her own concept of an ideal husband. If these concepts clash with each other, the problem of adjustment in married life becomes very intricate. In fact, this clash arises because of differences in values of life and varying interests. It cannot be denied that some difference has to be there both in husband and wife, as the two have been nurtured and cultured in varying atmospheres. So both the husband and wife must learn to live together in harmony by sacrificing some of their own values and interests for the sake of each other. This implies that the married adult has to readjust his/her life-pattern in a new mould sinking many of his/her defenses with the other life-companion. This may be regarded as the golden rule for effecting happy adjustment in one's married life.

6. Problems of parenthood

The adult has to confront the problems that are associated with parenthood. The male adult has to be an ideal father and the female one an ideal mother. An adult belonging to the middle or upper class may regard parenthood as the fulfillment of
Early Adulthood

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Early marriage and they may look to their children with great expectation and pride. Adults belonging to the lower class regard sexual relationship as the major outcome of the marriage bond. The adult male and female may have their respective attitudes regarding fatherhood and motherhood. Some husbands think that their main job is to earn money for raising the family. Some of them are very attached to their children and some do not like their noise and disturbing activities. If the wife likes children, she happily undergoes the pains and inconveniences involved in pregnancy. Such a lady after becoming a mother attaches greatest importance to her children and in their interest she can give up other domestic duties. If the lady does not like children, she will seek abortion. Some ladies like the first baby very much, but they are greatly alarmed and unhappy when they conceive the other baby too soon after the birth of the first one. Both husband and wife want that their first child should be a male one and the second one a girl. Particularly in India the birth of a girl is regarded as a curse, because of the prevailing dowry system in marriage.

As a matter of policy the National Government in India is propagating the ideal of 'two children, happy man' (Do Santan, Sukhi Insan) and for the realization of this ideal many types of incentives are offered to the people. Those having only two children generally place high ideals before them (children) pertaining to some business or some particular profession. This creates tension in the children.

7. Problem of divorce and remarriage

When husband and wife are not able to adjust in life because of their varying temperaments or way of life, divorce appears to be the only alternative for making each of them tension-free. In our country, India, divorce is not a common practice, whereas in some western countries more than 30 per cent of the marriages end in divorce. In India due to family, social, economic, and moral grounds divorce becomes extremely difficult, though not impossible. Frequency of divorce differs from community to community. In lower communities and in sophisticated urban families, divorce is not very difficult, although it may take about two to three years to obtain it legally. Some major causes that lead to divorce are the following:

- Husband and wife having separate personalities due to their diametrically opposed interests and attitudes to life in general.
- Early marriage leads to maladjustment in life later.
- Neglect of the family for attaining higher social status.
- Inter-cultural marriages leading to deplorable lack of adjustment.
- Inability in carrying out the responsibility of parenthood, impotency of the husband, or inability on the part of the wife in bearing children.
- Perpetual quarrels between husband and wife on flimsy grounds and due to personal whims which lead to intolerable tension in life.
- Love affair of each other before marriage. In emotions of passion the individual fails to make the right selection of a good life companion. When
the individual happens to fall in the marriage trap of a bad-life companion, the divorce appears to be the only remedy.

- Overemphasizing the sexual aspect of marriage which leads to disinterest in married life.
- Giving over importance to adopting of latest fashion to the utter neglect of each other’s approach to married life.
- Excessive drinking and illicit sex with others may also lead to divorce.
- Hyper sexuality or homosexuality may be another cause which may force a partner to seek divorce.
- Excessive irritability and incessant quarrels on the part of a partner on apparently flimsy grounds leading to imbalance in the personality and behavior of either.
- Lack of cooperation in the performance of legitimate domestic duties leading to utter neglect of dependent children.

8. Difficulties in remarriage

Remarriage after divorce is accepted as a remedy for restoring the lost adjustment in married life. But in fact, the desirable adjustment does not come, and the apparent smile over the face of the remarried couple may be only a defense mechanism to conceal the wounded feelings smouldering within. So remarriage may present new difficulties. Remarriage is usually not so successful as one’s first marriage. It has been seen in many western countries that the rate of divorce is higher in remarried couples than in the first-married ones. The marriage with a widow is found to be more stable than that with a divorcee. Remarriage may provide a home for the young children, but the adjustment in such a home is proverbial. The stepfather, too, does not give adequate love to the children, as he considers them as impediments between himself and his new wife.

9. Problems of widowhood

The status of a widow particularly in India is really very pitiable. A widower does not face the problems that a widow has to, simply because he happens to be a male and usually an earning member. But he, too, has to face the difficulties of remarriage if he goes in for one. Quite contrary to the position of a widower, the widow is deprived of the protection over her head. She harbours the feeling that most of the people in the society either look at her with lust, or with contempt, or consider her as a social and financial liability. She never feels safe outside home. On journey in a railway train, bus, or elsewhere she feels nervous within herself, and for obvious reasons she is very much afraid of disclosing her status, if incidentally asked about the same. Most of the widows generally desire to remarry for financial and social protection and also for enjoying the natural fruits of human existence, but the social taboos, sometimes, prevent them from doing so. This situation leads them to perpetual and incessant anxiety and as a result life becomes a great curse.
to them for no fault of theirs. In fact, there is a need of social education of the people so that their attitude may be transformed and become healthier towards widows. Volumes may be written on the problems of widows in India, and this is an area of a sociologist. Evidently, it lies beyond the scope of this book to deal with this problem in detail.

10. Problem of widowers
As one has already indicated above, the adult widower presents a different problem for the society. Needless to remark, he ceases to be a problem when he remarries. But if he does not, his movement in the society becomes restricted, as he himself does not like to continue to visit the places where he used to frequent before, along with his wife. Moreover, now he harbours the feeling that people in society are not so cordial and open-hearted to him as they used to be before. This feeling becomes suffocating to him and he gradually imposes restrictions on his participation in social functions even when invited. Even if he goes out at all he is reminded of his loneliness and he does not feel happy within. This mental tension makes his life unhappy and he begins to develop many complexes which in turn make him a whimsical individual who is not trusted easily. If the widower is not able to concentrate his energy and talents on some activities in order to occupy himself in a worthwhile manner, it will be better for him to be married to some suitable life companion. In this effort, he must seek the advice and assistance of his well-wishers.

11. Problem of unmarried adults
There are some people in our society who have not chosen the bond of marriage. Both men and women are found in this group. It is good and reasonable not to go in for marriage, if there are some physical or physiological inadequacies and the medical advice is against it. But there are some individuals who do not marry because of loss of their individuality and independence. This is particularly true of some grown-up women. Some men happen to be so awkward physically or are socially and financially weak that no girl accepts them as life companion. Some parents are so poor that they fail to marry their daughters because of heavy dowry demands. There are enough cases where it is seen that some parents tactfully accept the unmarried status of their daughters because they want them (the daughters) to continue to earn for their upkeep. Some parents in our country are so miserly and careless that they never care to perform the marriage of their daughters. These are some of the unusual instances which have led to many women and men remaining unmarried, in our society. Needless to mention, such individuals pose a serious problem to our society.

It may be admitted that every adult, unless physiologically or medically unfit, wants to get married and enjoy the fruits of a married life. When due to some reasons they remain unmarried, is beset with frustrations and disappointment of various kinds, such as, feeling of loneliness, non-fulfillment of desires of becoming a parent, burning feeling of non-fulfillment of sexual desire, not enjoying the love of
a member of the opposite sex, and not getting the prestige which is usually enjoyed by a person who has succeeded in raising a family. If the adults harbour an interest or desire to get married they are awfully upset by their failure to procure a suitable life companion. Sexual desire during adulthood is generally very intense. As a result, the unmarried adult feels lost in his/her life and becomes socially maladjusted. If fortunately, the unmarried man or woman is engaged in some gainful job, his or her loneliness is mitigated at least for the period he or she is engaged in the professional work. But after the official duties the ghost of loneliness may haunt his or her existence. This situation is really very pitiable.

The above discussion about unmarried adults must not lead one to construe that they (the unmarried adults) are always a load on themselves and on the society. In several cases, one may find that unmarried adults have succeeded in rendering tremendous service to the society, and in many cases they are found to be perfectly healthy and well-adjusted in life. The unmarried adult may feel great confidence in his or her ability. He or she may not have to resort to escapism and may want to be in the thick of life. It will be wrong to assume that an unmarried adult violates social values. In fact, he/she may be a strict adherent to the same.

### 7.3 THEORIES OF POST-FORMAL THOUGHT

**Riegel’s theory on post formal thought**

According to Riegel (1975) adult experiences lead to exposure to new levels of cognitive challenge. Many aspects of our environment can manifest contradictory features. This is especially so in the human environment. For example, a person we love can be warm and generous often, but there will be times when he or she may become selfish and indifferent. How would we label them then? Generous or selfish?

In various other situations, people may exhibit contradictory behaviour. Even groups or organizations may present strongly differing points of view on the same issue. There may be no absolute resolution of the conflicts. We simply have to integrate our understanding into a more complex picture.

Life can be far from simple and at times really ambiguous. Riegel argued that achieving the intellectual ability to deal with the contradictions that confront us in our everyday life requires progress to a stage of reasoning – the stage of dialectical operations, now more commonly called postformal thought.

Research into postformal reasoning indicates that development continues well into adulthood (Sinnott, 1998). Research participants are often presented with problems relating to complex topics (e.g. in science, education, religion, politics or personal relationships) and encouraged to provide and justify decisions. Their reasoning is coded and categorized into stages.
Kramer’s three stages

Kramer (1983, 1989) proposed that people progress through three broad stages:

(i) absolutist
(ii) relativist
(iii) dialectical

Early adulthood sees several people in the absolutist phase that is, being capable of solving problems, inclined to believe that all problems have a solution. For example, a student may begin university education on the belief that it will be a matter of learning facts and procedures, that the lecturers know everything and will tell you what is right and wrong.

People in the relativist stage are aware of different perspectives on certain issues, and the dependence of ‘correct’ answers on the context. Students welcome different theories and conflicting evidence – but this diversity of perspectives leads them to assume that hardly anything can be depending on. So, for example, it is possible for a lecturer to come up with a new theory, which may be altogether wrong.

There is proof that the undergraduate experience marked by diverse ideas and conflicting viewpoints and theories can facilitate the development of relativist thinking (Benack & Basseches, 1989).

In the dialectical phase, people are eventually capable of integrating competing positions and reach a level of synthesis. They come to accept and comprehend the existence of diverse views, and appreciate that the overall progress and contributions of their chosen discipline derives from efforts to resolve its internal contradictions. Basseches (1984) found that this type of reasoning is more characteristic of people studying at higher degree level or of university staff. Although aspects of dialectical reasoning can be found in adults in their 20s and 30s, Kramer’s (1989) research led her to the conclusion that this stage is only fully realized in late adulthood.

7.3.1 Theory of Love

The triangular theory of love is a theory of love developed by psychologist Robert Sternberg. In the context of interpersonal relationships, “the three components of love, according to the triangular theory, are an intimacy component, a passion component, and a decision/commitment component.”

7.3.1 Triangular Theory of Love

The triangular theory of love is a theory of love developed by psychologist Robert Sternberg. Presented in the year 1985, Sternberg was a member of the Psychology Department at Yale University. During his time as a professor, Sternberg emphasized his research in the fields of intelligence, creativity, wisdom, leadership, thinking styles, ethical reasoning, love and hate. In the context of interpersonal relationships,
“the three components of love, according to the triangular theory, are an intimacy component, a passion component, and a decision/commitment component.”

These three components of love have been briefly discussed here.

1. **Passion:** Passion can be associated with either physical arousal or emotional stimulation. Passion is defined in three ways:
   - (i) A strong feeling of enthusiasm or excitement for something or about doing something
   - (ii) A strong feeling (such as anger) that causes people to act in a dangerous way
   - (iii) Strong sexual or romantic feeling for someone

2. **Intimacy:** Intimacy is described as the feelings of closeness and attachment to one another. This tends to strengthen the tight bond that is shared between two individuals. Additionally, having a sense of intimacy helps create the feeling of being at ease with one another, in the sense that the two parties are mutual in their feelings. Intimacy is primarily defined as something of a personal or private nature; familiarity.

3. **Commitment:** Unlike the other two blocks, commitment involves a conscious decision to stick with one another. The decision to remain committed is mainly determined by the level of satisfaction that a partner derives from the relationship. There are three ways to define commitment:
   - (i) A promise to do or give something
   - (ii) A promise to be loyal to someone or something
   - (iii) The attitude of someone who works very hard to do or support something.” The amount of love one experiences depends on the absolute strength of these three components, and the type of love one experiences depends on their strengths relative to each other.” Different stages and types of love can be explained as different combinations of these three elements; for example, the relative emphasis of each component changes over time as an adult romantic relationship develops. A relationship based on a single element is less likely to survive than one based on two or three elements.

7.3.2 Early Theories of Love

One of the first theories of love was developed by Sigmund Freud. As Freud so frequently attributed human nature to unconscious desires, his theory of love centered on the need for an “ego ideal”. His definition of an ego ideal is this: the image of the person that one wants to become, which is patterned after those whom one holds with great respect.
Another theory was introduced by Maslow. Maslow’s hierarchy of needs places self-actualization at the peak. He maintains that those who have reached self-actualization are capable of love.

Yet another theory, one about being in love, was developed by Reik. Being in love was said to be attainable for those who could love for the sake of loving people, not just fixing one’s own problem. When theories about love moved from being clinically based to being socially and personality based, they became focused on types of love, as opposed to becoming able to love. Of the multiple different early and later theories of love, there are two specific early theories that contribute and influence Sternberg’s theory.

The first is a theory presented by Zick Rubin named The Theory of Liking vs. Loving. In his theory, to define romantic love Rubin concludes that attachment, caring and intimacy are the three main principles that are key to the difference of liking one person and loving them. Rubin states that if a person simply enjoys another’s presence and spending time with them, that person only likes the other. However, if a person shares a strong desire for intimacy and contact, as well as cares equally about the other’s needs and their own, the person loves the other.

In Sternberg’s theory, one of his main principles is intimacy. It is clear that intimacy is an important aspect of love, ultimately using it to help define the difference between compassionate and passionate love.

The second is a theory—The Color Wheel Model of Love—presented by John Lee. In his theory, using the analogy of primary colours to love, Lee defines the three different styles of love. These include Eros, Ludos and Storge. Most importantly within his theory, he concludes that these three primary styles, like the making of complementary colours, can be combined to make secondary forms of love.

In Sternberg’s theory, he presents, like Lee, that through the combination of his three main principles, different forms of love are created. Sternberg also described three models of love, including the Spearmanian, Thomsonian, and Thurstonian models. According to the Spearmanian model, love is a single bundle of positive feelings. In the Thomsonian model, love is a mixture of multiple feelings that, when brought together, produce the feeling. The Spearmanian model is the closest to the triangular theory of love, and dictates that love is made up of equal parts that are more easily understood on their own than as a whole. In this model, the various factors are equal in their contribution to the feeling and could be disconnected from each other.

### 7.3.3 Elaboration

Sternberg’s triangular theory of love was developed after the identification of passionate love and companionate love. Passionate love and companionate love are different kinds of love but are connected in relationships.
Passionate love is associated with strong feelings of love and desire for a specific person. This love is full of excitement and newness. Passionate love is important in the beginning of the relationship and typically lasts for about a year. There is a chemical component to passionate love. Those experiencing passionate love are also experiencing increased neurotransmitters, specifically phenylethylamine. These feelings are most commonly found in the most early stages of love.

Companionate love follows passionate love. Companionate love is also known as affectionate love. When a couple reaches this level of love, they feel mutual understanding and care for each other. This love is important for the survival of the relationship. This type of love comes later on in the relationship and requires a certain level of knowledge for each person in the relationship. Sternberg created his triangle next. The triangle’s points are intimacy, passion, and commitment. Intimate love is the corner of the triangle that encompasses the close bonds of loving relationships. Intimate love felt between two people means that they each feel a sense of high regard for each other. They wish to make each other happy, share with each other, be in communication with each other, help when one is in need. A couple with intimate love deeply values each other. Intimate love has been called the “warm” love because of the way it brings two people close together. Sternberg’s prediction of this love was that it would diminish as the relationship became less interrupted, thus, increasing predictability.

Passionate love is based on drive. Couples in passionate love feel physically attracted to each other. Sexual desire is typically a component of passionate love. However, passionate love is not limited to sexual attraction. It is a way for couples to express feelings of nurture, dominance, submission, self-actualization and so forth. Passionate love is considered the “hot” component of love because of the strong presence of arousal between two people. Sternberg believed that passionate love will diminish as the positive force of the relationship is taken over by opposite forces. This idea comes from Solomon’s opponent-force theory.

Commitment, or committed love, is for lovers who are committed to being together for a long period of time. Something to note about commitment, however, is that one can be committed to someone without feeling love for him or her, and one can feel love for someone without being committed to him or her. Commitment is considered to be the “cold” love because it does not require either intimacy or passion. Sternberg believed that committed love increases in intensity as the relationship grows. Commitment can be considered for friends as well. Sternberg believed love to progress and evolve in predictable ways; that all couples in love will experience intimate, passionate and committed love in the same patterns.

It is important to note that although these types of love may contain qualities that exist in non-loving relationships, they are specific to loving relationships.
Early Adulthood

Check Your Progress

1. What is the period of adulthood?
2. List any two major causes that lead to divorce in adulthood.

7.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The time between 23 to 45 years of age may be roughly regarded as the period of adulthood.
2. Two major causes that lead to divorce in adulthood are the following:
   (i) Excessive irritability and incessant quarrels on the part of a partner on apparently flimsy grounds leading to imbalance in the personality and behavior of either.
   (ii) Lack of cooperation in the performance of legitimate domestic duties leading to utter neglect of dependent children.

7.5 SUMMARY

- It will not be wrong to say that preparation for adulthood begins from infancy and continues through childhood and middle adolescence. It is during the late adolescence that it reaches its culmination which is in a way the point of growing into independence.
- It is through the behavior of parents, teachers, elder brothers, sisters, and other elders in the family, barbers, rickshaw and taxi-drivers, that the individual in late adolescence may know that he/she has reached adulthood.
- The time between twenty-three to forty-five years of age may be roughly regarded as the period of adulthood. Several kinds of changes take place both in men and women during this period.
- An individual naturally develops some interests during adolescence. Some of these interests are also carried over to adulthood in some form or the other. However, some of them are left out also. Thus their number continues becoming smaller and smaller as the years pass on.
- The adults today is hit by their vocational problems. About half a century ago the son usually followed the profession of his father.
- For an adult it is very important to get adjusted to married life. Adults are unlike adolescents who may make castles in the air regarding their married life. The attitude of the adult regarding marriage is more realistic.
In many Western countries, a majority of adolescents have experiences of pre-marital sex, for such adolescents the sexual pleasure does not have much importance after marriage.

Fulfillment of sexual desire must not be considered as the only important aspect of married life. Therefore, the adult, naturally, faces the problem on how to become an ideal husband and wife.

The adult has to confront the problems that are associated with parenthood. The male adult has to be an ideal father and the female one an ideal mother. An adult belonging to the middle or upper class may regard parenthood as the fulfillment of marriage and they may look to their children with great expectation and pride.

When husband and wife are not able to adjust in life because of their varying temperaments or way of life, divorce appears to be the only alternative for making each of them tension-free.

Remarriage after divorce is accepted as a remedy for restoring the lost adjustment in married life. But in fact, the desirable adjustment does not come, and the apparent smile over the face of the remarried couple may be only a defense mechanism to conceal the wounded feelings smouldering within. So remarriage may present new difficulties.

The status of a widow particularly in India is really very pitiable. A widower does not face the problems that a widow has to, simply because he happens to be a male and usually an earning member.

There are some people in our society who have not chosen the bond of marriage. Both men and women are found in this group. It is good and reasonable not to go in for marriage, if there are some physical or physiological inadequacies and the medical advice is against it.

According to Riegel (1975) adult experiences lead to exposure to new levels of cognitive challenge. Many aspects of our environment can manifest contradictory features. This is especially so in the human environment.

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One of the first theories of love was developed by Sigmund Freud. As Freud so frequently attributed human nature to unconscious desires, his theory of love centered around the need for an “ego ideal”. His definition of an ego ideal is this: the image of the person that one wants to become, which is patterned after those whom one holds with great respect.
Early Adulthood

NOTES

• Sternberg’s triangular theory of love was developed after the identification of passionate love and companionate love. Passionate love and companionate love are different kinds of love but are connected in relationships.

• Commitment, or committed love, is for lovers who are committed to being together for a long period of time.

7.6 KEY WORDS

• Dialectic: A method of discovering the truth of ideas by discussion or logical arguments.

• Ego: The sense of your own value and importance.

7.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions
1. Write a short note on the vocational problems faced by adults.
2. What are the problems faced by unmarried adults?
3. Briefly mention Riegel’s theory on post-formal thought.

Long Answer Questions
1. ‘For an adult it is very important to get adjusted to married life.’ Explain the statement.
2. Discuss Kramer’s theory of adulthood.
3. Critically analyse the theories of love.

7.8 FURTHER READINGS


UNIT 8 MIDDLE ADULTHOOD

Structure
8.0 Introduction
8.1 Objectives
8.2 Middle Adulthood Section: An Overview
  8.2.1 Perimenopause and Menopause
  8.2.2 Hormone Therapy for Menopausal Symptoms
  8.2.3 Midlife Crisis and Transitions
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8.3 Late Adulthood: An Overview
  8.3.1 Biological Aging
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8.4 Answers to Check Your Progress Questions
8.5 Summary
8.6 Key Words
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8.0 INTRODUCTION

According to the Oxford English Dictionary, middle age is between 45 and 65. “The period between early adulthood and old age, usually considered as the years from about 45 to 65.” The US Census lists the category middle age from 45 to 65. Webster lists middle age from 45 to 64, while prominent psychologist Erik Erikson saw it starting a little earlier and defines middle adulthood as between 40 and 65. The Collins English Dictionary lists it between the ages of 40 and 60, and the Diagnostic and Statistical Manual of Mental Disorders – the standard diagnostic manual of the American Psychiatric Association – used to define middle age as 40 to 60, but as of DSM-IV (1994) revised the definition upwards to 45 to 65.

8.1 OBJECTIVES

After going through this unit, you will be able to:

- Outline the aspects of middle adulthood
- Discuss the menopausal phase, including hormone therapy for menopause
- Identify the events of midlife crisis and transitions it entails in family relationships
8.2 MIDDLE ADULTHOOD SECTION: AN OVERVIEW

It is difficult to define this phase of life precisely. The variety of human life courses means that individuals can be in very different stages of their personal development at any age point (i.e. turning 40) that we have taken as a rough measure of entry to middle age.

Physical Development
During midlife, people experience a range of external and internal physical changes. External changes include the appearance of grey hair and thinning hair, increase in facial wrinkles, and a tendency to put on weight around the waist or lower body. Internal changes include reduced efficiency of the cardiovascular, respiratory and nervous systems.

There are changes in the sensory capacities, too. One of the most noticeable symptoms for most middle-aged people is the onset of presbyopia – a condition of farsightedness due to progressive changes in the shape of the lens of the eye. This leads to difficulty in reading small print – you may notice people of this age holding printed matter further away than a younger reader does. Hearing, particularly sensitivity to higher frequency sounds, is also prone to weaken during middle age.

Menopause
Middle adulthood is the time when women experience the menopause – the cessation of menstruation. Many women suffer some level of physical and psychological discomfort as a result, such as hot flashes, mood changes, loss of libido, and insomnia. But the intensity of these symptoms varies considerably among individuals. There is some evidence that the physical symptoms associated with menopause vary across some cultures. This may reflect variations in diet and/or social expectations about the nature of the menopause. As at other stages of the lifespan, physical changes are closely interwoven with psychological changes. Signs of aging prompt many people to review their lives (see below) and some begin to feel dissatisfied with their bodies. In a large sample of middle-aged and older Swiss women, for example, Allaz, Bernstein, Rouget et al. (1998) found that a majority expressed dissatisfaction about their weight and many had dieted to control it, even though their weight fell within the normal range. Individuals’ own behavioural
choices can moderate the effects of biological changes. For example, menopausal women who take regular aerobic exercise report more positive moods and less somatic discomfort than non-exercising peers. The reactions and support of partners can also influence women’s experience of menopause.

Cognitive Development: Stable and Unstable Patterns

In terms of primary mental abilities, Schaie’s (1996) data depict midlife as a relatively stable period. In fact, on most measures, middle-aged adults perform as well as or slightly better than younger adults. Schaie did find a decline in numeric skill, and other researchers have obtained evidence of a modest decrease in reaction time and a reduction in conscious processing efficiency during this period. However, in terms of psychometric measures of intellectual functioning, middle-aged people perform well overall.

Life Skills

There are some tasks on which middle-aged adults tend to fare worse than young adults. For example, Denney and Palmer (1981) gave people between the ages of 20 and 80 a traditional problem-solving test—a game of ‘Twenty Questions’. (The goal is to identify an object known to the tester by asking a series of indirect questions about it: ‘Is it a plant?’ ‘Can you eat it?’ etc.) The older people got, the worse they did.

But this could well be because this type of test was more familiar to the younger participants, who were therefore likely to do better. This interpretation of the findings is perhaps borne out by another series of tests administered by Denney and Palmer. These ‘real world’ tests related to practical applications of reasoning, such as how to deal with faulty purchases, brooding in the basement, or a child returning late from school. On these practical tests, middle-aged people scored significantly higher than young adults. In other research, Denney and Pearce (1989) found that the number of solutions people generate in response to everyday practical problems peaks in middle age.

Occupational Adjustment

Many adults find meaning in and define themselves by what they do—their careers. Earnings peak for many during adulthood, yet research has found that job satisfaction is more closely tied to work that involves contact with other people, is interesting, provides opportunities for advancement, and allows some independence (Mohr & Zoghi, 2006) than it is to salary (Iyengar, Wells, & Schwartz, 2006).

Emotions and clear thinking

Researchers who focus on qualitative developments in adult reasoning have found evidence of continuing development through the lifespan. The progression through absolutist, relativist and dialectical reasoning may continue for decades. Some researchers argue that there is an important reorganization of thinking in middle age.
Middle Adulthood

NOTES

Self-Instructional Material

adulthood, as people achieve an integration of information-processing and emotional self-regulation.

A good illustration is provided by Blanchard-Fields (1986). She tested adolescents, young adults and middle-aged adults on three hypothetical problems, each involving a conflict of perspectives. One problem concerned competing historical accounts of a civil war, with different historians taking different sides. Another problem concerned a dispute over a proposed visit to grandparents, with parents in favour of the visit and their adolescent children against. The third problem concerned a pregnancy dilemma, with the female and male taking different views over whether to terminate. The participants’ task was to explain the conflict in each case. Blanchard-Fields analysed the quality of the participants’ reasoning. She found that the middle-aged adults performed at a higher level than each of the younger groups. The younger participants tended to take sides, especially in the emotionally engaging ‘visit’ and ‘pregnancy’ problems, leading to distorted, one-sided accounts. The middle-aged participants were more likely to try to understand why each party felt the way they did, and to provide more balanced descriptions, taking all perspectives into account. In other words, it seemed that the younger participants tended to be swayed by their own emotions about the conflicts, while the middle-aged participants appeared to integrate emotional understanding with other problem-solving skills.

Social and emotional development

Each phase of life brings new challenges, and for many people midlife brings a multiplicity of them – from all quarters. By this time, people’s histories are very varied. In their personal and occupational lives, many different options may have been chosen and many different events and circumstances will have affected their progress. So can we pin down any particular patterns of social and emotional development associated with middle age? Despite this variety in individuals’ personal background, some lifespan developmentalists maintain that we can.

Psychological Changes

According to Erikson (1980) middle age was a period when adults faced conflict between generativity and stagnation. Generativity – the process of making a contribution to the next generation – can be realized in a variety of ways through personal (family) or career attainments that provide a basis for others to progress. For example, a businessperson in midlife might find satisfaction in her professional achievements to date and in the scope now to pass on skills to younger colleagues. Another person might find a sense of generativity through having reared children that she is proud of and who are now entering the adult world well equipped to meet challenges. A ‘link between the generations’, maintained Erikson, is ‘as indispensable for the renewal of the adult generation’s own life as it is for the next generation’.
Stagnation is the opposing feeling of having achieved relatively little and of having little to offer to the next generation. Some people in midlife, for example, conclude that they have not met the family or occupational goals that once motivated them. Some respond to this sense of “standing still” with a period of self-absorption, and an acute awareness that time is limited.

Individuals are likely to experience both types of feeling – generativity and stagnation – and the core developmental process of midlife, according to Erikson, is the resolution of this conflict. Those who resolve it successfully attain a sense of care (about both the present and the future), and those who fail to do so develop a sense of rejective (i.e., they turn away from society and have little interest in contributing to it).

Recent research has supported Erikson’s claims that generativity is positively associated with subjective well-being in middle-aged people, while a preoccupation with aging (“time running out”) is negatively associated with well-being.

8.2.1 Perimenopause and Menopause

Perimenopause means “around menopause” and refers to the time during which a woman’s body makes the natural transition to menopause, marking the end of the reproductive years. Perimenopause is also called the menopausal transition.

Women start perimenopause at different ages. They may notice signs of progression toward menopause, such as menstrual irregularity, sometime in the 40s. But some women notice changes as early as their mid-30s.

The level of estrogen — the main female hormone — in a woman’s body rises and falls unevenly during perimenopause. Their menstrual cycles may lengthen or shorten, and they may begin having menstrual cycles in which their ovaries don’t release an egg (ovulate). A woman may also experience menopause-like symptoms, such as hot flashes, sleep problems and vaginal dryness. Treatments are available to help ease these symptoms.

Once a woman has gone through 12 consecutive months without a menstrual period, she is considered to have officially reached menopause, and the perimenopause period is over.

Symptoms

Throughout the menopausal transition, some subtle — and some not-so-subtle — changes may take place in a woman’s body. She might experience:

- **Irregular periods**: As ovulation becomes more unpredictable, the length of time between periods may be longer or shorter, the flow may be light to heavy, and may even skip some periods. If there is a persistent change of seven days or more in the length of menstrual cycle, it may indicate early menopause. If there is a space of 60 days or more between periods, it is likely to be late menopause.
Middle Adulthood

NOTES

- **Hot flashes and sleep problems:** Hot flashes are common during perimenopause. The intensity, length and frequency vary. Sleep problems are often due to hot flashes or night sweats, but sometimes sleep becomes unpredictable even without them.

- **Mood changes:** Mood swings, irritability or increased risk of depression may happen during perimenopause. The cause of these symptoms may be sleep disruption associated with hot flashes. Mood changes may also be caused by factors not related to the hormonal changes of perimenopause.

- **Vaginal and bladder problems:** When estrogen levels diminish, vaginal tissues may lose lubrication and elasticity, making intercourse painful. Low estrogen may make the woman more vulnerable to urinary or vaginal infections. Loss of tissue tone may contribute to urinary incontinence.

- **Decreasing fertility:** As ovulation becomes irregular, the ability to conceive decreases. However, as long as periods are happening, pregnancy is still possible. If one wishes to avoid pregnancy, they can use birth control until the periods stop for 12 months in a row.

- **Changes in sexual function:** During perimenopause, sexual arousal and desire may change. But if there was satisfactory sexual intimacy before menopause, this will likely continue through perimenopause and beyond.

- **Loss of bone:** With declining estrogen levels, bone loss is quicker than it is getting replaced, thus increasing the risk of osteoporosis — a disease that causes fragile bones.

- **Changing cholesterol levels:** Declining estrogen levels may lead to unfavorable changes in blood cholesterol levels, including an increase in low-density lipoprotein (LDL) cholesterol — the “bad” cholesterol — which contributes to an increased risk of heart disease. At the same time, high-density lipoprotein (HDL) cholesterol — the “good” cholesterol — decreases in many women as they age, which also increases the risk of heart disease.

**Causes**

As a woman’s body goes through the menopausal transition, the body’s production of estrogen and progesterone rises and falls. Many of the changes she will experience during perimenopause are a result of decreasing estrogen.

**Risk factors**

Menopause is a normal phase in life. But it may occur earlier in some women than in others. Although not always conclusive, some evidence suggests that certain factors may make it more likely that a woman starts perimenopause at an earlier age, including:

- **Smoking:** The onset of menopause occurs one to two years earlier in women who smoke than in women who don’t smoke.
- **Family history:** Women with a family history of early menopause may experience early menopause themselves.

- **Cancer treatment:** Treatment for cancer with chemotherapy or pelvic radiation therapy has been linked to early menopause.

- **Hysterectomy:** A hysterectomy that removes the uterus, but not the ovaries, usually doesn’t cause menopause. Although the woman will no longer have periods, the ovaries still produce estrogen. But such surgery may cause menopause to occur earlier than average. Also, if one ovary has been removed, the remaining ovary might stop working sooner than expected.

  **Complications**
  Irregular periods are a hallmark of perimenopause. Most of the time this is normal and nothing to be concerned about. However, a doctor should be consulted if:
  - Bleeding is extremely heavy
  - Bleeding lasts longer than seven days
  - Bleeding occurs between periods
  - Periods regularly occur less than 21 days apart
  
  Signs such as these may mean there’s a problem with the reproductive system that requires diagnosis and treatment.

### 8.2.2 Hormone Therapy for Menopausal Symptoms

Ten years have passed since publication of the first results of the Women’s Health Initiative (WHI) hormone therapy trials. The debate that followed gave women and their providers the impression that the experts don’t agree on the topic of hormone therapy. The purpose of this joint statement is to demonstrate the experts do agree on the key points.

The North American Menopause Society, the American Society for Reproductive Medicine, and The Endocrine Society take the position that most healthy, recently menopausal women can use hormone therapy for relief of their symptoms of hot flashes and vaginal dryness if they so choose. These medical organizations also agree that women should know the facts about hormone therapy. Below are the major points of agreement among these societies.

**Hormone therapy reduces menopausal symptoms**

- Hormone therapy is the most effective treatment for menopausal symptoms such as hot flashes and vaginal dryness. If women have only vaginal dryness or discomfort with intercourse, the preferred treatments are low doses of vaginal estrogen.

- Hot flashes generally require a higher dose of estrogen therapy that will have an effect on the entire body. Women who still have a uterus need to
take a progestogen (progesterone or a similar product) along with the estrogen to prevent cancer of the uterus. Five years or less is usually the recommended duration of use for this combined treatment, but the length of time can be individualized for each woman.

- Women who have had their uterus removed can take estrogen alone. Because of the apparent greater safety of estrogen alone, there may be more flexibility in how long women can safely use estrogen therapy.

**Hormone Therapy Risks**

- Both estrogen therapy and estrogen with progesterone therapy increase the risk of blood clots in the legs and lungs, similar to birth control pills, patches, and rings. Although the risks of blood clots and strokes increase with either type of hormone therapy, the risk is rare in the 50 to 59 age group.

- An increased risk in breast cancer is seen with 5 or more years of continuous estrogen/progesterone therapy, possibly earlier. The risk decreases after hormone therapy is stopped. Use of estrogen alone for an average of 7 years in the Women’s Health Initiative trial did not increase the risk of breast cancer.

**The Bottom Line**

Hormone therapy is an acceptable option for the relatively young (up to age 59 or within 10 years of menopause) and healthy women who are bothered by moderate to severe menopausal symptoms. Individualization is key in the decision to use hormone therapy. Consideration should be given to the woman’s quality of life priorities as well as her personal risk factors such as age, time since menopause, and her risk of blood clots, heart disease, stroke, and breast cancer.

Medical organizations devoted to the care of menopausal women agree that there is no question that hormone therapy has an important role in managing symptoms for healthy women during the menopause transition and in early menopause. Ongoing research will continue to provide more information as we move forward.

### 8.2.3 Midlife Crisis and Transitions

Levinson (1978) depicts midlife as a period of inner conflict. Levinson saw the period from approximately 33 to 40 as the ‘settling down’ period. But settling down is not the end of the story. Levinson found that most of his interviewees next underwent a major new phase, during a period of midlife transition. Many of the men he interviewed reported that this was a time of personal crisis. They began to review their lives, asking themselves what they had achieved and where they were heading. Many wondered whether their personal and career struggles had been worthwhile, and some contemplated or underwent radical changes in direction (changing career paths, divorcing). Although Levinson’s sample was all male, other
research indicates that many women report similar periods of reassessment during middle age.

These kinds of reassessment are popularly associated with the notion of the ‘midlife crisis’. The visible signs of aging, changes in the family structure as children become adolescents or young adults, and frustrations in the workplace may all serve to remind the middle-aged person that life is passing by – and this might precipitate a personal ‘crisis’. Levinson argued that this is a normative process, and that successful adult development beyond midlife requires facing up to and resolving the crisis.

Appealing as the idea may seem (and much as newspaper writers and TV dramatists relish it), subsequent research shows that it is an over simplification to assume that everybody undergoes a midlife crisis. For example:

- Periods of turbulence and self-doubt can be experienced by adults of most ages, and some individuals – especially those who score highly on measures of neuroticism – may be prone to develop crises at any age.
- In larger samples than Levinson’s (1978), only a minority of middle-aged people feel they have experienced a crisis.
- Substantial proportions of middle-aged people report better mental health and self-esteem during this phase of life than ever before.

The midlife crisis, therefore, does not appear to be as widespread as once thought, and there is no guarantee that you will have any more (or less) crises during your middle years than in other phases of your life. But there is no doubt that there are many pressures on middle-aged people. Some of these pressures relate to domestic and family life, and others to the world of work. For many middle-aged people, there are new parenting challenges as their children reach adolescence or early adulthood. At a time when adults are becoming aware of their own physical decline, their children may be gaining the attractions of youth.

Often, these demands coincide with increasing anxieties about and responsibilities towards the older generation. For some middle-aged people, usually women, looking after both their own children and their aging parents can cause ‘caregiving pile-up’ – an experience of overload due to too many competing demands.

As in earlier phases of life, the quality of a person’s attachment to his or her partner has important implications for adjustment, personal satisfaction and dealing with life stresses. For example, in a longitudinal study of middle-aged people, Kirkpatrick and Hazan found that those with secure relationship attachment styles were less likely to experience a break-up of their partnership.

8.2.4 Changes in Family Relationships

According to Ryff & Singer, 2009, ‘Positive relationships with significant others in our adult years have been found to contribute to a state of well-being’.
Middle Adulthood

Most adults in the United States identify themselves through their relationships with family—particularly with spouses, children, and parents. Umberson, Padovska, & Reece in 2010 observed, ‘While raising children can be stressful, especially when they are young, research suggests that parents reap the rewards down the road, as adult children tend to have a positive effect on parental well-being.’ Having stable intimate relationships has also been found to contribute to well-being throughout adulthood.

In young adulthood, particularly in the twenties and thirties, people tend to be concerned with forming meaningful ties; if the young and middle-aged adults are unable to form meaningful relationships with family, friends, or community, they feel miserable and abandoned.

Most of the young adults find themselves raising small children. This is not the typical pattern, however. By the time most parents reach middle age, their children are at least of adolescent age.

It has been observed that both middle adults and their children experience emotional crises. As adolescents search for their own identities, middle adults are in the search of what it is called as ‘generativity’, the need to counsel and raise children. These two crises are not always compatible, as parents try to deal with their own issues as well as those of their adolescents (for example, discovering identity).

Some middle adults also form the habit to ‘live out’ their own youthful fantasies through their children. They try to make their teenage children the improved versions of themselves. Witnessing their children on the verge of becoming adults can trigger a midlife crisis. The adolescent journey into young adulthood reminds middle age parents of their own aging processes and the inescapable settling into middle and later adulthood. Due to this, parents may experience depression or seek to recapture their youth. This may take shape through age inappropriate behaviour and sexual adventures. It may so happen that some teenagers ignite much tension at home that their departure to college or into a career course acts as a relief to parents. Other parents experience the empty nest syndrome after all of their children leave home. They have trouble reconnecting to each other and rediscovering their own individuality separate from parenthood without the children as a focal point for their lives.

Parents

Most middle adults define the relationship with their parents as affectionate. A strong bond often exists between related middle and older adults. Although, it has been observed that the majority of middle adults do not live with their parents, and instead maintain frequent and positive contact.

In some cases, adults, who expected to spend their middle age years travelling and enjoying their own children and grandchildren, instead find themselves taking care of their ailing parents. This is the major issue facing middle adults –
caring for their aging parents. Relationships with older adult parents vary a great deal. Some parents remain completely independent of their adult children’s support while others partially depend upon their children. There are still others who completely depend upon them. Daughters and daughters in law most commonly take care of aging parents and in laws.

For adults caring for their older parents, there are support groups and counselling sessions available. These typically provide information, teach caregiver skills, and offer emotional support. Other programs, such as Social Security and Medicare, ease the financial burdens of older adults and their caregivers.

Middle adults have been seen to react with intensity and pain to the death of one or both parents. The death of one’s parents offers a ‘wake up call’ to live life to its fullest and mend broken relationships while the people involved still live. Finally, the death serves as a reminder of one’s own mortality.

Friendship

Friends provide a healthy alternative to family and acquaintances in all age groups. They are the system of support, direction, guidance, and provide a change of pace from usual routines. Although many young adults manage to maintain their friendships but for middle adults family, school, and work can become greater concerns. Life responsibilities reach an all-time high at this stage so there is less time for socializing. For this reason, middle adults generally maintain fewer close friendships than their newlywed and retired counterparts, although this is not always the case.

Grandparenthood

For most people, becoming a grandparent is a positive experience; but there is a clause attached to it – it largely depends on the age at which it happens. According to Szinovacz, 1998, ‘Nearly one third of grandparents enter grandparenthood ‘off-time’: either before 40 or after 60’. The influences by grandparents can be direct, resulting from contact and face-to-face interaction, and indirect, mediated by other means such as parental behaviour. One source of indirect influence of grandparents is via financial support. Also, by acting as parents themselves, grandparents influence how their children act as parents. According to Benoit and Parker (1994) ‘65 per cent concordance in attachment security across three generations: maternal grandmothers’ and mothers’ adult attachment interview (AAI) status and infants’ strange situation classification at 12 months. Attachment theory emphasizes consistency over generations, but it also predicts that adults can work through or resolve unsatisfactory relations with their parents and modify their internal working models, either through self-reflection or with the aid of therapy or counselling.’

According to Farrington, 1993; Murphy-Cowan & Stringer, 1999, ‘Research on children’s antisocial behaviour also points to intergenerational influences. The use of physically aggressive and punitive techniques in the
grandparent/parent generation predicts similar behaviour in the parent/grandchild generation, and also antisocial behaviour in the grandchildren.’ Caspi and Elder in 1988 also found a reinforcing dynamic between problem behaviour and unstable ties in the family across four generations of women in their Berkeley Guidance Study. Examples of direct influence are giving gifts, being a companion and confidant, acting as an emotional support or ‘buffer’ at times of family stress, passing on family history or national traditions, and acting as a role model for ageing.

Check Your Progress
1. Name some of the risk factors for early menopause.
2. What is generativity?
3. What are the risks associated with prolonged use of hormone therapy?
4. Write a note on benefits of having friends in middle adulthood.

8.3 LATE ADULTHOOD: AN OVERVIEW

Late adulthood is perhaps the most difficult of all to categorize precisely – mainly because there is very wide individual variation in the physical, cognitive and social processes of aging.

Physical development

In late adulthood, external physical changes include changes in the skin (wrinkling, loss of elasticity), loss of subcutaneous fat, thinning of the hair, and changes in general posture due to the loss of collagen between the spinal vertebrae. There are also many internal changes, less apparent to the onlooker but important to the functioning of the aging individual. These include changes to the cardiovascular system and loss of cardiac muscle strength, decline in muscle mass and reductions in the efficiency of the respiratory, digestive and urinary systems.

Lifestyle

But although physical change is inevitable, the timing and extent are highly variable (and, to some degree, influenced by the behavioural choices and lifestyle of the individual). For example, aging of the skin is affected by exposure to sunlight, physical strength and fitness decline less in people who exercise regularly, and the well-being of the digestive system is influenced by diet and drug use. Physical and sensory capacities, so important in our earliest encounters with the world, also tend to decline with age. Manual dexterity is reduced, and the visual system becomes less effective. The older person’s pupils become smaller, and the lens of the eye becomes less transparent (and so less sensitive to weak lights, and less
able to adapt to darkness) and less able to accommodate. Hearing, taste, olfaction and touch all become less sensitive during later adulthood.

If perceptual abilities were so vital at the outset of life, what are the psychological consequences of beginning to lose them?

Imagine becoming less able to listen to music, experiencing difficulties in attending to conversations, or finding that food and drink seem less interesting. Research indicates that our physical senses remain important at this end of the lifespan, too. There is a strong connection between sensory functioning and intelligence in old age. Gradual deficits in hearing can affect older people’s ability to process speech in the context of other noise, which in turn affects how easily they interact with other people.

Coping

Certainly, the decline of abilities that were once taken for granted can lead to a reduced sense of competence for the older person. And the curtailment of activities that were previously enjoyed can affect people’s assessment of their quality of life. But, once again, the extent of the impact of biological decline varies from person to person, and is influenced by both the rate of change and the individual’s coping skills (which are, in turn, influenced by personality and social circumstances).

Cognitive development

Does intellectual capacity decrease with age? Let us return again to Schaie’s data on primary mental abilities across the lifespan. Look at the average performance of 67-year-olds compared to adults in mid-life, and you will see evidence of some decline. At this stage it is not particularly dramatic, but our eyes are drawn to the right of the figure, where we see more marked reductions in the performance of people in their 70s and 80s. It seems that by the mid 60s, the downward trend is set. But take another look. If we compare the performance of the 67-year-olds with the 25-year-olds, it turns out that they are very similar on three of the measures, and only slightly poorer on two of them. On average, people in their mid 60s are performing on these tests at roughly the same level as those in their mid 20s. Schaie’s and other research also shows that while there is variation between age groups on some measures of intellectual performance, there is also great variation within groups – and this variation within groups increases with age. Older people do tend to perform less well than younger adults on tasks dependent upon reaction time and processing speed. Some researchers have also reported that older adults perform less well on Piagetian-type tasks measuring formal operations.

But these differences do not necessarily support the conclusion that intellectual capacity in the elderly is pervasively inadequate. Intelligent behaviour in everyday life typically involves several capacities, and people may be able to compensate for reductions in one ability (such as processing speed) by placing greater weight on another (such as judgement based on experience). Many of the studies that point to age-related differences are based on different cohorts – that is, groups of
people who were born at different times, and experienced different educational systems. Some studies compare young adults at university with older adults drawn from the broader community, which confounds education with age. Hooper, Hooper and Colbert (1985) addressed this issue by comparing students of different age groups, and found that older participants’ (aged 61–80) performance on formal reasoning tasks was comparable to those of the young people.

Psychological Aspects

Theorists such as Erikson and Erikson (1997) and Levinson (1978) regarded late adulthood as another major stage of adult development. Erikson and Erikson again saw the individual as facing a conflict – this time between integrity and despair. They maintained that as people realize they are coming towards the end of their life, they reminisce about their past and review how they feel about themselves. Have I met life’s challenges successfully/achieved goals that I value/contributed to the wellbeing of those I care about? Or have I failed to realize my potential/wasted time in pointless work or futile relationships/been a burden to others?

Erikson and Erikson believed that individuals who arrive at a predominantly positive view (i.e. regarding their life as integrated and successful) experience a more contented late adulthood. Levinson saw the period from approximately 60 to 65 as the late adult transition, when the individual has to deal with intrinsic changes in capacity and performance, as well as changes in relations with others and in society’s expectations. One of the key aspects of many people’s adult life – their job – is now approaching its end, or has already concluded. All of these changes pose challenges.

How do older people cope with the demands of aging and their changing social status? Not surprisingly, the answer is that there is considerable variation.

8.3.1 Biological Aging

Biological age, also called physiological age, is a measure of how well or poorly your body is functioning relative to your actual calendar age. For example, you may have a calendar or chronological age of 65, but because of a healthy and active lifestyle (avoiding longevity threats like tobacco and obesity), your body is physiologically more similar to someone with a chronological age of 55. Your biological age would, therefore, be 55.

There are several ways that you can determine your biological age, but none are definitive or accurate. However, there are health factors that would give you years back on your average life expectancy. Let’s take a look at them.

Lifestyle

Healthy habits can have a significant impact on your longevity and biological age. These are as follows:

- Exercise habits
- Eating habits
Middle Adulthood

Heredity

Another major contributor to biological age has nothing to do with your habits. Heredity, or your gene pool, is responsible for your biological age. Just as specific diseases run in families, longevity does also. If you have family members who have lived longer than 96 years, chances are you’ll live a long life too, even if your habits are less than healthy.

Location

Another important factor influencing biological age is where you live. It’s no secret that the environment and culture you live in is connected to healthy habits, but it’s also tied to your safety, the foods you eat, and so much more.

For example, people living in an unsafe neighborhood are unlikely to go out to exercise. They’re also less likely to find shops selling fresh fruit and produce. Perhaps even more significantly, they are likely to experience high levels of stress.

8.3.2 Dementia/Neurocognitive Disorders

All neurocognitive disorders (NCDs) feature ‘an acquired cognitive decline in one or more cognitive domains.’ These disorders tend to involve problems with thinking, reasoning, memory, and problem solving. Some types, such as Parkinson’s disease, can lead to physical disabilities. There are major and mild neurocognitive disorders (NCDs), depending on how severely the symptoms impact a person’s ability to function independently in everyday activities.

Factors underlying different types of neurocognitive disorder include metabolic and endocrine conditions, nutritional deficiencies, substance abuse, trauma, and infections. This type of condition is more likely to affect older people. Here are some key points about neurocognitive disorders, or dementia.

- Dementia is a common term for conditions such as Alzheimer’s and other neurocognitive disorders.
- These disorders affect the nerve cells and often impact a person’s ability to remember, to reason, and to make judgments.
- They usually develop as people age, but they can affect younger people too.
- The exact cause of some types of neurocognitive disorder is unknown, but some lifestyle factors may reduce the risk.
8.3.3 Stages of Dying

Kubler-Ross and colleagues developed a five-stage model of death and dying. These stages have different emotional responses that people go through in response to the knowledge of death. They are commonly referred to by an acronym of DABDA and are denial, anger, bargaining, depression and acceptance.

The first stage in the Kubler-Ross model is denial. During this stage, the initial (and most common) emotional response to the knowledge of impending death is denial. People in this stage say, 'No, not me. It can’t be!' According to Kubler-Ross, denial serves as a defense mechanism. Denying the inevitable helps ease anxiety and fearful thoughts. For example, a man diagnosed with cancer may be adamant that the test results are incorrect or feels invincible and thinks he can beat the odds of survival. Denial can be a positive coping method, allowing one to come to terms with the knowledge of dying on their own until they are ready to cope constructively. Close family members and friends may also experience denial.

The second stage is anger. Once the dying person accepts that the diagnosis is correct he or she may become very angry. Feelings of rage or resentment may overcome this person and the anger may be directed at others as well. The person may ask, ‘Why me?’ The identification of this stage has aided the care of dying patients, as Kubler-Ross recommended that doctors and loved ones should not respond to the anger of the dying person with avoidance or returned anger, but instead through support.

The third stage is bargaining. During this stage the dying person may try to barter with doctors, family or even God. Saying, ‘Okay, but please ...’ The person may try to bargain for a cure, extra time with family or less pain. The fourth stage is depression. As the dying person realizes death is impending and has nothing left out.

8.3.4 Death

Death is the cessation of all biological functions that sustain an organism. Phenomena which commonly bring about death include biological aging (senescence), predation, malnutrition, disease, suicide, homicide, starvation, dehydration, and accidents or trauma resulting in terminal injury.

Bodies of living organisms begin to decompose shortly after death. Death has commonly been considered a sad or unpleasant occasion, particularly for humans, due to the affection for the being that has died and/or the termination of social and familial bonds with the deceased.

Other concerns include fear of death, necrophobia, anxiety, sorrow, grief, emotional pain, depression, sympathy, compassion, solitude, or saudade. The potential for an afterlife is of concern for humans and the possibility of reward or judgement and punishment for past sin with people of certain religions.
Signs of death or strong indications that a warm-blooded animal is no longer alive are:

- Respiratory arrest (no breathing)
- Cardiac arrest (no pulse)
- Pallor mortis, paleness which happens in the 15-20 minutes after death
- Livor mortis, settling of the blood in the lower (dependent) portion of the body
- Algor mortis, the reduction in body temperature following death. This is generally a steady decline until matching ambient temperature
- Rigor mortis, the limbs of the corpse become stiff (Latin rigor) and difficult to move or manipulate
- Decomposition, the reduction into simpler forms of matter, accompanied by a strong, unpleasant odor.

8.3.5 Hospice and Palliative Care

For many seriously ill patients, hospice and palliative care offers a more dignified and comfortable alternative to spending your final months in the impersonal environment of a hospital. Palliative medicine helps patients manage pain while hospice provides special care to improve quality of life for both the patient and their family. Seeking hospice and palliative care isn’t about giving up hope or hastening death, but rather a way to get the most appropriate care in the last phase of life.

Although death is a natural part of life, the thought of dying understandably still frightens many people. You may imagine pain and loneliness, spending your final days in the cold, sterile environment of a hospital far from family, friends and all that you know and love. However, hospice care represents a compassionate approach to end-of-life care, enhancing the quality of remaining life and enabling you to live as fully and as comfortably as possible.

Hospice is traditionally an option for people whose life expectancy is six months or less, and involves palliative care (pain and symptom relief) rather than ongoing curative measures, enabling you to live your last days to the fullest, with purpose, dignity, grace, and support. While some hospitals, nursing homes, and other health care facilities provide hospice care onsite, in most cases hospice is provided in the patient’s own home. This enables you to spend your final days in a familiar, comfortable environment, surrounded by your loved ones who can focus more fully on you with the support of hospice staff.

The term ‘palliative care’ refers to any care that alleviates symptoms, even if there is hope of a cure by other means. It is an approach that focuses on the relief of pain, symptoms, and emotional stress brought on by serious illness. Your disease doesn’t have to be terminal for you to qualify for palliative care and, in the
U.S., many palliative treatments are covered by Medicare. In some cases, palliative treatments may be used to alleviate the side effects of curative treatment, such as relieving the nausea associated with chemotherapy, which may help you tolerate more aggressive or longer-term treatment.

**Hospice and End-Of-Life Issues**

For many in Western society, death remains a taboo subject. Consequently, many patients and their families remain reluctant to even discuss the possibility of hospice care or palliative care. While most people would prefer to die in their own homes, the norm is still for terminally ill patients to die in hospital, receiving treatment that is either unwanted or ineffective. Their loved ones usually have only limited access and often miss sharing their last moments of life.

Some families who do choose hospice care often do so only for the last few days of life, and later regret not having more time saying goodbye to their loved one. To ensure that your family understands your wishes, it’s important for anyone with a life-limiting illness to learn all they can about hospice and palliative care and discuss their feelings with loved ones before a medical crisis strikes. When your loved ones are clear about your preferences for treatment, they’re free to devote their energy to care and compassion.

**8.3.6 Life Satisfaction in Late Adulthood**

Retirement which is defined as an individual’s exit from the workforce, is usually accompanied by a behavioural withdrawal from work. While retirement was seen as a crisis in the past, it now stands as an opportunity for individuals to engage in different types of work, and to dedicate more time in their community with friends and family. Cross-national studies have been conducted to clarify the impact of preparedness on the temporal process of retirement: decisions, transition, and adjustment to retirement. Nevertheless, societies are constantly changing and future research, with the frameworks discussed in this chapter in mind, can continue investigating the concepts of retirement to help individuals prepare better.

According to Wang and Shi (2014), ‘Retirement is an individual’s exit process from the workforce, which is usually accompanied by both a decrease in psychological commitment to work and an increase in behavioural withdrawal from work. In the past, retirement was perceived as a “crisis” that negatively impacted the retiree’s well-being.’ Subsequent research has acknowledged the beneficial effects of retirement.

According to Wang & Shi, ‘Retirement planning typically begins years before the individual desires to retire. Individuals start saving for retirement and discuss retirement plans with friends, family members, and current colleagues’. The specific time when individuals first engage in retirement planning depends on several factors, such as the norms and institutions of the society or the organization. If the organization promotes (early) retirement, the individual will have more resources at work with which to engage in retirement planning. Taylor-Carter, Cook,
Weinberg (1997) have argued that retirement planning can be categorized as financial planning (focusing on private savings) and cognitive planning (exploring the possibilities of work and social interactions in the future). Both types of planning are important because they describe different aspects of the postretirement life that can be improved via preretirement planning. Financial planning allows the individual to engage in nonpaid activities during retirement, if desired, and reduces planning costs (e.g., economic and psychological barriers to acquiring information, calculating numbers, and developing a plan; van Rooij, Lusardi, & Alessie, 2011).

Check Your Progress
5. How do Erikson and Erikson regard the conflict of late adulthood?
6. How is biological age measured?
7. What are the factors underlying different types of neurocognitive disorders?
8. What is the full form of DABDA?
9. For whom is hospice care an option?
10. What is retirement?

8.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS
1. Some of the risk factors for early menopause include smoking, family history, cancer treatment and hysterectomy.
2. It has been observed that both middle adults and their children experience emotional crises. As adolescents search for their own identities, middle adults are in the search of what it is called as ‘generativity’, the need to counsel and raise children.
3. Both estrogen therapy and estrogen with progesterone therapy increase the risk of blood clots in the legs and lungs, similar to birth control pills, patches, and rings. Also, an increased risk in breast cancer is seen with 5 or more years of continuous estrogen/progestogen therapy, possibly earlier.
4. Friends provide a healthy alternative to family and acquaintances in all age groups. They are the system of support, direction, guidance, and provide a change of pace from usual routines. Although many young adults manage to maintain their friendships but for middle adults family, school, and work can become greater concerns. Life responsibilities reach an all-time high at this stage so there is less time for socializing. For this reason, middle adults generally maintain fewer close friendships than their newlywed and retired counterparts, although this is not always the case.
5. Theorists such as Erikson and Erikson (1997) and Levinson (1978) regarded late adulthood as another major stage of adult development. Erikson and Erikson again saw the individual as facing a conflict—this time between integrity and despair. They maintained that as people realize they are coming towards the end of their life, they reminisce about their past and review how they feel about themselves.

6. Biological age, also called physiological age, is a measure of how well or poorly your body is functioning relative to your actual calendar age.

7. Factors underlying different types of neurocognitive disorder include metabolic and endocrine conditions, nutritional deficiencies, substance abuse, trauma, and infections. This type of condition is more likely to affect older people.

8. DABDA stands for denial, anger, bargaining, depression and acceptance.

9. Hospice is traditionally an option for people whose life expectancy is six months or less, and involves palliative care (pain and symptom relief) rather than ongoing curative measures.

10. Retirement which is defined as an individual’s exit from the workforce, is usually accompanied by a behavioural withdrawal from work.

8.5 SUMMARY

- According to the Oxford English Dictionary, middle age is between 45 and 65. It is difficult to define this phase of life precisely. The variety of human life courses means that individuals can be in very different stages of their personal development at any age point (i.e. turning 40) that we have taken as a rough measure of entry to middle age.

- Middle adulthood is the time when women experience the menopause—the cessation of menstruation. Many women suffer some level of physical and psychological discomfort as a result, such as hot flashes, mood changes, loss of libido, and insomnia.

- Many adults find meaning in and define themselves by what they do—their careers. Earnings peak for many during adulthood, yet research has found that job satisfaction is more closely tied to work that involves contact with other people, is interesting, provides opportunities for advancement, and allows some independence (Mohr & Zoghi, 2006) than it is to salary (Iyengar, Wells, & Schwartz, 2006).

- According to Erikson (1980) middle age was a period when adults faced conflict between generativity and stagnation. Generativity—the process of making a contribution to the next generation—can be realized in a variety of ways through personal (family) or career attainments that provide a basis for others to progress.
• Perimenopause means “around menopause” and refers to the time during which a woman’s body makes the natural transition to menopause, marking the end of the reproductive years. Perimenopause is also called the menopausal transition.

• As a woman’s body goes through the menopausal transition, the body’s production of estrogen and progesterone rises and falls. Many of the changes she will experience during perimenopause are a result of decreasing estrogen.

• Hormone therapy is the most effective treatment for menopausal symptoms such as hot flashes and vaginal dryness. If women have only vaginal dryness or discomfort with intercourse, the preferred treatments are low doses of vaginal estrogen.

• As in earlier phases of life, the quality of a person’s attachment to his or her partner has important implications for adjustment, personal satisfaction and dealing with life stresses. For example, in a longitudinal study of middle-aged people, Kirkpatrick and Hazan found that those with secure relationship attachment styles were less likely to experience a break-up of their partnership.

• Most middle adults define the relationship with their parents as affectionate. A strong bond often exists between related middle and older adults. Although, it has been observed that the majority of middle adults do not live with their parents, and instead maintain frequent and positive contact.

• Late adulthood is perhaps the most difficult of all to categorize precisely—mainly because there is very wide individual variation in the physical, cognitive and social processes of aging.

• Erikson and Erikson believed that individuals who arrive at a predominantly positive view (i.e. regarding their life as integrated and successful) experience a more contented late adulthood.

• Levinson saw the period from approximately 60 to 65 as the late adult transition, when the individual has to deal with intrinsic changes in capacity and performance, as well as changes in relations with others and in society’s expectations.

• There are several ways that you can determine your biological age, but none are definitive or accurate. However, there are health factors that would give you years back on your average life expectancy.

• All neurocognitive disorders (NCDs) feature ‘an acquired cognitive decline in one or more cognitive domains.’ These disorders tend to involve problems with thinking, reasoning, memory, and problem solving. Some types, such as Parkinson’s disease, can lead to physical disabilities.

• Kubler-Ross and colleagues developed a five-stage model of death and dying. These stages have different emotional responses that people go through in response to the knowledge of death. They are commonly referred
to by an acronym of DABDA and are denial, anger, bargaining, depression and acceptance.

- Death is the cessation of all biological functions that sustain an organism. Phenomena which commonly bring about death include biological aging (senescence), predation, malnutrition, disease, suicide, homicide, starvation, dehydration, and accidents or trauma resulting in terminal injury.

- For many seriously ill patients, hospice and palliative care offers a more dignified and comfortable alternative to spending your final months in the impersonal environment of a hospital. Palliative medicine helps patients manage pain while hospice provides special care to improve quality of life for both the patient and their family.

### 8.6 KEY WORDS

- **Menopause**: The cessation of menstruation is known as menopause.

- **Perimenopause**: Perimenopause means ‘around menopause’ and refers to the time during which a woman’s body makes the natural transition to menopause, marking the end of the reproductive years.

- **Biological aging**: Biological age, also called physiological age, is a measure of how well or poorly your body is functioning relative to your actual calendar age.

- **Palliative care**: The term ‘palliative care’ refers to any care that alleviates symptoms, even if there is hope of a cure by other means.

- **Hospice**: Hospice is traditionally an option for people whose life expectancy is six months or less, and involves palliative care rather than ongoing curative measures, enabling you to live your last days to the fullest, with purpose, dignity, grace, and support.

- **Retirement**: Retirement which is defined as an individual’s exit from the workforce, is usually accompanied by a behavioural withdrawal from work.

### 8.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. What are the benefits and risks of hormone therapy for menopause?
2. What is midlife crisis?
3. What are some of the physical changes that take place in old age?
4. Name some commonly known neurocognitive disorders and the key points about them.

5. How do hospices and palliative care help the older adults?

**Long Answer Questions**

1. Discuss the symptoms, causes, and risk factors of perimenopause.
2. What kind of changes are seen in family relationships in middle adulthood? Explain in detail.
3. Does cognitive ability decline with age, as per research? Give examples to support your answer.
4. What are the contributors to a reduced biological age? Explain.
5. Define death and discuss the various stages of dying.

**8.8 FURTHER READINGS**


UNIT 9  LIFE SPAN PROBLEMS

9.0 INTRODUCTION

From the moment we are first conceived, to the day we die, we are constantly changing and developing. While some of the changes we undergo are as a result of chance incidents and personal choices, the vast majority of life changes and stages we pass through are due to our common biological and psychological heritage as human beings and are shared by all people.

Previously, it was commonly thought that once you are 25, your development is essentially completed. Now, however, our academic knowledge of lifespan has changed and although there is still less research on adulthood than on childhood, adulthood is gaining increasing attention. This is particularly true now that the large section of the society known as the baby boomers are beginning to enter late
adulthood. The assumption that early childhood experiences dictate our future is also being called into question. Rather, we have come to appreciate that growth and change continues throughout life and experience continues to have an impact on who we are and how we relate to others. We now recognize that adulthood is a dynamic period of life marked by continued cognitive, social, and psychological development.

In this unit, you will be introduced to some common life span problems, their prevention and means of coping.

9.1 OBJECTIVES

After going through this unit, you will be able to:

- Identify some of the common mental health and sexual problems
- Discuss the basic facts about HIV/AIDS and its preventive measures
- Explain emotional imbalance and the resulting fear, phobic problems, anxiety and stress, and their coping styles
- Provide an overview of the development of positive and adaptive behaviours
- Identify common human relational problems
- Discuss the concept of mental peace and life satisfaction

9.2 MENTAL HEALTH PROBLEMS

‘Psychosis’ as a term was coined only in the year 1845. The term was used to refer to a category of serious mental disorders. Earlier the term psychosis was used synonymous with insanity. In the early 18th century, Cullen coined the term ‘neurosis’ to refer to all conditions that be attached to disorders of all nervous system. During 19th century, the terms ‘psychosis’, ‘psychoneurosis’, and ‘psychopathy’ were indiscriminately used by psychiatrists. Currently the term neurosis is not used and the distinction between psychosis and neurosis has been deleted from diagnosis procedure. The traditional division between neurosis and psychosis that was evident in ICD-9 (although deliberately left without any attempt to define these concepts) has not been used in ICD-10. (WHO, ICD-10 Classification of Mental and Behavioural Disorders, p.10.)

ICD-10 has abolished the concept of neurosis from its diagnosis. It no more adopts the classic distinction between neurosis and psychosis. This has been done since it has been observed that the same psychic disorder can be present in both psychotic and non-psychotic manifestations, and the concept of neurosis has been used in multiple forms and in various contexts based on its application in theories of intra psychic causality not recognized by all authors. The term ‘neurotic’ is used by IVD-10 in the exclusively descriptive-phenomenological sense, exempt of theoretical content (Dilling & Dittmann, 1990)
According to ICD-10, the diagnosis of psychotic disorder merely refers to the presence of hallucinations, delusions or a limited number of several abnormalities of behaviour in an individual. The symptoms of the disorder include gross excitement and over activity, marked psychomotor retardation and catatonic behaviour. The manual makes no assumption about psychodynamic mechanisms underlying the conditions. Currently the term neuroses are no longer used formally within the psychiatry and clinical psychology. Currently the umbrella term is replaced with specific diagnostic categories including anxiety, obsessive-compulsive disorder, hysteria, and phobias.

9.2.1 Hysteria

The English word ‘hysteria’ derives from the Greek word ‘hystera’ which means uterus. According to the American heritage dictionary, the Greek word for uterus has been derived from the Sanskrit word referring to stomach or belly. The origin of the word is suggestive of its causation believed at that time of history. Freud used the term ‘conversion hysteria’ to highlight the conversion of unconscious conflicts into psychological symptoms in the disorder. He also believed that psychological mechanism, i.e. the repression of traumatic memories which are usually sexual in their nature, underlies in this disorder. Hysteria is no longer used as an independent diagnostic entity as it had been removed from diagnostic manuals since 1970.

Since 1960, the condition of disorder called hysteria is classified as Conversion Disorders in DSM manuals. Since 1992, ICD recognizes the condition as Dissociative (Conversion) Disorder. Somatoform and dissociative disorders are now also separated in the ICD classificatory system but, conversion disorder falls under the category of dissociative disorders.

ICD-10 states that it has not used the term hysteria in the title for any disorder in its classification. The reason for this is that the term has many and varied shades of meaning. For removing the ambiguity of the term hysteria, the term ‘dissociative’ has been substituted for it in ICD-10. The new term dissociative reactions refer to the disorders previously known as hysteria. Both dissociative and conversion types are now recognized together in the modern usage. This was done because patients with the dissociative and conversion varieties seemed to share a number of other common characteristics. Very frequently they also exhibited both varieties at the same time or sometimes at different times. It is therefore reasonable to believe and according to ICD-10, that the same or very similar psychological mechanisms are common to both types of symptoms.

Thus in the current practice the term hysteria is not used and the phenomena represented under the term are appropriately subsumed in other diagnostic titles.

The disorders diagnosis in DSM IV and Dissociative (Conversion) Disorder diagnosis in ICD-19 are concerned with the phenomena originally labelled as hysteria in the historical context.
The Conversion Disorders

The conversion disorders have been earlier classified under various types of ‘conversion hysteria’. The term hysteria may be now best be discarded since the hysteria is associated with many varied meaning and hence confusing.

Dissociative disorders are presumed to be ‘psychogenic’ in origin. They are often found associated closely with recent mental traumas, insurmountable conflicts, and disruption in relationships. As in psychoanalysis and other psychodynamic theories it is possible to interpret the genesis of the disorders in terms of theoretically posited principles. But, the guidelines or criteria prescribed in ICD-10 refrains from having allegiance to concepts derived from any one particular theory.

Certain common characteristics are found in the dissociative (or conversion) disorders. Past memories, identity, present sensations, and control of bodily movements are well integrated in normal individual free from these disorders. But, these are partially or completely lost in dissociative (conversion) disorders.

Dissociative Amnesia

The chief characteristic of dissociative amnesia is loss of memory. The memory loss for the most part is related to recent times. The cause for this memory loss can be only broadly attributed to ordinary forgetfulness or mental fatigue, and the cause does not lie in any organic mental disorder.

This kind of amnesia is usually linked to traumatic events, such as accidents or unexpected bereavements, and it is usually partial and maybe selective. The extent and degree of completeness of the amnesia varies from day to day and between investigators. In spite of this variation, there is a persistent common core that cannot be recalled in the waking state. The occurrence of complete and generalized amnesia is not frequent and is usually seen as occurring as part of a fugue. If this disorder is found to occur as a part of fugue, then the disorder has to be classified as fugue.

Varied affective states are connected with amnesia. Severe depression rarely occurs in these disorders. The prominent features evident in these disorders include perplexity, distress, and attention-seeking behaviour. At time the patient may exhibit calm acceptance. These disorders are more prevalent among young adults. These disorders occur in most serious degree among men subjected to combat stress. Nonorganic dissociative states are rarely found among the elderly. The individual affected by these disorders may roam in local place without a purpose. This type of wandering may be accompanied by self-negligence on the part of the individual. This condition usually does not last more than a day or two.

Dissociative Stupor

The individual may be in stupor depicting dazed unconscious state despite no physical causative factor is present as revealed by medical examination and clinical
testing. Further, the patient’s case report may show a reasonable psychogenic cause such as severe stressful happening or extraordinary problems in social behaviour or disruption in interpersonal relationship on the part of the patient. Dissociative stupor shares psychogenic causes found in other dissociative disorders.

Emotionally intense diminution or complete absence of voluntary movement and normal responsiveness to external sensory stimuli are the chief diagnostic feature of this disorder. Individuals with this disorder may sit or lie without motion for prolonged period. Speech and spontaneous as well as intentional movement are mostly or entirely not present in this condition of disorder. Possibly, slight disturbance of consciousness may be apparent in these patients. The patient with these disorders is neither asleep nor unconscious as clearly seen in muscle tone, posture, pattern of breathing, and occasionally, eye-opening as well as coordinated eye movements.

**Trance and Possession Disorders**

An individual is diagnosed for this disorder when he or she has lost both the sense of personal identity and full awareness for environment for a temporary period. In a few cases the patient may behave as if taken possession by such factors as someone else’s personality, spirit, or worshipped being. In the behaviour of the patient, attention as well as awareness are partial and focused upon one or two aspects of the patient’s environment. The patient with this disorder frequently makes limited but repeated set of movements, adopt postures, and revelations.

Trance states occurring as involuntary and unwanted behaviour that interfere with the day-to-day activities outside the religious domain or other accepted cultural activities alone are qualified for the diagnosis of trance and possession disorder. During schizophrenia or psychoses also trance and possession may occur. But, such ones are excluded from this diagnosis. This diagnosis will be withheld when trance and possession observed could be attributed to any physical disorder including temporal lobe epilepsy or head injury or trance occurring with psychoactive substantive intoxication.

**Dissociative Disorders of Movement and Sensation**

A loss of or interference with movements or loss of sensations, usually cutaneous is the chief characteristic of dissociative disorders of movement and sensation. The symptoms may include physical disorder. But, none of the physical disorders can account for these symptoms. The physical symptoms complained by the individual with this disorder do not follow the known principles of physiology and medicine but follow the conception of physiology contemplated by the individual himself/herself. The investigations will reveal that there is presence of psychogenic cause for this condition of the individual. To a large extent the symptoms may appear to be such that they are aiding the individual to escape confronting severe conflicting situations and irresolvable problems. They imply expression of resentment and dependency on the part of the patient.
The individual ordinarily refuses to admit the psychogenic factors vehemently and claims that such symptoms are arising from his/her real physical disability. The degree of disability complained by the patient will change now and then in consonance with the number of people around him or her attending on him or her, and also on his or her emotional liability. Varying degree of attention seeking can be observed in the patient. The patient may also disclose a centre or core of loss of movement or sensation which are not under the volitional control of the patient. The association between the symptoms with the psychological stress may be or may not be seen in this disorder. The patient may remarkably show calm acceptance of serious disability. But, this is not the rule. Such calm acceptance of serious physical illness may be seen with the well-adjusted as well.

**Dissociative Motor Disorders**

Loss of ability to move the whole or a part of a limb or limbs is the chief criteria of this commonest variety of dissociative disorders. The condition involves paralysis. The paralysis witnessed may be either partial or complete. The partial paralysis in the individual involves movements either being weak or slow, or complete. The incoordination terms ataxia varies in form and degree in its manifestation. This is particularly the case when ataxia in the legs that result in bizarre gait or inability to stand unaided called astasia-abasia. Trembling or shaking may occur in exaggerated form either in one or more extremities of the whole body. All verities of ataxia (poor coordination of muscles), apraxia (loss of the ability to perform physical activities), akesenia (The state of being without movement), aphonya (Loss of the voice), dysarthria (Difficulty in articulating words), dyskinesia (impairment in the ability to control movement), or paralysis (Loss or impairment of the ability to move a body part) may closely resemble one another.

**Dissociative Convulsions**

This involves Pseudo seizures which may look very much like epileptic seizures. They are close to each other in terms of movements. Biting the tongue, severe bruising caused by falling, and inability to withhold urine are rare in this disorder. Either consciousness is present or substituted by a state of stupor or trance.

**Dissociative Anesthesia and Sensory Loss**

Areas of the skin adhering to the patient’s conception of bodily functions rather than the actual physiology medical knowledge are the chief feature of this disorder. The individual experiences differential loss between sensory modalities and this loss cannot be accounted by any neurological lesion. Skin sensation including burning, prickling, itching or tingling not having any physical cause (paresthesia), visual problems such as loss of visual acuity, blurring of vision in general, and tunnel vision (constricted vision) are present. These may be accompanying the sensory loss in the patient. None-the-less, overall mobility and motor performance are often remarkably intact. Loss of sensation or vision is more common than dissociative deafness and amnesia (lack of sense of smell).
9.3 SEXUAL PROBLEMS

Sexual behaviour is diverse and determined by a complex interaction of factors. It is affected by one’s relationship with others, by life circumstances, and by the culture in which one lives. An individual’s sexuality is enmeshed with other personality traits, with his or her biological makeup, and with a general sense of self. It includes the perception of being a man or a woman and reflects developmental experiences with sex throughout the life cycle. Sexuality encompasses all those thoughts, feelings, and behaviours connected with sexual gratification and reproduction, including the attraction of one person to another.

It is the least understood yet a quite prevalent aspect of our everyday living. It is essentially one’s private and a personal affair where each individual has varied preferences and fantasies that may surprise or even shock us from time to time. As long as our fantasies and desires do not harm us or others in any unwanted ways, they are absolutely normal. But the moment they begin to affect or harm us or others in unwanted ways, they begin to qualify as abnormal in nature and are hence termed as sexual disorders. The sexual disorders have been categorized as—Gender Identity Disorder, Paraphilias, and sexual dysfunction.

9.3.1 AIDS/HIV

AIDS (Acquired Immunodeficiency Syndrome) is a set of symptoms (or syndrome as opposed to a virus) caused by HIV or Human Immunodeficiency Virus. A person is said to have AIDS when their immune system is too weak to fight off infection, and they develop certain defining symptoms and illnesses. This is the last stage of HIV, when the infection is very advanced, and if left untreated will lead to death.

Basic facts about AIDS

- AIDS stands for acquired immune deficiency syndrome; it’s also called advanced HIV infection or late-stage HIV.
- AIDS is a set of symptoms and illnesses that develop as a result of advanced HIV infection which has destroyed the immune system.
- Fewer people develop AIDS now because treatment for HIV means that more people are staying well.
- HIV is a virus that attacks the immune system, our body’s natural defense against illness.
- If HIV is left untreated, a person’s immune system will get weaker and weaker until it can no longer fight off life-threatening infections and diseases.
- Testing regularly for HIV means you can get antiretroviral treatment if you need it and stay healthy.
- HIV stands for human immunodeficiency virus.
• People with HIV can enjoy a long and healthy life by taking antiretroviral treatment which is effective and available to all.
• Once a person has HIV, the earlier they are diagnosed, the sooner they can start treatment which means they will enjoy better health in the long term.
• It’s possible for antiretroviral treatment to reduce the level of HIV in the body to such low levels that blood tests cannot detect it. People living with HIV whose viral load is confirmed as undetectable cannot pass on HIV.
• HIV is found in semen, blood, vaginal and anal fluids, and breastmilk.
• HIV can’t be transmitted through sweat, saliva or urine.
• Using external (or male) condoms or internal (or female) condoms during sex is the best way to prevent HIV and other sexually transmitted infections.
• If you inject drugs, always use a clean needle and syringe, and never share equipment.
• If someone is pregnant and living with HIV, the virus in their blood could pass into their baby’s body, during birth or afterwards through breastfeeding. Taking HIV treatment and becoming undetectable eliminates this risk.

9.4 PREVENTIVE MEASURES

To deal effectively with bodily or mental illnesses or disorders, there are three levels of prevention, as described below:

• Primary prevention: Primary prevention operates at a community level. “It consists of ‘improving the social environment’, and promotion of the social, emotional, and physical well-being of all people. It includes working for better living conditions and improved health and welfare resources of community.”

• Secondary prevention: Operates in schools, universities, industries, recreation centres etc. Consists of early diagnosis of mental illness and of social and emotional disturbances through screening programmes and provision of treatment facilities and effective community resources. In this regard, ‘family based’ health services have much role to play. The family service agencies identify emotional problems and early symptoms of mental illness, help family members to cope with overwhelming stress, treat problems of individuals and social maladjustment when required and prepare individual family members for psychiatric care. ‘Case work’ or ‘counselling’ is the method most commonly employed by the family service agencies. The agencies chief responsibility is to provide a counselling service and help to families with marital conflict, disturbed parent-child relationship and strained interpersonal relationship. Family counselling is one method of treatment intervention for helping the mentally ill. Family counsellors make an accurate psychosocial diagnosis.
• Tertiary prevention: Aims to reduce the duration of mental illness and thus reduce the stresses they create for the family and the community. In short, the goal at this level is to prevent further break-down and disruption.

9.4.1 Primary Prevention

Primary prevention refers to preventive steps that aim to eliminate a disease or disordered state before it can occur. The objective of primary prevention is much easier to achieve when the causes underlying a disease are well known. Hence when it comes to physical or bodily diseases, whose causes are well defined, the task of primary prevention is easily achieved. Primary prevention may aim at reducing or killing the responsible agent, intervening in the transmission, or enhancing host resistance.

However, when it comes to psychiatric disorders or mental illnesses, primary prevention becomes difficult as for many illnesses a definite aetiology is not known. Instead a complex interaction of biological and psychosocial factors involving susceptibility, early life conflicts that persist into adulthood, and environmental stress are known to be some of the factors that may precipitate a mental disorder.

In addition, mental disorders are long term conditions affecting complex behavioural patterns, such as interpersonal relationships. There seems to be a bi-directional relationship between disordered behaviour and psychosocial stress, where both are the result and cause of each other.

But one of the best examples of primary prevention in psychiatry can be seen in general paresis, e.g., tertiary syphilis and the psychotic states associated with pellagra. As a result of effective methods for the early identification of syphilis and antibiotics to treat it, tertiary syphilis has been converted from a common to a rare condition. This became possible with the administration of vitamin niacin which is known to cause pellagra.

Several approaches have been proposed to attempt primary prevention in psychiatry. To achieve this mountainous task, one first needs to study the prevalence and incidence of various psychiatric disorders to determine the characteristics of at-risk populations. This can be done by the study of first admission to mental hospitals and their subsequent hospitalization history.

An illness (such as schizophrenia) that tends to require frequent rehabilitations represent at-risk population. In case of illnesses that require rehabilitation, the focus should be on treatment style and prevention of hospitalization, rather than on the prevention of the disorder itself.

Distress scales can also be used to identify the relationship between stress and the onset of mental illness. On major drawback of using these distress scales is the fact that they are non-specific in predicting the type of illness, as the occurrence of the illness depends more on the specific susceptibility of the person being stressed than on the type of stress.
A developmental approach to prevention assumes that there are points of heightened susceptibility. According to Erikson the successful mastery of a specific developmental task is necessary for moving into the next developmental stage. Resolution of the task presupposes a period of stress and a time of heightened susceptibility.

In the intrauterine stage of genetic development, syndromes of altered chromosomal structure (that progress to serious clinical disease in early extrauterine life) can be identified by using techniques such as amniocentesis. A couple of disorders in which the genetic loading is high are likely to be prevalent across generations. In such cases genetic counselling can be an important tool for primary prevention as genetic counselling helps in the prediction of possible genetic defect. For instance, to reduce the occurrence of Down’s syndrome, Turner’s syndrome and Klinefelter’s syndrome, as well as certain inborn errors of metabolism such as Tay-Sachs and Glycogen Storage Disease, genetic counselling for the avoidance of conception is recommended, as a method of primary prevention. Alternatively, diagnosis as soon as possible after birth permits steps that would prevent the clinical emergence of the disorder, as in phenylketonuria.

Early immunization enhances host resistance, as in the case of infectious diseases. The closest example of enhancing host resistance in psychiatry is the Caplan notion of developing community support systems to permit mastery of critical tasks and to deal with periods of unusual stress that could result in crisis and decompensation. People can be prepared in advance to deal with expected developmental tasks or to master unusual stress, as in disaster situations with the help of anticipatory guidance.

Despite the enthusiasm for such primary prevention in psychiatry, there is little data to support its efficacy. Davis cites sixty studies of mental health education efforts, in which no demonstrably effective prevention measures for major psychiatric disorders were found. No evidence of support for the belief system about what is good or bad for one’s mental health was found. Despite the lack of evidence for efficacy, in the expectation that consultative services and anticipatory guidance will prevent mental disorder, the community mental health movement spends considerable effort and resources on prevention.

With this perspective in mind, the primary prevention can be begun even at the prenatal level where awareness needs to be given to the mothers regard nutrition and diet. They need to be educated about the importance of providing adequate protein intake to prevent depletion of brain cells and the need to stay away from drug addiction and alcoholism as it seriously affects the infant in utero.

The primary prevention in childhood depends on an awareness of the developmental processes and on helping parents learn parenting skills to facilitate healthy development of the child. The parents of pre-school and school age children can further be helped to anticipate the normal crisis of childhood. In this process
the skill development of the child prepares him for future problems and difficulties in life that they are likely to encounter. For instance, competence training in preschool children has been shown to enhance the acquisition of key interpersonal cognitive problem solving skills and the behavioural improvements that were acquired earlier were also seen to be later maintained.

Research has shown that the early childhood experiences and family environment plays a significant role in predisposing individuals towards mental illnesses. For instance, in studying routes of transmission, the family has been indicted as a significant contributor to the schizophrenic process. Studies of the families of schizophrenics have shown that the communication style in such families are different from the styles used in other families and may result in aberrant types of cognitive styles. The families of schizophrenics have been seen to engage in double blind communication.

Another form of primary prevention can be behavioural change too. Research has shown that changing maladaptive habits have a positive effect both on the physical and mental health of the individual. Cessation of cigarette smoking, weight reduction, and regular exercise could prevent cardiovascular diseases, pulmonary diseases, depression etc. Despite being aware of the significant negative impact these habits have on the individual’s body and mind yet individuals show significant resistance towards changing these habit. When compared to changing habits, dealing with biotechnical interventions, immunization, treatment of dietary deficiencies, or treatment of infectious disease that could cause mental illness is easier because it is episodic, rather than continuous.

Primary prevention on mental illnesses is more frequently associated with a high level of rhetoric than with the low level of fact that is appropriate. Rutter has pointed to several myths associated with primary prevention:

- prevention cuts costs
- effective prevention in childhood will improve adult health
- improvements in living standards will reduce mental illness
- humane intervention brings benefits
- information about high risk will lead to preventive action
- prevention is easily accomplished by implementing what is known about causality.

In short, there are many leads to effective prevention, but before leaping into action, systematic research must be undertaken to develop effective intervention and to test it.
Check Your Progress
1. What is the meaning of psychosis? When was it coined?
2. How is hysteria known now?
3. What happens in a dissociative motor disorder?
4. Name the four categories of sexual disorders.
5. What is an acquired dysfunction?
6. What is AIDS and how is it acquired?
7. What is primary prevention?

9.5 EMOTIONAL IMBALANCE

Emotions can be classified into two broad dimensions—adaptive/positive and disruptive/negative. Positive affectivity (PA) refers to positive emotions, such as joy, happiness, love, and interest. Negative affectivity (NA) refers to negative emotions, such as anxiety, anger, guilt, and sadness. Positive emotions facilitate approach behaviour (Davidson, 1993; Watson, 2001; Watson and others, 1999). In other words, positive affect increases the likelihood that individuals will interact with their environment and engage in activities that are adaptive for the individual, its species, or both. Positive emotions can broaden people’s horizons and build their personal resource. For example, joy increases by creating the urge to play, push limits, and be creative, interest broadens by creating the motivation to explore, absorb new information and experiences, and expand the self (Csikszentmihalyi, 1990; Ryan and Deci, 2000).

There is increasing interest in the role that positive affectivity might play in wellbeing (Frederickson, 2001); for example, positive emotions appear to improve coping. In one study, individuals who experienced more positive emotions than others developed broader-based coping strategies, such as thinking about different ways to deal with a problem and step back from the situation and being more objective (Frederickson and Joiner, 2002). In some cases, positive emotions—such as joy, happiness, love, and interest—may override, or undo the lingering effects of negative emotions—such as sadness, anger, and despair (Diener, 1999; Frederickson, 2001). For example, mild joy and contentment have been found to undo the lingering cardiovascular effects of negative emotions, such as sadness (Frederickson and Levenson, 1998). To sum it all, positive emotions are likely to serve important functions in an individual’s adaptation, growth and social connection. By building personal and social resources, positive emotions improve people’s wellbeing.
One aspect of positive emotion that is increasingly being studied is happiness. Psychologists' interest in happiness aims at the positive ways in which we experience life, including cognitive judgments of our well-being (Diener, Lucas, and Oishi, 2001; Locke, 2002). In other words, psychologists are trying to find out what makes us happy and how we perceive our happiness. Recent research reviews indicate that the following factors are linked with happiness (Diener and Seligman, 2002; Diener and others, 1999):

- Psychological and personality characteristics, like high levels of self-esteem, optimism, extraversion, and personal control.
- A supportive network of close relationships.
- A culture that offers positive interpretations of most daily events.
- Being engaged by work and leisure.
- A faith that embodies social support, purpose, hope, and religious attendance.

9.5.1 Managing Negative Emotions

There are few general strategies for managing negative emotions. They are as follows:

- **Keep away from the negativity**: Negative emotions may comprise jealousy, anger, resentment, fear, etc. These may be caused by a bad experience leaving us feel negatively towards someone or something. It is important to find out the exact reason that causes such negative emotions to understand where they are coming from and help to keep from taking them out on others around.

- **Doing something positive**: Positive emotions consist of interacting more with others, enjoying making things better and thinking positively. Positive emotions are fuelled by an underlying desire for enjoyment and unity, for example, interest, enthusiasm, boredom, laughter, empathy, action, curiosity, etc.

- **Happiness**: When people smile, it releases chemical which make them feel better. It is a state of mind or feeling characterized by love, contentment, satisfaction, joy, or pleasure. Many biological psychological, religious, and philosophical approaches have striven to define happiness and identify its sources. Research has identified many attributes that correlate with, viz., relationship, happiness, extraversion, social interaction, health, marital status, employment, optimism, democratic freedom, religious involvement and physical exercise.

- **Yoga**: The term yoga is originated from Sanskrit. It is a combination of mind, body and soul. (Seaward, 1995). Yoga emphasizes on uniting the mind, body and spirit through action, emotion and intelligence (Seaward 1994). It involves combining the art of breathing, conscious stretching, and
mind balancing in a rigorous discipline for effectiveness. Central to yoga are a series of ‘asanas’ or stretching positions that are done smoothly, slowly and gracefully with focus and spiritual depth. There is not much scientific evidence on the effect of yoga, though occasional study does show positive psychological benefits (Birkel 1991).

- **Managing anger**: Negative anger is harmful and it should be avoided, on the other hand, positive anger is constructive and creates positive experiences. Negative anger usually arises in response to a perceived threat, frustration or injustice. The greater the threat the greater the potential anger. A key to dealing with negative anger is to cover up the causes of that threat and what can be done in order to manage that.

- **Managing ego**: Ego and emotion are the obverse and the reverse of the same coin. On one hand, ego is self-binding and the other hand, it is self-transcending. High ego becomes problematic and cause major obstacle in the way of success and decreases well-being and happiness.

- **Identify the feeling first**: Approach the positive feeling, make a list of the feeling of positive behaviour, choose the most approachable way and work on it.

- **Ask what would help you to feel better**: Find out the answer of self-question, move to the easiest way to control the negative emotion, solve the problem and implement the positive one.

- **Change to overcome challenges**: Emotions that we want to challenge or change is not always compromising.

- **Need to believe in ourselves**: How we think matters the most. Interpretation emerges from beliefs and beliefs emerge from sense of meaning, value and purpose. This entire realm is the realm of thinking or cognition.

### 9.6 FEAR AND PHOBIC PROBLEMS AND ANXIETY AND STRESS

The diagnosis of anxiety disorders which are the most common requires distinguishing the pathological anxiety from normal anxiety. The clinician is required to interview the patient, his/her families, and friends to arrive at a decision to find out whether the anxiety experienced by the client is pathological or not. The patients with pathological anxiety may need through neuropsychiatric assessments and the treatment plan for every individual patient with pathological anxiety should be formulated specifically oriented to the characteristics and condition of the individual. We should be aware that anxiety can be a symptom in several general pathological mental conditions and also in certain specific mental disorders.

In contrast to pathological anxiety, normal anxiety is contributing to adaptational development adding change, and new experience, and growth. The
The main distinction between fear and anxiety is the sharpness of fear and chronicity of anxiety. The experience of anxiety has two components:

- Awareness of the neuro physiological sensations
- Feeling of palpitations and sweating

In ICD-10 groups neurotic (anxiety) disorders with stress-related, and somatoform disorders. The reason for grouping anxiety disorders along with stress-related and somatoform disorders is that these disorders have been found associated with the conception of neuroses during the past, and also that these disorder have a substantial association with psychological causation.

Despite the fact that DSM-10 has discarded using neurosis to refer to a major principle for classifying the mental disorders, it allows the term neurosis to enable some users who desire to make use of their own usage to easily identify this disorder. Further, using the term neurosis may facilitate identifying the disorder by general practitioners at primary health centers who used to have patients with less severe manifestation of this disorder.

Depression and anxiety coexist mostly in these disorders. The manual also provides a category for cases that cannot be diagnosed on a single main syndrome.

The ‘neurotic’ (anxiety) disorders include the following as classified in ICD-10.

- Phobic anxiety disorders
- Other anxiety disorders
- Obsessive compulsive disorders

Other anxiety disorders, according to ICD-10, include the following:

- Panic disorder [episodic paroxysmal anxiety]
- Generalized anxiety disorder
- Mixed anxiety and depressive disorder
- Other mixed anxiety disorders
- Other specified anxiety disorders
- Anxiety disorder, unspecified

### 9.6.1 Phobic Anxiety Disorders

When specific external situations and objects that are not rationally accepted as dangerous to the individual alone, or predominantly invoke anxiety phobic disorders are diagnosed. Such situations and objects are typically avoided by persons with these disorders. It is hard to differentiate phobic anxiety from the other types of anxiety.
anxiety in terms of subjective, physiological, and behaviour symptoms. Phobic anxiety experiences may vary in degrees, from mild uneasiness to terror. Being concerned with palpitation and feeling faint and other such phobic response may be found with persons with this disorder. These concerns may be often combined with certain secondary fears. Fear of dying, losing control over oneself, becoming insane are a few instances for the secondary fears developing in the patient. Merely being knowledgeable on the facts of the conditions does not help getting rid of anxiety what so ever. Anticipatory anxiety is generated usually in the individual by mere contemplation of entry to the phobic situations.

Fears about disease (nosophobia), and disfiguring (dysmorphobia) and other such fears are presently classified as hypochondriacal disorder. This is in accordance with the present conception of phobic anxiety referring to external objects and situations evoking fear despite of being non-harmful to the patient as symptoms of the disorder. In case the fear of disease is invoked predominantly and repeatedly from the possibility of getting exposed to infection or pollution, or merely an apprehension of procedures of treatment such as injections, and surgery, or hospital conditions including dentistry, laboratory investigations, such fears are considered as the legitimate symptoms of the specific phobic anxiety disorder.

Often, phobic anxiety coexists with depression. When phobic anxiety is a combined condition in depression, it is worsened during an intercurrent episode of depression. Depressive episodes may sometimes be combined with temporary phobic anxiety. Depressive mood may be associated with certain phobias, especially with agrophobia. When phobic and anxiety and phobias are simultaneously present, it is diagnosed with one of these two. The decision to choose any one of these diagnosis depends on which one of the two had an onset earlier than the other, and which one of the two conditions is predominating at the time of diagnosis. That is, if the condition satisfied the diagnostic criteria of depression earlier to the first appearance of phobic symptoms, then we should classify that condition as depression. If the phobic attack happens in an established phobic situation it is considered as an indication of the severity of the phobias, and the condition should be diagnosed as phobia. The condition is diagnosed as panic disorder only when any of the phobias classified in the phobic anxiety disorders is not present. The prevalence of most of the phobic disorders other than social phobias is more among women.

Phobic Anxiety Disorders, according to ICD-10, include the following:

- Agoraphobia
- Without panic disorder
- With panic disorder
- Social phobias
- Specific (isolated) phobias
- Other phobic anxiety disorders
- Phobic anxiety disorder, unspecified
Social Phobias

These phobias often have their onset in adolescence. Fear of being closely examined by others in relatively small groups mainly found to be in focus in these phobias. This fear causes these people to avoid such social situations. The phobias are equally found both in women and in men. They are individually distinct. Social phobia experienced by individual may vary from person to person. Each individual may restrict his or her phobic reaction to certain select personal situations. Such restricted situations may include dining in hotels or restaurants, addressing public, interacting with members of opposite gender, or diffused amalgamation of almost the entire social situations outside the family. A fear of likely to vomit in public has been reported to be a significant fear present in patients with social phobias. Members of certain culture may consider eye-contact with others as most stressful. Low self-esteem and fear of criticism have been found to be associated with social phobias. Social phobias may manifest in the form of annoyances. Such annoyances may include annoyances for blushing, tremor in hand, nausea, or urgency for urinating. The patient may at times be convinced that the secondary manifestation of the anxiety is his or her primary problem to be dealt with and may not realize that a pathological condition of anxiety which is not apparent causes his or her annoyances.

9.6.2 Other Anxiety Disorders

The chief feature in these disorders is presence of profound anxiety. Such anxiety is not to be associated with any specific environmental condition or situation. Sometimes the anxiety may be combined with symptoms relating to depression, obsessional condition, or phobic anxiety as distinctly secondary and with lesser severity.

Other anxiety disorders include the following:
- Panic disorder (episodic paroxysmal anxiety)
- Generalized anxiety disorder
- Mixed anxiety and depressive disorder
- Other mixed anxiety disorders
- Other specified anxiety disorders
- Anxiety disorder, unspecified

Generalized anxiety disorder

Anxiety involving emotional tension and worry without a tangent target which is generalized and persevering is the chief feature of this disorder. The anxiety here is not restricted to any special environmental situation and is ‘free-floating’. It is not even dominating in any particular circumstance. The predominating symptoms of this disorder are highly varying. Of course, this disorder also depicts some common symptoms of its own. Persisting feelings of emotional tension, fearing unknown
things, physical trembling, tension in muscles, perspiration, lightness of the head, throbbing, whirring sensation, and discomfort in the upper middle portion of the abdomen are common in this disorder. An individual may express such fears as that he or she or his or her relative will soon get ill or meet with accident. These fears are compounded. So are the other worries and other anticipations and apprehensions entertained by the individual. The disorder follows varied courses. The condition of the disorder may be fluctuating and chronic.

Mixed anxiety and depressive disorder

The simultaneous presence of both symptoms of both anxieties in almost equal measure is the chief feature of this disorder. In such a case each one of the conditions considered alone is unjustifiable to qualify for the diagnosis. In such circumstance both are to be recorded and a single diagnosis is not given.

Other mixed anxiety disorders

These disorders satisfy the criteria for generalized anxiety disorder and also have prominent, often short-lasting features of other disorders included in neurotic, stress-related, and somatoform disorders.

Other specified anxiety disorders, and anxiety disorder unspecified (Includes: anxiety NOS) also included in the category of other anxiety disorders.

9.6.3 Post Traumatic Stress Disorder

Post-Traumatic Stress Disorder, or PTSD, is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include human-caused or natural disasters, violent personal assaults, military combat, or accidents. Traumatic event will have shocking reactions that may include anger, nervousness, fear, and even guilt. These reactions are common for everyone and these feelings continue and even increase. This feeling becomes so strong that it becomes difficult for a person to lead a normal life.

Each person is unique in his or her ability to manage fear and stress, and to cope with the threat posed by a traumatic event or situation. For that reason, not everyone who experiences or witnesses a trauma will develop PTSD. Further, the type of help and support a person receives from friends, family members and professionals following the trauma may influence the development of PTSD or the severity of symptoms.

Treatment for PTSD

Treatment for PTSD help victim to restore the sense of control and to deal with trauma. The following are the ways of treating PTSD:

- **Trauma focused cognitive-behavioural therapy (CBT):** CBT can help the victim to change the extreme ways of thinking. Carefully and gradually
exposing to thoughts, feeling and traumatic situations help them to feel better and to behave differently. This therapy identifies distorted and irrational thoughts about the traumatic events and replaces them with more balanced ones.

- **Family therapy**: Family therapy is a type of counselling that involves the entire family. A therapist helps the entire family to communicate and maintain good relationships, and cope with tough emotions. In family therapy, each person can express his or her fears and concerns. It is important to be honest about the feelings and to listen to others. Everyone can talk about their PTSD symptoms and what triggers them. By doing this, family will be better prepared to help each other.

- **Medication**: Medications help in regulating the chemical imbalances that occur in the brain, thus reducing emotional and physical over-reactivity. According to the International Psychopharmacology Algorithm for PTSD (2005), the first-line medication is usually a serotonin-and-nor epinephrine reuptake inhibitor (SNRI) or a serotonin-selective reuptake inhibitor (SSRI). The reuptake inhibitors block the re-absorption of serotonin or norepinephrine by nerve cells, making the chemicals more available for transmitting signals in the brain. Considerate symptom reduction usually takes place four to twelve weeks after starting the medication.

9.7 **Coping Style**

Coping refers to dealing with the stress. Coping does not always ensure successful outcome in a stress situation. For instance, withdrawing totally from the stress inducing situation is considered as one of the stress coping strategy. While this may lead to reducing bodily stress reactions, it may be maladaptive since the original situation which induced stress still remains unsolved.

In recent times coping is viewed as constantly changing cognitive and behaviour efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resource of the person (Lazarus and Folkman, 1984). Now the emphasis is not just dealing with the stress situation but on effectively dealing with the stress situation. In other words, coping is an attempt to managing stress in some effective way. Thus coping does not consist of one single act but is a process that permits us to deal with various demands for adjustment.

This form of coping can be of two kinds:

- Emotion-focused coping strategy
- Problem-focused coping strategy

Emotion-focused coping strategy is not concerned with attempts to change the frustrating situation. It is concerned with reappraising of the frustrating situation so that the frustration effect is reduced and removed. This type of attempts to
cope with stress includes resorting to mental mechanisms or defense mechanisms. The defense mechanisms may provide temporary relief from anxiety and guilt feelings but may not provide long lasting solution to the conflict. Although emotion-focused coping strategy can at times distort reality, they can be used successfully when the reappraisal is accurate enough to the stressful condition.

Problem-focused strategy directly addresses the stress inducing situation itself. It attempts to deal with the stressors in most appropriate ways so that the stress is reduced and eliminated. This involves problem solving skills. The strategy consists of identifying the stressful problem, identifying steps to reduce the situation to manageable limit, and then improving the situation step by step, and thus ultimately eliminating stress.

In a proverbial story for children, a merchant was transporting a tiger, a goat, and a hay-stock and when he reached the river crossing his journey, he found that there was only a small boat available for his use. The boat had to be self-propelled and it could carry the weight of him and any one of the three ‘goods’ he needed to transport. The situation was stress inducing since he could move the merchandizes one by one rowing up and down, since leaving any tow of the merchandizes on the shore would be dangerous since it involved great risk of one eating the other. The merchant had to take the goods as earliest as possible due to changing weather and time losing to transport the objects.

Emotional coping in this situation may be that the merchant may leave the goat and the hay on the shore and first transport the tiger to the other side, and then return and take the goat to the destination, and it is most likely that the hay might have been swallowed by the goat when it was left along with the hay while the tiger was transported. This implies that the merchant had accepted to lose a part of the merchandize and rationalize that though he head lot the hay, it is the least cost he may have to pay in the situation. The loss is there, but, is minimum and so it is ok.

The task oriented coping may be that the merchant may involve the following shuttle trips from this shore to the other shore.

1. Take the goat first to the other shore (Tiger cannot eat grass)
2. Take the hay to the other shore, deposit the hay, and take the goat and return
3. Take the tiger to the other shore and leave it with the hay stock already deposited, and return.
4. Take the goat now to the other shore.

This is a simple and elegant solution to meet the stress and deal with it.
9.8 DEVELOPMENT OF ADAPTIVE AND POSITIVE BEHAVIOUR

In behavioural ecology, an adaptive behaviour is a behaviour which contributes directly or indirectly to an individual’s survival or reproductive success and is thus subject to the forces of natural selection. Examples include favoring kin in altruistic behaviours, female selection of the most fit male, and defending a territory or harem from rivals.

Conversely, a non-adaptive behaviour is a behaviour or trait that is counterproductive to an individual’s survival or reproductive success. These might include altruistic behaviours which do not favor kin, adoption of unrelated young, and being a subordinate in a dominance hierarchy.

Adaptations are commonly defined as evolved solutions to recurrent environmental problems of survival and reproduction. Individual differences commonly arise through both heritable and nonheritable adaptive behaviour. Both have been proven to be influential in the evolution of species adaptive behaviours, although heritable adaptation remains a controversial subject.

Some of the first publications of intervention with a child with autism was an application of then new behaviour analysis procedures to the problem of teaching a young boy to wear his glasses (Wolf et al., 1964). Since that time, behavioural interventions have been applied to building a wide variety of adaptive skills with varied populations of children and adults with developmental disabilities.

Toilet training and associated issues have been the focus of a broad range of early behavioural interventions. For example, behavioural interventions for toilet training have been based upon principles of both operant and classical conditioning (Azrin et al., 1971; Azrin and Foxx, 1971, 1974; Mahoney et al., 1971). The problem of nocturnal enuresis has been addressed with urine detection devices that serve to awaken children so they can get out of bed when wet, as well as with systematic behavioural procedures involving practice, rewards, and clean-up requirements (Hansen, 1979). Interventions have also been developed and evaluated to address encopresis (O’Brien et al., 1986).

Adaptive skills are usually taught through a process that begins with a task analysis, which breaks down a skill into its component parts (Haring and Kennedy, 1988). Instruction then proceeds through a process of teaching each component skill in small steps, and ultimately chaining the sequence of behaviours together.

9.9 HUMAN RELATIONAL PROBLEMS

In a world full of people, what can be more beautiful than knowing how to form healthy relationships and establish deeper connections with those around us? What can be more powerful than looking at people around you and understanding
that by being kind, loving and helpful towards them, you are also being kind, loving and helpful towards yourself?

Albert Einstein said it so beautifully with these words: ‘A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.’

By better understanding how they relate to others - including family members, peers, therapists and other staff - during the course of their work, patients experience directly the importance of relationships in contributing to lasting change. Relationships in which trust and concern are built over time form the glue that holds the community together.

The concept of Human Relations is generally defined as the capacity to interact and work well with other people. It looks at social dynamics at both the individual and group level and tackles how they can complement each other to work effectively. There are numerous problems and challenges when it comes to conflicts within human relations, which factor in a range of dynamics and individual criteria. However, some major issues which are common to most situations are:

- Self esteem
- Mutual respect
- Group dynamics
- Communication skills
- Motivation

Most problems that may occur can be traced back to the lack of anyone or a combination of the above skills or positive situation. Human relation problems are:

1. Affairs/cheating/infidelity
2. Sexual problems
3. Differences in values
4. Life stages/styles
5. Traumatic/Life changing events
6. Stress
7. Feeling bored
8. Dealing
9. Family issue
10. Marriage compatibility
Life Span Problems

NOTES

11. Domestic violence
12. Unrealistic expectations
13. Lack of responsibility
14. Alcoholism
15. Excessive reliance
16. Lack of support
17. Manipulation/over involvement
18. Lack of communication
19. Personal disappointment
20. Long term depression
21. Difference of opinion
22. Unsupportive partner

9.10 MENTAL PEACE AND LIFE SATISFACTION

Finding inner peace is more about being than doing. It is about leaning toward rather than struggling against. It’s about being fully present and focused on the task at hand. The rewards of finding peace are numerous. They include mental and physical health and well-being, self-confidence, better relationships, and a more intense and joyful experience of life.

Ways of finding mental peace

Samataabhava is mental equipoise, mental balance. There must be neither superiority complex nor inferiority complex in one’s mind. For equipoise, behave with every created being in such a way that neither a superiority complex nor inferiority complex develops in you or in those with whom you interact.

A complex of any sort is a psychic malady. A balanced mind will be able to move towards Parama Purusha. That is why it has been said, Trinadapi sunichena – “One should be humbler than grass.” Usually, superiority complex is found more in humans than inferiority complex. Even those who possess mere knowledge of an alphabet feel themselves to be quite superior to those who are totally illiterate.

You must be as tolerant as the trees. Remember that a certain thing may hit another thing and may be hit back immediately by that second thing. But it is better to assimilate the opposing force. Suppose someone struck at you and you struck back. In this case you did not assimilate the striker’s blow into yourself; rather, you returned it. Now if you are clever, you will tolerate a blow; and later, after assimilating it, you will strike back at the striker with greater intensity.

To tolerate means to gauge your enemy’s strength as applied against you. You assimilate it: not that you tolerate it for the sake of toleration. Rather you tolerate it to contain yourself and to (control) your enemy. At the same time, your
enemy’s strength is dwindling. Hence everyone needs to cultivate the power to tolerate (whatever) will be useful. That does not mean that you will continue to tolerate endlessly and ultimately invite death. So toleration for the sake of toleration is not an ideal habit, but toleration for assimilation and augmentation of strength is profitable.

Next, you must give respect to those whom no one respects. Ninety-nine per cent of people do not enjoy social prestige due to three main factors: First, society did not recognise them. Secondly, as they are economically challenged, they are forced to remain in perpetual subservience. Thirdly, they lack education and knowledge.

If you want someone to be respected, you will have to provide him with recognition, economic self-sufficiency and education. Giving respect to each and every human being is part and parcel of dharma.

If you want someone to be respected, then arrange for their proper education, see to it that they are socially elevated and economically self-sufficient and can hold their heads high in self-esteem.

No one is high or low from a caste point of view. Differentiations such as between Hindus and Muslims on the basis of religion are also despicable. Humans belong to one species; they are all children of God.

The second factor, as mentioned, is that you should look after their economic aspect, so that all get proper food and clothing, education and medical treatment – so that all can hold their heads high and live dignified lives, without depending on the mercy of others.

So if you really want to give respect to humans, especially to those with no social prestige, then you are to arrange for their education, social standing and economic establishment. Finally you have to also create the sentiment of spirituality in each and every human being. Through this approach we can get mental peace.

9.10.1 Life Satisfaction

Satisfaction with life is an important factor for the well-being of individuals and communities. Being content with one’s personal, social, family, school or professional life is a key ingredient for adaptation and success.

Interest in measuring satisfaction with life among the youth stems from the need to enhance mental and positive health in children and adolescents. Life satisfaction is linked to important aspects of human life such as scholastic achievement which is found to correlate positively with life satisfaction.

Life satisfaction is how people evaluate their whole life. It’s definitely not the same thing as happiness, which is one way you might feel at a time. How happy or sad somebody is, those are very useful things to know but they are substantially different from life satisfaction—being more about a person’s emotions right now. Life satisfaction is important to measure because it’s important that people have good lives!
Check Your Progress

8. How are emotions categorized?
9. What are hypochondriacal disorders?

9.11 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. ‘Psychosis’ as a term was coined only in the year 1845. The term was used to refer to a category of serious mental disorders.

2. Since 1960, the condition of disorder called hysteria is classified as Conversion Disorders in DSM manuals. Since 1992, ICD recognizes the condition as Dissociative (Conversion) Disorder. Somatoform and dissociative disorders are now also separated in the ICD classificatory system but, conversion disorder falls under the category of dissociative disorders.

3. Loss of ability to move the whole or a part of a limb or limbs is the chief criteria of this commonest variety of dissociative disorders. The condition involves paralysis. The paralysis witnessed may be either partial or complete. The partial paralysis in the individual involves movements either being weak or slow, or complete.

4. The sexual disorders have been categorized as—Gender Identity Disorder, Paraphilias, and sexual dysfunction

5. Acquired dysfunctions are those dysfunctions that develop after at least one episode of normal functioning.

6. AIDS stands for acquired immune deficiency syndrome. AIDS is a set of symptoms and illnesses that develop as a result of advanced HIV infection which has destroyed the immune system.

7. Primary prevention refers to preventive steps that aim to eliminate a disease or disordered state before it can occur. The objective of primary prevention is much easier to achieve when the causes underlying a disease are well known.

8. Emotions can be classified into two broad dimensions—adaptive/positive and disruptive/negative. Positive affectivity (PA) refers to positive emotions, such as joy, happiness, love, and, interest. Negative affectivity (NA) refers to negative emotions, such as anxiety, anger, guilt, and sadness.

9. Fears about disease (nosophobia), and disfiguring (dysmorphobia) and other such fears are presently classified as hypochondriacal disorder. This is in accordance with the present conception of phobic anxiety referring to external
objects and situations evoking fear despite of being non-harmful to the patient as symptoms of the disorder.

9.12 SUMMARY

- Earlier the term psychosis was used synonymous with insanity. In the early 18th century, Cullen coined the term ‘neurosis’ to refer to all conditions that be attached to disorders of all nervous system. During 19th century, the terms ‘psychosis’, ‘psychoneurosis’, and ‘psychopathy’ were indiscriminately used by psychiatrists. Currently the term neurosis is not used and the distinction between psychosis and neurosis has been deleted from diagnosis procedure.
- Dissociative disorders are presumed to be ‘psychogenic’ in origin. They are often found associated closely with recent mental traumas, insurmountable conflicts, and disruption in relationships.
- Trance states occurring as involuntary and unwanted behaviour that interfere with the day-to-day activities outside the religious domain or other accepted cultural activities alone are qualified for the diagnosis of trance and possession disorder.
- Sexual behaviour is diverse and determined by a complex interaction of factors. It is affected by one’s relationship with others, by life circumstances, and by the culture in which one lives. An individual’s sexuality is enmeshed with other personality traits, with his or her biological makeup, and with a general sense of self.
- AIDS (Acquired Immunodeficiency Syndrome) is a set of symptoms (or syndrome as opposed to a virus) caused by HIV or Human Immunodeficiency Virus. A person is said to have AIDS when their immune system is too weak to fight off infection, and they develop certain defining symptoms and illnesses. This is the last stage of HIV, when the infection is very advanced, and if left untreated will lead to death.
- Emotions can be classified into two broad dimensions—adaptive/positive and disruptive/negative. Positive affectivity (PA) refers to positive emotions, such as joy, happiness, love, and, interest. Negative affectivity (NA) refers to negative emotions, such as anxiety, anger, guilt, and sadness. Positive emotions facilitate approach behaviour.
- In recent times, the preventive approach for promoting mental health has gained currency and a number of positive youth projects are implemented in school settings and also in therapeutic preventive settings.
- In ICD-10 groups neurotic (anxiety) disorders with stress-related, and somatoform disorders. The reason for grouping anxiety disorders along with stress-related and somatoform disorders is that these disorders have...
been found associated with the conception of neuroses during the past, and also that these disorders have a substantial association with psychological causation.

- When phobic anxiety is a combined condition in depression, it is worsened during an intercurrent episode of depression. Depressive episodes may sometimes be combined with temporary phobic anxiety.

- Post-Traumatic Stress Disorder, or PTSD, is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include human-caused or natural disasters, violent personal assaults, military combat, or accidents.

- Coping refers to dealing with the stress. Coping does not always ensure successful outcome in a stress situation. For instance, withdrawing totally from the stress inducing situation is considered as one of the stress coping strategy. While this may lead to reducing bodily stress reactions, it may be maladaptive since the original situation which induced stress still remains unsolved.

- The concept of Human Relations is generally defined as the capacity to interact and work well with other people. It looks at social dynamics at both the individual and group level and tackles how they can complement each other to work effectively.

- Satisfaction with life is an important factor for the well-being of individuals and communities. Being content with one’s personal, social, family, school or professional life is a key ingredient for adaptation and success.

### 9.13 Key Words

- **Dissociative Disorders**: These are presumed to be “psychogenic” in origin. They are often found associated closely with recent mental traumas, insurmountable conflicts, and disruption in relationships.

- **Dissociative Amnesia**: This kind of amnesia is usually linked to traumatic events, such as accidents or unexpected bereavements, and it is usually partial and maybe selective.

- **Dissociative Stupor**: Emotionally intense diminution or complete absence of voluntary movement and normal responsiveness to external sensory stimuli are the chief diagnostic feature of this disorder.

- **Trance**: An individual is diagnosed for this disorder when he or she has lost both the sense of personal identity and full awareness for environment for a temporary period.
• **Paraphilias**: The term paraphilias refers to a group of disorders involving sexual attraction to unusual objects or sexual activities that are unusual in nature.

• **AIDS**: AIDS (Acquired Immunodeficiency Syndrome) is a set of symptoms (or syndrome as opposed to a virus) caused by HIV or Human Immunodeficiency Virus.

• **Primary Prevention**: It refers to preventive steps that aim to eliminate a disease or disordered state before it can occur.

• **Agoraphobia**: It refers to a category of irrational fears relating to crowds, congested places with no emergency escape route, home, etc.

• **PTSD**: Post-Traumatic Stress Disorder, or PTSD, is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened.

• **Adaptive Behaviour**: An adaptive behaviour is a behaviour which contributes directly or indirectly to an individual’s survival or reproductive success and is thus subject to the forces of natural selection.

### 9.14 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. How has the meaning and significance of the term ‘psychosis’ changed since 1845?
2. What are the sexual pain disorders in males and females?
3. Identify some basic facts about AIDS.
4. Which are the various types of emotions and how do they affect individuals?
5. Write a short note on PTSD.
6. What kind of relational problems do human beings face?

**Long Answer Questions**

1. Identify the various types of conversion disorders and their symptoms and how they are diagnosed.
2. Discuss the various types of sexual disorders and their symptoms.
3. Explain the concept and implementation of primary prevention and its benefits.
4. Which are the various types of anxiety disorders? How are they diagnosed as per ICD-10? Explain the connection between phobias and anxiety.
5. How can individuals cope with stress? What are the various styles and in which situations are they adequate?

6. Describe ways in which one can try to attain mental peace and life satisfaction.

9.15 FURTHER READINGS


UNIT 10 PERSONALITY AND SOCIAL DEVELOPMENT

Structure
10.0 Introduction
10.1 Objectives
10.2 Emotions
10.3 Emergence of Self
   10.3.1 Role of Parents and Siblings
   10.3.2 Peer Groups
10.4 Psychoanalytical Perspective in Personality Development
10.5 Social Learning Perspective in Personality Development
   10.5.1 Cognitive Perspective in Personality Development
10.6 Emotional Problems of Childhood
   10.6.1 Identity Crisis in Adolescence
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10.7 Answers to Check Your Progress Questions
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10.0 INTRODUCTION

Personality is defined as the characteristic set of behaviours, cognitions, and emotional patterns that evolve from biological and environmental factors. Personality traits reveal various types of persons and therefore predict their behaviour. Personality varies from person to person, depending upon their physical and psychological attributes. Personality is a significant variable of behaviour and includes a large number of qualities which cannot be changed easily. Personality is composed of several characteristics which are comparatively permanent and influence human behaviour. Different variables and characteristics form different personalities that are reflected in behaviour. Personality is influenced by several factors such as family, characteristics, learning, social influences, psychological features, etc.

10.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the concept of the self
- Explain the various perspectives of personality development
- Examine some of the emotional problems of childhood
10.2 EMOTIONS

Emotions play a very crucial role in how we think and behave; our emotions influence the actions and decisions we take regarding our life on a daily basis. The way we act is often influenced by the way we feel. There are three components of emotions which are very important, such as subjective component (how we experience the emotion), a physiological component (how our bodies react to the emotion), and an expressive component (how we behave in response to the emotion). There are primary emotions which we usually experience like joy, sadness, fear, anger, and disgust.

Our emotions can be short (for example- a flash of annoyance at a co-worker) or long-lasting (for example- enduring sadness over the loss of a relationship). Children tend to imitate how their parents behave and behave in the same manner with others. Our emotions are very important and we need them in order to think, solve problems and to focus attention on different things. A balance of emotions is crucial in everyone’s life and if we are to balance and regulate our emotions then we can remember, retrieve, transfer, and connect all new information to what we already know. If a person is going through too many negative emotions, which affect our brain’s architecture, it leaves us in a lot of stressed state where fear, anger, anxiety, frustration, and sadness take over our thinking, logical brains.

A child’s emotional development takes place when they are a baby, right up to adulthood. Let us discuss this in detail.

Infant (birth to 2 years)

Several changes in the child’s emotional development is seen in the first year of their life. For instance, in the first few months the baby is quite sleepy most of the time but as he or she grows, he or she becomes relatively more alert, responsive and interactive with people around him. Also a development of a warm close bond with the care givers is seen at around 3 months of the age, the child begins to imitate and engage in a social smile.

With increasing awareness about one’s surroundings, they starts exploring and developing their own sense of belonging in the family, starts displaying jealousy especially when parent hold someone else’s baby and calls them as their own.

Toddler or Preschool Age (2 to 5 years)

As the child becomes increasingly mobile, they begin to start exploring their environment on their own. A significant degree of improvement in their language is also seen around the same time. Children begin to develop their own personality and start exploring their own emotions and start throwing tantrums. At this stage the parent needs to teach the child the value of delayed gratification and that they cannot get everything always as and when they want. Around this stage, the child begins to say ‘No’ and it is important that he or she learns to accept hearing ‘No’ from others.
School Going Age (6 to 12 years)

Around this stage, the child becomes increasingly independent and social. He or she may struggle to adapt to schooling. It is important that during this stage, parents instil a good set of morals and accepted behaviour. Parents should provide praise and encouragement for achievements and should at times allow children to experience natural consequences of their behaviour and provide logical consequences to help them learn from their mistake.

Adolescent or Teenage (13 -18 years)

This stage is usually marked with several emotional and social changes a child goes through. Some changes in mood, sensitivity and self-consciousness are often seen among all children. Around the age of 15, most children want to do things on their own without their parents and their peer or social circle begins to matter a lot. By the age of 17 years, children learn to regulate their emotions, are less likely to lose their temper and are better able to deal with uncomfortable feelings. They also develop strong relations with people they feel close to.

10.3 EMERGENCE OF SELF

The self is what makes someone an individual; it is the essential for a person, ego, and the awareness of one’s own inner self. It is a reflective consciousness of a person. The self has two parts: the first is lower self or ego which consists of the temporary body, the five senses, changing thoughts and opinions and the second is the higher or true self. These are quite important and never change. The self is a multilevel system not simply reducible to genes or neurons, emerging from interactions of mechanisms operating at neural, psychological, and social levels. This term is very important for both social and humanistic psychology. According to Lewis (1990), the self-concept has two aspects:

(I) The Existential Self: It is the most basic part of the self-scheme or self-concept. It is important for children to understand that they exist as a separate and distinct entity from others. Every individual should have their own concept of self and that should remain constant. According to Lewis, the awareness of the existential self begins around the age of 2 to 3 months. The development of this aspect to some degree is based on the way the child relates to the world around him. For example, when the child smiles, someone smiles back at him or when a child plays with mobiles and sees that it works or moves.

(II) The Categorical Self: After a child has realized that he/she exists as a separate entity in the world, they also start seeing themselves as an object. He/she also becomes aware that they can be experienced and they also have properties. We can categories ourselves as age, gender, size or skill. In early childhood, children categories themselves concretely in terms of, for example, hair colour, height and favourite things.
10.3.1 Role of Parents and Siblings

Children develop from infants to teens to adults and also go through a series of developmental stages which are important for their physical, intellectual, emotional and social development. Parents are the first teachers for their children and they should provide encouragement, support and also access to activities that enable the child to master key developmental tasks. It is the duty of parents to provide proper support to their children throughout their life.

The environment in which children grow has a great impact on the type of personality characteristics they develop. If the children experience conflicts at home where there are a lot of arguments and disagreements, then such children tend to have conflict-driven personality when they grow older. It is very important that families have proper structure in their household if not then children will become more impulsive and have higher chances of getting involved in some or the other problem.

Along with parents, the relationship with our siblings also influence our personality development. In fact, sometimes our relationship with siblings influence us more than the relationship with our parents.

Birth order also has a major influence on a child’s emotions, behaviour and personality development. Older children are more parent-oriented than their younger siblings and are more anxious, achievement focused than their younger siblings.

Younger siblings try to copy their older siblings, that is, they try to model their behaviour and achievements. So, they have a much smaller developmental gap to overcome, less to prove and fewer self-imposed achievement pressures as compared to their older sibling.

10.3.2 Peer Groups

A peer group has people who have similar interest, age, background, or social status. The members of groups influence a person’s beliefs and behaviour. Each peer group has hierarchies and behave differently.

During adolescence peer groups face major changes, and at this stage children tend to spend more time with their peers as compared to their parents. They do not like their parents interfering in any matter. Adolescents prefer to talk about school and their careers with their parents and enjoy talking about sex and other interpersonal relationships with their peers.

Children during adolescence want acceptance and whichever group accepts them they try to get involved in that group even if they are involved in negative activities. Children do not accept those who are different from them.

When children interact with people of their own age group they learn how to work cooperatively, collaborate with people and relate to others. This helps in developing communication skills which are important for social development of an individual. Interactions between peers promote a child’s sense of self by encouraging him/her to think of himself in relation to others and it also teaches them to understand
what is acceptable and what is not as a social behaviour. We have different types of relationship with our peers like as an acquaintance, a flat mate, a colleague, a fellow-student, or a neighbour.

**Check Your Progress**

1. List the three components of emotions that are extremely important.
2. What are the two parts of the self?

### 10.4 Psychoanalytical Perspective in Personality Development

The psychoanalytical perspective emphasizes the importance of early childhood experiences and the unconscious mind. The unconscious mind has a great influence on our behaviour and personality. The dynamic interaction that takes place among these parts of the mind, progress through five distinct psychosexual stages of development, as given by Freud. This perspective on personality was created by the psychiatrist Sigmund Freud; he believed that things which are hidden in the unconscious can be revealed by different ways like through dreams, free association, and the slip of the tongue. Many theorists like Erik Erikson, Carl Jung, Alfred Adler and Karen Horney believed in the importance of the unconscious, but did not agree with other aspects of Freud’s theories. This theory of Freud has been criticized because it only focuses on sexuality which influences the personality development of human beings.

**Freud’s Psychoanalytic Theory of Personality Development**

According to this theory, there are two basic factors which drive an individual and help in shaping his/her personality. These two drives are love and aggression which have a direct impact on what an individual thinks and does. He says love and aggression have a direct control on our minds and thoughts. Freud referred to love and aggression as ‘Eros’ and ‘Thanatos’. ‘Eros’ refers to the intimate and passionate love between two partners. It is often defined as a kind of madness which one experiences for his/her partner. Freud believed that Eros represents an individual’s instinct to survive. Eros refers to an individual’s determination to live, where sex is the major driving force. Thanatos was a figure in Greek mythology, though he never really existed as a person. The term symbolizes death.

### 10.5 Social Learning Perspective in Personality Development

The social learning theorists have observed how complex a human behaviour is cannot easily be explained by traditional behavioural theories. This theory combines
cognitive learning theory and behavioural learning theory. Albert Bandura integrated these two theories and came up with four requirements for learning: observation (environmental), retention (cognitive), reproduction (cognitive), and motivation (both). This integrative approach to learning was called social learning theory.

Bandura proposed the theory of social learning and he is a widely recognised individual in the field of social learning theory. According to Bandura, people learn a lot by watching other people and seeing the rewards and/or punishments that other people receive. His research has made a lot of impact and the effects of modelling on aggressive behaviour are still being studied. The other social learning theorists do not deny the influence of reinforcement and punishment, but they suggest that it can be experienced through observation and does not require direct, personal experience as Skinner had argued. Observational learning requires cognition but cognition cannot be observed.

10.5.1 Cognitive Perspective in Personality Development

The cognitive perspective has evolved along with the development of computers since the mid-1950s. According to the cognitive perspective, what people are is based on their thinking, that is, how they attend, perceive, analyze, interpret, encode and retrieve information. People tend to have habitual thinking patterns which are characterized as personality. The older cognitive perspective focused more on introspection (e.g., Wundt, 1870s), that is the actual content of mind. But the new cognitive psychology evolves more directly from social learning theory and extensions of behavioural theory. It also has a link to humanistic psychology which focuses on the ‘information stored about the self’. A particular strength of cognitive theory is that it is compatible with all the other perspectives. This approach differs from personality theories which emphasize either the conditions within which personality develops (e.g., behavioural theories) or the trait structures that are revealed in those various conditions (e.g., evolutionary and trait theories).

This perspective also says that personality is a person’s mental organization. It is very important for every individual to receive and organize all the information from the world including sensory information. It is often known as the information-processing model. Thus, what you think, the way you process the information (including attending to, perceiving, interpreting, encoding and retrieving of information) and the way we regulate ourselves has a great influence on our personality.

10.6 EMOTIONAL PROBLEMS OF CHILDHOOD

Every child faces emotional difficulties from time to time just like adults. Feeling sad or having emotional extremes is a part of growing up. Some children respond in an inappropriate emotional and behavioural manner towards some situations. It is important for the parents to realize that each child’s behaviour requires proper attention and they should support their children. If proper care is not taken then
children might suffer from emotional disorders. Emotional disorder is a mental disorder in which a person’s emotions are disturbed to a great extent. This disorder is not due to any abnormalities in the brain development or function, but it is a psychological condition in which thoughts and emotions are not in a proper state. Although the cause of emotional disorders are not very specific, but there is a correlation between the disorders with certain causal factors like, exposure to prenatal drugs, experience of physical abuse, poverty, being neglected, parental stress, changing rules and expectations, confusion over long time and so on. The causes can be broadly categorized into biological, family, school or living environment. Children who suffer from emotional disorders are quite impulsive and are violent in their conduct, that is, both on the self and others. They remain anxious, have short attention span, do not follow rules in classroom, and so on. Such children cannot adapt to any variations in the routine setup, accuse others and have difficulty working in groups. They also tend to suffer from low self-esteem, which makes them absentees from school mostly.

We refer to mental disorders using different ‘umbrella’ terms such as emotional disturbance, behavioural disorders, or mental illness. Beneath these umbrella terms, there is actually a wide range of specific conditions that differ from one another in their characteristics and treatment. These include: anxiety disorders; bipolar disorder (sometimes called manic-depression); conduct disorders; eating disorders; obsessive-compulsive disorder (OCD) and psychotic disorders. Some other emotional problems that children experience during childhood can be categorized into following headings:

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers
3. Inappropriate types of behaviour or feelings under normal circumstances
4. A general pervasive mood of unhappiness or depression
5. A tendency to develop physical symptoms or fears associated with personal or school problems

**10.6.1 Identity Crisis in Adolescence**

Identity crisis is a feeling of unhappiness and confusion which is caused by not being sure about what type of person you really are or what the true purpose of your life is. It can take place at any age, but it is very important to resolve its effect in a young age otherwise it creates problem in adulthood. In the teenage years, people mostly experience an identity crisis; they also go through significant and confusing changes like puberty, raging hormones, school work getting more demanding and frequent extracurricular activities. This a challenging stage for every adolescent, where they are trying to find their identity.
Some adolescents are able to identify a goal or a plan for the next stages of their lives and some are not able to. Some teenagers struggle at this stage because they find it difficult to understand the changes their bodies are going through or have not achieved the sense of self-identity that they need to move forward in life; this is known as identity crisis. If parents are able to understand the identity crisis their child is going through then they can help the teenagers in this difficult stage.

Adolescents sometimes face major obstacles which hinders the growth of a strong identity. The unresolved crisis leaves individuals struggling to ‘find themselves’, that is, they have no idea of who or what they are, where they belong or where they want to go. There are chances that they may withdraw from normal life, that is, not take action or act as they usually would at work, or at school, or in a relationship or be unable to make defining choices about the future. They may even turn to negative activities, such as crime or drugs since from their point of view having a negative identity could be more acceptable than none at all.

Those adolescents who are able to develop a strong sense of identity can face adulthood with confidence and certainty. According to Erikson, peers have a strong influence on the development of our ego identity during adolescence.

There is a model of identity crisis which has two types:

1. Identity deficit (motivation crisis): An individual experiences a lack of guiding commitments but struggles to establish personal goals and values.

2. Identity conflict (legitimation crisis): The person has several commitments which prescribe conflicting behavioural imperatives in some situations, so that at least one commitment may have to be betrayed.

The developmental psychologist Erik Erikson defined eight crisis stages that characterize our lives from birth through death as follows:

1. Trust vs. Mistrust (oral-sensory, Infancy, under 2 years)
2. Autonomy vs. Shame/Doubt (muscular-anal, Toddlerhood, 2–4 years)
3. Initiative vs. Guilt (locomotor-genital, Early Childhood, 5–8 years)
4. Industry vs. Inferiority (latency, Middle Childhood, 9-12 years)
5. Identity vs. Role Confusion (Adolescence, 13–19 years)
6. Intimacy vs. Isolation (Early Adulthood, 20-39 years)
7. Generativity vs. Stagnation (Middle Adulthood, 40–59 years)
8. Ego integrity vs. despair (Late Adulthood, 60 years and above)

10.6.2 Relationship with Parents and Peers

We humans are social beings and it is very important to form and maintain relationships. If we are mentally healthy then our wellbeing will be positive and we will be able to maintain good relations with others. Children who can develop strong lasting friendships tend to feel much happier at school and are able to
cooperate with their peer group. They also learn to become confident, optimistic, develop a sense of self-belief and form an identity.

This is all the more true for adolescents who are already facing and are learning to deal with physical and emotional challenges. Peer influence and relationships at this stage of life can be both a source of relief and a cause of stress. Supportive and close family relationships can protect children engaging in risky behaviours like drinking alcohol, taking drugs, etc., and from getting into depression etc.

During the school years, it is very important for children to develop friendships and positive relations with their peers. Many people especially children feel that they do not get family support and their peers are sufficient but family support is very important at this stage. But for some teenagers, parents and families are a source of care and emotional support because they give practical, financial and material help. The setting of rules, boundaries and standards of behaviour, provide children with a sense of consistency and predictability.

Relationships do change from being a nurturer and a guide to your child in his/her childhood to treating your child as equal in adolescence. Families do experience ups and downs during these years, but things start improving during late adolescence when children become more mature.

Even if nobody else supports a child during adolescence, then also the family is seen as a secure emotional base where children feel loved and accepted. Strong family relationships can help children grow into a well-adjusted, considerate and caring adult.

10.6.3 Sexual Identity (Teenage Problems)

Gender identity is your inner sense of being a male, female, or both. For some people, their gender identity does not match the sex that they were assigned at birth. People who feel this way often refer to themselves as ‘transgender’ or “trans”. At the age of three, children are able to form their gender identity, that is, either a girl or a boy.

Adolescence is the time when a teenager’s body goes through many changes such as hormonal and physical changes of puberty; sexual feelings also increase at this age. A major struggle is of gender identity as from teen years the body develops and changes, and also their emotions and feelings.

People take time to understand their own sexual feelings and who they are attracted to. They have sexual thoughts and attractions and for some these feelings and thoughts can be intense and may find them confusing. There can be teenagers who also have romantic or sexual thoughts about someone of the same sex. Teens that are gay, transgender, or question their own gender identity have four times the greater chance of attempting suicide than their peers.

If any teenager faces trouble regarding their gender identity, then they can seek professional care. There are counsellors who specialize in helping gay or
transgender teens through the process of identifying who they are and what gender they more strongly identify with. One can also visit a therapist if one is having trouble accepting one’s teenager’s gender identity. They can also help parents and other family members deal with their own emotions and help their loved ones in dealing with their identity issues. Parents should keep in mind that although their feelings are totally valid, but it is very important that parents should support their children during the difficult times of teenage years.

Check Your Progress
3. What does the psychoanalytical perspective emphasize?
4. What is an identity crises?
5. According to Freud, what does Eros represent?

10.7 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. There are three components of emotions which are very important, such as subjective component (how we experience the emotion), a physiological component (how our bodies react to the emotion), and an expressive component (how we behave in response to the emotion).
2. The self has two parts: the first is lower self or ego which consists of the temporary body, the five senses, changing thoughts and opinions and the second is the higher or true self.
3. The psychoanalytical perspective emphasizes the importance of early childhood experiences and the unconscious mind.
4. Identity crisis is a feeling of unhappiness and confusion which is caused by not being sure about what type of person you really are or what the true purpose of your life is.
5. Freud believed that Eros represents an individual’s instinct to survive. Eros refers to an individual’s determination to live, where sex is the major driving force.

10.8 SUMMARY

- Emotions play a very crucial role in how we think and behave; our emotions influence the actions and decisions we take regarding our life on a daily basis.
Our emotions can be short (for example— a flash of annoyance at a co-worker) or long-lasting (for example— enduring sadness over the loss of a relationship).

A child’s emotional development takes place when they are a baby, right up to adulthood.

The self is what makes someone an individual; it is the essential for a person, ego, and the awareness of one’s own inner self. It is a reflective consciousness of a person.

Children develop from infants to teens to adults and also go through a series of developmental stages which are important for their physical, intellectual, emotional and social development.

A peer group has people who have similar interest, age, background, or social status. The members of groups influence a person’s beliefs and behaviour. Each peer group has hierarchies and behave differently.

The unconscious mind has a great influence on our behaviour and personality.

According to Freud, there are two basic factors which drive an individual and help in shaping his/her personality. These two drives are love and aggression which have a direct impact on what an individual thinks and does.

The social learning theorists have observed how complex a human behaviour is cannot easily be explained by traditional behavioural theories. This theory combines cognitive learning theory and behavioural learning theory.

According to the cognitive perspective, what people are is based on their thinking, that is, how they attend, perceive, analyze, interpret, encode and retrieve information.

Every child faces emotional difficulties from time to time just like adults. Feeling sad or having emotional extremes is a part of growing up.

Adolescents sometimes face major obstacles which hinders the growth of a strong identity. The unresolved crisis leaves individuals struggling to ‘find themselves’, that is, they have no idea of who or what they are, where they belong or where they want to go.

Gender identity is your inner sense of being a male, female, or both. For some people, their gender identity does not match the sex that they were assigned at birth.

If any teenager faces trouble regarding their gender identity, then they can seek professional care. There are counsellors who specialize in helping gay or transgender teens through the process of identifying who they are and what gender they more strongly identify with.
10.9 KEY WORDS

- **Puberty**: It refers to the period during which adolescents reach sexual maturity and become capable of reproduction.
- **Thanatos**: In Greek mythology, Thanatos was the personification of death. He was a minor figure in Greek mythology, often referred to but rarely appearing in person.
- **Hormones**: It is a chemical substance produced in the body that controls and regulates the activity of certain cells or organs.
- **Eros**: It refers to sexual love or desire.

10.10 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. Write a short-note on emotions.
2. What is the social learning perspective in personality development?
3. Discuss sexual identity in teenagers.

**Long Answer Questions**

1. Describe the two aspects of the concept of self.
2. Discuss Freud’s psychoanalytical theory of personality development.
3. Examine some of the emotional problems of childhood.

10.11 FURTHER READINGS

UNIT 11 PERSONALITY AND
SOCIAL ISSUES IN YOUNG
ADULTHOOD

Structure
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11.1 Objectives
11.2 Parenthood and Career Planning
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11.3 Intimate Relationships and Personal Lifestyles
11.4 Work Life
11.4.1 Personal Relationship in Family and Work Life
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11.0 INTRODUCTION

Parenting is the process of encouraging and supporting the physical, emotional, social, and intellectual development of a child from infancy to adulthood. Good parenting is more vital than a good school because kids are very much dependent on their parents for a lot of things like love, care, respect, support and guidance. Parenting can be challenging and it is one of the most crucial jobs in the society. Career planning is another important aspect of one’s life and parents play an influential role in their children’s career choices. In order to solve life problems, manage stress effectively and overcome challenges in life, one needs to maintain a balance between intimate relationships and personal lifestyle.

A person in regular workforce should also know the ways to maintain a better work-life balance. In addition to this, an individual stepping into adulthood should know and be prepared beforehand with the various physical changes of...
old age. Aging affects our body in many ways—it deteriorates our psychomotor functioning, memory, health and fitness, etc. Exercising is a great way to prevent oneself from common old age diseases.

Besides dealing with good practices associated with parenthood, childcare and career planning; the unit also discusses the aspects, issues and problems related to old age. The unit also focusses on the pre-retirement and post-retirement stages and explores the factors that influence one’s adjustment to old age.

11.1 OBJECTIVES

After going through this unit, you will be able to:
- Assess the concept of parenthood and importance of good parenting
- Discuss the need of effective career planning
- Evaluate the importance of maintaining a work-life balance for every working individual
- Explain the significance of personal relationship in family and work life
- Discuss the various physical changes in old age
- Describe the health problems during old age
- Analyse various physiological and memory changes that old people experience
- Discuss the changes in peoples’ habits from a work-focussed lifestyle into retirement phase
- Explain the factors that can influence one’s adjustment to old age
- Analyse the ways that can be carried out in order to maintain purpose and meaning in life

11.2 PARENTHOOD AND CAREER PLANNING

Parenting is both an art and a skill. In fact, the word, ‘parenthood’ comes from the Latin word ‘to give birth’. It is a long and difficult journey, which involves not only bringing a new human life into the world, but also helping them in the journey towards adulthood. All this requires a lot of energy, effort, courage and patience. It is about accepting that you are primarily responsible for your child’s education, well-being, safety, emotional maturity and eventual attainment of adulthood. A good parent is someone who takes care of their offspring and ensures that they grow up properly. Good parenthood is the practice of taking good care of one’s offspring and ensuring that they grow up well.

It is extremely important to have good parenting for several reasons as given as follows:
1. **Education**: The first education that we receive is from our parents. They teach us how to read and write, tie shoelaces, counting etc. Good parenting is not only about teaching children facts and skills but also provide a supportive environment for their children’s independent learning.

2. **Morality**: It is the duty of parents to teach their children what is wrong and what is right for them from the very beginning. They provide us moral guidance, help in developing our morality throughout life. Parents should always give answer to whatever questions their kids ask and should not ignore their questions.

3. **Love**: Children should be provided with love and care throughout their lives. But in order to maintain a good and loving relationship with others in later lives, children should experience loving relationships from early years of life. So, a good parenting is required in order to teach children to be loving human beings.

4. **Safety**: It is the duty of parents to ensure that their children are provided a safe environment. Safety and stability are important for children and it can be best provided by parents. Whenever young children go somewhere parents should accompany them so that they feel safe.

5. **Citizenship**: Parents help children in becoming good citizens because they teach them basic civic sense like unselfishness, neatness, truthfulness and willingness to help others. They also teach their children practical things like telling them whom to call in case of any emergency or to socialize in neighbourhood.

6. **Teaching parenthood**: When children grow up to be adults, they become parents. They try to recall their childhood days and the memories of their parents, in order to become good parents. Parents provide their children with a model about how to bring up a child which stays with them throughout their life.

7. **Respect**: It is the duty of parents to teach their children about how to respect their elders like teachers and other people in similar positions of authority. If children know how to respect their parents, then they can also respect others. Children should also know how to earn respect.

8. **Support**: Parents provide support to their children from feeding and clothing them when they are young to providing them with advice and guidance when they enter university or the job market. Support is very important in everyone’s life. We need support from our parents throughout our life like emotional support after a break up or financial support. The parent-child relationship should always be supportive.

9. **Reciprocity**: When parents get old it is time for children to reciprocate all the emotional and material support that they have received from their parents. If parents have provided a good support to their children when they were young, then children will put in all the effort to support their children.
Career planning is a continuous process of thinking about our career interests, values, skills and preferences, exploring the life, work and learning options available and ensuring that the type of work we choose fits our personal circumstances. If we wish to succeed in our career, then we need to take ownership for shaping it and ensure that it is moving in the direction we want it to go. We need to plan in order to achieve success in our career. The various steps involved in career planning are as follows:

1. Put on paper where you see yourself going in your career.
2. Plot each step that you will need to reach, in order to get there.
3. Assess your self, skills, potential, strength, weakness and ability to fulfill your aims.
4. After you have assessed yourself, then you need to pay attention to any loopholes that you may have identified in your self-assessment, and ensure you come up with an action to correct and fill these loopholes. This will lead to development of self.
5. Work in order to get the experience, take up additional projects so that you can gain new experience.
6. Be the best at workplace, in order to get promotions.
7. You need to have a good network which requires the right contacts and earn the respect of those that may be able to assist you in your career aspirations.
8. Find a mentor and if your company offers this facility, then find a mentor. A mentor is a person who can help you in obtaining essential knowledge and information that will enable you to quickly learn what is required in your job, and help you succeed.
9. Take advantage of any opportunities for training that come your way.

In order to engage in effective career planning, one needs to deal with the following key concerns:

1. What are my long-term career objectives?
2. What will I want to get out of my job in the next five years or so?
3. Do I need to study?
4. If so, what for?
5. What are my individual priorities?

The 5 key steps that are involved in enabling one to create an effective career plan for oneself are as follows:

**STEP 1: SELF-EVALUATION:** It refers to knowing the following:

1. Discovering what one really wants to do.
2. Knowing what motivates one and what one thoroughly enjoys doing
3. Gaining an understanding of one’s personal attributes and lifestyle priorities
4. Understanding what are one’s strengths and weaknesses
5. Realisation of the key things one is looking for in a job or a career.

**STEP II: SKILLS ANALYSIS:** It refers to knowing the following:
1. Getting an insight into one’s personal preferences and existing skills
2. Reflecting upon one’s qualifications and experience
3. Knowing about one’s key strengths, transferable skills and specific skills
4. Having an understanding of one’s biggest achievements
5. Being open to one’s weaknesses and areas for development

**STEP III: SETTING YOUR DIRECTION:** It refers to knowing the following:
1. Having an idea about the type of roles or industries that will suit one best.
2. Shortlisting broad industries that really appeal one
3. Understanding about the types of roles that would suit one best
4. Knowing how well, these options match one’s personal preferences
5. Focusing on the key skills that one needs to develop

**STEP IV: COMMITTING TO A TIME FRAME:** It refers to knowing the following:
1. Knowing key goals or manageable milestones that one needs to set to make a career.
2. Asking self what one needs to achieve within the next six, twelve or eighteen months
3. Deciding upon how and when one would achieve his training and education goals
4. Planning how and when one would gain the additional skills and experience one needs
5. Knowing how and by when to expand one’s network

**STEP V: REVIEW YOUR CAREER PLAN:** It refers to knowing the following:
1. Having a clear pathway on which one needs to head
2. Monitoring the progress of one’s career plan at least every 6 months
3. Ensuring the inherent risks and the processes one need to meet one’s goals
4. Re-evaluating one’s career plan and goals
5. Making suitable adjustments accordingly based on changing economic and personal circumstances.
Parents can have the greatest influence over their children’s career choices. This is because:

- They have the best knowledge of their child’s interests and abilities.
- They have the strongest interest in their well-being and success.
- They spend a great deal of time with them and can help to cultivate a variety of career considerations.
- They are one of their first role models. They can instill a positive view of all kinds of work and career planning.

11.3 INTIMATE RELATIONSHIPS AND PERSONAL LIFESTYLES

It is important for every individual to have a balance between his/her intimate relationships and personal lifestyle. This has a direct impact on our well-being and life expectancy. Good healthy relationships help us to manage stress effectively, solve problems and overcome challenges in our life. We also have a relationship with ourselves, which we need to balance effectively. Some of key concerns or factors that enable one to develop healthy and gratifying interpersonal relationships are as follows:

1. **Compatibility:** We are likely to enjoy our relationships better if we have a compatible partner. And to find one such partner, one really needs to know what exactly one is looking for. It is very important to know the other before getting into a relationship with them in terms of who they are, whether their values match with one’s own values or not and whether this is a good personality fit or not.

2. **Communication:** Both verbal and non-verbal communication should be good between partners, that is, both people need to respect their partner’s opinion, even if it’s different from their own. Each partner should feel comfortable expressing their feelings, needs and desires, and listen respectfully to what the other person has to say. It is also important to note the body language, tone of voice, facial expressions of our partner, in order to understand what they are trying to communicate.

3. **Honesty and accountability:** In order to maintain a healthy bond one should be fair and honest. If one is honest then one would not feel uncomfortable in expressing one’s deepest feelings and desires to one’s partners. Even if there is some problem with the partner or some issue, one would be easily able to express it. Along with honesty, accountability is also important. Accountability refers to the fact that each partner is responsible for their own feelings and behaviour.
4. **Shared power**: Sharing of power is required in order to maintain a healthy relationship. Every individual should feel safe and respected and must have equal say in all aspects of the relationship. Sharing power also involves negotiation it means that partners try to reach a solution where both feel satisfied, respected and validated as opposed to feeling bullied into a situation or solution.

5. **Healthy physical boundaries**: When in a relationship, it is very important that you communicate your partner the boundaries. You should know whether your partner is comfortable or not during sexual activity or different types of touch.

6. **Healthy emotional boundaries**: Emotional boundaries are necessary in order to maintain healthy relationships. It helps you to maintain a strong sense of self, protect you from being manipulated, separates you from the problems or feelings that your partner(s) might be experiencing.

7. **Trust and caring**: Trust and care are required to form and maintain a relationship and also intimacy. We need to show care to our partner in order to receive care in return. When you trust someone in order to be intimate with them, you’re trusting that they’ll treat you with respect and dignity. If your partner cares for you then they will respect the boundaries you’ve established regarding what you are or are not comfortable with sexually.

### Check Your Progress

1. What is parenting and why it is believed as a long and difficult journey?
2. What do you understand by career planning?

### 11.4 WORK LIFE

Each and every adult who is working needs to maintain a work-life balance. It is that balance which an individual needs to maintain between the time allocated for work and other aspects of life. When we work as an employee in an organization, we start identifying with our organization and feel as a collective group. Employees interact with many people in their company like employees, management, customers, or others, reinforces. It is very important that each employee maintains his/her identity and they should show their “true self”.

Many employees identify not only within the organization, but also other facets of their life (family, children, religion, etc.). But sometimes their identities align and sometimes they do not. When we have a conflicting identity, then work-life balance gets affected. In order to avoid conflict and stress as an employee, we
should align our identity according to the work environment. So, that one can work effectively in our workplace.

Apart from work-life, employees also identify with their outside roles, or their “true self”, for example parental/caretaker roles, identifications with certain groups, religious affiliations, align with certain values and morals, mass media etc.

The following things can be done to ensure better work life balance:

- Schedule a weekly social activity
- Eliminate unproductive activities
- Don’t take on too much
- Slow down
- Make your life enjoyable
- Know when to seek help

11.4.1 Personal Relationship in Family and Work Life

For development of human beings it is very important that they have a strong and supportive family unit. Human beings are required to maintain healthy family relationships to enhance their emotional growth. The immediate biologically related members like mother and father are important for us in order to build strong and deeper ties. The following four reasons emphasise why it is important to build personal relations:

- The quality of our personal relationship affects our mental health and personal well-being. The more connected we are to the people we love, the more happy and satisfied we feel.
- Family members play an important role in each other’s emotional well-being. People realize that the love and understanding of their family members is important when the world becomes harsh towards us.
- It is important for every individual to develop a sense of personal self-worth and positive emotional growth at every age. This growth is based upon the attributes associated with all types of family structures.
- There are many important relationships in our life which not only includes family and personal friends but also the wider groups and communities we belong to. Forming connections with colleagues, neighbour’s and many other groups help us to make up an identity and contribute towards our wellbeing.

Along with personal relationships it is very important to have a balance in work life. Work-life balance is all about creating and maintaining supportive and healthy work environment, which enables us to have balance between work and personal responsibilities and thus strengthening our loyalty and productivity towards our organization.
If there is no work-life balance then it will lead to conflicts in the workplace and other problems like long working hours, stressful job, increased smoking and alcohol consumption, weight gain and depression.

There are a number of ways using which companies can help to encourage a work-life balance for their employees like changes in policies, offering flexible working options- work from home, job sharing, and compressed work weeks. This will help to reduce the conflict between work and personal responsibilities.

Nowadays, employers are becoming increasingly aware of the cost implications associated with over-worked employees such as: operating and productivity costs, absenteeism, punctuality, commitment and performance.

Check Your Progress

3. Why it is important to maintain a work-life balance?
4. List the number of ways using which the companies can help to encourage a work-life balance?

### 11.5 PHYSICAL CHANGES IN OLD AGE

Old age is also known as late adulthood which starts around 60-65 years of age. At this age people retire and they get benefits like income tax advantages, reduced fares and admission prices to leisure events, and special purchase or discount privileges.

Many changes take place in the body at the onset of old age that is loss or shrinkage of nerve cells, slowing of responses, visual and hearing problems may interfere with daily life, susceptible to accidents and falls, loss of teeth can also affect the amount of nutrition they receive. Some also suffer from chronic conditions but that does not limit them from performing their daily activities.

Most of the older people are quite healthy because they follow a healthy lifestyle. The proportion of older adults with physical disabilities has declined. But still, older adults need more medical care than younger ones. Exercise and diet are important influences on health. Various physical changes take place in our body as we reach old age. The details of the same are given below:

1. **Heart**: Our heart pumps all day and night, whether we are awake or asleep. But in old age our blood vessels lose their elasticity, fatty deposits build up against the artery walls and the heart has to work harder to circulate blood through our body. This in turn leads to high blood pressure and atherosclerosis.

2. **Bones, Muscles & Joints**: When we grow older our bones shrink in size and density, which makes some people shorter. Chances of fracture increase due to bone loss. Muscles, tendons, and joints may lose strength and
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3. Digestive System: Our digestive reflexes and swallowing slows down when we age because our swallowing becomes harder as the esophagus contracts less forcefully. The flow of secretions that help digest food in the stomach, liver, pancreas and small intestine may also be reduced.

4. Kidneys and Urinary Tract: Kidneys can become less efficient in removing waste from the bloodstream because the size of the kidney reduces and chronic diseases like diabetes or high blood pressure cause more damage to the kidneys. Problems in urination may occur in females due to changes in hormone levels in women and an enlarged prostate in men are factors that lead to urinary incontinence.

5. Brain and Nervous System: When we age, we also lose cell which eventually leads to memory loss. Reflexes may slow down, distraction is more likely and coordination is affected. The brain can compensate for this loss by increasing the number of connections between cells to preserve brain function.

6. Eyes: Many changes in vision occur when we age; we may need help in seeing objects as our lens stiffens. People face difficulty in seeing low-light conditions and colours may be perceived differently. The capacity of our eyes to produce tears reduces and lenses also become less cloudy.

7. Ears: If an individual hears too many noises throughout their life. Due to reduced capacity of ears to hear at old age, older adults face difficulty hearing higher pitched voices and sounds. They face difficulty hearing in busy places.

8. Hair, Skin, and Nails: At old age our skin, hair and nails experience changes like our nails become more dry and brittle, which can lead to more wrinkles, the layer of fat under our skin reduces which reduces sweating, and growth of hair and nails reduces.

9. Weight: During old age physical activity reduces which leads to weight gain as our metabolism slows down when we age. Now the body does not have the capacity to burn off calories which it was able to do earlier.

11.5.1 Psychomotor Functioning

Aging in old age affects our sensation and motor ability. A decline in our psychomotor functioning is seen. For instance, the senses start becoming dull, lenses of the eye discolour and become rigid, the capacity to hear reduces, the sense of taste also reduces etc.

People also experience dulling of the senses, reflexes become slow and fine motor abilities continue to decrease with old age. By late adulthood, most adults notice a gradual reduction in their response time to any spontaneous event. For
example—while driving older adults find it difficult to focus especially during nighttime.

Similarly, older people tend to have a lower manual dexterity as compared to young adults. Stroke is a disorder that can affect fine motor skills among the elderly. Parkinson’s disease is a disorder that can affect fine motor skills in the elderly. Osteoarthritis is a disorder that can affect fine motor skills in the elderly.

11.5.2 Health and Fitness

Due to various reasons people at old age slow down and become more sedentary with age. It can be due to health problems, weight or pain issues, or worries about falling. People also sometimes avoid exercising at old age because they feel discouraged by health problems, aches and pains, or concerns about injuries or falls. But in order to remain fit and healthy at old age we should exercise regularly as it will keep our body fit, boost our energy. Regular exercise is also good for the mind, mood, and memory. Below are enlisted certain key benefits of exercise especially for seniors and aging adults:

- **Exercise helps prevent disease:** If we exercise regularly in old age then we can prevent ourselves from common diseases like heart disease and diabetes, it also improves our immune system. Exercise like walking can prevent us from diseases.

- **Exercise improves mental health:** Exercise improves our mental health and produces endorphins (the ‘feel good’ hormone), which help to relieve stress and we feel happy and satisfied. It helps to improve our sleep, which is important for older adults who suffer from insomnia and disrupted sleep patterns.

- **Exercise decreases the risk of fall:** At old age people are at a higher risk of falling which is important for maintaining independence. Exercise helps to improve balance and coordination, reducing the risk of falls. An improvement in strength and bone density is seen which reduces the risk of fall and improves one’s balance.

- **Exercise promotes social engagement:** Exercising can become fun if we join a walking group, go to group fitness classes or visit a gardening club. In order to avoid feeling of loneliness or depression, we can maintain social ties.

- **Exercise improves cognitive functions:** If we exercise regularly then our cognitive functioning improves and it also boost our motor skills.

- **Exercise enhances one to live longer:** Exercise such as walking or swimming can increase lifespan by around three to five years.

- **Exercise reduces the risk of stroke or heart attack:** The risk of stroke or heart attack decreases if we do brisk walking, cycling or light housework. This raises the heart rate and also the blood flow to the heart, which is known to improve our overall health.
• **Exercise leads to better bone density**: Bone density increases through walking or jogging which helps in increasing the strength of bones and reduce the risk of developing osteoporosis and fractures.

• **Exercise reduces the risk of developing dementia**: Exercising regularly also reduces the risk of dementia in old age. Studies have shown that people who exercise regularly are less likely to suffer from dementia.

• **Exercise enhances one’s confidence and level of independence**: People at old age become more confident and independent when they exercise regularly. As it reduces the fear of falling.

11.5.3 Health Problems

Most of the health problems seen during old age can be broadly divided into the following five categories:

1. **Physiological Problems**

   During old age many physiological problems occur like loss of teeth leads to shrinkage of the jaw line, wrinkles develop on cheeks, eye lids become baggy with upper lids over hanging the lower, eyes become dull, skin becomes rough and loses its elasticity, hair becomes thin and grey, nails become thick and tough, hands start trembling, bones harden and become brittle which can cause fractures.

   The physical condition to some extent depends upon hereditary constitution, the manner of living and environmental factors. There are various secondary causes for physical decline like faulty diet, malnutrition, infectious, intoxications, gluttony, inadequate rest, emotional stress, overwork, endocrine disorders and environmental conditions like heat and cold.

   Changes in nervous system influences our brain, ratio of heart weight to body weight gradually decreases. The chance of heart disease, chronic disease and other ailments also increases. The regulatory muscles get affected in old age, which affects the body temperature. So, in old age people are affected more due to climate change. They also suffer from insomnia, troubles in digestion, dental problems which affects their chewing and swallowing.

   In old age chances of accidents increase, as their reaction to dangers slows down. This is due to malfunctioning of the sense organs and declining mental abilities. Our capacity to work also decreases, changes in the nerve center of the brain and retina affects our vision. So, the ability to differentiate between colours reduces gradually. Also they find it difficult to see things that are at a distance that is farsightedness gets affected because of reducing eye sight.

   Sexual potency also decreases along with secondary sexual characters. Women experience menopause around 45 – 50 years of age. During menopause women also experience nervousness, headaches, giddiness, emotional instability, irritability and insomnia. They easily get tired, they do not feel like learning or doing new things.
2. Psychological Problems
In old age there is a higher chance of developing mental disorders like depression. There are also two major psychotic disorders like senile dementia and psychosis with cerebral arteriosclerosis.

In senile dementia people develop symptoms like poor memory, intolerance of change, disorientation, restlessness, insomnia, failure of judgment, a gradual formation of delusions and hallucinations, extreme mental depression and agitation, severe mental clouding in which people become restless, combative, resistive and incoherent.

Psychosis along with cerebral arteriosclerosis involves physiological symptoms like weakness, fatigue, dizziness, headache, depression, memory defect, periods of confusion, lowered efficiency in work, heightened irritability and tendency to be suspicious about trivial matters, forgetfulness. Intelligence and creative thinking also gets affected in old age.

3. Emotional Problem
Old people suffer from various emotional issues like loss of spouse, feeling lonely, isolated. Also when they are neglected by their family members it leads to emotional problems. Their mental ability starts declining and they become dependent on others. They start losing trust in their ability or are not able to judge things, but still they wish to get involved in the family matters.

4. Social Problems
With age, older people suffer from huge losses like death of relatives, friends and spouse which restricts them from participating in social activities. Due to huge losses old people become lonely, isolated and also start suffering from depression. They get confined at home and only interact with their family members.

5. Financial Problem
Old age is the time when we see physical deterioration and social alienation in some cases, loss of spouse, friends, job, property and physical appearance. It is also the phase when people retire which leads to loss of income and the pension that they receive is not sufficient. With reduced income their life is reversed from ‘Chief breadwinner to a mere dependent’. The physical strength deteriorates, mental stability diminishes, financial power becomes bleak and eye sight suffers a setback. In this period people feel disappointed, dejected, lonely, suffer from diseases and repent over many things.

One may experience many health problems during old age, such as:
- Arthritis
- Heart disease
- Cancer
- Respiratory diseases
11.5.4 Memory Changes

Our brain keeps changing throughout our life like our body. When we are infants our brains are adapting, learning, making memories, in late twenties the aging process of the brain starts and also we start losing neurons. But around sixties our brain starts to shrink, this process is quite normal and each one of us experience this.

Attention plays a very important role it helps us to focus on information, select information, divide and sustain the limited processing capacity to different tasks and inhibits any distracting information. Old people experience changes in attention which reduces cognitive functioning like memory or psychomotor performance.

Memory is of two types: working memory and procedural memory. In old age working memory declines but procedural memory remains same. The job of procedural memory is to perform certain actions like it guides the processes we perform and working memory in contrast holds multiple pieces of transitory information in the mind where they can be manipulated. Memory starts degenerating with age, as older people find it difficult to remember and attend to any new information.

Becoming forgetful is also a major concern that old people experience. For example-

- One may start to talk about a movie you saw recently when you realize you can’t remember the title.
- While giving directions to your house, you may suddenly become blank on a familiar street name.
- One may at times find oneself standing in the middle of the kitchen wondering what they went in there for.

When we grow older we need to understand that many changes take place in our memory along with physiological changes. It will take longer to learn, recall things; we cannot be that quick as we used to be when we were young. But if we give ourselves time, then we can recall things.

11.5.5 Work and Retirement

Retirement is a very big phase in a working individual’s life. Before retirement some people start planning for pre-retirement that is they try to escape from their workplace. Pre-retirement stage involves two sub-stages that is in the first sub-
stage people have negative views regarding retirement and they feel that there is a lot of time in getting retired. In the second sub-stage they start making plans for future. When people start thinking of retirement, the first thing that comes in their mind is financial issues.

Retirement brings changes in habits from a work-focussed lifestyle to changes in behaviour which affects physical and mental well-being. The decision of retirement affects an individual’s well-being for many years. It is a lifestyle that every individual has to accept.

Every person who is retiring sees it differently like some see it as an opportunity to escape from obligations and a chance to pursue their own passion, but for some it has a negative effect.

Involuntary retirement or unexpected job loss increases the chances of depression in later life. But if it is a gradual retirement then the person may not feel so much stressed. The people who receive strong support from their family and friends tend to have better mental health than others who do not receive support.

Often engaging in the following things can make the transition into retirement relatively easy:

- **Give time:** One needs to give oneself time and understand that retirement doesn’t happen overnight. Emotions keep changing day by day.

- **Assess your resources:** It refers to assessing things on what one can execute control and things on what one cannot execute control. For example, asking these questions to self also helps: Can I change what’s challenging me? If not, can I change the way I see it? And finally, can I reduce my stress level through meditation, exercise, therapy, etc.?

- **Having a purpose of life:** One needs to maintain his/her identity, their relationships, and work towards a sense of purpose.

- **Socialize:** Maintaining friends and socializing makes this transition relatively easy.

- **Exercise regularly:** It helps by boosting one’s mood by producing stress-relieving chemicals such as endorphins and serotonin. It is also known to increase one’s overall health.

- **Have a mission:** Making a mission statement, writing down a list of things one wants to do and then identifying ways of achieving these goals have been found quite helpful by most.

- **Explore newness:** Exploring something one has never done before adds thrill in life.

- **Seek help:** If nothing seems to work, then one can take help of a counsellor or try to take help of someone who can guide one better.
11.5.6 Adjustment to Old Age

Old age is the last stage of life, when physical strength deteriorates, mental ability weakens, the individual becomes economically dependent and sometimes, emotionally disturbed. This is known as the natural aging process. Old age is also known as a period of decline in life cycle.

People in old age are quite fearful, that is they feel they are becoming forgetful, they find it difficult to adjust to the ever growing world. They have problems in material, social and emotional adjustment. The weight-bearing bones and the movable joints take much wear and tear as the body ages, eyesight weakens, cataracts and macular degeneration can develop, hearing loss.

They face many physical, psychological and social role changes that affect their happiness. They feel lonely and depressed due to retirement, death of their friends or spouse or some family member. So, they find it difficult to maintain relations and also to form new one.

In order to adjust to all these changes it is important for them to be flexible and learn new skills in order to cope up and lead a happy and satisfied life.

In today’s modern period, the ‘cultural status’ of old people has declined in many societies. Elders are seen no longer as bearers of wisdom but as a burden. This changing attitude is associated with rapid urbanization, industrialization, westernization, changed roles of women, and breakdown of traditional family structures and roles.

Each individual who is working goes through a phase of retirement, which leads to loss of income. Their status changes from chief breadwinner to a mere dependent although they have spent their earnings on education of children, their marriage, acquiring new property, and family maintenance. Their children are growing who are busy working and do not have time to be with their parents which in turn leads to loneliness and depression. Some parents are also sent to old age homes by their children as they became a liability.

Many factors influence both men and women during old age and some of them are beyond their control. The following are some of the factors that can influence one’s adjustment to old age.

- **Preparation for old age:** Every individual entering the phase of old age should prepare oneself psychologically and economically, otherwise one may find it difficult to adjust to the changes and it may seem like a traumatic experience for one.

- **Earlier experiences:** If people are facing difficulty in adjusting to old age that means the way they have learnt to adjust in earlier periods has not been appropriate, because of which they are now suffering.

- **Satisfaction of needs:** In order to live a well-adjusted life in old age, men and women should be able to satisfy their personal needs and live up to the expectations of others.
• **Retention of old friendships**: Older people stay happy and better adjusted if they have a lot of friends to interact and spend time with.

• **Grown children**: If grown up children associate well with their elderly parents then the parents will have a good personal and social adjustment.

• **Social attitudes**: It is important to have the correct social attitude otherwise older people find it difficult to adjust.

• **Personal attitudes**: Old people should keep a positive attitude towards aging and should happily adjust to the changes.

• **Methods of adjustment**: There are some rational and some irrational ways of adjustment. The various methods of rational adjustment are— accepting the limitations of age, developing new interests, learning to give up one’s children and not thinking about the past.

  o The various methods of irrational adjustment are— denying changes that come with age and trying to continue as before, becoming preoccupied with the pleasures and triumphs of bygone days, and wanting to be dependent on others for bodily care.

• **Chronic illness**: Chronic illness affects our life more as compared to temporary illness.

• **Living conditions**: If elderly people are not provided with proper living conditions then they tend to feel inferior, inadequate, and resentful. This affects their adjustment to old age.

• **Economic conditions**: It is especially difficult for elderly people to adjust to financial problems because they know that they will have little or no opportunity to solve them, as they could when they were younger.

### 11.5.7 Personal Relations in Late Life

When people age, their relationships go through many changes and new ones also develop. Some also feel that their personal relationships have changed. Relations with family are important at every stage of life. But when we grow older circumstances change and the things we need from our family change with them. At old age, people become quite vulnerable and need emotional support, which can only be provided by the family.

Along with aging, people also experience a number of unique circumstances and challenges, as it makes life more difficult, they feel lonely.

They also experience physical and cognitive difficulties which make it difficult for them to live. If they have support of their family members then they can continue with their household work and can fulfill their other requirements.

It is difficult for older people to maintain a good and healthy social life outside their family. They face mobility issues that is why they find it difficult to go out and interact with others.
The world is changing quite fast and to maintain pace with the changing world is very difficult for old people. Without family support they cannot cope in the changing world like culture and technology etc.

11.5.8 Death and Bereavement

Death and dying are an inevitable part of life. The way each person reacts to death is different; it cannot be avoided or predicted in advance. A person’s reaction to loss will depend upon the relationship he/she had with the person who has died. Death leads to a period of grief and mourning which is known as bereavement. The person who experiences bereavement may also have to deal with decline in health, end of an important relationship etc. The amount of time spent by a person in bereavement depends upon how attached one was to the person who died and how much time was spent anticipating the loss.

The following tips can be followed to better deal with death:

- Realize that everyone deals with death differently
- Open up and talk about it, but only when you’re ready
- Let yourself be vulnerable
- Cherish the memories of your loved ones
- Give yourself time to heal

11.5.9 Purpose and Meaning of Life

It is very important for every individual to have meaning and purpose in life. It leads to happiness, although purpose and happiness are different concepts. But feeling a sense of meaning in your life can be a key factor in experiencing happiness.

Everyone experiences ups and downs in their life but still having meaning and purpose motivates you to do your best. The concept of happiness does change when we age that is when we are young we try to associate happiness with excitement, but when we get older we associate happiness with peace. This can happen as we tend to shift our focus from future to what is happening at the present in our life.

Some of the following things can be undertaken in order to maintain purpose and meaning in life:

- **Donate time, money or talent:** By the time one reaches old age, he or she has attained a lot in life in terms of money, gratitude, material etc. It is also the time when one is at that stage of life, where he/she can contribute meaningfully to the lives of others in terms of material donations, time, money or talent.
- **Listen to feedback:** It is important that we listen to our inner voice and start redoing things that we feel quite passionate about.
• **Surround yourself with positive people**: Being around positive people is inspiring and motivating. It makes one feel more happy, satisfied and positive within self.

• **Start conversations with new people**: Human beings are social beings and can’t live alone. People around us are both a source of joy and pain. It is always better to add new people in one’s life and develop a social support system.

• **Explore your interests**: During the years of youth, one gets too busy in doing the everyday errands and trying to meet up one’s basic needs. Old age gives one an opportunity to explore and engage in different areas of their interest.

• **Consider injustices that bother you**: One can even feel for something and make it a cause of mission of life with the idea of contributing meaningfully in the lives of others around us.

### Check Your Progress

5. List a few changes that take place at the onset of old age.

6. Name the five categories of health problems seen during old age.

### 11.6 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Parenting is raising of children and performing all responsibilities and activities associated with it. It is believed as a long and difficult journey because it is not just bringing a new human life into the world but it also comprise of monitoring them and helping them in the journey towards adulthood.

2. Career planning is a continuous thinking process about one’s career interests, values, skills and preferences, life explorations, available work and learning options and ensuring that the type of work we choose fits our personal circumstances.

3. It is important to maintain a work-life balance because it enables us to have a balance between work and personal responsibilities thus strengthening our loyalty and productivity towards our organization and personal life.

4. Companies can help employees to encourage a work-life balance using a number of ways like changes in policies, offering flexible working options—work from home, job sharing and compressed work weeks. This will help to reduce the conflict between work and personal responsibilities.

5. There are many changes that took place at the beginning of old age such as loss or shrinkage of nerve cells, slowing of responses, visual and hearing
problems may interfere with daily life, susceptibility to accidents and falls, loss of teeth which can also affect the amount of nutrition they receive. Chronic conditions are also the part of old age.

6. The five categories of health problems seen during old age are as follows:
   (i) Physiological Problems
   (ii) Psychological Problems
   (iii) Emotional Problems
   (iv) Social Problems
   (v) Financial Problems

11.7 SUMMARY

- Parenting requires a lot of energy, effort, courage and patience. It is about accepting that you are primarily responsible for your child’s education, well-being, safety, emotional maturity and eventual attainment of adulthood.

- Career planning is important in order to achieve success in our career. There are five key steps that enables one to create an effective career plan, namely self-evaluation, skill analysis, setting a focused direction, committing to a stipulated time frame, monitoring and reviewing your career plan.

- Good and healthy relationships help us to manage stress effectively, solve problems and overcome challenges in our life.

- Compatibility, communication, honesty and accountability, sharing, healthy physical and emotional boundaries, trust and care are a few factors that enable one to develop healthy and gratifying interpersonal relationships.

- Each and every adult who is working needs to maintain a work-life balance. It is that balance which an individual needs to maintain between the time allocated for work and other aspects of life.

- Old age is also known as late adulthood which starts around 60-65 years of age. Various physical changes take place in our body as we reach old age. Though, most of the older people are quite healthy because they follow a healthy lifestyle. Exercise and diet are important influences on health.

- Aging in old age affects our sensation and motor ability. People also experience dulling of the senses, reflexes become slow and fine motor abilities continue to decrease with old age. Older people tend to have a lower manual dexterity as compared to young adults. Parkinson’s disease is a disorder that can affect fine motor skills in the elderly.

- In order to remain fit and healthy at old age we should exercise regularly as it will keep our body fit, boost our energy. Regular exercise is also good for the mind, mood, and memory.
• Our brain keeps changing throughout our life like our body. When we are infants our brains are adapting, learning, making memories, in late twenties the aging process of the brain starts and also we start losing neurons. But around sixties our brain starts to shrink, this process is quite normal and each one of us experience this.

• Memory is of two types: working memory and procedural memory. In old age working memory declines but procedural memory remains same.

• Retirement is a very big phase in a working individual’s life. Retirement brings changes in habits from a work-focused lifestyle to changes in behaviour which affects physical and mental well-being.

• Old age is also known as a period of decline in life cycle. People in old age feel they are becoming forgetful. They have problems in material, social and emotional adjustment. In order to adjust to all these changes it is important for them to be flexible and learn new skills in order to cope up and lead a happy and satisfied life.

• Old age people also experience physical and cognitive difficulties which make it difficult for them to live. If they get family support then they can continue with their household work and can fulfil their other requirements.

• Death and dying are an inevitable part of life. The way each person reacts to death is different; it cannot be avoided or predicted in advance.

• A meaning and purpose in life leads to happiness, although purpose and happiness are different concepts. But feeling a sense of meaning in your life can be a key factor in experiencing happiness.

11.8 KEY WORDS

• Parenthood: It refers to the state of being a parent and the responsibilities involved.

• Absenteeism: It is a practice of regularly staying away from work or school without good reason.

• Dexterity: It is an ability to perform a difficult action quickly and skilfully with the hands.

• Parkinson’s disease: It is a progressive disease of the nervous system that affects the part of one’s brain that controls the movement of the body.

• Sedentary: It means sitting a lot and it also refers to a person or job that is not very physically active.

• Cognitive function: It is a high order mental process that help us gather and process information.

• Motor skill: It is a function which involves the movement of muscles and bone structures.
11.9 SELF ASSESSMENT QUESTIONS AND EXERCISES

Short Answer Questions

1. Why is good parenting important? Discuss briefly.
2. What are the five key steps that enable one to create an effective career plan for oneself?
3. Briefly discuss how parents can have the greatest influence over their children’s choices.
4. Write short notes on:
   (a) Psychomotor Functioning
   (b) Working Memory and Procedural Memory

Long Answer Questions

1. Discuss the various steps involved in effective career planning.
2. Why it is important to maintain healthy family relationships? Discuss in detail.
3. Discuss the problems or challenges a person encounters as he/she gets older.
4. Why it is important for every individual to have meaning and purpose in life? Elaborate.

11.10 FURTHER READINGS


BLOCK - IV
SOCIAL BEHAVIOURS

UNIT 12 SOCIAL MOTIVES, ATTITUDES AND LEARNING IN SOCIAL CONTEXTS

Structure
12.0 Introduction
12.1 Objectives
12.2 Social Motives and Behaviours
12.2.1 Social Motives
12.3 Nature and Measurement of Attitude
12.3.1 Attitude Change
12.4 Reinforcement and Learning
12.4.1 Social Learning through Imitation
12.5 Answers to Check Your Progress Questions
12.6 Summary
12.7 Key Words
12.8 Self Assessment Questions and Exercises
12.9 Further Readings

12.0 INTRODUCTION

Psychologists have divided motives into three types – biological motives, social motives and personal motives. Biological motives refer to both animals and human beings, but social motives are specific only to human beings. As the name suggests, these motives are learnt in social groups as a result of interaction with the family and society. Some of the common social motives recognized by psychologists are: achievement motives, aggressive motive, power motive, acquisitive motive, curiosity motive and gregariousness. An individual can have both positive and negative attitude.

The unit will deal with the common social motives displayed by the human beings. The nature, measurement and change of attitudes. In addition, it will also deal with the ABC Model of Attitude and explore the Social learning theory by Albert Bandura.
12.1 OBJECTIVES

After going through this unit, you will be able to:

- Define social psychology and discuss various aspects of social behaviour
- Describe the common social motives displayed by human beings
- Evaluate the nature, measurement and change of attitudes
- Explain the ABC Model of Attitude
- Analyse Albert Bandura’s Social learning theory

12.2 SOCIAL MOTIVES AND BEHAVIOURS

The study of social motives and behaviour falls in the realm of social psychology. Social psychology is the study of human interaction and the way it affects behaviour. To put it more formally, social psychology is the scientific study of the many ways in which interactions, interdependence, and influence between people, affect the individual’s behaviour and thought.

Often how people process, store, and apply information about other people and social situations is of key interest. These aspects of social behaviour are studied by the sub-realm of social psychology known as social cognition. Social cognition also focuses on the role that cognitive processes play in our social interactions. The way we think about others plays a major role in how we think, feel, and interact with the world around us.

12.2.1 Social Motives

Social motives are specific only to human beings as they are learnt in social groups based on one’s interactions with their family and society at large. Some of the common social motives displayed by people are as follows:

- **Achievement motive:** It refers to one’s desire to achieve a goal, attain high success, reach high positions and standards, to do better and improve one’s performance. High achievers are seen to choose and perform better at challenging tasks, prefer personal responsibility, seek and make use of the feedback received about their performance, and come up with innovative ideas to improve their performance. Whereas, low achievers do not accept challenge, put on average standards and tend to accept failure easily. It is essential that parents allow children to take their own decisions independently and guide them for higher achievement so that children are able to develop a high achievement motivation.

- **Aggressive motive:** If refers to one’s tendency to react aggressively especially when faced with frustration or inability to reach a goal or resulting from a sense of being insulted by others. One is also seen to display verbal or physical aggression in situation of fear and danger.
• **Power motive:** It refers to one’s desire to have an impact on others, influence people by their reputation, expect people to listen and obey their instructions. People who are high on power motive tend to choose jobs in which they can exert their power, have following and get high prestige and recognition from others such as jobs in Police, Government administration etc.

• **Acquisitive Motive:** It refers to one’s desire for material property, money and to acquire all those things which appear attractive to them.

• **Curiosity motive:** It refers to one’s tendency to explore and know about new things, travel to new places, look for new things and developments that take place outside their environment, to extend their knowledge and experiences by exploring new things. Children in their early growing years are usually high on curiosity.

• **Gregariousness (Affiliation need):** It refers to one’s tendency to associate self with other members of the same group or species; to establish, maintain and repair friendly relationships and to increasingly participate in group activities, as it leads the fulfillment of one’s basic needs, and needs for safety and security. People are seen to conform to social norms or ethical codes of groups in which they are interested in.

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**Check Your Progress**

1. Define social psychology?
2. Differentiate between high achievers and low achievers.

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**12.3 NATURE AND MEASUREMENT OF ATTITUDE**

An attitude refers to a set of beliefs that one holds in relation to an object, person, thing, event or issue. Attitudes can be positive or negative, or we can simply have opinions about issues without any strong emotional commitment.

Attitudes are usually made of three components namely the affective component, behavioural component and cognitive component. This is also known as the **ABC Model** of Attitude. The details of the various components of attitudes are given below:

• **Affective component:** It refers to the emotional or feeling aspect of an attitude. It is related to the statement which affects another person and deals with feelings or emotions that are brought to the surface about something, such as fear or hate.

• **Behavioural component:** Behaviour component of an attitude consists of a person’s tendencies to behave in a particular way toward an object. It
refers to that part of attitude which reflects the intention of a person in short run or long run.

- **Cognitive component**: The cognitive component of attitudes refers to the beliefs, thoughts, and attributes that we would associate with an object. It is the opinion or belief segment of an attitude. It refers that part of attitude which is related in general knowledge of a person.

We all keep forming attitudes about different things, sometimes consciously and at times unconsciously. Attitude formation is the result of a number of different influences with only one thing in common: They are all forms of learning.

- **Direct contact**: One way in which attitudes are formed is by direct contact with the person, idea, situation, or object that is the focus of the attitude. For example, a child who tries and dislikes sprouts will form a negative attitude about sprout.

- **Direct instruction**: Attitudes are also formed through direct instruction, either by parents or some other individual.

- **Interaction with others**: Sometimes attitudes are formed because the person is around other people with that attitude.

- **Vicarious conditioning (Observational Learning)**: Many attitudes are learned through the observation of other people’s actions and reactions to various objects, people, or situations. Just as a child whose mother shows a fear of dogs may develop a similar fear, a child whose mother or father shows a positive attitude toward classical music may grow into an adult with a similarly positive attitude.

### 12.3.1 Attitude Change

Attitudes once formed can also change. The art of persuading people to change their attitude is called as attitude change. Attitudes are subject to change with new learning.

Attitude change refers to the symbolic process in which communicators try to convince other people to change their attitudes or behavior regarding an issue through the transmission of a message, in an atmosphere of free choice. There are several factors that become important in predicting how successful any persuasive effort at attitude change might be. Attitude change depends on several factors as follows:

- **Source**: The communicator is the person delivering the message. There is a tendency to give more weight to people who are perceived as experts as well as, those who seem trustworthy, attractive, and similar to the person receiving the message.

- **Message**: The actual message should be clear and well organized (Booth-Butterfield, 1996). It is usually more effective to present both sides of an argument to an audience that has not yet committed to one side or the other.
(Crowley & Hoyer, 1994; O’Keefe, 2009; Petty & Cacioppo, 1996; Petty et al., 2003). Messages that are directed at producing fear have been thought to be more effective if they produce only a moderate amount of fear and also provide information about how to avoid the fear-provoking consequences.

- **Target audience**: The characteristics of the people who are the intended target of the message of persuasion are also important in determining the effectiveness of the message. The age of the audience members can be a factor.
- **Medium**: The form through which a person receives a message is also important. For example, seeing and hearing a politician’s speech on television may have a very different effect than simply reading about it in the newspaper or online.

Researchers have given various models to explain the process of attitude change. The details of the same have been given below:

1. **Elaboration Likelihood Model (ELM)**: This model focuses on the various thinking processes that might occur when we attempt to change a person’s attitude through communication; the different effects that particular persuasion variables play within these processes, and the strength of the judgments that results. According to this model, any one variable can influence attitudes in a number of different ways and can serve to either increase or decrease persuasion through several different mechanisms.

   According to this model, the two keys processes that are involved in bringing about a change in one’s attitude are — central-route processing and peripheral-route processing.

   If a person is motivated and able to think carefully about a message, then he or she is likely to follow the central route to persuasion. In the central route, individuals carefully consider the elements of the message in order to determine whether its proposal makes sense and will benefit them in some way. The Peripheral route processing, involve mechanisms where message recipients use simple cues or mental shortcuts as a means of processing the information contained in a message.

   **Check Your Progress**

   3. What is the ABC Model of Attitude?
   
   4. List the different forms of learning which result in different attitude formation.

### 12.4 REINFORCEMENT AND LEARNING

Consequences that increase the likelihood of occurrence of a particular behaviour are termed as reinforcers. Smiles, acceptance, praise, acclaim and attention from other people are example of social reinforcers.
Research over the years, have shown that children respond very well to social reinforcers. For instance, in a study, it was seen that children tended to study 2 hours more when they were given social reinforcement than when they receive no such reinforcement.

Such reinforcement need not always come from external source as giving oneself approval for one’s behaviour is equally reinforcing (Self-reinforcement). Social reinforcement is seen to play a vital role in various sphere of our life. It can also influence the type of health choices and decision we make.

12.4.1 Social Learning through Imitation

Social learning theory was given by Albert Bandura, a social cognitive psychologist, who proposed that new behaviours can be acquired by observing and imitating others. According to him, learning is a cognitive process that takes place in a social context and learning can take place through observation or direct instruction, even in the absence of any external direct reinforcement. Learning can also occur through vicarious reinforcement in terms of observation of rewards and punishments.

Some of the key aspects of social learning theory are as follows:

- Learning is both a behavioural and cognitive process that takes place in a social context.
- Observation of behaviour and observation of consequences of the behaviour can both facilitate learning (Vicarious Reinforcement).
- Learning involves observation, extraction of information from those observations, and making decisions about the performance of the behaviour (observational learning or modeling). Thus, learning can occur without an observable change in behaviour.
- Reinforcement does play an important role but it is not solely responsible for learning to take place.
- The learner is not a passive recipient of information. Cognition, environment, and behaviour all mutually influence each other (reciprocal determinism).

Social learning theory states that there are three types of modeling stimuli, namely:

- **Live models**, where a person is demonstrating the desired behaviour
- **Verbal instruction**, in which an individual describes the desired behaviour in detail and instructs the participant in how to engage in the behaviour
- **Symbolic**, in which modeling occurs by means of the media, including movies, television, Internet, literature, and radio. Stimuli can be either real or fictional characters.

The following four stages are involved in observational learning i.e., learning a behaviour by observing a model:

- **Attention**: In order to learn, observers must attend to the modeled behaviour. Researches have shown that awareness of what is being learned...
and the mechanisms of reinforcement greatly boosts learning outcomes. Several characteristics of the observer (such as, perceptual abilities, cognitive abilities, arousal, past performance) and characteristics of the behaviour or event (such as relevance, novelty, affective valence, and functional value), greatly influence the degree to which one will pay attention to model or modeled behaviour. The prestige of different models is also seen to affect the relevance and functional value of observation.

- **Retention**: For a behaviour to occur, one must be able to remember various features of the behaviour. Retention gets influenced by observer characteristics (such as cognitive capabilities, cognitive rehearsal) and event characteristics (such as complexity).
- **Reproduction**: The ability to reproduce a learnt behaviour depends to a great deal on the cognitive skills, and the sensorimotor capabilities required to produce a task.
- **Motivation**: Whether one exhibits a learnt behaviour or not depends a great deal on the motivations and expectations of the observer, including anticipated consequences and internal standards.

### Check Your Progress

5. What is Bandura’s social learning theory?
6. What are the four stages of observational learning?

### 12.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Social psychology is the scientific study that deals with social interactions, interdependence, and influence between people, affect the individual’s behaviour and thought.

2. High achievers perform better at challenging tasks. They prefer personal responsibility, seek and make use of the feedback received about their performance, and come up with innovative ideas to improve their performance. On the other hand, low achievers do not accept challenge, put on average standards and tend to accept failures effortlessly.

3. There are three main components of an attitude, namely the affective component, behavioural component and cognitive component. This is called as the ABC Model of attitude. A for affective, B for behavioural, and C for cognitive.
4. The different forms of learning which result in different attitude formation are as follows:
   (a) Direct contact
   (b) Direct instructions
   (c) Interaction with others
   (d) Vicarious conditioning (Observational Learning)
5. The social learning theory by Albert Bandura states that new behaviours can be acquired by observing and imitating others. The theory explains how people learn new behaviours, values and attitudes.
6. Learning by observation involves four stages or components: attention, retention, reproduction and motivation.

12.6 SUMMARY

- Social psychology is the scientific study of the many ways in which interactions, interdependence, and influence between people, affect the individual’s behaviour and thought.
- Social motives are specific only to human beings. Some of the common social motives displayed by people are achievement motive, aggressive motive, power motive, acquisitive motive, curiosity motive, gregariousness.
- An attitude refers to a set of beliefs that one holds in relation to an object, person, thing, event or issue. Attitudes can be positive or negative.
- Attitudes are usually made of three components namely the affective component, behavioural component and cognitive component. This is also known as the ABC Model of Attitude.
- Attitude change refers to the symbolic process in which communicators try to convince other people to change their attitudes or behaviour regarding an issue through the transmission of a message. Source, message, target audience and medium are a few factors which result to attitude change.
- Bandura’s social learning theory proposes that new behaviours can be acquired by observing and imitating others. According to Albert Bandura, learning is a cognitive process that takes place in a social context and learning can take place through observation or direct instruction, even in the absence of any external direct reinforcement.
- There are three types of modeling stimuli, according to Social learning theory, namely live models, Verbal instruction, and Symbolic.
12.7 KEY WORDS

- **Cognition**: It refers to the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses.
- **Vicarious**: It refers to a feeling or experience from someone else.
- **Perceptual**: It refers to an ability to interpret or become aware of something through the senses.
- **Stimuli**: It refers to something that incites to action or exertion or quickens action, feeling, thought, etc.

12.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. What is social cognition?
2. Write a short note on attitude change.
3. What are the three types of modeling stimuli under social learning theory?
4. Write short notes on the following:
   (a) Vicarious conditioning (Observational Learning)
   (b) Elaboration Likelihood Model (ELM)

**Long Answer Questions**

1. Discuss in detail the common social motives displayed by human beings.
2. Describe the three components of attitudes.
3. Explain the central-route processing and peripheral-route processing.
4. Analyse the key aspects of social learning theory.

12.9 FURTHER READINGS

UNIT 13 ANTI-SOCIAL AND PROSOCIAL BEHAVIOUR

Structure
1.0 Introduction
1.1 Objectives
1.2 Sinews of Growth: Defining Growth and Growth Management
1.3 Answers to Check Your Progress Questions
1.4 Summary
1.5 Key Words
1.6 Self Assessment Questions and Exercises
1.7 Further Readings

13.0 INTRODUCTION

In this unit, you will learn about pro and anti-social behaviour. Prosocial behaviour refers to the phenomenon of people helping each other with no thought of reward or compensation. Prosocial behaviour refers to actions or patterns of behaviour rather than motivations. The motivation to do charitable acts is called altruism. Anti-social behaviour is exhibited typically by people who are ‘anti-social’ which is hostility toward society or the established values of society. When behaviours are exhibited that violate rules or conventions of society and/or personal rights, they are exhibiting anti-social behaviour.

13.1 OBJECTIVES

After going through this unit, you will be able to:
- Study about prosocial behaviours and anti-social behaviour
- Define aggressive behaviour and its impacts
- Discuss the management of aggression

13.2 AGGRESSION

Any behaviour that is intended to harm another individual who doesn’t wish to get harmed is termed as an aggressive behaviour (Baron & Richardson, 1994). Because it involves the perception of intent, what looks like aggression from one point of view may not look that way from another, and the same harmful behaviour may or may not be considered aggressive depending on its intent. Intentional harm is, however, perceived as worse than unintentional harm, even when the harms are identical (Ames & Fiske, 2013).
Several factors seem to underlie aggression. Some of them include the following:

- Aggression is linked with genetics.
- Researchers have seen that presence of an extra Y chromosome, is also associated with increased aggression.
- Most likely people inherit a predisposition to violence but the environmental factors and modelling of aggressive behaviours in one’s environment is known to be closely related to aggression and violence.
- The amygdala is a brain structure that is believed to play an important role in aggression.
- Alcohol intake does have an impact on aggressive behaviour. Psychologically, alcohol acts to release inhibitions, making people less likely to control their behaviour even if they are not yet intoxicated.
- Biologically, alcohol affects the functioning of many neurotransmitters and in particular is associated with a decrease in serotonin.
- Aggression can also be directly learned through operant conditioning, involving positive and negative reinforcement and punishment. Bandura proposed that aggression can also be learnt by the indirect mechanism of observational learning.
- Social learning theory maintains that children learn through a process of imitation. Aggressive acts carried out by a role model will be internalized by an individual and reproduced in the future. If the role model’s behaviour is seen to be rewarded, then a child can learn that this is an effective way of getting what they want. Through this process of vicarious reinforcement, rewards that are witnessed as a result of aggression result in the behaviour being seen as acceptable and then reproduced.
- Parents are the primary role models for children; through a process of observation and identification of their behaviour is modelled. That is why, the boy who watches his father attack his mother is more likely to become an abusive parent and husband.
- Role models in the media can provide a source of vicarious reinforcement which can lead to aggressive behaviour being replicated. Bandura proposed that these role models can provide a child with a ‘script’ to guide their behaviour.
- Some evidence suggests that even taking on a particular social role, such as that of a soldier, can lead to an increase in aggressive behaviour. A social role is a pattern of behaviour that is expected of a person who is in a particular social position. For example a woman becomes a mother when she has a child and so occupies the status of mother. She is expected to also play the role of mother by caring for and loving her children (among other things).
There is increasing evidence that early exposure to media violence is a contributing factor to the development of aggression. Researchers have examined the impact of television and other media violence on the aggressive behaviour of children of various ages.

According to some researchers, violent scenes that children are most likely to model their behaviour after are ones in which they identify with the perpetrator of the violence, the perpetrator is rewarded for the violence and in which children perceive the scene as telling about life like it really is.

A 2010 review by psychologist Craig A. Anderson and others concluded that ‘the evidence strongly suggests that exposure to violent video games is a causal risk factor for increased aggressive behaviour, aggressive cognition, and aggressive affect and for decreased empathy and pro-social behaviour.’ Anderson’s earlier research showed that playing violent video games can increase a person’s aggressive thoughts, feelings and behaviour both in laboratory settings and in daily life.

13.2.1 Management of Aggression

One of the key principles that underlies management of aggression is expression and release of tension and pent up emotions. Some of the following ways can be adopted to manage one’s aggression better:

- **Catharsis**: As given by Freud, it refers to letting out of pent up emotions as it bring a sense of relief. One can even share their feelings with someone they have confidence in, be it a parent, friend, spouse etc. one can even pen down their emotions and feelings on a piece of paper.

- **Displacement**: Displacing or transferring aggression to some other objects can also help in releasing aggression.

- **Modelling**: One can even model better ways of displaying and expressing their aggression in more socially appropriate ways.

- **Teaching**: Children can be taught various ways and techniques to tolerate some degree of frustration. By training the child to be disciplined and develop positive values and morality, a lot of aggressive behaviour can be controlled.

- **Control of television, video shows and films**: Some decrease in aggression can be seen by controlling what children watch.

**Check Your Progress**

1. Define aggressive behaviour.
2. What is the Amygdala?
13.3 ALTRUISM AND HELPING BEHAVIOUR OR PROSOCIAL BEHAVIOUR

Altruism and helping behaviours are called Prosocial behaviours. In other words, Prosocial behaviours are those that are intended to help other people. Prosocial behaviour is characterized by a concern for the rights, feelings, and welfare of other people. Behaviours that can be described as pro-social include feeling empathy and concern for others and behaving in ways to help or benefit other people.

Research has shown that there are several factors that determine why or why not people help others. The various factors that determine why people help others are largely divided into internal, situational, external, personality and emotional factors. A lot of these factors coincide with each other and therefore more than one may be present while deciding whether an individual helps another or not. The details of the same are given below:

- **Internal factors:** These factors refer to various characteristics within a person that influence their behaviour. In pro-social behaviour when referring to internal factors, we are looking into personality traits that either enhance or inhibit helping. While looking into why or why not people help based on their inner attributes, altruism and ego centrism often come up. People either help for the benefit of themselves, egocentrism or solely for the benefit of others, known as altruism.

- **External factors:** These factors are based on situations therefore behaviour depends on the environment around the individual. In terms of helping behaviours, the situation one is in could definitely influence whether they engage in helpful behaviour or not.

- **Situational factors:** When deciding to help another person the situation can be very powerful. The situation can vary, from seeing someone else engage in pro-social behaviour, to whether or not you like the person, or to whether you believe they deserve help.

- **Emotional factors:** As humans, we all deal with a great variety of emotions that can affect many aspects of our lives. One of these aspects is the likelihood that we would engage in helpful behaviour. Emotions could have to do with both internal and external factors due to the fact that some emotions are brought out based on the external factors. On a daily basis we can differentiate emotional reactions to external events from reactions we have based on internal attributes.

- **Personality factors:** Personality dispositions are defined as stable characteristic behavioural traits that are based on learning experiences and genetics or both. In terms of helping, there are certain personality dispositions that tend to predict pro-social behaviour more than others. In layman terms, some people are just more helpful than others. Altruism is a combination of...
NOTES

Dispositional variables that are associated with helpful behaviour. Empathy is a trait that includes sympathy, a desire to solve the issue and putting one’s self in another person’s shoes. Those who have empathetic traits tend to want to help others immensely.

Some of us are highly motivated to help those in need, while others couldn’t care less and vehemently object to giving money or volunteering time in the service of others. Often when people are thinking about whether or not to help others, they undergo a cost-benefit analysis calculating the personal rewards of helping, as well as the psychological and physical drawbacks of offering help. If the emotional costs are deemed too high, such as when individuals feel overly threatened, insecure, or not personally accountable for offering help, then they will be far less inclined to display helping behaviours.

There are various reasons or factors that state when people are less likely to offer help. Important ones include the following:

- People are much less compassionate and less inclined to offer assistance to others when part of a group in comparison to when alone.
- Because of bystander effect, people tend to ignore the others’ pleas in a crowd.
- People are known to help more when the psychological cost of helping is low, and the need of the person needing help is considered to be substantial.
- People are less likely to help when they believe the person in distress could have prevented the problem through a proactive and decisive action of his or her own (Batson, 2010).
- Whether one would help the other or not is also seen to depend on several superficial associations between the helper and the person needing help, in terms of perceived degree of physical, intellectual, racial, and gender similarities (McDermott, & Kayson, 1990). This happens because we tend to see the needy as on like us. This Phenomenon is also known as in-group membership (Stürmer, Snyder, & Omoto, 2005).

Decision points in helping behaviour: Latane and Darley

Latane and Darley (1970) have given us five decisions an individual must undertake before he or she decides to help a stranger or not. The details of the same are given as follows:

- Noticing Something Unusual: One is more likely to help when one notices something unusual happening around.
- Defining the event as an emergency: The changes of offering help increase when one sees that is an emergency situation where the needy desperately needs help.
- Taking responsibility: In situations where there is only one person who is held responsible for offering help, then one is more likely to help as compared...
to the situation when the responsibility of offering help could be diffused among many. In order words this is known as bystander effect.

- Deciding you have what it takes: one is likely to help especially when the emergency situation requires certain skills that one possesses. For example, if someone is drowning and there is a person who knows swimming then he or she is more likely to help. But, if one feels that he or she may not be able to save the person, then they are less likely to offer help.

- Providing help: One is also more likely to help, if the positive outcomes in the favor of helping are more than the negative outcomes. The perception of these outcomes is known to depend on the fears, insecurities, emotions and beliefs of the helper.

### Check Your Progress

3. What is empathy and why do we need it?
4. What is bystander effect and when does it occurs?

#### 13.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Any behaviour that is intended to harm another individual who does not wish to get harmed is termed as an aggressive behaviour.
2. The amygdala is an almond-shape set of neurons located in the medial temporal lobe of the brain. It is a section of the brain that is primarily responsible for detecting fear and preparing for emergency events. Also, it is an area of the brain that plays an important role in aggression.
3. Empathy is a trait that includes sympathy. It is an ability to understand and share the feelings of another person. It also deals with a desire to solve others’ issues and putting oneself in another persons’ shoes. Those who have empathetic traits tend to help others immensely.
4. Bystander effect is a psychological phenomenon in which individuals are less likely to offer help to a victim when other people are present. It occurs in situations when the responsibility of offering help could be diffused to many.

#### 13.5 SUMMARY

- Pro-social behaviour refers to the phenomenon of people helping each other with no thought of reward or compensation. Anti-social behaviour is exhibited typically by people who are ‘anti-social’ which is hostility toward society or the established values of society.
Any behaviour that is intended to harm another individual who doesn’t wish to get harmed is termed as an aggressive behaviour.

Aggression can also be directly learned through operant conditioning, involving positive and negative reinforcement and punishment. Bandura proposed that aggression can also be learnt by the indirect mechanism of observational learning.

Social learning theory maintains that children learn through a process of imitation. Parents are the primary role models for children; through a process of observation and identification of their behaviour is modelled.

One can manage his/her aggression better by adopting methods like catharsis, displacement of aggression, modelling, teaching tolerance techniques, control of television, video shows and films.

Altruism and helping behaviours are called pro-social behaviours. The various factors that determine why people help others are largely divided into internal, situational, external, personality and emotional factors.

Latane and Darley, social psychology researchers, have given us five decisions an individual must undertake before he or she decides to help a stranger or not.

13.6 KEY WORDS

- **Neurotransmitter**: It is a chemical that carries messages between neurons or between neurons and muscles.
- **Perpetrator**: It refers to an individual who carries out a harmful, illegal or immoral act.
- **Egocentrism**: It refers to the inability to differentiate self and other.
- **Vehemently**: It refers to a feeling which is very intense and strong.

13.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. Write short notes on pro-social behaviour and anti-social behaviour.
2. Briefly discuss how alcohol consumption promotes aggressiveness.
3. Write a short note on altruism.
4. List the ways to manage aggression in a better way.
Long Answer Questions

1. Elaborate on the factors which trigger aggression.
2. What are some factors that make people less considerate to help others?
3. Explain Latane and Darley’s five decisions that an individual must go through in deciding to help a stranger in need.

13.8 FURTHER READINGS


UNIT 14 GROUP PROCESSES

14.0 INTRODUCTION

In this unit, you will learn about group processes. Why do individuals form themselves into groups? What are the reasons for forming or joining a group and what are the benefits to such individuals who become a part of the group? There are many factors that influence the formation of the group, the most important being the individual need satisfaction. This means that the members expect affiliation with the group to satisfy a need. This need is primarily a social need for love, affection and friendship. While there are many reasons why individuals would either form or join a group, some reasons standout. The most basic theory explaining group affiliation is the geographic proximity. For example, individuals working in the same area are more likely to form a group than those who are not physically located together.

14.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the meaning, types and theories of group formation
- Explain how a group task is performed and problems are solved
- Describe the various aspects of group communication and empathy
- Understand the significance of psycholinguistics, i.e., inter-relation between language and psychology
14.2 GROUP FORMATION AND MAINTENANCE

Various theories have been proposed to explain and understand how groups are formed and get change with the passage of time. There are four types of group development models that exist these are as follows:

- **Life Cycle Model:** According to this model, a group is formed through a process of a prescribed and linear sequence of stages.
- **Teleological Model:** According to this model, changes in group take place as a purposeful movement towards one or more goals based on the feedback they receive from their environment.
- **Dialectic Model:** This model proposes that a series of conflicts between two opposing entities and their resolution bring about changes within a group.
- **Evolutionary Model:** According to this model, changes within a group take place from a repeated cycle of variation, selection and retention.

Several theories have been put forward to explain the process of group development. Details of some of these are given below:

1. **Kurt Lewin’s Individual Change Process:** According to this model, changes within a group follow a three-stage process namely:
   1. **Unfreezing:** It involves overcoming inertia and altering the already existing mind set and overcoming the underlying defense mechanisms.
   2. **Change:** This refers to a period of confusion and transition, where old ways are challenged and replaced by new ones.
   3. **Freezing:** In this stage, the new mind set soon gets crystalized and the comfort seems to walk in again.

2. **Tuckman’s Stages Model:** According to this model, group development goes through four linear stages namely—forming, storming, norming and performing.
   1. **Forming:** In this stage, group members learn about each other and the task at hand. This stage is marked with unclear objectives, un-involvement, un-committed members, confusion, low morale, hidden feelings, poor listening etc.
   2. **Storming:** This stage is marked with conflicts and arguments about the structure of a group. There is a lack of cohesion, subjectivity, hidden agendas, conflicts’ confrontation, volatility, resentment, anger, inconsistency, failure etc. A leader’s job is to resolve conflict and tension.
   3. **Norming:** At this point, group members establish implicit or explicit rules about how they would want to achieve their goals. This phase is marked with questioning performance, reviewing or clarifying objectives, changing or conforming roles, opening risky issues, assertiveness, listening, testing new grounds and identifying strengths and weaknesses. The role of a leader...
is to empower to help its members to successfully implement and sustain a task.

IV. Performing: At this stage, a group reaches a conclusion and implements the solutions to the issues they were struggling in the past with. This stage is marked with creativity, inventiveness, flexibility, open relationships, pride, concern for people, learning, confidence, high morale, success etc.

V. Adjourning: This is the last stage of the model wherein the group once achieves the task for which it was originally designed for, then it disbands in this phase.

3. Tubbs Systems Model: This model states that there are four phases of group development that take place in a small group namely,

I. Orientation: In this stage, group members get to know each other, they start to talk about problems and begin to examine the limitations and opportunities of the project.

II. Conflict: Conflict is seen as a necessary part of group development which allows the group to evaluate ideas and can lead to group conformity and groupthink.

III. Consensus: In this stage, conflict ends and the group members compromise, select ideas and agree on alternatives.

IV. Closure: In this stage, the final result is announced and group members reaffirm their support of the decision.

4. Fisher’s Theory of Decision Emergence in Groups: This theory highlights how interactions change by focusing on their content as the group decision gets formulated and solidified. It outlines four phases as follows:

I. Orientation: During this stage, group members get to know each other and they experience a primary tension that arises before clear communication rules and expectations have been established.

II. Conflict: This phase is marked by secondary tension as here the group members tend to disagree with each other and debate over ideas. Conflict is seen as positive in nature as it helps the group achieve a positive result.

III. Emergence: The group tasks and its social structures become apparent in this group which leads to an attitudinal change making members more receptive to each other’s views.

IV. Reinforcement: Here group members bolster their final decision by using supportive verbal and non-verbal communication.

5. Poole’s Multiple Sequence Model: According to this model, different groups employ different sequences in making decisions. For example,

I. Task Track: It refers to various processes by the group accomplishing its goals such as doing problem analysis, designing solutions etc.
II. Relation: It deals with interpersonal relationships between the groups.

III. Topic Track: It includes a series of issues or concerns the group have over time.

IV. Breakpoints: When a group switches from one track to another then breakpoints in terms of conversation, adjournment, postponement etc. occur

14.2.1 Types of Group

A group refers to a social unit that consists of a number of individuals who share certain roles and relationship with one another, perform some specific tasks or functions, which tend to get stabilized over time thereby developing set of values or norms for their own behaviour. A person tends to join a group as it satisfies his or her certain needs and the membership may be rewarding to the individual. Groups have a dynamic process of social and emotional development of its members. Groups may have their formal leaders.

There are different types of groups. Details of the same are as follows:

- **Secondary groups:** It refers to special interest groups such as national, political, religious, fraternal and professional groups. These groups do not depend upon face-to-face contact although there may be direct interactions among the members.

- **Socio and psycho groups:** In social groups, members meet together to work on some common objectives or problems such as labour union, editorial staff of a school, etc. Whereas psycho groups are relatively more personal in nature where the members come together for the purpose of inter-member associations.

- **Organized and unorganized groups:** In organized groups the members play different roles in relation to common goals. The degree of organization may be very loose, or may be highly complex or formal one. In unorganized groups, each member functions more or less independently of the other. It is highly flexible and members are free to develop their roles.

- **In groups and out groups:** In groups refer to a group to which an individual belongs and feel loyalty. Whereas the group to which an individual does not feel loyalty or sympathy towards are seen as out groups.

**Check Your Progress**

1. Name the four types of group development models.
2. What are the four linear stages of Tuckman’s Stages Model?
Group processes refer to various principles or aspects of social behaviour, which have the power of changing one’s ideas and actions to meet the demands or expectations of a social group, perceived authority or a social role an individual is expected to play. Conformity, group thinking, group polarization, social loafing, social facilitation, de-individuation, compliance and obedience are examples of such group processes. The details of the same are given below:

1. Conformity

It refers to changing one’s belief or behaviour in order to fit in with a particular group, in response to real (involving the physical presence of others) or imagined (involving the pressure of social norms / expectations) group pressure.

The term conformity is often used to indicate an agreement to the majority position, brought about either by a desire to ‘fit in’ or be liked (normative) or because of a desire to be correct (informational), or simply to conform to a social role (identification).

There are several factors that influence conformity as follows:

- **Group Attractiveness**: The more attractive the group is to its members, the more likely the members are to conform. The lower the social position of the individual member in the group, the more that person can be influenced to conform to the group.

- **Group Unanimity**: Groups that are unanimous or in total agreement can exert great pressure to conform. When even one person has a dissenting view in a group, the pressure to conform to the group’s view is reduced considerably.

- **Public vs Private Response**: When group members have to express their views in front of others, they are most likely to conform than if they could do so in private, such as by filling out an opinion survey.

- **Nature of the task**: Tasks or questions that are vague or have no clear answer are easier to have people conform to. When they are clear, factual, or on a topic you feel competent about relative to the group, you are less likely to conform.
2. Groupthink

It refers to one’s attempt to strive for consensus within a group by either setting aside their own personal beliefs or by adopting the opinion of the rest of the group. One is more likely to engage in groupthink when one fears that their objections might disrupt the harmony of the group or suspect that their ideas might cause rejection of other members.

The following are some of the key features or aspects of groupthink:

- **Illusion of Invulnerability**: Members ignore obvious danger, take extreme risk, and are overly optimistic.
- **Collective Rationalization**: Members discredit and explain away warning contrary to group thinking.
- **Illusion of Morality**: Members believe their decisions are morally correct, ignoring the ethical consequences of their decisions.
- **Excessive Stereotyping**: The group constructs negative stereotypes of rivals outside the group.
- **Pressure for Conformity**: Members pressure any in the group who express arguments against the group’s stereotypes, illusions, or commitments, viewing such opposition as disloyalty.
- **Self-Censorship**: Members withhold their dissenting views and counterarguments.
- **Illusion of Unanimity**: Members perceive falsely that everyone agrees with the group’s decision; silence is seen as consent.
- **Mindguards**: Some members appoint themselves to the role of protecting the group from adverse information that might threaten group complacency.

3. Group Polarization

It refers to a phenomenon, when a group moves towards an extreme point in either of the direction as is indicated by the members of its group by changing the attitudes among members within a group. It can also lead to groupthink.

Group polarization occurs because of persuasion, comparison and differentiation. The details of the same are as follows:

- **Persuasion**: People change their mind as a result of the rational arguments presented by others.
- **Comparison**: People change their mind to conform with group norms especially when those norms are socially desirable.
• **Differentiation:** It refers to providing a variation or comparison where people change their mind to fit in with their view of the sort of decisions their group should make.

**NOTES**

4. **Social Facilitation**

It refers to an improvement in one’s performance because of the mere presence of others. There are two types of social facilitation: co-action effects and audience effect. Social facilitation occurs not only in the presence of a co-actor but also in the presence of a passive spectator/audience. This is known as the **audience effect.** But when there is a negative effect of presence of others on one’s performance then it is known as social impairment.

5. **Social Loafing**

It refers one’s tendency to put in less effort when one is a part of a group, as one may feel that all members of the group are pooling their effort to achieve a common goal, each member of the group contributes less than they would if they were individually responsible.

Some of the factors that affect social loafing are as follows:

- **Motivation:** People who are less motivated by a task are more likely to engage in social loafing when they are part of a group.

- **Diffusion of responsibility:** When in groups, people tend to feel less personal accountability and may even feel that their individual efforts have little impact on the outcome.

- **Group size:** In small groups, people are more likely to feel that their efforts are more important and will, therefore, contribute more. The larger the group, however, the less individual effort people will extend.

6. **De-individuation**

It refers to a phenomenon, when a person’s identity within a group overrides his or her own identity and self-awareness by creating a mob mentality and by preventing critical thinking and dissent. People in groups often feel less individual responsibility for their behaviour, and may feel that they will be able to act with more anonymity. They may also identify so strongly with a group that their individual feelings matter less.

Religious settings, sports games, political events, and large organizations such as militaries can all cause members to de-individuate. Peer pressure to go along with groupthink may also play a role in de-individuation.

When a person de-individuates within a non-destructive group, the benefits can be positive and may include a sense of belonging and camaraderie. De-individuation can be extremely emotional, and some people feel exhilarated when
they return to a sense of self-awareness. However, de-individuation can also contribute to destructive group behaviour. Political oppression, mass violence, riots, and bullying can all stem from de-individuation.

Anyone is susceptible to de-individuation, but a strong desire to belong and a strong group identity can increase a person’s likelihood of de-individuation. A highly religious person, for example, is much more likely to de-individuate in a religious setting than an avowed atheist.

7. Compliance
It refers to changing one’s behaviour due to the request or direction of another person with the idea of fitting in with the group, while still disagreeing with the group. Unlike obedience, in which the other individual is in a position of authority, compliance does not rely upon being in a position of power or authority over others.

Various techniques are used to gain compliance. The details of the same are given below:

- **The ‘Door-in-the-Face’ Technique:** This refers to asking initially for a larger request and when this request gets refused then making a smaller and a reasonable request in the hope of getting it fulfilled. After refusing the first offer, one may feel compelled to comply with the second request.

- **The ‘Foot-in-the-Door’ Technique:** This refers to asking for a small request and when once already fulfills it then asking for a relatively larger request, hoping that one is more likely to comply with the larger request too.

- **The ‘That’s-Not-All’ or Lowball Technique:** It refers to giving an additional offer over a product that has just been pitched in before the potential purchaser has made a decision with the idea of making the offer as appealing as possible.

Cultural differences exist in people’s susceptibility to these techniques. For the foot-in-the-door technique in particular, research has shown that people in individualistic cultures (such as the United States) are more likely to comply with the second request than are people in collectivistic cultures (such as Japan). The research suggests that people in collectivistic cultures are not as concerned with being consistent with previous behaviour because they are less focused on their inner motivation than are people in individualistic cultures, who are more concerned with their inner motives and consistency.

8. Obedience
It refers to performing an action under the orders of an authority figure. It differs from compliance (which involves changing your behaviour at the request of another person) and conformity (which involves altering your behaviour in order to go
along with the rest of the group). Instead, obedience involves altering your behaviour because a figure of authority has told you to.

Obedience differs from conformity in three key ways:

- Obedience involves an order; conformity involves a request.
- Obedience involves following the order of someone with a higher status; conformity usually involves going along with people of equal status.
- Obedience relies on social power; conformity relies on the need to be socially accepted.

14.3.1 Group Communication and Empathy

Various aspects of group communication and empathy in terms of prejudice and discrimination, liking and loving, and aggression and pro-social behavior are studied under a broad term called as social interaction. The details of the same are given as follows:

(a) Prejudice and discrimination

Prejudice is an unjustified or incorrect attitude (usually negative) towards an individual based solely on the individual's membership of a social group. For example, a person may hold prejudiced views towards a certain race or gender etc. (e.g. sexist).

Discrimination is the behaviour or actions, usually negative, towards an individual or group of people, especially on the basis of sex/race/social class, etc. For example Apartheid was a system of racial segregation that was enforced in South Africa from 1948 to 1994. Non-white people were prevented from voting and lived in separate communities.

Prejudice is often born of stereotypes and forms the fertile soil of discrimination. Different kinds of prejudice lead to different forms of discrimination. The details of the same are as follows:

- Gender prejudice: Gender stereotyping refers to the attitude that all members of a particular gender — all women, all girls, all men, all boys are a certain type of person. From this stereotype emerges sexism, which is the belief that members of one gender are inferior to another. For example, the attitude that girls don't understand math and science as well as boys do is based on a long-held stereotype about basic female intelligence.

- Racial/ethnic minority prejudice: There are many examples of racial prejudice in today's society. For starters, when the owner of a large hotel chain chooses not to employ those of a certain race or ethnicity because he believes they are in some way inferior to another, he is discriminating based upon a specific kind of prejudice called racism. This also includes profiling,
which happens when a person of color is, for example, pulled over based on their skin color (instead of an actual suspicion of a committed crime).

- **Age prejudice**: When townships and states pass laws limiting the rights of children to participate in legislation that might affect them, they are acting on an age prejudice, or ageism. In this case, the belief is that those below a certain age cannot understand or contribute meaningfully to lawmaking dialogues.

- **Class prejudice**: Classism is the belief or attitude that those of a certain economic class are inferior to another class. In some government structures, classism is employed by the ruling class as a basis to limit the rights of the lower class. For instance, by not extending funding to repair and renovate old schools or build new ones in low-income communities, the ruling class is sending the message that lower-class individuals are not entitled to quality education opportunities.

- **Scapegoating**: It represents the defence mechanism of denial by projecting responsibility and blame on others. It allows the perpetrator to eliminate negative feelings about him or herself and provides a sense of gratification. Furthermore, it justifies the self-righteous discharge of aggression. For the perpetrator, it can provide a firm separation between good and bad.

  The ego defence of displacement plays a role in scapegoating, in which uncomfortable feelings such as anger, frustration, envy, and guilt are displaced and projected onto another, often more vulnerable, person or group. The scapegoated target is then persecuted, providing the person doing the scapegoating not only with a conduit for his uncomfortable feelings, but also with pleasurable feelings of piety and self-righteous indignation. The creation of a villain necessarily implies that of a hero, even if both are purely fictional.

Prejudice can be learnt or developed under various ways such as exposure to the attitudes of parents, teachers, other children and the various forms of media etc. several theories have as been put forward to explain the process of their development.

- **Realistic Conflict Theory**: states that whenever there are two or more groups that are seeking the same limited resources, this will lead to conflict, negative stereotypes and beliefs, and discrimination between the groups. The conflict can lead to increasing animosity toward the groups and can cause an ongoing feud to develop. Conversely, conflict, negative stereotypes and beliefs, and discrimination between groups can potentially be reduced in situations where two or more groups are seeking to obtain some superordinate goals.
• **Social Identity Theory**: Social identity is a person’s sense of who they are based on their group membership(s). Social identity theory aims to specify and predict the circumstances under which individuals think of themselves as individuals or as group members. The theory also considers the consequences of personal and social identities for individual perceptions and group behavior. According to the theory, three psychological processes are central in that regard: social categorization, social comparison, and social identification.

  Social categorization refers to the tendency of people to perceive themselves and others in terms of particular social categories that is, as relatively interchangeable group members instead of as separate and unique individuals.

  Social identification reflects the notion that people generally do not perceive social situations as detached observers. Social comparison is the process by which people determine the relative value or social standing of a particular group and its members.

  With respect to prejudice social identity theory helps explain why people feel the need to categorize or stereotype others, producing the in-group sense of “us versus them” that people adopt toward out groups.

  Various methods are used to overcome prejudice such as educating one and learning about people who are different from one in many ways.

• **Equal status contact**: It refers to contact on an equal basis. Just as a relationship between people of unequal status breeds attitudes consistent with their relationship, so do relationships between those of equal status. Hence, interracial contact should be between persons equal in status to reduce prejudice. Moreover, Equal-status contact is defined as social interaction that occurs on an equal footing, without obvious differences in power or status. Equal Status Contact has been shown to reduce prejudice and discrimination, along with on-going, positive cooperation.

• **The jigsaw classroom**: It aims to reduce racial conflict and promote minority students’ learning motivation and learning outcome. It emphasizes that each individual learner was unique, and his or her role as a team member emphasized his or her contribution to the team through the learning process.

(b) **Interpersonal Attraction**

Interpersonal attraction refers to positive feelings about another person. It can take many forms, including liking, love, friendship, lust, and admiration. Several factors are involved in the attraction of one person to another, including both superficial physical characteristics as well as elements of personality.
• **Physical attractiveness**: It includes seeing someone as good looking, beautiful, handsome or pretty. It can include the beauty/attractiveness of a person’s face or other physical attributes such as height, body shape, etc. We do make very quick initial appraisals of other people when we meet them.

• **Proximity**: Physical proximity is how close a person is to you, and it is a slower, longer term source of attraction. When you can see and interact with another person more often, you tend to gradually find him or her more attractive.

• **Similarity**: Similarity is a very early determinant of interaction. Some evidence suggest that when we perceive that we are generally similar to another person, it can lead to romantic attraction. Furthermore, as relationships progress similarities decreases in importance to the point that being similar to your long term friends and romantic partners may not be important later in the relationship.

• **Reciprocity**: Finally, people have a very strong tendency to like people who like them. This is known as the reciprocity of liking.

(c) **Love**

Love is a basic human emotion, but understanding how and why it happens is not necessarily easy. According to the Sternberg’s Theory of Love, the triangular theory of love holds that love can be understood in terms of three components that together can be viewed as forming the vertices of a triangle. The triangle is used as a metaphor, rather than as a strict geometric model.

These three components are intimacy (that is feelings of closeness, warmth, connectedness, and bondedness in loving relationships), passion (that is, drives that lead to romance, physical and sexual attraction etc.), and decision/commitment (refers to the decision that one loves the other and wishes to share and spend rest of his other life with the others).

All these three components of love, namely, intimacy, passion and commitment interact with each other. For example, greater intimacy may lead to greater passion or commitment, just as greater commitment may lead to greater intimacy, or with lesser likelihood, greater passion.

14.3.2 **Psycholinguistics**

The term psycholinguistics was coined in 1936 by Jacob Robert Kantor. It refers to the inter-relation between language and psychology. It is also called as the psychology of language. In order words, it aims to study various psychological and neurobiological factors that enable humans to acquire, use, comprehend and
produce language. It is concerned with the study of how brain processes language. It has its roots in education and philosophy which aims to study children’s ability to learn language.

It studies various aspects of human language such as:

- **Phonetics and phonology**: It is concerned with the study of speech sounds. Psycholinguistics focus on how the brain processes and understands these sounds.

- **Morphology**: It refers to the study of word structures, especially the relationships between related words and the formation of words based on rules.

- **Syntax**: It is the study of patterns which determine how words are combined to form sentences.

- **Semantics**: It deals with the meaning of words and sentences.

- **Pragmatics**: It is concerned with the role of context in the interpretation of meaning.

Different theories have been put forward to explain how children acquire language. According to the first theory, all language must be learned by the child. Whereas, the second theory states that abstract systems to language cannot be learned but humans possess an innate language faculty.

Psycholinguistic researchers believe that human ability to use language is qualitatively different from any sort of animal ability. This ability might have resulted from a favorable mutation or from an adaptation of skills evolved for other purposes. But some psycholinguistics believe that language can be learned.

Psycholinguistics also deal with the study of how people understand sentences as they read and how people produce language either in written or spoken form, in a way that conveys meaning comprehensible to others. People are known to represent meaning by observing and analyzing instances of speech error or speech disfluencies like false starts, repetition, reformulation and constant pauses in between words or sentences; also, slips of tongue, like blendings, substitutions, exchanges (for example, spoonerism), and various pronunciation errors. Analysis of these speech errors have enlisted some of the following key observation:

- Speech is planned in advance; speech errors like substitution and exchanges show that one does not plan his/her entire sentence before s/he speaks. Rather, their language faculty is constantly tapped during the speech production process. But speech errors involving exchanges imply humans can only plan certain ideas and only to a certain extent in their sentence.
Lexicon is organized semantically and phonologically that is both by its meaning and form.

Morphologically complex words are assembled, that is, humans can generate morphologically complex words by merging morphemes rather than retrieving them as chunks.

**Check Your Progress**

3. Give examples of group processes.
4. What are the eight features or aspects of groupthink?
5. What is the difference between prejudice and discrimination?

### 14.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The four types of group development model are as follows:
   (a) Life Cycle Model
   (b) Teleological Model
   (c) Dialectic Model
   (d) Evolutionary Model

2. The four linear stages of Tuckman’s Stages Model are forming, storming, norming and performing.

3. Conformity, group thinking, group polarization, social loafing, social facilitation, de-individuation, compliance and obedience are examples of group processes.

4. The eight key features or aspects of groupthink are:
   (a) Illusion of Invulnerability
   (b) Collective Rationalization
   (c) Illusion of Morality
   (d) Excessive Stereotyping
   (e) Pressure for Conformity
   (f) Self-Censorship
   (g) Illusion of Unanimity
   (h) Mindguards
5. Prejudice is an unjustified or incorrect attitude (usually negative) towards an individual based solely on the individual’s membership of a social group. While, discrimination is the behaviour or actions, usually negative, towards an individual or group of people, especially on the basis of sex/race/social class, etc.

**14.5 SUMMARY**

- The four types of group development models that exist are: life cycle model, teleological model, dialectic model, and evolutionary model.
- Several theories have been put forward to explain the process of group development, namely Kurt Lewin’s individual change process, Tuckman’s Stages Model, Tubbs Systems Model, Fisher’s theory of decision emergence in groups, and Poole’ Multiple Sequence Model.
- A group refers to a social unit that consists of a number of individuals who share certain roles and relationship with one another, perform some specific tasks or functions, which tend to get stabilized over time thereby developing set of values or norms for their own behaviour. There are different types of groups, namely secondary groups, socio and psycho groups, organized and unorganized groups, in groups and out groups.
- Group processes refer to various principles or aspects of social behaviour. Conformity, group thinking, group polarization, social loafing, social facilitation, de-individuation, compliance and obedience are examples of such group processes.
- Prejudice is an unjustified or incorrect attitude (usually negative) towards an individual based solely on the individual’s membership of a social group. Discrimination is the behaviour or actions, usually negative, towards an individual or group of people, especially on the basis of sex/race/social class, etc.
- Different kinds of prejudice lead to different forms of discrimination. Gender prejudice, racial/ethnic minority prejudice, age prejudice, class prejudice, scapegoating are types of prejudice.
- Interpersonal attraction refers to positive feelings about another person. It can take many forms, including liking, love, friendship, lust, and admiration.
- Love is a basic human emotion, but understanding how and why it happens is not necessarily easy.
- The term psycholinguistics was coined in 1936 by Jacob Robert Kantor. It refers to the inter-relation between language and psychology. It is also called as the psychology of language.
14.6 KEY WORDS

- **Polarization**: It refers to a division into two sharply contrasting groups or sets of opinions or beliefs.
- **Unanimity**: It is the state of complete agreement among every member of the group.
- **Stereotyping**: It refers to setting up an over-generalized belief about a particular category of people.
- **Loafing**: It refers to spending one’s time in an aimless and idle way.
- **Compliance**: It refers to an action or fact of complying with a wish or command.
- **Scapegoating**: It refers to an act of blaming a person or group for something bad that has happened or that someone else has done.
- **Reciprocity**: It refers to the practice of exchanging things with others for mutual benefit.

14.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

**Short Answer Questions**

1. Briefly explain the theories that have been put forward to explain the process of group development.
2. What is group polarization and why does it occur?
3. What do you mean by the term social loafing? Name the factors that affect social loafing.
4. What is obedience? How is it different from compliance and conformity?

**Long Answer Questions**

1. Discuss the eight types of group processes in detail.
2. What is compliance? Explain the various techniques of compliance.
3. Elaborate on different kinds of prejudice.
4. What do you understand by psycholinguistics? Describe the various aspects of human language it studies.
14.8 FURTHER READINGS


