

Krishna Kanta Handiqui State Open University

CERTIFICATE PROGRAMME IN EARLY CHILDHOOD EDUCATION

CECE 01

Exam Code:

CHILD DEVELOPMENT AND EARLY CHILDHOOD CARE

CECE 01

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KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

Certificate programme in Early Childhood Education

CECE01- CHILD DEVELOPMENT AND EARLY CHILDHOOD CARE

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COURSE INTRODUCTION (COURSE 1)

COURSE INTRODUCTION

CHILD DEVELOPMENT AND EARLY CHILDHOOD CARE

This is the First course in Certificate in Early Childhood Education. The course consists of fourteen units. This course primarily will deal with child development and care. As a pre-school teacher, it is essential to identify the developmental changes that take place in children. The knowledge of these changes help the teacher to plan the various scholastic and co-scholastic activities for their students. The Early Childhood Period is an important stage of life, characterized by remarkable physical, cognitive, social and language development. This course will enable you to identify those changes in the pre-school students. Moreover, it will also deal with the nutritional care and common ailment that affect the children body.

The course comprises of fourteen units. The **first Unit**-***"Introduction to Educational Psychology"*** gives you the basic concept of psychology and its application in teaching-learning process. The **second** unit-***"Growth and Development"*** discusses about the concept of growth and development and its relationship. The **third** Unit- **"*Stages of Development***" describes the concept of life span and different phases of life-span. The **fourth** Unit- **"*Pre-Natal Development"*** explains the pre-natal stage and different conditions that are determined during this period. The **fifth** unit- **"*Neo-Natal Developmental Period"*** deals with the neo-natal period of human life and its allied aspects. The **sixth** Unit-"***The Babyhood (Infancy) Period"*** covers the infancy stage of human life and different developmental aspect during this period. The **seventh** Unit- **"*Early Childhood Period*"** discusses the characteristics and problems faced by the children during this period. The **eight** unit- **"*Physical and Motor Development in the Early Childhood Period"*** discusses how physical and motor development take place in young children. The **ninth** unit-***"Cognitive and Concept Development in the Early Childhood Period"*** deals with the cognitive changes in the young children and how different concepts are formed during this period. The unit **tenth**- ***"Social, Language and Emotional development during Early Childhood Period"*** discusses how social, language and emotional development take place in the young children. The **eleventh** unit- "***Developmental Hazards among Pre-School Children"*** explains about different hazards faced by the children during early childhood period. The **twelve** unit- **"*Nutritional Care***

for Pre-school Children" deals with nutritional care for the children. The **thirteenth** Unit – **"*Identifying the Common Ailment in Pre-School Children"*** discusses about common ailment and diseases among the young children and how measures can be taken to protect them from all these diseases and ailments. The **last Unit** of this course- ***"Education for Exceptional Children"*** deals with the children having special need or exceptionality and various educational programme for these children.

While going through this SLM, you will come across some boxes in the middle of the text. These boxes will explain you more about some important points and concept within the text. Apart from this, there will be some broad and short questions which have been included under **"ACTIVITY"** and "**CHECK YOUR PROGRESS"** in every unit. Activities will increase your thinking and reasoning capacity as questions put in **ACTIVITY** are not directly derived from text. Hints on the answer to the short questions have been put under section **"ANSWER TO CHECK YOUR PROGRESS"** .Besides, a few text-related questions have been out in **"POSSIBLE QUESTIONS/ MODEL QUESTIONS".** These questions will help to draw your attention on the probable topics for the examinations so that you can prepare for the examination with confidence and determination.

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Physical Development in a Toddler, Development of Language in a toddler, Cognitive development in a Toddler, Jean Piaget's theory of Cognitive Development , Social development in a Toddler.

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UNIT STRUCTURE

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1.1. LEARNING OBJECTIVES:

After going through this unit you will be able to:

- define the meaning of educational psychology
- identify the nature of educational psychology
- elaborate the scope of educational psychology
- describe the importance and applications of educational psychology in the teaching learning process

1.2 INTRODUCTION

Before going into the depth of child development, you must familiar yourself with the concept of psychology as development is one of the significant component of psychological study. This unit introduces to you the very meaning of psychology and how it is related to education. Here, we

are also going to discuss the concept, nature and scope of educational psychology. Again, through this unit, we can determine the importance and application of psychology in teaching learning process. It is through psychology that we can study human behaviour in a scientific way. With the knowledge of psychology a person can easily understand the human behaviour and the surroundings which have important bearing on the human behaviour. The knowledge of is vital for the growth and development of personality. In the following sections we aregoing to discuss the topic in detail

1.3 CONCEPT OF EDUCATIONAL PSYCHOLOGY

Before discussing Educational Psychology, it is necessary to understand the meaning of psychology. The word 'psychology' is derived from the Greek word 'Psyche' and 'Logos' which mean 'soul' and 'study' respectively. So, the word 'psychology' means the 'study of soul'. Various psychologists have defined psychology as the Science of Mind, Science ofConsciousness and in a later stage it was McDougall who defined psychologyas the Science of Behaviour that "gives us the better understanding and control of the behaviour of the organism as a whole." The changing conceptof psychology has been defined by Woodworth in these words: "First psychology lost its soul; then it lost mind; then it lost consciousness; it stillhas behaviour of a kind."

Educational psychology is an applied branch of Psychology. This branch of Psychology studies the human behaviour in educational situations. The pioneer work in the development of Educational Psychology was doneby Herbert, Pestalozzi and Froebel. Educational psychology consists of two words, 'Education' and 'Psychology'. Here, 'Psychology' means the study of human behaviour and 'Education' means the modification of humanbehaviour. To modify human behaviour,the knowledge of psychology is essential. In the teaching- learning process, for a successful teacher, the knowledge of psychology is important. Because educational psychology helps the teacher to understand the children's behaviour, their interest, their innate capacities and intelligence, will and sentiments, habits and attitudes and other factors which are responsible for the growth and development of the children as well as their behavioral changes. Educational psychology can be described as "the application of psychology in the field of education." It studies the behaviour of the individualin learning situations and its problems. It utilizes the principles and laws ofgeneral psychology to solve the problems that arise in the classroom situations.

Various psychologists have defined educational psychology in different ways. A large number of eminent scholars and scientists have contributed to the development of educational psychology from time to time.

According to Skinner, “Educational psychology deals with the behavour of human beings in educational situation.”

Stephen’s view is that “Educational Psychology is the systematic study of the educational growth and development of a child.”

Psychologists Crow and Crow have defined that Educational psychology describes and explains the learning experiences of an individualfrom birth through old age.

Thus the subject matter of educational psychology is concerned with the condition that affects learning and behaviour of the individual. Educational psychology is the scientific study of human behaviour by whichthe goal of life can be understood, predicted and directed.

CHECK YOUR PROGRESS

Q. 1. What is the meaning of educational psychology?

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Q. 2. Who is the founder of educational psychology?

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Q. 3. Give a comprehensive definition of educational psychology.

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Q. 4. How does educational psychology differ from general psychology?

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Q. 5. Say True or False:

i. The word Psychology is derived from Greek word.

ii. Etymologically, the meaning of psychology is ‘study of Soul’.

iii. McDougall defines Psychology also the Science of Behavior.

1.3.1 Nature of Educational Psychology

In this section, after going through the meaning of educational psychology, we are going to discuss in how many ways psychology can be predicted and directed in the field of education. A clear idea about the nature of educational psychology will emerge from the following description:

- **An Applied Science:** Educational psychology is an applied science; it is the application of psychological principles to the field of education.
- **A Positive Science:** Education psychology is a positive science not a normative science. It means that it explains the facts and does not pass a judgment.
- **A Social Science:** Educational psychology studies the individual from the educational point of view; its result is applicable to all the individuals or to a group of individuals. Such studies have social implications and relevance.
- **An Educational Science:** Educational psychology deals with educational problems only. General psychology deals with the behaviour of individuals in various situations, but educational psychology studies the behaviour of the individual in educational situations.
- **A Specific Science**: Although the science of psychology is general in nature, educational psychology deals with those facts and principles that have specific significance and utility for the process of learning and teaching.
- **A Growing and Developing Science**: As a study of human behaviour and human nature, educational psychology is constantly growing in keeping with changing behaviour of an individual.
- **An Academic Discipline:** Educational psychology is an academic discipline. As such it has focused upon research studies on human bahaviour.

Besides these, the basic purpose of educational psychology is to employ scientific methods and adopt scientific approach to study the behaviour of an individual in an educational environment.

CHECK YOUR PROGRESS

Q. 6. Write short notes on the following (30 words)

I. Educational psychology as an applied science.

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II. Educational psychology as a growing and developing science

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III. Educational psychology as a Specific Science

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IV. Educational Psychology as an Academic Discipline.

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1.3.2 Scope of Educational Psychology

After having a fair understanding of Educational Psychology as a branch of Psychology, now we have to go through the scope of Educational Psychology. The scope means the area that educational psychology deals with or it may imply its field of study. But the real fact is that the scope of educational psychology is ever increasing, with unlimited possibilities. Till now, the Scope of educational Psychology includes the following applications:

- **Learner Behaviour:** Learner means those who are involved in learning process. Educational psychology studies the learner behaviour in an educational environment. Psychology is the study of behavior and education means the modification of behaviour.
- **Growth and Development of Learning Experiences:** Educational Psychology deals with the development of a child in the learning process. How a child passes through the various stages of growth, what are the characteristics of each stage of development etc. are included as an area of study under educational psychology.
- **Learning Process:** Educational Psychology studies the laws of learning, methods of learning, nature and theories of learning. It studies how learning can take place most effectively and efficiently.
- **Heredity and Environment:** Educational Psychology studies those influences that contribute to the growth of the child's personality. It means, to what extent heredity and environment constitute to it and how the knowledge of psychology can be made use of to bring about the optimum development of the child.

- **Development and Adjustment of Personality:** Educational Psychology deals with the nature and development of the personality of an individual. In fact, education has been defined as all round development of the personality of an individual; personality development itself also implies a well-adjusted personality.
- **Individual Differences:** Human nature is focused with the help of educational psychology. Because it studies the human behavior and through it, the individual differences can be easily brought out.
- **Evaluation of Learning Performance:** Educational Psychology helps in the use of Statistical tools and methods in education and conducting research on educational problems.
- **Providing Guidance and Counseling:** Educational Psychology provides guidance and counseling to the learner for their all-round development in life. Providing guidance and counseling is the most important area of study included in the field of educational psychology.
- **Mental Measurement:** Educational Psychology helps us to study the mental abilities as well as the talents of an individual, such as intelligence, aptitudes, attention etc. Mental Measurement is a promising field of study in the domain of educational psychology.
- **Mental Hygiene:** Mental hygiene is closely related to educational psychology. Today's social life is very complex and people suffer from variety of mental problems. Educational Psychology helps people maintain a proper mental balance by making the mind free from various mental problems and anxieties.

These are some of the uses of Educational Psychology for an individual in general and a learner in particular. But there are so many aspects of education like character formation, adjustment, mal-adjustment, adjustment mechanisms, motivational mechanisms, growth of balanced personality etc. which are included in the field of educational psychology. Educational Psychology has further study to solve the various problems facing the teaching learning process.

CHECK YOUR PROGRESS

Q. 7. What is meant by the scope of educational psychology?

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ACTIVITY 1.1

Make a list of some other important areas that educational psychology deals with in the teaching learning process.

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1.4 IMPORTANCE AND APPLICATION OF EDUCATIONAL PSYCHOLOGY IN TEACHING -LEARNING PROCESS

The application of educational psychology means the use of psychology in the classroom interaction or school interaction in the teaching-learning process. Therefore, it is very important to know how educational psychology helps a teacher to know his students and improve his own skill. It is obvious that a teacher should understand his students for an effective teaching learning process. It is said that the teacher is the only person who is closely associated with the students in school. As John Adams says, “the teacher teaches Latin to John”, it means that to teach Latin properly to John; the teacher has to know John’s psychology.

Samuel Smith, says “A thorough mastery of educational psychology aids the teacher to gain understanding of the pupil’s motives and to provide for his needs.” It means educational psychology helps the teacher to understand their students’ needs, desires and motives through the process of interaction in the classroom or in school.

According to Skinner, “The teacher needs psychology to bridge the lives of the young and the aims of education”. Therefore, we find that educational psychology is of great help to the teacher. It helps in the following ways:

- **Understanding the child:** Educational psychology helps the teacher to understand the nature of development of the child in different stages. A teacher should have a thorough knowledge of all the stages (i.e. infancy, childhood, adolescence till reaching the adulthood stage) of development. Without the knowledge of such development characteristics, education cannot be designed effectively for a child.
- **Understanding the individual difference:** By nature, no two individuals are alike. The teacher has to understand the varieties among the children in the classroom. Therefore, for giving education to the students, the course content should be organized or planned according to the purposes, interests and needs of the children keeping in mind the mental level of the children.

- **To understand the nature of classroom teaching:** Educational psychology helps the teacher to know the ways of the learning process in general and the problems of classroom learning in particular. Educational Psychology enables the teacher to instruct effectively in aids the teacher to gain understanding of the pupil's motives and to provide for his needs." It means educational psychology helps the teacher to understand their students' needs, desires and motives through the process order to organise his classroom teaching. Educational Psychology provides us with the knowledge of different approaches evolved to tackle the problems of teaching at different age levels. In the class to understand the principles of learning and various approaches
- **To understand the effective teaching methods:** Educational psychology helps the teacher in applying the appropriate methods of teaching. Besides this, it also helps him in developing new strategies of teaching. Classroom teaching is not dependent on any one theory; it uses and is related to several theories of teaching learning. The teacher must be acquainted with the knowledge of various theories in order to organise his classroom teaching. Educational Psychology provides us with the knowledge of different approaches evolved to tackle the problems of teaching at different age levels.
- **A Knowledge of mental health:** Educational psychology helps a teacher to understand the concept of mental health and also helps him to know how to maintain the mental health among the students in the school. Through the knowledge of educational psychology, the teacher can easily know the various factors which are responsible for the mental ill-health and maladjustment of the learners.
- **To understand the problems of children:** Educational psychology helps a teacher to understand the various needs and requirements of the students. It also enables him to understand the problems which are faced by the children in the classroom. With the knowledge of educational psychology, the teacher can take the remedial steps for solving those problems.
- **Curriculum construction:** Psychological principles are also used in formulating the curriculum for different stages. The developmental characteristics, learning patterns, needs and requirements of the society as well as children, all these are incorporated in the curriculum. Therefore, in order to make the curriculum effective, a teacher has to understand the correlation principle between school and society. He should also understand the capacity and mental level of the students while they are in learning.

- **Knowledge of heredity and environment:** Educational psychology helps a teacher to understand the influences of heredity and environment on the personality development of the child. Heredity means the native potential and prospect of the child, whereas, environment represents the external factors like the surrounding in which we live, grow and learn various things.
- **Measurement of learning outcomes:** Educational psychology helps the teacher to assess the learning outcome of the student. The teacher can also evaluate their teaching methods in the light of the performance of the student. Thus educational psychology helps the teacher to modify the strategy and method of teaching
- **Research:** Educational psychology helps in developing tools and devices for the measurement of various factors as well as variables which influence the behaviour and performance of students. In classroom teaching, the teacher can control, direct and predict the behaviour of students on the basis of research studies.
- **Provides knowledge about the efficacy of rewards and punishments**: Rewards and punishments are considered important tools of a teacher to modify the behaviour of the pupils. Educational Psychology helps the teacher to study and to realize the situation for improving the teaching-learning processes in the school
- **Provides knowledge about the mental abnormalities:** The knowledge of Educational Psychology helps teacher to find out the various mental abnormalities that the children has to suffer in school and also with the help of the psychological knowledge, the teacher can take effective measures to avoid or correct such abnormalities of the student in the school.
- **Use of innovations:** For improving or adding the up to date information or knowledge, teacher can apply information regarding new innovations and ideas in the field of education. In this regard, educational psychology can help the teacher by providing knowledge of such innovation; micro teaching, group discussion, team teaching etc.

Thus, from the above discussion we have found that educational psychology has great importance in teaching learning process. Because, o make teaching learning process effective, the knowledge of educational psychology must be acquired by the teachers who are engaged in the teaching profession.

LET US KNOW

The importance and application of Educational Psychology basically reveals how the knowledge of educational psychology helps the teacher to make the teaching learning process effective in classroom teaching. For understanding the child, understanding the individual differences, to understand the classroom teaching, to understand the effective teaching methods, to understand the mental health and hygiene of the children, measuring the learning outcomes and curriculum constructions, research and experiments, understanding the heredity and environment of the children, giving feedback about the achievement of the children, the knowledge of educational psychology plays a prominent and pertinent role to teaching learning process in school.

ACTIVITY 1.2

Describe the effectiveness of educational psychology to a teacher.

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1.4 LET US SUM UP

After going through this unit, it can be summarised as-

- The word 'Psychology' is derived from the Greek word, 'Psyche' and 'Logos' which means 'Soul' and 'Study'. The basic meaning of educational psychology means the study of soul.
- It was McDougall who has defined psychology as the Science of Bhaviour as "to give us the better understanding and control of the behaviour of the organism as a whole."
- Educational psychology is one of the applied branches of psychology.
- This psychology studies the human behavior in educational situations. The pioneer work in the development of educational psychology was done by Herbert and Froebel, both are German Professors.
- Thus the actual meaning of psychology means study the human behaviour and education means the modification of human behaviour.
- To become a successful teacher, the knowledge of psychology is must to have to each and every one who are engaged in the profession of teaching.
- Various Psychologists has defined educational psychology in different ways. All Psychologists have concluded that Educational psychology is the body of scientific

knowledge about two activities-education and psychology. Its subject matter is concerned with the condition that affects learning and behavior

- The Nature of Educational Psychology has been found as an applied science, a positive science, a social science, an educational science, a specific science, a growing and developing science, an academic discipline, and also adopting various innovative ideas and scientific approaches which are used to study the behaviour of an individual in educational environment.
- The applications of educational psychology includes the scope of learner behaviour, growth and development of learning experiences, learning process, heredity and environment of children, development and adjustment of learner's personality, individual differences, evaluation of learning performance, providing guidance and counseling, mental measurement, mental hygiene of the children etc.
- The knowledge of educational psychology is very much helpful for a teacher for educational management in school.
- Educational psychology helps the teacher to understand their students for achieving the effectiveness of teaching-learning process.
- Understanding the child, understanding the individual difference, understanding the nature of classroom teaching, understanding the effective teaching methods, understanding problems of children, acquiring the knowledge of mental health and hygiene, constructing the curriculum, knowledge on heredity and environment, measuring learning outcomes, conducting research and experiments, provides knowledge about the efficacy of rewards and punishments, provides knowledge about the mental abnormalities and also use of academic innovations; the knowledge of educational psychology is essential in teaching-learning process.

1.6 FURTHER READING

1) Agarwalla, Dr. Sunita: Psychological Foundation of Education and Statistics, Bookland2008.

2) Chauhan, S S: Advanced Educational Psychology, Vikas Publishing House, 1993

1.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1:

Educational psychology is an applied branch of general psychology. Educational psychology studies the human behaviour in educational situations. It is because the meaning of

psychology means to study the human behaviour whereas the meaning of education means the modification of human behaviour.

Ans to Q. No. 2: Herbert, Pestalozzi and Froebel, were the founder of educational psychology,

Ans to Q. No. 3: Educational Psychology is an applied discipline, it is the scientific study of human behaviour, by which the goal of life can be understood, directed and predicted.

Ans to Q. No. 4: Psychology basically indicates the whole concept in itself, whereas educational psychology is one of the branches of psychology. Thus, psychology is a macro concept considering all things related to mind, soul and behaviour, whereas educational psychology is a micro concept related to the study of learner behaviour in an educational situation.

Ans to Q. No. 5: i. True, ii.True, iii.True

Ans to Q No 6:

i. Educational psychology observes and studies the various problem as well as behavour of the learner in classroom teaching and also helps the teacher to take the remedial step as well as action in order to solve the various problem and behavioural disorderthatlearner have faced in classroom situation. Therefore, educational psychology is called as an applied branch of psychology.

ii. As studied the human behaviour and the human nature, educational psychology is constantly growing because of constantly changing the nature and behaviuor of human being. And also the science of educational psychology is ever growing due to constant changes in this field. Therefore, it is called as a growing and developing science.

iii. Educational psychology is a specific science because it has the wide scope to study the learner problems as well as behaviour in educational environment and also it has the wide implications of those facts and principles that have the specific significance and utility for the process of learning and teaching.

iv. The educational psychology as a branch of psychology itself indicates as an academic discipline. Because it has focused upon the learner's behavior as well as their various problems in school environment. Educational psychology has focused upon research studies on human behaviour. The information, the knowledge and various principles of teaching, the methodology all that constitutes the substance of

educational psychology provide a base for educational theory and practice. So, it is called as purely as an academic discipline.

Ans to Q. No. 7: The scope of educational psychology means the area that educational psychology deals in or implies the field of study. In fact, the scope of educational psychology basically indicates two things:

- The limits of operations and applications of educational psychology
- Branches, topics and the subject matter with which educational psychology deals.

1.9 POSSIBLE QUESTIONS

A) Short Questions (Answer each question in about 50 words)

Q. 1: What is meant by psychology?

Q. 2: What is meant by educational psychology?

Q. 3: What is the relationship between education and psychology?

B) Short Questions (Answer each question in about 150 words)

Q. 1: What are the nature of educational psychology?

Q. 2: Why do you think that psychology should be related to education?

Q. 3: Explain briefly the effectiveness of educational psychology as a tool for a teacher in class room transaction.

C) Long Questions (Answer each question in about 300-500 words)

Q. 1: What do you mean by educational psychology? What is the contribution of educational psychology in solving classroom problems? Discuss

Q. 2: Select five classroom problems, where you can make use of the knowledge of educational psychology. Discuss

Q. 3: How does the knowledge of educational psychology help the teacher to modify the behavioural problems of the children in the classroom?

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UNIT 2: GROWTH AND DEVELOPMENT

UNIT STRUCTURE

2.1 Learning Objectives
2.2 Introduction
2.3 Meaning of Growth and Development
2.4 Relationship of Growth and Development
2.5 Principles of Development
2.6 Let Us Sum Up
2.7 Further Readings
2.8 Answers to Check Your Progress
2.9 Possible Questions

2.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- identify and differentiate the meaning of growth and development.
- explain the relationship between growth and development.
- describe the principles of development.
- discuss about the developmental periods.

2.2 INTRODUCTION

This unit deals with general nature of growth and development. An understanding of growth and development will helps us to plan educational growth and development of the child.

Human life starts from a single fertilized cell. This cell is under constant interaction with the environment in the mother's womb and after birth with the outside world. This interaction leads to the Growth and Development of the child. The increasing of an organ or limb of the baby, in size and weight is Growth. Division of each cell and their growing into thousands in number, or their changing tissues, blood or bone, is part of the process of Development. The primary purpose of studying the growth and development of children is to understand them better. As a teacher or a parent, you, can manage children more effectively if you are aware of how they grow and develop in a systematic manner right from the moment of conception. An orderly pattern is found in the growth of every organ of the body and area of development.

Although the development process is continuous, the rate or speed of development varies at different ages of the child. For example, children grow most rapidly during the first three years of life. In their middle childhood, i.e., from 6 - 12 years, their rate of growth is comparatively slow whereas it is accelerated again when they approach adolescence. A knowledge of the trends and patterns of growth and development will enable you to know how children grow and develop; when and what to expect from them, how to guide them in each stage and provide the environment for their optimum development.

The purpose of this unit is to familiarise us with the fundamental facts and various characteristics of Growth and Development.

2.3 MEANING OF GROWTH AND DEVELOPMENT

Let us first understand the meaning of these two important terminologies. 'Growth' and 'Development' are often used as synonymous terms. But, in fact, growth is different from development. Growth means an increase in size, height, weight, length etc. which can be measured. Development, on the other hand, implies change in shape, form or structure resulting in improved working or in functioning. Improved functioning implies certain qualitative changes leading to maturity. Growth and Development are the important characteristics of a living organism. Development involves a series of progressive, orderly and meaningful changes leading to the goals of maturity. Normally Growth contributes to Development. In reality though 'Growth and Development' are different, but they are inseparable. Generally process of Growth and Development goes on simultaneously.

LET US KNOW

Growth and Development :

- Often used as synonymous terms.
- Important characteristics of a living organism.
- Growth refers to change in size.
- Development implies overall changes in the individual.
- The process of Growth and Development goes on simultaneously.

CHECK YOUR PROGRESS

Q.1. State whether the following statements are true or false.

- Growth is not different from development.
- Growth cannot be measured.

- Maturation involves qualitative change.
- Development implies overall changes in the individual.

2.4 RELATIONSHIP OF GROWTH AND DEVELOPMENT

After going through the meaning and concept of growth and development, now we are going to identify the relationship between the two, which are as follows:

- The term growth is used in purely physical sense. It generally refers to an increase in size, length, height and weight. Changes in the quantitative aspects come into the domain of growth. Development implies overall changes in shape, form or structure resulting in improved working or functioning. It indicates the changes in the quality or character rather than in quantitative aspects.
- Growth is one of the parts of developmental process. In a strict sense, development in its quantitative aspect is termed as growth. Development is a wider and comprehensive term. It refers to overall changes in the individual.
- Growth describes the changes which take place in particular aspects of the body and behaviour of an organism. Development describes the changes in the organism as a whole and does not list the changes in parts.
- Growth does not continue throughout life. It stops when maturity has been attained. Development is a continuous process. It goes from womb to tomb. It does not end with the attainment of maturity, the changes however small they may be, continue throughout the life span of an individual.
- The changes produced by growth are the subject of measurement. They may be quantified. Development implies improvement in functioning and behaviour and hence brings qualitative changes which are difficult to be measured directly.

CHECK YOUR PROGRESS

Q.2. State any two relationships between growth and development.

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2.5 PRINCIPLES OF DEVELOPMENT

We have to understand the principles of development also, which will help us to know how development occurs and also know what the various dimensions of development are**.**

The following are the important principles of Development –

- **Development is a continuous process:** First development is a continuous process. Development does not stop at any time. It continues from the moment of conception until the individual reaches maturity. It takes place at a slow or a rapid rate but at a regular pace rather than by leaps and bounds.

  You may be surprised to know that the physical manifestations of certain features may appear to be sudden; the process of development is continuous. For example, speech does not come over-night. It has gradually developed from the cries and other sounds made by the baby at birth. The fact that development is continuous emphasises the point that each stage of development has its foundations built upon a preceding stage and has a definite influence on the succeeding stage of development. There may be a break in the continuity of growth due to illness, starvation or malnutrition or other environmental factors or some abnormal conditions in the child's life.

  According to Growth and Development, the life of an individual can be divided into the following major developmental periods:

  * **Pre-natal period (from conception to birth)**
  * **Neo-natal period (birth to 10-14 days)**
  * **Babyhood (2 weeks to 2 years)**
  * **Early childhood (2 years to 6 years)**
  * **Late childhood (6 years to 12-13 years)**
  * **Adolescence (from 12-13 years to 18-19 years)**
  * **Adulthood (from 18-19 years and onwards)**

CHECK YOUR PROGRESS

Q.3. Indicate the factors that affect in the continuity of growth.

Q.4. Mention the major developmental periods of human life.

- **Development follows a pattern:** Secondly, development occurs in orderly manner and follows a certain sequences. In nature we find that every species or organism follows a pattern of development. The same is the case with human beings. Development occurs in orderly manner and follows a certain sequence which, in general is the same for most children. Each stage of development leads to the next. For instance, all children first learn to sit up without support before they stand. Similarly, they learn to draw a circle before attempting to draw a square.

The rate and speed of development may vary in individual cases, but the sequence of the pattern is the same. A child from a disadvantaged home and a child from an affluent home, both follow the same pattern of development, although the latter may develop at a faster rate due to the facilities available at home.

One of the sequential patterns of development relate to the two directions in which development proceeds. ***Firstly,*** development proceeds from the upper portions of the body toward the lower portions. This is referred to as "head to toe" sequence. This means that improvements in the structure and function in a child's body come first in the head region, then in the trunk and last in the leg region. This growth pattern helps to explain why children sit before they can stand and crawl before they can walk.

Secondly, development proceeds from the centre line of the body outward towards the distance or peripheral parts referred to as "near to far" sequence. Hence, in a foetus, the head and the trunk are fairly well developed before the rudimentary limb buds appear, gradually the arm buds lengthen and then develop into hands and fingers. This growth pattern explains, for instance, why children in the early years are more adept at controlling larger muscles than the whole limbs. They are unable to control finer muscles that are required for the manipulation of tiny objects with fingers.

CHECK YOUR PROGRESS

Q.5. What develops first —-

i) legs or toes?

ii) head or trunk?

iii) trunk or legs?

iv) arms or legs?

v) arms or fingers?

 Development proceeds from general to specific responses: Thirdly, it makes from a generalized to localized behaviour.In studying the development pattern of children, it is observed that general activity always precedes specific activity. The early responses of the baby are very general in nature which is gradually replaced with specific ones. The earliest emotional responses of the new born are generally diffused excitement and this slowly gives way to specific emotional patterns of anger, joy, fear, etc. Babies wave their arms in general, random movements before they are capable of such specific responses as reaching for an object held before them. Similarly, in early stages of language development the child may use a particular word for any type of animal/ eatable. Gradually, as his / her vocabulary increases, he/she will learn to use correct specific words. Thus, uncoordinated movements/ responses are gradually replaced by specific ones.

 Development involves change: Development involves a progressive series of changes**.** The human being is never static. From the moment of conception to the time of death, the person is undergoing changes. Nature shapes development most clearly through genetic programming that may determine whole sequences of later development. It refers to a progressive series of orderly coherent changes. Growth on the other hand refers to quantitative changes increasing in size and structure. Development implies both quantitative and qualitative changes.

CHECK YOUR PROGRESS

Q.6. State whether true or false.

i) The pattern of development is the same for all children, but the rate differs.
ii) The pattern and rate of development is the same for all children.
iii) The rate of development is the same for all children, but the pattern differs.
iv) Both the rate and pattern of development are different for different children.

 Development is a product of interaction of the heredity and environment: Child at any stage of his growth and development is a joint products of both heredity and environment. But it is not possible to indicate exactly in what proportion heredity and environment contribute to the development of an individual. The two work hand in hand from the very conceptions. The environment bears upon the new organism from the beginning. Among, the environmental factors like nutrition, climate, the conditions in the home, the type of social organisation in which individual move and live, the roles they have to play and other.

- **Principle of uniqueness:** Development is individualized process. Although the pattern of development is similar for all children, they follow the pattern at their own rate. These individual differences arise because each child is controlled by a unique combination of hereditary endowment and environmental factors. Every child follows a developmental timetable that is characteristically unique for each child. All children therefore do not reach the same point of development at the same age.

  Individual differences are caused by the both hereditary and environmental conditions. The child's physical development, for example, depends partly on the hereditary potential and partly on the environmental factors such as diet, general health, climate etc. Development is also affected by the genetic factors. A child should be provided with opportunities for experiences and learning. These include:

  a) A stimulating environment where the child can explore. The environment must include materials which arouse curiosity and facilitate learning, and
  b) Encouragement and guidance from parents and teachers.

  Each child is a unique individual. No two children can be expected to behave or develop in an identical manner although they are of the same age. For example, in the same class, a child who comes from a deprived environment cannot be expected to do as well in studies as a child of the same ability whose parents put high value on education and encourage the child to study.

- **The Principle of Interaction of Maturation and Learning:** Another important principle of development is that it occurs as a result of both maturation and learning. Maturation refers to changes in a developed organism due to the unfolding ripening of abilities, characteristics, traits and potentialities present at birth. Learning denotes the changes in behaviour due to training and or experiences. Maturation is the inner growth process unaffected by training. Another factor that causes growth is 'learning'. Learning implies exercise and experience on the part of an individual. Learning may result from practice, which in due course of time may bring about a change in the individual's behaviour.

Maturation and learning are closely related and one influences the other. This means that traits potentially present will not develop to their maximum without effort or learning. Thus, learning have a great influence on growth and development, maturation provides the raw material for learning and determines to a large extent the more general patterns of the individual's behaviour.

CHECK YOUR PROGRESS

Q.7. Fill in the blanks with the appropriate word / words.

i) Development is a joint product of both _____ and _____.

ii) Each child is a _____ individual.

Q.8. State whether true or false.

i) There are individual differences in development.

ii) Physical and Intellectual development is not affected by genetic and Environmental factors.

Development is often predictable: Development psychologists have observed that each developmental phase has certain common traits and characteristics. We have seen that the rate of development for each child is fairly constant. The consequence is that it is possible for us to predict at an early age the range within which the mature development of the child is likely to fall. But all types of development, particularly mental development, cannot be predicted with the same degree of accuracy. It is more easily predictable for children whose mental development falls within the normal range rather than for those whose mental development shows marked deviation from the average.

ACTIVITY 2.1

Why do you thing that changes are the integral part for the growth and development of the human body? Based on your own understanding justify this statement.

2.6 LET US SUM UP

After going through this unit, it can be summarised as-

- Growth refers to change in size; development implies overall changes in the individual.
- The principles of development state that-
  - it is a continuous process;
  - it follows a pattern;
  - it proceeds from general to specific responses;
  - it proceeds at different rates for different parts of the body;

- there are individual differences in development;
- it is both quantitative and qualitative and it is often predictable.
- There are internal, external and other factors that affect the growth and development of the child.

- There are two main phases of the process of development i.e. the stage or phase of before Birth and the stage or phase of after Birth.
- The second phase of life has four stages, i.e. Infancy, childhood, Adolescence and Adulthood. The period of infancy covers the period from birth to 5 years, childhood from 6 to 12 years and adolescence from 12 to 18/19 years. Each stage of development has its own specific characteristics.

2.7 FURTHER READING

1) Das, Dr. L.: *Elements of Education (Part I),* Amrita Prakashan, Guwahati,
2) Mangal, Dr. S. K: *Psychological Foundations of Education*, Prakash Brothers, Ludhiana,
3) Goswamee, Dr. G.: *Child Development and Child Care*, Arun Prakashan, Guwahati-1.

2.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q. No. 1: i)False, ii) False, iii) True, iv) True

Ans. to Q. No. 2: i) Growth refers to increase in size, length, height and weight and development implies overall changes in the individual.
ii) Growth is one of the parts of developmental process.

Ans. to Q. No. 3: Followings are the factors that affect in the continuity of growth i.e.

- Illness
- Malnutrition
- Environmental factors
- Abnormal conditions.

Ans. to Q. No. 4: Pre-natal, Neo-natal, Babyhood, Early childhood, late childhood Adolescence and Adulthood are the major developmental periods of human life.

Ans. to Q. No. 5: i) Legs, ii) Head, iii) Trunk, iv)Arms, v) Arms

Ans. to Q. No. 6: i) True, ii) False, iii) False, iv)False

Ans. to Q. No. 7: i) Heredity, environment; (ii) Unique

Ans. to Q. No. 8: i) True, ii) False

2.9 POSSIBLE QUESTIONS

A) Very Short Questions (Answer each question in about 50 words)

Q.1. What do you understand by the term growth and development?

Q.2. What is the relationship between growth and development?

B) Short Questions (Answer each question in about 50 words)

Q.1. What are the opportunities and experiences to be provided to the learner for development of genetic abilities?

Q.2. 'Development is a product of interaction of the heredity and enviornment'-explain the statement briefly.

C) Long Questions (Answer each question in about 300-500 words)

Q.1. What do you understand by the term growth and development? Bring out clearly the relationship between these two terms.

Q.2. Discuss in brief the various principles of human development.

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UNIT 3: STAGES OF DEVELOPMENT

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Definition and Concept of Lifespan

3.4 Stages of Life Span

3.5 Let us Sum Up

3.6 Further Reading

3.7 Answer to Check Your Progress

3.8 Possible Questions

3.1 LEARNING OBJECTIVES

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

- familiar with the concept of life-span
- comprehend the different stages of life-span

3.2 INTRODUCTION

The preceding unit has helped you to better acquaint with the basic concept of growth and developmental, their relationship and the principles of development. As an individual we all experiences different changes in life through different stages of life. Characteristics accompanied by these stage differs from one another. We are not the same person we were in our childhood or in our adolescence period. As a learner of developmental psychology, you all must be clear with these stages and how changes take place through these stages. This unit will deal with those stages of our life, which is going to be not only interesting and but exciting too to study.

3.4. DEFINITION AND CONCEPT OF LIFESPAN

Human life is full of variety of experiences and explorations. Life of human being starts with the conception in the womb of the mother. It is a transitional process. Throughout life, an individual

exhibit typical behavioral characteristics in all the dimensions of behavior and personality. Life span is the ongoing process that we go through while growing up**.** It is the period of time between the birth and death of an organism. Lifespan Development refers to the full process of human development from conception to death. The concept of life span implies that there is an individual whose existence has a definite beginning and end. It is a holistic approach to understand all of the physiological, cognitive, emotional, and social changes that people go through. Life-span simply means the average duration of existence of an individual in a particular environment or under specified circumstances.

Life-span development refers to the pattern of change that begins at conception and continues through the one's life cycle. Lifespan development can be defined as a methodical, intra-individual change associated with progressions corresponding to age. The development progresses in a manner implicating the level of functioning.

According to **Baltes, (1987),** Life-span developmental psychology is the field of psychology that involves the examination of both constancy and change in human behavior across the entire life span, that is, from conception to death.

According to **Educational Foundation (2001),** life span development is a process beginning at conception that continues until death. The progression initiates with the emergence of a fetus from a one-celled organism. As the unborn child enters the world, the environment in which the child exists begins to influence the child's development.

Life span development includes issues such as the extent to which development occurs through the gradual accumulation of knowledge versus stage like development, or the extent to which children are born with innate mental structure versus learning through experiences.

CHECK YOUR PROGRESS

Q.1. What is life-span?

Q.2. What is your understanding about life span development?

3.5 STAGES OF LIFE SPAN

Human development periods span the lifetime from conception to the end of life. Across life-span, people develop in stages. When we examine the sequence of changes over the entire life-span we find broad patterns in different phases of life. These stages are broad pattern of development characterized by some dominant feature. In each stage of development, a person shows typical capabilities, pattern of behavior and characteristics modes of functioning. Each period has certain important tasks to accomplish by the individual and depending on the success or completion of the tasks, the movement to the next stage of development take place

Various theories attempt to define how the movement from one level to the next level of development occurs. Educators and psychologists have pointed at different ways of describing stages of development in the life span of an individual. Psychologists vary in their view regarding the classification of human stages. Some justify it as five stages, whereas other want to categorize life span as nine or seven stages and so on based on developmental characteristics. Here, we are out forwarding some of the classification of life –span as classified by renowned psychologists or thinkers-

A. **Rousseau's Classification of Stages of Development**: The earliest effort at marking out the stages of development was made by Rousseau. He attempted to divide the individual's development into four stages as given-

	Stage of Life-span	**Period**
1	Infancy	1 to 5 years
2	Childhood	Between 5 to 12 years
3	Pre Adolescence	12 to 15 years
4	Adolescence	15 to 20 years

B. **E.H. Erickson's Eight Stages of Human Development:** Famous Psychoanalyst Erickson tried to classify human development into eight stages on the basis of his psycho-social development theory. The eight stages are-

	Stages	**Period**
Stage I	Infancy	Birth to 1 and a half year
Stage II	Toddler Age	1 and a half year to -3 years
Stage III	Preschooler Age	3-6 years
Stage IV	School –Age	6-12 years
Stage V	Adolescence	12-20 Years
Stage VI	Early Adulthood	20 to 45 years
Stage VII	Middle Adulthood	45 to 65 years
Stage VIII	Later Adulthood	65 years onwards

C. Celley's Classification on human development:

Celley had classified human life-span development into three categories-

	Stages	**Period**
1	Infancy	1 to 5years
2	Childhood	5 to 12 years

3	Adolescence	12 to 18 years

D. James Ross's Classification:

James Ross had classified human development into following five stages-

	Stages	**Period**
1	Infancy	Birth to 3 Years
2	Early Childhood	3 to 6 years
3	Later childhood	6 to 12 years
4	Adolescence	12 to 18 years
5	Adulthood	18 years onwards

E. **Jean Piaget's Development Stages**: Piaget, a Swiss educator on account of his biological background traced the initiation of human cognitive development and classified the human intellectual development into four developmental stages -

	Stage	**Period**
1	Sensory-Motor Stage	Birth to Two years
2	Pre-Operational Stage	2 years to 7 years
3	Concrete Operational Stage	7 to 11 Years
4	Formal Operational Stage	12 to 15 years

F. Dr. Earnest Classification on Human Life Developmental Space:

	Stage	**Period**

1	Infancy	1 to 5 years
2	Late Childhood	6 to 12 years
3	Adolescence	12 to 18 years
4	Maturity	18 years onwards

Thus, we find that there are variation in the classification of life-span of human. Psychologists have classified human development on the basis of different developmental dimensions and characteristics. There are certain common developmental or practical characteristics belonging to each stage. The human organism shows peculiar quantitative and qualitative changes in his body and behavior with the help of which we can say at what particular age an individual belongs to which definite stage of his life. The process of development involves the interaction of biological, cognitive and social-emotional processes. But, for our better understanding and convenient discussion, the life-span of individual is classified into the following common stages according to growth and development-

Stage I: Pre-Natal Period (From Conception to Birth)

Stage II: Neo-Natal Period (Birth to 10-14 Days)

Stage III: Babyhood (Two Weeks to 2 Years)

Stage IV: Early Childhood (2 years to 6 Years)

Stage V: Late Childhood (6 years to 12-13 Years)

Stage VI: Adolescence (From 12 years to 18 Years)

Stage VII: Adulthood (18 years to 60 years)

Stage VIII: Old Age or Aging (From 61 years till death)

Let’s discuss the stages of life in brief-

Stage I: Pre-Natal Period (From Conception to Birth)

Pre-natal stage refers to the period of development before birth. It is a period that ranges from the time of conception to birth. The period approximately lasts for about 280 days. During this period, development is extremely rapid. It is mainly physiological and consist of the growth of all the bodily structure. Pre-natal development is of interest to psychologists investigating the context of early psychological development. This is the period, during which individual develops from a single cell to a fully developed organism. The development from conception till birth of a baby constitute the prenatal stage, although babies are not born exactly after 280 days of conception. Biologically, it takes about 266 days from conception for a fetus to become ready for birth process. Actual birth of normal baby may take place any time after that. The pre-natal development of human is viewed in three separate stages-

1. Germinal Stage: The range of this period is conception to 2 two weeks.
2. Embryonic Stage: The range of this period is three week to eight week.
3. Fetal Stage: It ranges from week 9 to time of birth.

The detail about this period will be covered by unit 4.

Stage II: Neo-Natal Period (Birth to 10-14 Days)

This is the period of the newborn or the neonate. During this period, an infant try to adjust to a totally new environment outside the mother’s body. At this stage, the organism goes through a sensorimotor development through contacts with external world. The details of this period will be discussed in unit 5

Stage III: Babyhood (Two Weeks to 2 Years)

Babyhood stage is also termed as infancy period. From birth until the child begin to speak, they are referred as an infant. The word, infant is derived from the Latin word-*infans* which means unable to speak. When the human child learns to walk, the term toddler is used. The period from

two week to two years constitute the infancy stage of life. Babyhood period marks the transition from a purely reflective function organism to a psychological organism. At first babies are completely helpless and during the first six weeks he/she spends most of the time in sleeping. When he is awake, however he engages himself in active interaction with the environment. This interaction serves to stimulate the psychological and social development in the infants. Gradually the infant learns to control his muscles so that he can become increasingly self-reliant. Babyhood is the period, in which he gains control over his bodily movement and he learns to speak.

Stage IV: Early Childhood (2 years to 6 Years)

Early childhood is also known as pre-school period. When children go to pre-school, they broaden their social horizons and become more engaged with those around them. Broadly it covers the period from 2 to 6 years. This is the time during which the children become mobile, he is able to widen the sphere of his/her activities beyond the caregivers and the family. Through interaction with the wider society and the environment the child learns the rules of appropriate social behavior and develops mental abilities which prepare him/her for formal schooling. Children starts using short sentences and learns to explore and control his surroundings. The child incessantly ask questions, makes friends with his peer group. Hence, this period is also termed as pre-gang age. Details about the developmental characteristic of this stage will be discussed in unit 7.

Stage V: Late Childhood (6 years to 12-13 Years)

This is the formal schooling age. During this period, children go through the transition from the world at home to that of school and peers. Children learn to make things, use tools and acquire the skills to be a worker and a potential provider. Children receive feedback from outsiders about their accomplishment. The major development in this stage is building up friendship and socialization. During this stage, growth becomes more gradual and rate of physical change becomes slower until puberty at about 12-13 years when there is again a rapid growth spurt.

Stage VI: Adolescence (From 12 years to 18 Years)

This is the transitional period from childhood to adulthood. It is the period from the onset of puberty till attainment of adulthood. The word-Adolescence has been derived from Latin word –*adolescere* which means –*to grow* or *to grow to maturity*. As such the essence of the word adolescence is

growth and it is in this sense that it represents a period of intensive growth change in nearly all aspects; of individual's development. Puberty marks the beginning of sexual maturity and reproductive capacity of an individual. As such with the occurrence of sexual maturity adolescence begins. This is the period of physiological upheaval especially sexual maturation. In the later adolescence period, there is increased heterosexual interest and concern for personal appearance and the desire to make a good impression on others. The peer group has greater influence in this period than the home and they desire for independence. During this period, the individual becomes ready for adulthood and family life. This period is known for the formation of personal and social identity and discovery of moral purpose. Unlike the childhood, adolescence is the stage in which intelligence exists in logical form of demonstration.

Stage VII: Adulthood (18 years to 60 years)

This is the stage of complete maturity. Identity versus role confusion is coming to an end in this stage. The individual learns how to form intimate relationship both in friendship and love. The development of this skill relies on the resolution of other stages. The young adult becomes a fully functioning social being assuming the role of a married family person and developing intimate social and sexual relationship. Although most of the physical development is over by the end of adolescence period, some development do occur during the early part of adulthood period.

The later part of adulthood which is often termed as middle adulthood refers to the period between ages 40 to 60. During this period, the middle-aged experience a conflict between generativity and stagnation. They may either feel a sense of contributing to the next generation and their community. Physically, the middle aged experience a decline in muscular strength, reaction time, sensory keenness. Especially women experience menopause and a sharp drop in the hormone estrogen. Middle age is called as "Shrinking circle stage" of family life because the most important change at this time is reduction of family members living under the same roof.

Stage VIII: Old Age or Aging (From 61 years till death)

The period of life from 60 till death is the period of old age. Now-a days, with increasing life expectancy and longer work period there is a delayed onset of the actual feeling of old age. During this period, people experience a conflict between integrity versus despair. It denotes to the feeling of sense of accomplishment or failure when they reflect their life. Besides retirement from active

work life, the old people have to cope with many other challenges such as their own declining physical fitness, ill health, and death of dear and near ones in the family including possible loss of spouse leading to loneliness. There are wide individual variation in the way old people prepare to face death and other challenges associated with the age. Changes in recreational activities in old age are due to changes in health and mental status.

The development of individual take place throughout these mentioned stages of life. Development is a continuous process. It starts with the pre-natal period and continues till the death of an individual. Each stage is unique in its developmental traits and sequence. Individual difference is too common in each stage of development. The further units will help you to go in depth of these stages and help you to understand the beautiful journey of men from womb to tomb.

CHECK YOUR PROGRESS

Q.3. What are the stages of development as classified by Jean Piaget?

Q.4. What are the sub category of pre-natal development?

Q.5. Fill in the Blanks-

a) The Word Infant had been derived from ----------.

b) The Word adolescence had been derived from ----------.

c) The Middle age is called as----------.

3.6 LET US SUM UP

After going through this unit, it can be summarized as-

- Life-span development refers to the pattern of change that begins at conception and continues through the one's life cycle.
- Human development periods span the lifetime from conception to the end of life.

- Various theories attempt to define how the movement from one level to the next level of development occurs. Educators and psychologists have pointed at different ways of describing stages of development in the life span of an individual.
- But, for our better understanding and convenient discussion, the life-span of individual is classified into the following common stages according to growth and development-Stage I: Pre-Natal Period (From Conception to Birth), Stage II: Neo-Natal Period (Birth to 10-14 Days), Stage III: Babyhood (Two Weeks to 2 Years), Stage IV: Early Childhood (2 years to 6 Years) Stage V: Late Childhood (6 years to 12-13 Years), Stage VI: Adolescence (From 12 years to 18 Years), Stage VII: Adulthood (18 years to 60 years) and Stage VIII: Old Age or Aging (From 61 years till death)
- Each stage is unique in its developmental traits and sequence. Individual difference is too common in each stage of development

3.7 FURTHER READING

1. Dash B.N (2011): *A textbook of Educational Psychology*, Dominant publishers and distributors' pvt. Ltd.

2. Chetry Krishna Kumari (2016): *Developmental Psychology*, Ashok Book Stall, Panbazar, Ghy.

3. Goswamee Gayatree (2008): *Child Development and Child Care*, Arun Prakashan, Guwahati, Assam.

4. Mangal S.K (2006 2nd Edition): *Advanced Educational Psychology*, Published by Asoke K Ghosh, Prentice Hall of India Private Limited, New Delhi

5. Signh Punam (2011): *Developmental Psychology*, Centrum Press, New Delhi.

3.8 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

The concept of life span implies that there is an individual whose existence has a definite beginning and end. It is a holistic approach to understand all of the physiological, cognitive, emotional, and social changes that people go through. Life-span simply means the average duration of existence of an individual in a particular environment or under specified circumstances.

ANSWER TO Q.NO.2:

Life-span development refers to the *pattern of change that begins at conception and continues through the one's life cycle*

ANSWER TO Q.NO.3:

The stages of development as classified by Jean Piaget are-

Sensory-Motor Stage	Birth to Two years
Pre-Operational Stage	2 years to 7 years
Concrete Operational Stage	7 to 11 Years
Formal Operational Stage	12 to 15 years

ANSWER TO Q.NO.4:

The pre-natal development of human is viewed in three separate stages-

1. Germinal Stage: The range of this period is conception to 2 two weeks.
2. Embryonic Stage: The range of this period is three week to eight week.
3. Fetal Stage: It ranges from week 9 to time of birth.

ANSWER TO Q.NO.5:

Fill in the blanks-

a)Latin word-*infans*

b) Latin word –*adolescere*

c) "Shrinking circle stage" of family life.

3.9 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

1. What is meant by life span development?

2. Mention the classification of human development as made by Erickson.

3. How would you differentiate between childhood and adolescence?

B. Long Questions (Answer each questions in about 300-500 words**)**

1. Define life-span. Discuss the stages of life-span.

2. Analysis the difference of life span as classified by Rousseau and Piaget.

3. Which is the most crucial stage of life-span according to you and why? Give your views.

****

UNIT 4: PRE-NATAL DEVELOPMENT

4.1 Learning Objectives

4.2 Introduction

4.3 Concept of Pre-Natal Development

4.3.1 Conditions Determined at Pre-natal Development

4.4. Phases under Pre-natal Period

4.5 Conditions Affecting Pre-natal Development

4.6 Let us Sum Up

4.7 Further Reading

4.8 Answer to Check Your Progress

4.9 Possible Questions

4.1 LEARNING OBJECTIVES

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

- comprehend the pre-natal stage of development
- identify the conditions that are determined during the pre-natal period
- understand how development take place in pre-natal stage through its phases
- identify the conditions affecting pre-natal development

4.2 INTRODUCTION

The unit 3 of this block must have given you clear idea about different stages of life-span, pre-natal period being the first phase of human life. You all very well know that development does not just take place in individual, it follows a particular pattern and sequence. Development of human being starts with the conception in the mother's womb. Since conception, different changes take place and a single cell turn to a full-fledged baby ready to come out to the world as an individual. The period from conception to birth is termed as Pre-Natal Stage of human life-span, which is most critical from developmental perspectives, as it is the base phase of human life. As investigated by research studies, most of the development take place before birth. In this unit,

discussion will be made in detail about this period and how development take place throughout the period.

4.3 CONCEPT OF PRE-NATAL DEVELOPMENT

Before going in depth into the different developmental process and changes of the pre-natal period, let's acquaint yourself with the first period of human life-span.

Pre-natal Period:

Life's journey begins with conception in the womb of the mother. The approximate nine month period spent in mother's womb is known as the pre-natal period. This is the most important period of life. This period begins at the time of conception and end at birth, which is approximately 270 to 280 days in length or nine calendar months. Pre-natal development is orderly and predictable, hence, it is possible to give a timetable of the important developments taking place during this period.

Conception (How life begins?):

Pre-natal period starts at the moment of conception. The first step in the development of a human being is that moment of conception. New life begins with the union of a male sex cell called *spermatozoon* and a female sex cell called *ovum*. These sex cell are developed in the reproductive organs (the gonads). Conception take place through the fertilization process of ovum (egg Cell) by spermatozoon (sperm**).** Fertilization in humans refers to the fusion of male and female sex cell that facilitates the development of a new organism. Fertilization is the natural life process, which results in the formation of a new cell, this cell is called as **zygote**. In humans, the process of fertilization takes place in the fallopian tube. Zygote formation in human or another multicellular organism is the first developmental stage in the process of reproducing a complete individual. The zygote further divide into a mass of cells known as **blastocyst** which will transform into an embryo which will further transform into a fetus and over a period of months the fetus will transform into an offspring. Sexual intercourse is the natural process leading to fertilization. But with the advancement of medical science, the fertilization event that leads to zygote formation can happen through medically assisted fertilization such as in-vitro fertilization (IVF).



Figure 4.1: Fertilization leading to Zygote Formation

Image Source: https://media.istockphoto.com/vectors/process-of-human-fertilization-vector-id1151753982

4.3.1 Conditions determined at Conception:

As already mentioned pre-natal period is the most significant period of human life-span. At the time of conception, certain conditions are determined that influence the individual's later development. These conditions play a very significant role in individual's life.

A. **Hereditary Endowment:** The first important happening at the time of conception is the determination of the newly created individual's hereditary endowment. The maturation of reproductive cells is important in determining what the hereditary endowment of the newly created person will be. Within each sex cell whether the sperm or the ovum there are 23 pairs of chromosomes, within each of which are strings of microscopically small particles- these are called **Genes.** These genes are the physical substances passed from parents to children. There is a common saying that children carries most of their psycho-physical traits from their parents and grandparents through genes. From the two parents the child receives a new combination of parental genes. This combination of genes in parents of the newly created being is made up of the genes they received from their parents. As such the children may receive some common traits in common with one or both of the parents or their grandparents such in appearance, nature, habit etc. The following diagram will help you to understand why children resemble to their parents or grandparents-

Every man and every women at conception received 23 chromosomes from each parent as a whole 46 in all.

Paternal Grandparents (23 +23) **Maternal Grandparents (23+23)**





In mating each passes on half of his/her chromosomes to every child





Father (23) **Mother (23)**

Father passes half of his Chromosomes to child By the way of a sperm

Mother too contribute half of the chromosomes.

23 23

Child 23 +23=46

These 46 chromosomes constitute everything that determines the heredity of the child.

Diagram 4.1: The hereditary process determined at conception

B. Sex of the newly created individual:

Determination of the individual's sex is another important happening at the time of conception. Sex of the newly created individual or whether the child will be a male or female depends on the kind of spermatozoon that unites with the ovum. As discussed in the above diagram, each sperm and ovum contains 23 chromosomes. The father produces sperm of two kinds in equal number-one half of all mature sperm carry the X chromosomes and the other half carry Y chromosomes. But, mother produces egg or matured ova all of one kind, each with a large X chromosomes. These X and Y chromosomes are sex determining chromosomes. It the mature **ovum (X)** is fertilized by **Y-**bearing spermatozoon, the offspring will be **a Boy**, but if the mature **ovum (X)** is fertilized by **X-** bearing spermatozoon, the offspring will be a **Girl.**

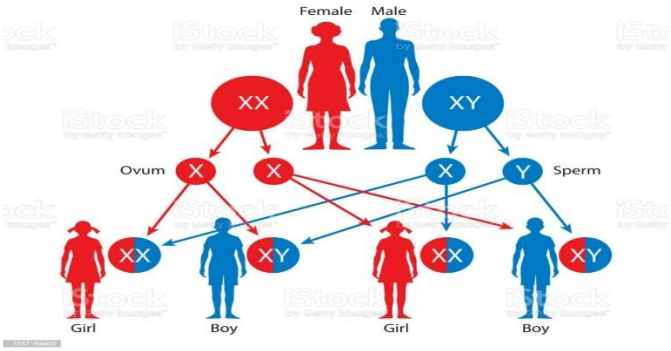


Figure 4.2: Sex determination of baby at conception

Image Source*: https://media.istockphoto.com/illustrations/sex-determination-in-humans-illustration-id1257168903*

C. Number of Offspring: Another important happenings that is determined at the time of conception is number of off spring. While most human are singleton, twins or multiple birth also occur. When a matured ovum is fertilized by one spermatozoon, the result is singleton, if the fertilized ovum or the zygote splits into two or more distinct part during the early stages of cell cleavage, it results in identical twins, triplets or multiple birth. It is important to mention here that, if two or more ovum are released simultaneously by mother and are fertilized by different spermatozoon, it result in non-identical twins or triplets.

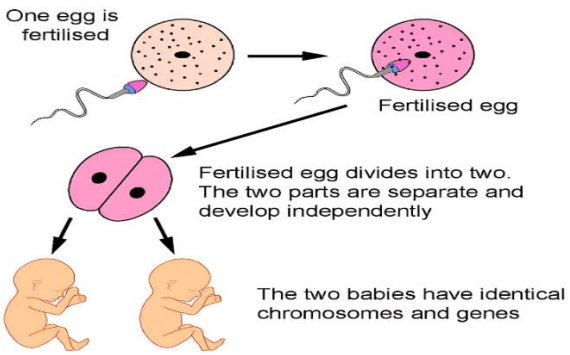


Figure 4.3: Determination of off-spring at the time of conception.

LET US KNOW

- ✓ The first developmental period in the life-span is next to the shortest of all, the shortest is the period of new born.
- ✓ Zygote is a eukaryotic cell formed by the fertilization of two gametes. Thus, an egg cell or ovum fertilized by a sperm cell is a zygote.
- ✓ If the fertilized ovum or the zygote splits into two or more distinct part during the early stages of cell cleavage, it results in identical twins, triplets or multiple birth.

CHECK YOUR PROGRESS

Q. 1. What is fertilization?

Q.2 What is a Zygote?

Q.3 What is blastocyst?

Q.4. A child receives ----------chromosomes from each parent at the time of conception.

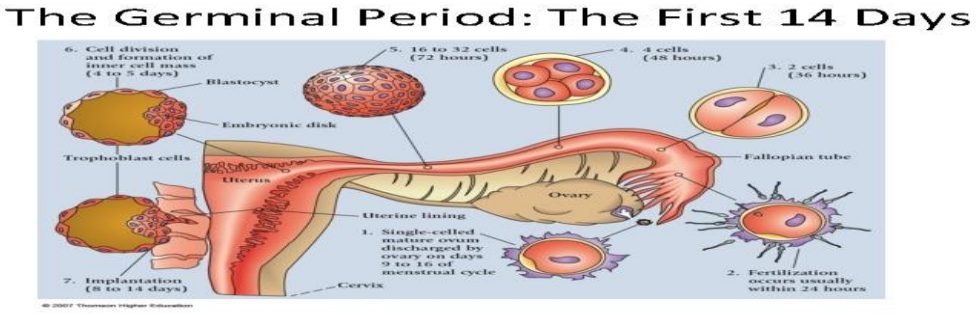
Q.5. How is the sex of the baby determined at conception?

4.4. PHASES UNDER PRE-NATAL PERIOD

To know about the developmental norms of pre-natal period, it is essential to be clear with the stages of this period. There are three sub-stages of pre-natal period (Pre-Natal Development)or the pre-natal period is divided into three stages. Each of these stages are characterized by its own peculiar type of development.

1. **Period of Ovum/Zygote or Germinal Stage:**

   This period covers the period from fertilization or conception to end of second week. During the two weeks of this period, the size of the zygote or fertilized ovum is that of a pinhead. During first half of this period the size remain unchanged and free and unattached because it does not receive any outside source of nourishment. The zygote is kept alive by the yolk in the ovum. In this period, the zygote passes down the fallopian tube to the uterus, it divides into many times and separates into outer and inner layer. The *outer layer later develops into* ***the placenta, the umbilical cord and the amniotic sac***. The inner layer develops into a new human being. While the zygote completes its journey the lining of the uterus completes its preparation to receive the ovum. When the zygote finds a place in the uterine wall it gets nourishment through the blood vessels. After ten days after fertilization, the zygote becomes implemented in in the uterine wall. Once, it is implanted, it becomes parasite throughout the pre-natal period in the uterus.



Source:https://slidetodoc.com/presentation_image_h/72fadb6d4f718dc6f558229babe235cb/image-8.jpg

2. **Period of Embryo or Embryonic Stage:**

The second sub stage of pre-natal period is period of embryo or it is also termed as embryonic stage. This period ranges from the end of second week from conception to second lunar month. This period occurs once the zygote finally implants into the uterine wall of the mother. During this period, the embryo develops into a miniature human being. This period is characterized by rapid developmental changes. All the essential features of body both external and internal are established in this period. Major development occurs in the head region first and in the extremities last. The placenta, the umbilical cord and the amniotic sac are developed which protect and nourish the embryo until the time of birth. The sex organs are well developed enough to distinguish the sex of the embryo. Some features such as eye, arms, ears and feet too become recognizable. At the end of this period, the embryo weighs on the average 1 ¼ ounces and measures in length 1 ½ inches.



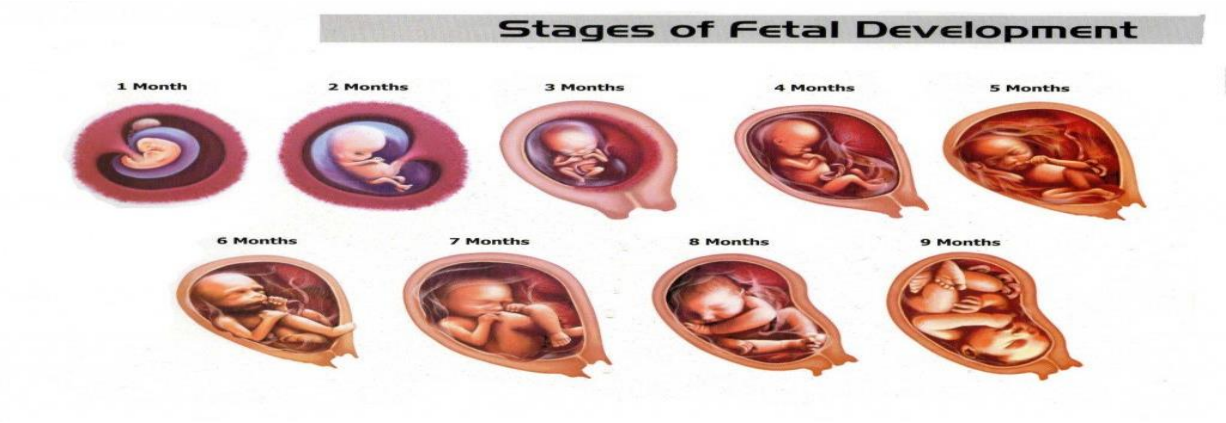
Source:https://assets.babycenter.com/ims/2015/01/pregnancy-week-8-brain-nerve-cells_square.jpg?width=600

3. **Period of Fetus or Fetal Stage:**

The third and the most important sub stages of pre-natal development. This period covers the period from end of second lunar month to the time of birth. This is the longest period of pre-natal development. Major development during this period can be presented as-

- ✓ Changes take place in the relative size of the already formed body parts and its functioning.
- ✓ Fetal heartbeat can be detected about the fifteenth week.
- ✓ By the end of fifth month, the different organ assumes nearly like the one they will have in adult body.
- ✓ Nerve cells starts increasing rapidly in numbers during second, third and fourth month.
- ✓ Fetal starts kicking and turning between eighteen (18) and twenty two (22) weeks and increase rapidly up to ninth month.
- ✓ At five month, course hair begins to grow on the eyebrows and eyelashes.

- ✓ By 28-32 weeks, respiratory system develops.
- ✓ By the end of seventh month, the fetus is well developed though born at this period are considered pre-matured.
- ✓ By the end of eight month, the fetus is completely formed though smaller than that of normal or full term fetus.
- ✓ During 7^{th} and 8^{th} month, fetal growth slows down a little and movement are curtailed die to cramped conditions in mother's womb.
- ✓ About a week before birth, the baby stops growing having average weight of just 7 pounds and a length of 20 inches.
- ✓ By the end of this period, the fetus takes a head-down position in the pelvic region in preparation for birth.



Source:https://www.scienceabc.com/wp-content/uploads/2015/05/stages-of-fetal-development.jpg

LET US KNOW

- ✓ **Lanugo:** A wolly hair that grows over the body of the fetus while they are developing in the womb. These hairs disappear either by birth or shortly after when vellus hairs replace them.
- ✓ A baby born at five or six month practically has no hope of survival because the respiratory system is not developed during that period.

4.5 CONDITIONS AFFECTING PRE-NATAL DEVELOPMENT

The above discussion has revealed that pre-natal period is one of the most important and crucial period of human development. But there are some conditions which may affect the baby and its development. As a learner of developmental psychology as well as a laymen too, you all should

be cleared with these conditions. Pre-natal period is greatly influenced by a wide variety of factors. Some of such factors are-

1. **Nutrition of the mother:**

   The unborn babies' nourishment comes from the maternal bloodstream through the placenta. The malnutrition of the mother will affect the growth and development of the fetus. Hence, mother must be careful in taking balanced diet and proper nutrition such as protein, fats, milk, carbohydrates, folic acid, vitamin C found in various green vegetables and fresh fruits.

2. **Drugs:**

   Certain unprescribed drugs taken by the mother during the pregnancy can have serious developmental effect on the fetus. Narcotics and dosage of these drugs may prove very harmful to both the expectant mother and the fetus. Since drugs permeate the mother's bloodstream and get transmitted to the fetus, hence mother and family members should be very careful in taking drugs.

3. **Age of the Mother:**

   The mother's age at the time of conception and delivery is also an important factor to be considered. Before 21 years of age, the female reproductive system is not fully matured and the hormones needed for reproduction have not reached their optimal levels. The best age for a women to bear a child is 23 to 30. Children generally born before or after this age in average may pronounced various types of genetic abnormalities.

4. **RH factors:**

   Certain substance present in the blood of the fetus which is not present in the mother's blood may create some problems. It may lead to biochemically incompatible. Moreover, incompatibility between the maternal and paternal blood types may cause damage of the cells in the fetus leading to physical or mental complication, miscarriage, still birth or death shortly after birth.

5. **Illness and infections:**

   Though many infectious illness of the mother during the pre-natal period do not cross the placenta, but there are some serious infections that may cross the placenta and affect the baby leading to mental retardation. Some of such well known disease or infections illness is rubella virus or German measles.

6. **Birth Complication:**

Another important factor affecting pre-natal period is birth complication. Prematurity and anoxia are two of the main complications that can occur in infant's delivery and may lead to retardation and intellectual disfunctioning.

7. **Smoking and alcohol:**

   Consumption of smoking and alcohol during pregnancy is very harmful and it must be avoided as it may lead to damage of child's physical and mental development. Research studies revels that smokers tens to have more spontaneous abortions, more still births and increased heartbeat.

8. **Emotional state of mother:**

   For many women, pregnancy is a time of depression, anxiety and worry. The indirect influences in the form of attitudes of significant people, particularly the mother has a significant impact on the unborn child. Severe and prolonged maternal stress affect the baby's development. This stress may cause hyperactivity of the mother's adrenal glands leading t release of an increased supply of hormone hydrocortisone which may cause physical irregularities and create other allied problems during birth.

9. **Environmental Factor:**

   Besides the above mentioned factors, there are some other environmental factors may affect the unborn baby. Chemicals, radiations, extreme heat, humidity and other hazards of modern life may affect both mother and the fetus.

The expectant mother, the father and the other family members should be conscious about these factors and be very careful in keeping the mother being unaffected from these factors or conditions. A healthy mother living in a healthy environment can give birth to a heathy and happy baby which in turn live a healthy and happy life.

4.6 LET US SUM UP

After going through this unit, it can be summarized as-

- Pre-natal period being the first phase of human life. The approximate nine month period spent in mother's womb is known as the pre-natal period.
- An egg cell or ovum fertilized by a sperm cell is a zygote. When the zygote further divide into a mass of cells, it is known as **blastocyst** which will transform into an embryo which will further transform into a fetus and over a period of months the fetus will transform into an offspring.

- There are certain conditions that are determined at conception influencing the individual's later development. These are- hereditary Endowment (genes), sex of the newly created individual and the number of Offspring.
- Every man and every women at conception received 23 chromosomes from each parent as a whole 46 in all.
- The **father** produces sperm of two kinds in equal number-one half of all mature sperm carry the X chromosomes and the other half carry Y chromosomes, i.e. **XY**. But, **mother** produces egg or matured ova all of one kind, each with a large X chromosomes, i.e., **XX**
- If the fertilized ovum or the zygote splits into two or more distinct part during the early stages of cell cleavage, it results in identical twins, triplets or multiple birth.
- The pre-natal period is divided into three stages-period of ovum, period pf embryo and period of fetus. Each of these stages are characterized by its own peculiar type of development.
- There are some conditions which may affect the baby and its development- Nutrition of the mother, Drugs, Age of the Mother, Birth Complication etc.

4.7 FURTHER READING

1. Hurlock Elizabeth B (1980): *Developmental Psychology: A life-span Approach*, Mc Graw Hill Companies, Inc., New York.

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5. Signh Punam (2011): *Developmental Psychology*, Centrum Press, New Delhi.

4.8 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

Fertilization in humans refers to the fusion of male and female sex cell that facilitates the development of a new organism.

ANSWER TO Q.NO.2:

Zygote is a eukaryotic cell formed by the fertilization of two gametes. Thus, an egg cell or ovum fertilized by a sperm cell is a zygote.

ANSWER TO Q.NO.3:

When the zygote further divide into a mass of cells, it is known as blastocyst which will transform into an embryo which will further transform into a fetus and over a period of months the fetus will transform into an offspring.

ANSWER TO Q.NO.4:

A child receives 23 chromosomes from each parent at the time of conception.

ANSWER TO Q.NO.5:

It the mature ovum (X) is fertilized by Y-bearing spermatozoon, the offspring will be a Boy, but if the mature ovum (X) is fertilized by X- bearing spermatozoon, the offspring will be a Girl.

4.9 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

1. How is a zygote form?
2. What are the three phases of pre-natal development?
3. What is the role of chromosomes in human's life?
4. How is the sex of unborn baby determined?
5. Write about the period of ovum in brief.

B. Long Questions (Answer each questions in about 300-500 words)

1. Discuss the process of life formation in mother's womb.
2. Discuss the conditions that are determined at the time of conception.
3. Elaborate the three stages of pre-natal period.
4. Describe the factors that affects the pre-natal period of human development.

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UNIT 5: NEO-NATAL DEVELOPMENTAL PERIOD

UNIT STRUCTURE

5.1 Learning Objectives

5.2 Introduction

5.3 Neo-Natal Period

5.3.1 Phases Under Neo-natal Period

5.4 Developmental Characteristics of New Born Infant

5.5 Action and Reactions of New Born Infant

5.6 Let us Sum Up

5.7 Further Reading

5.8 Answer to Check Your Progress

5.9 Possible Questions

5.1 LEARNING OBJECTIVES

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

- Identify and understand the neo-natal period
- Comprehend the importance of different phases under neo-natal period
- understand how development take place in new born infant
- list out the actions and reactions of new born infants

5.2 INTRODUCTION

The discussion made in the unit 4 must have clarified your concept about pre-natal period and its importance in shaping one's life. As soon as the baby comes out of the mother's womb, he/she enters into a new phase of life which is full of new experiences, adjustment as well as anxiety. This is totally a challenging phase both for the mother and the new born. Here in this unit, we will discuss about the developmental aspects of the new born infants including their actions and reactions.

5.3 NEO-NATAL PERIOD

Neo-natal period is the most important period of human life as it introduces the baby with a completely new environment where he/she has to adjust outside the mother's womb. After being in mother's womb for about nine month, when the baby comes out, he/she faces a complete new world, he/she becomes independent unlike the pre-natal period. Parents and the other members surrounded by the baby also experiences variety of activities and development in the baby. The second important period after pre-natal is the neo-natal period. This period ranges from the time of birth to 10 -14 days post birth. The period right after birth is called as Neo-natal period or period of new born. This is the shortest of all period after birth. This is the time, when the fetus must adjust to life outside the uterine walls of the mother where it has lived for approximately nine month.

The word-"Neonate" is derived from the Greek word-"Neos" which means new and the Latin verb-"Nascur" which means-born. According to medical criteria, the neonatal period begins with birth and ends when the naval heals.

Characteristics of Neo-Natal Period:

The neo-natal period has the following salient features-

- This is the beginning or the early period of existence as an individual rather than a parasite in mother's body.
- The neo-natal period is a time of radical adjustment.
- The neo-natal period is a hazardous period both physically and psychologically due to their adjustment in the new environment.
- It is the shortest of all developmental period post birth.
- During this period, the new-born's complete helplessness gradually gives away to increasing independence.
- There are certain conditions that effects the adjustment of neo-nate in the new environment, such as-pre-natal environment, parental attitude, postnatal care etc.
- The neo-natal period is often termed as a plateau in development, because there is a temporary halt in the process of growth and development.

5.3.1 Phases under Neo-Natal Period

This neo-natal period is subdivided into two periods-

A. Period of Partunate

This period ranges from birth to fifteen to thirty minutes after birth. The period begins when the baby has emerged from the mother's body and lasts until the umbilical cord has been cut. Until the cut of umbilical cord, the baby continues to be a parasite and he/she makes no adjustment to the new environment outside mother's body.

B. The period of Neonate

This period covers the time from cutting the umbilical cord to approximately the end of the second week of post-natal period. With the cutting of umbilical cord, the baby becomes a separate and independent individual. During this period the most important task for the baby is to make adjustment to the new environment outside the womb.

The neo-natal period is a time of radical adjustment. It is a period of transition from an internal to an external environment. The neo-natal period is often termed ***as a plateau in development***, because there is a temporary halt in the process of growth and development. The rapid development of pre-natal period suddenly come to a stop with birth, this regression though lasts for a week after birth. By the end of the neonatal period, the baby's state of development is usually back to where it was at the time of birth.

CHECK YOUR PROGRESS

Q.1. What is neo-natal period?

Q.2. State the derivative meaning of neonate.

Q.3. State two characteristics of neo-nate.

Q.4. How is the neo-natal stage classified?

Q.5. Why is neo-natal period often termed as a plateau in development?

5.4 DEVELOPMENTAL CHARACTERISTICS OF NEW BORN INFANT

The period of neonate begins from the cutting of the umbilical cord and last for the end of second week of post-natal life. The development of new born infant in their post-natal life begins to show in behaviour with their completion in adjustment in the new environment. Although the human life span legally begin at the moment of birth, birth is merely an interruption of the developmental pattern that started at the moment of conception. Development in new born infant is the graduation from an internal to an external environment.

- **Development back after a halt at birth:** The rapid growth and development which took place during the prenatal period suddenly come to a stop with birth. This regression in new born last for few days, after which the new born infant begins to improve. By the end of the infancy period, the new born infant's state of development is usually back to where it was at the time of birth.
- **Development resumes after adjustment:** The new born infant has to make radical adjustment in the new environment in post-natal period outside the mother's body. Once the adjustment is completed, infant resumes their growth and development.
- **Development in new born is a preview of later development:** Though it is not possible to predict the individual's future development on the basis of the development apparent at birth, however, the new-born's development provides a clue to what to expect later on.
- **Development is hazardous for new infant:** New born infant face so many hazards in physical and psychological development as they have to make necessary radical adjustment.

5.5 ACTIONS AND REACTIONS OF THE NEO-NATE

Neo-natal period is the most important as well as the shortest period of human development. This period marks the beginning of fetus as an independent human being. Besides the parents and family members we all as a laymen are curious and excited to experience the actions and reactions of the neo-nate. The activities and reactions of the neo-nate can be listed below-

Movements of body of the baby appear as soon as the fetus emerges from the mother's body. Because of the neurophysiological immaturity of the infant, one could not expect its movements to be coordinated or meaningful. In spite of their random, meaningless nature movements or actions of the infants can be classified into two categories-

1. **Mass Activity of the Neo-nate:**

   Mass activity in neo-nate occurs throughout the entire body when any area is stimulated, though the activity is most pronounced in the stimulated area. Normally mass activity increases in intensity and frequently with each passing day. The greatest activity generally occurs early in the morning when the infant is rested after a relatively long sleep. It is lowest at noon when it is apt to be fatigued as a result of having been bathed or dressed during the morning. The pre-natal and birth experiences influences the infant's activity. The baby who have been most active as fetus in mother's womb, tend to be more active during the neo-natal period. A long and difficult labour or heavy medication of the mother can cause the infant to be relatively inactive for the first few days after birth. It is said that *infant delivered by caesarean section are usually less active than those born through normal delivery.* The greatest amount of activity is in the trunk and legs and the head moves the least.

   The following conditions leads to increased activity in baby-

   - Hunger, pain and general discomfort give rise to great activity and activity tends to be less when the baby is nursed or fed by the mother.
   - Removal of cloths and cover from the body.
   - Environmental conditions like light, sounds produces increase in infant's activity.
   - Crying and awakening.

2. **Specific activities or reflexes of the neo-nate:**

   Specific activities in the neo-nate involve certain limited areas of the body. They includes some reflexes which are definite responses to specific sensory stimuli and which remain unchanged with repetition of the same stimulus and generalized responses which use larger group of muscles. This may aroused by either external or internal stimuli. Most of the important reflexes in the baby are-pupillary reflexes, reflexes of the lips and tongue, sucking, flexion, knee jerk, sneezing. With the passing of days, these reflexes become stronger.

   Some of the common generalized responses in the baby includes-spontaneous eye-movement, shedding of tears, sucking of fingers, yawning, hiccupping, mouthing, frowning

and wrinkling, turning the trunk, body jerk, prancing, kicking , salivating, turning and lifting the head etc.

3. **Vocationalisation:**
   Another important form of reaction that a baby make is through vocationalisation. The vocationalisation of the newborn infant is classified into two categories-crying and explosive sounds. During the neo-natal period, baby make responses through crying. Normally, crying starts with birth. Birth cry is reflex activity that causes the lungs to inflate, making breathing possible. Besides crying, the baby makes produce reaction through some explosive sounds uttered without meaning.

ACTIVITY 5.1

List out the actions exhibited by a new born infant in your family or in the neighborhood.

CHECK YOUR PROGRESS

Q.6. Development in new born a preview of later development—Give cause

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Q.7 State some specific actions of neonate.

Q.8 What are the conditions that leads to increased activity in baby?

5.6 LET US SUM UP

After going through this unit, it can be summarized as-

- The second important period after pre-natal is the neo-natal period.
- This period ranges from the time of birth to 10 -14 days post birth. The period right after birth is called as Neo-natal period or period of new born.

- Movements of body of the baby appear as soon as the fetus emerges from the mother's body.
- The baby who have been most active as fetus in mother's womb, tend to be more active during the neo-natal period. A long and difficult labour or heavy medication of the mother can cause the infant to be relatively inactive for the first few days after birth.
- Developmental Characteristics of New Born Infant – development back after a halt at birth, development resumes after adjustment, development in new born is a preview of later development, and development is hazardous for new infant.
- Meaningless nature movements or actions of the infants can be classified into two categories-mass activities and specific activities.

5.7 FURTHER READING

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5.8 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

The period right after birth is called as Neo-natal period or period of new born

ANSWER TO Q.NO.2:

The word-"Neonate" is derived from the Greek word-"Neos" which means new and the Latin verb-"Nascur" which means-born

ANSWER TO Q.NO.3:

Characteristics of neo-natal period-

- This is the beginning or the early period of existence as an individual rather than a parasite in mother's body.
- The neo-natal period is a time of radical adjustment.

ANSWER TO Q.NO.4:

The period is classified into two sub-stages of pre-natal period in terms of-- period of partunate and period of neonate. Period of partunate begins when the fetal body has emerged from the mother's body and lasts until the umbilical cord has been cut and tied. The period of neonate begins from the cutting of the umbilical cord and last for the end of second week of post-natal life.

ANSWER TO Q.NO.5:

The neo-natal period is often termed *as a plateau in development*, because there is a temporary halt in the process of growth and development. The rapid development of pre-natal period suddenly come to a stop with birth, this regression though lasts for a week after birth.

ANSWER TO Q.NO.6:

The rapid growth and development which took place during the prenatal period suddenly come to a stop with birth. This regression in new born last for few days, after which the new born infant begins to improve. By the end of the infancy period, the new born infant's state of development is usually back to where it was at the time of birth.

ANSWER TO Q.NO.7:

Pupillary reflexes, reflexes of the lips and tongue, sucking, flexion, knee jerk, sneezing.

ANSWER TO Q.NO 8:

The following conditions leads to increased activity in baby-

- Hunger, pain and general discomfort give rise to great activity and activity tends to be less when the baby is nursed or fed by the mother.
- Removal of cloths and cover from the body.
- Environmental conditions like light, sounds produces increase in infant's activity.
- Crying and awakening.

5.9 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words**)**

1. Why is neo-natal period important?
2. What are the phases under neo-natal period?
3. What is significance of period of partunate?
4. State some mass activities of neo-nate
5. Why Development is in new born considered as preview of later development?

B. Long Questions (Answer each questions in about 300-500 words**)**

1. Discuss the developmental Characteristics of New Born Infant.
2. Elaborate the actions and reactions of new born infant.

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UNIT 6: THE BABYHOOD (INFANCY) PERIOD

UNIT STRUCTURE

6.1 Learning Objectives
6.2 Introduction
6.3 Physical Developmental Aspects in a Toddler
6.4 Development of Language in a Toddler
6.5 Cognitive Development of a Toddler
    6.5.1Jean Piaget's Theory of Cognitive Development
6.6 Social Development of a Toddler
6.7 Let Us Sum Up
6.8 Further Reading
6.9 Answers to Check Your Progress
6.10 Possible Questions

6.1 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- understand the concept of development in the toddler.
- explain the physical changes in a toddler
- describe the development of language in a toddler
- comprehend the cognitive development in a toddler
- explain the social development in a toddler

6.2 INTRODUCTION

The life of an individual starts from the very moment of conception in the mother's womb. The birth of the individual is a natural event of life. It enables him to come out of the internal environment of the mother's womb and be in communion with the external environment wherein he has to promote his growth. This growth is continued till death and it has to undergo several changes of all types- physical, mental, emotional, and social, etc. The successive changes that occur from time to time in these types are known as development. The first stage of an individual's life after birth is infancy. The developmental period of the newborn infant or 'neonate' is from birth to fourteen days, which is already discussed in the previous unit. Infancy is regarded as the 'foundation age' as at this period many behavior patterns, many attitudes and many patterns of

emotional expression are being established. The first year of a child is infancy period and from the first year (12 months) to 2-3 years is the period of toddler. A toddler is a child approximately 12 to 36 months old, though its definitions vary. The toddler years are a time of great cognitive, emotional and social development. The word toddler is derived from the words “to toddle” which means to walk unsteady like a child of this age.

6.3 PHYSICAL DEVELOPMENT IN A TODDLER

There is no exact age at which all infants should be able to grasp object or hold up their heads without support. Physical development occurs at different times for all children depending on many factors such as the child’s unique characteristics, the family’s values and culture and available resources certain conditions must exist for a toddler to grow and develop. A young child’s basic need or physical needs include: Food, shelter, warmth, clean air and environment, health and dental care and activity and rest.

Physical development including gross and fine-motor skills, consumes the interest of toddlers as they practice learned skills and look to develop new ones. Healthy physical development is dependent upon nutrition, brain development, the central nervous system, muscles, bones and the interactions and experiences that are offered to toddlers. Recognizing developmental delay during toddlerhood for the early intervention is more effective than if the delays were not acknowledged until childhood. Delays in physical development may affect more than gross and fine-motor skills. For example: - If a toddler is unable to smile at his parents or lift his arms to be picked up than this can impact social and emotional development.

Physical Development aspects:

Toddlerhood is a period of rapid growth and development. There are marked changes regarding the different developmental aspects from birth till the period of infancy ends, i.e., at the end of two years. The different aspects are discussed below:

The physical development of a toddler is very rapid and it can be easily studied under the following heads-

- **Height and weight:** At four months after birth the infant measured almost 23 and 24 inches and at one year he measures between 26 and 30 inches and at two years between 32 and 34 inches. The toddler’s weight is almost double when the infant is four months old. At one year, babies’ weight, on the average, is three times their weight at birth. This is mainly due to the increase in fat tissue.

- **Nervous proportion**: Head growth gradually slows down while the chest and limbs growth increases. Thus the toddler slowly becomes less top heavy and appears more slender, though the head covers one-fourth of the body at birth.
- **Bones development**: The number of bones increases during toddlerhood, particularly the second year of life. The soft spot on the skull closes by the age of the end of two years.
- **Muscles and fat**: Muscles are developed at birth. They grow slowly and are weak during the initial period of toddlerhood. On the contrary, fat tissues develop very rapidly during toddlerhood mainly due to the fat content of milk, the main food of the baby.
- **Sense organ development**: By the age of three months the eyes of muscles of the babies are well developed and coordinated to enable him to see clearly and distinctly and also to see colors. Hearing capability also develop very rapidly during this time. Smell and taste which are well developed at birth continue to improve further during toddlerhood. Toddlers respond quickly to touch stimuli because of the thin texture of their skin. They relate very well to pressure, pain and temperature.

6.4 DEVELOPMENT OF LANGUAGE IN A TODDLER

Language plays a vital role in the personality and social development of the child. The development of language is connected with the physical and mental development of a person. One is able to use language only after attaining a definite physical and mental maturation. So long as his vocal organs do not mature properly, he cannot pronounce words correctly and clearly. Speech is the main medium of communication between individuals. To be able to communicate with others, all individuals must be capable of two functions-

a) The ability to understand the meaning of what others are trying to communicate.

b) To communicate to others what they can understand.

Communication can be in any form of language- written, spoken, gestures, postures, musical, artistic expression but the most common is the spoken form. The foundation of speaking is laid in infancy itself though the ability to understand clearly happens generally in toddlerhood. Babbling which occurs after few months is most important because speech develop from it eventually.

The first sound of the toddler is natural and its differentiation is not possible. But after some days, it may be connected with hunger, heat, cold and thirst because its sounds for all these are of particular nature. In the beginning, its sounds are mainly vowel sounds, as ‘aaa’ ‘ee’ ‘al’ etc. After that it can produce consonant and vowel sounds both as MA, MAMA, PA, PAPA, etc with all these haphazard sounds, it gradually improves its language skills.

When the toddler reproduces the sound MAMA, MUM, PA or PAPA, it shows a response to it by considering it a stimulus for listening. When it hears itself reproducing the sound MAMA several times, it connects the sound 'MAMA' with its speaking activity. When the toddlers has learnt to speak 'MAMA' any adult can stimulate or condition it to speak some meaningful word like CAT, DOG, or RAT by pointing to these animals when present nearby. Thus with the help of some stimulus, the child learns to speak MAMA or CAT. A growing child can imitate some meaningful word only when it has reproduced the sound in its spontaneous language response.

The development of the child proceeds according to general principles of language development. Just as in motor development, the toddler succeeds in displaying distinct and definite movements by proceeding from indistinct and indefinite movements. Similarly in language development also it learns to reproduce specific and meaningful sounds by producing indistinct and indefinite sounds in the beginning

Language development involves the following

- **Pronunciation**: The toddlers learns to pronounce words clearly by end of second year by imitating parents and others adults. This is the second stage of language development. About the age of 16 to 24 months toddlers produce real words and partly trial and error sentences. While they are only capable of producing few short sentences at this time, it should be realized that they are able to understand more. Toddlers begin to understand language about twice as fast as they are able to produce it.
- **Vocabulary build up**: Toddlers learns and follows simple one-step direction and commands. The toddlers starts expanding vocabulary at this stage. By 24 months the toddlers starts using about 50 words regularly. The year between 12 and 24 months is the most exciting year in terms of language development. However they do not have idea about pronouns, preposition and conjunction. Vocabulary increase with age and maturation.
- **Sentences**: The toddles first real sentences usually appears between eighteen and twenty-four months, and generally consists of simple words accompanied by a bodily gesture. Gradually the toddlers uses more words in their sentences but gestures are still predominant through infancy and well into childhood.

CHECK YOUR PROGRESS

Q.1 Which period is known as the period of toddlerhood?

Q.2 The word toddler is derived from which word?

Q.3 Mention the heads through which physical development of a toddler can be studied.

Q.4 Mention one important aspect of language development in a toddler.

6.5 COGNITIVE DEVELOPMENT IN A TODDLER

Cognitive development refers to the development of the capabilities of knowing, thinking, reasoning, understanding, remembering, etc. Cognitive units include images, symbols, concepts, etc.

Images retain in the mind the similarities and relations between significant elements of the child's experience.

Symbols represent objects, events or even actions. The most commonly used symbols are represented by sign letters.

Concepts are the abstracts characteristics of objects, events or actions. The development of concepts results from associations of meanings with objects, people and situations.

Cognition may be direct and indirect. Direct cognitive abilities refer to the processes that occurs when a child tries to solve a problem. Cognitive activities are indirect when the child engages in the free associations or refer to dreams. The behavior of a normal baby shows that ability to form concepts develops very rapidly.

6.5.1: Jean Piaget's Theory of Cognitive Development

The famous Swiss psychologist Jean Piaget has made the most significant contribution in the study of cognitive development of children. We have already discussed briefly in the previous unit but let us discuss about the theory in detail -

Jean Piaget was the first to make systematic study of the acquisition of understanding how thinking in a child develops. According to him intellectual traits characteristic thoughts –"relation and "animism".

According to Piaget's realism is the tendency to the child to treat thoughts and dreams as physical events and the tendency of the child to give psychological attributes to physical objects is called animism.

Piaget believed that cognitive development takes place through four fundamental stages. All children have to pass through these stages to reach the next higher level of cognitive thinking.

Piaget's Stages of Child Development-

Jean Piaget's theory of Cognitive Development are divided into four Major stages are:

A. Sensory Motor Stage: (0—2 Years)
B. Preoperational stage: (2—7 Years)
C. Concrete Operational Stage: (7—11 Years)
D. Formal Operational Stage: (11 Years —Adulthood)

A. The Sensory Motor Stage (Ages: Birth to 2 years)

The main characteristic of this stage of development are:

- ✓ It involves the senses and motor activities.
- ✓ Children do reflexive activities such as sucking and grasping.
- ✓ The child observes and imitates his or her surroundings. Thought and memory also start to develop systematically.
- ✓ Children learn to recognize objects and understand that objects have their separate permanent existence

As infants grow older, they learn that even if an object is not in front of them, it still exists. Piaget called it to object permanence. It is also known as 'out of sight, out of mind

Children also learn to work in a particular direction. Catching a particular thing which they are asked to catch, playing with puzzles and so on are common activities they learn to do. They move

from simple to complex logical action and thinking. This goal-directed thinking helps them to progress to a higher level scheme to achieve a goal

The Sensory Motor Stage is further divided into six sub-stages

There are six sub-stages of the first stage given by Piaget:

1. Stages of Reflex Activities (0—1 month): Inborn reflexes (sucking and looking) help the child to understand the surrounding.

2. Primary Circular Reactions (1—4 months): Sensations and schemas get coordinated in this stage. Whatever children do in this stage, they tend to do it repeatedly as they derive pleasure from doing so. For example, if a child starts sucking thumb, he or she will continue with this action because it gives the child a soothing feeling.

3. Secondary Circular Reactions (4—6 months): younger Children become more focused on doing actions. They repeat their actions to get a response from the environment.

4. Coordination of Reactions (6—12 months): In this stage, children learn to make a difference between goal and means. They also develop ways to achieve their goals. They also try to generalize the learning and try to use it from one situation to another.

5. Tertiary Circular Reactions (12—16 months): This is a stage of trial and error. Children explore the things around them. They make mistakes and also tend to repeat these mistakes. This stage is very important as children learn to be confident in this particular stage. They repeat many actions because they want attention from their caregiver.

6. Early Representational Thought (16—24 months): Children start focusing more on mental activities rather than physical actions and they start thinking about objects. At this age, they show the ability to recognize object permanence. They search for the toy even if it is not in their sight.

B. The Preoperational stage (Ages: 2 to 7 Years)

The Main Characteristics of this stage involves:

- ✓ Children begin to process their thoughts at this stage although in a manner that is far less efficient than the logical thought-processing of adults.
- ✓ Their vocabulary expands and develops during this time because they change their working style and habits and start behaving like little adults
- ✓ This stage is known as a pre-operational stage of cognitive development. It is called ‘pre’ because, in this stage, children cannot perform a logical operation.

- ✓ This stage is categorized in two parts: **pre-conceptual stage (2-4) and intuitive stage (4-7).**
- ✓ Their vocabulary expands and develops during this time because they change their working style and habits and start behaving like little adults

Some of the other important characteristics are:

- ✓ **Ego-centrism** is one of the main characteristics of pre-operational. Children focus on their perspective and feel that they are correct. They also believe that others also share the same perspective because they think that it is the only perspective which exists. But gradually they understand that there are many perspectives and Piaget called it 'decentering: They start believing that they are not at the centre of everything.
- ✓ **Animism** is also a characteristic of the pre-operational stage. It is a characteristic by which children believe that all objects or things are living and has some consciousness. An example of this is that children often believe that a table also feels pain if it is hit or kicked; a car does not get started because it is tired and so on. A child believes that everyone is like him or her.
- ✓ Children also develop **the ability to use symbols, language, pictures, signs or gestures to represent actions or objects mentally**. Piaget called this semiotic function or symbolism. Along with this, their ideas of right and wrong are governed by the people around them.

C. The Concrete Operational Stage (Ages: 7 to 11 years)

The main characteristic of Concrete Operational stage are:

- ✓ Children can do operations on concrete objects and situations. However, they will find it hard to solve abstract problems and have difficulty with words like 'assume' that relate to mental conjecture.
- ✓ They can do logical thinking if they are allowed to manipulate objects. By comparison, however, it is seen that thoughts can be manipulated and the presence of the object is not necessary for the thought to take place in the formal operations stage.
- ✓ They start thinking more like mature persons and rarely believe in animism and ego-centrism.
- ✓ Children learn many things in this stage concerning conservation such as classification, grouping objects into categories, arranging of objects in sequential order according to one aspect, such as size, weight or volume

D. The Formal Operational Stage (Ages: 11 years to Adulthood)

The main Characteristics of formal operational stage are:

- ✓ This is the final stage of Piaget's cognitive development in this stage
- ✓ Children become capable of abstract thinking and can understand the combination and coordination of numbers and variables.
- ✓ Developed formal operational thought.
- ✓ Children move ahead from concrete objects to abstract concepts
- ✓ They develop a logical system of intelligence and try to incorporate all possible solutions while working on a problem.
- ✓ They also learn to coordinate between different variables.
- ✓ Children in this stage use the formal operations problem-solving strategy in which an individual begins by identifying all the factors that might affect a problem and then deduces systematically. Piaget called it hypothetico-deductive reasoning.
- ✓ This stage permits adolescents to reason beyond a world, of concrete reality to a world of possibilities. Sometimes, they just live in a world of imaginations with no concern about the real world.

Piaget believes that children overcome egocentrism, but they still tend to believe that everyone shares similar thoughts, feeling and concerns. They wonder why people do not understand their need and perspective and therefore, they develop adolescent ego-centrism. They feel that everyone notice them, what they do, how they walk, how they talk.

According to Piaget's the basis behavior starts through sensations and this stage is therefore called by him as the sensory-motor stage. He emphasized that the sensory -motor experiences have significant and probably irreversible effects on his later life.

Piaget described that between one and half years to 2 years a toddler starts understanding that objects have substance, occupy space and are permanent. He gradually can find difference between himself and other people and things in the environment. The cognitive development determines the toddler's ability to think understand and manipulate things in his surroundings.

6.7 SOCIAL DEVELOPMENT IN A TODDLER

Concept of social development:

Man is a social animal we see the truth of this statement since the birth of an infant. The manner in which an adult depends upon others for his various requirements in the same way a child is dependent on others. The social contacts immensely influence the child development. The first

social contact of the child is with his family. Therefore, his early habits and attitudes are determined by the members because he shows his family. These habits and attitudes have an important place in his development because he shows his response towards various social stimuli on their basis. The child's behavior is not determined by a single influence of the home and the environment. In fact his behavior is determined by his personality and his personal relations with the entire environment.

One of the significant characteristic that a toddlers develops is social development i.e. acquiring the skill needed to become a member of a group. Toddler starts talking and interacting more with others as they grow older. When young children enjoy their contacts with others, their attitudes towards those people will become favorable in future and if the social contacts with certain people are not enjoyable, then such contacts are not favorable in future.

Social development starts in infancy but it becomes more pronounced from toddlerhood with increasing age the child expands his social interactions to the parents and relatives, friends and peers, teachers and others. The young child wants and needs companions of adults and other children. Social acceptability becomes a very important goal in the child's life.

At the start of toddlerhood period, children show interest in watching other children play but himself play independently. Then comes a period when children gradually start engaging in play activities with other children. This is called associative play. Toddlers learn to socialize mainly by watching others make social contacts. Toddlers mostly imitates the behaviour and attitudes of parents as they admire them and want to be like them. The urge to establish social contacts and enjoy the associations with others become quite obvious in toddlerhood.

In toddlerhood, the toddlers mostly use toys in one form or another in their play activities and they attribute certain qualities to their toys. Towards the end of toddlerhood they lose interest in playing much with toys. The play interests during toddlerhood are very much influenced by their maturation level. Besides this, their interest are also determined by the socio-economic status of the family. Play activities during toddlerhood develop motor and communication skills in toddlers. They also become more creative. All these qualities and skills help the children to become more social.

The toddlers gradually learn social behaviours. This learning depends upon his contacts with others. His social development proceeds further as and when he comes in contact with others. A definite plan and guidance is necessary for the desired development of the child. Along with his social development the personality of the child also gets better adjusted. Social

development is usually associated with the development of power of self-expression which enables the child to stand on his own legs. Social development of toddlers proceeds in an order. So it is not difficult to predict the nature of social development at a certain age.

CHECK YOUR PROGRESS

Q.5 What do you mean by cognitive development?

Q.6 Mention one significant characteristic of social development in a toddler.

6.8 LET US SUM UP

The unit can be summarized as-

- The birth of the individual is a natural event of life. It enables him to come out of the internal environment of the mother's womb and be in communion with the external environment wherein he has to promote his growth. This growth is continued till death and it has to undergo several changes of all types- physical, mental, emotional, social, etc.
- The first stage of an individual's life after birth is infancy. The first year of a child is infancy period and from the first year (12 months) to 2-3 years is the period of toddler. A toddler is a child approximately 12 to 36 months old, though its definitions vary. The toddler years are a time of great cognitive, emotional and social development. The word toddler is derived from "to toddle" which means to walk unsteady like a child of this age.
- Physical development including gross and fine-motor skills, consumes the interest of toddlers as they practice learned skills and look to develop new ones. Healthy physical development is dependent upon nutrition, brain development, the central nervous system, muscles, bones and the interactions and experiences that are offered to toddlers.
- The physical development of a Toddler is very rapid

- Language plays a vital role in the personality and social development of the child. The development of language is connected with the physical and mental development of a person.
- One is able to use language only after attaining a definite physical and mental maturation. So long as his vocal organs do not mature properly, he cannot pronounce words correctly and clearly.
- Communication can be in any form of language- written, spoken, gestures, postures, musical, artistic expression but the most common is the spoken form. The foundation of speaking is laid in infancy itself though the ability to understand clearly happens generally in toddlerhood. Babbling which occurs after few months is most important because speech develop from it eventually.
- Cognitive development refers to the development of the capabilities of knowing, thinking, reasoning, understanding, remembering, etc. Cognitive units include images, symbols, concepts, etc.
- Jean Piaget's is a Swiss-born psychologist who was the first to make systematic study of the acquisition of understanding how thinking in a child develops. According to him intellectual traits characteristic thoughts –"relation and "animism".
- Jean Piaget's theory of Cognitive Development are divided into four Major stages are: Sensory Motor Stage: (0—2 Years),Preoperational stage: (2—7 Years),Concrete Operational Stage: (7—11 Years),Formal Operational Stage: (11 Years —Adulthood)
- Social development starts in infancy but it becomes more pronounced from toddlerhood with increasing age the child expands his social interactions to the parents and relatives, friends and peers, teachers and others. The young child wants and needs companions of adults and other children. Social acceptability becomes a very important goal in the child's life.
- Socialization occurs when one learns to become a member of the society by gaining the skills, values, behaviors and habits of the culture that one is living. Toddlers learn by listening and watching what their family members around them do and then imitates those actions to become a member of society.

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Web-links-

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3. https://www.verywellfamily.com
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6.10 ANSWERS TO CHECK YOUR PROGRESS

Answer to Q. NO.1: The first year of a child is infancy period and from the first year (12 months) to 2-3 years is the period of toddler. A toddler is a child approximately 12 to 36 months old, though its definitions vary.

Answer to Q. NO.2: The word toddler is derived from the words “to toddle” which means to walk unsteady like a child of this age.

Answer to Q. NO. 3: Height and weight, Nervous proportion, Bones development, Muscles and fat, Sense organ development.

Answer to Q. NO.4: One important aspect of language development in a toddler is - Pronunciation: The toddlers learns to pronounce words clearly by end of second year by imitating parents and others adults. This is the second stage of language development. About the age of 16 to 24 months toddlers produce real words and partly trial and error sentences. While they are only capable of producing few short sentences at this time, it should be realized that they are able to understand more. Toddlers begin to understand language about twice as fast as they are able to produce it.

Answer to Q. NO.5: Cognitive development refers to the development of the capabilities of knowing, thinking, reasoning, understanding, remembering, etc. Cognitive units include images, symbols, concepts, etc.

Answer to Q. NO. 6: One of the significant characteristic that a toddlers develops in social development is to acquire the skill needed to become a member of a group. Toddler starts talking and interacting more with others as they grow older. When young children enjoy their contacts with others, their attitudes towards those people will become favorable in future and if the social contacts with certain people are not enjoyable, then such contacts are not favorable in future.

6.11 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

Q.1 .Define Development.

Q.2 .What is the approximate age of a toddler?

Q.3 .What does the word 'Toddle' mean?

Q. 4 Mention the physical developmental aspects in a toddler.

Q.5 .Mention the important aspects of language development of a toddler.

Q.6. What do you mean by Cognitive development?

Q.6 What is Social development in toddler?

B. Long Questions (Answer each questions in about 300-500 words)

Q.1. Explain the concept of Physical development of a toddler.

Q.2. Discuss the Physical changes in a toddler.

Q.3. How does language formation takes place in a toddler? Explain.

Q.4.What do you mean by Cognitive development? Explain the units of cognitive development.

Q.5. Explain Jean Piaget's Theory of Cognitive Development.

Q.6.What do you mean by Social development? Explain the importance of social development during toddlerhood.

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UNIT 7: EARLY CHILDHOOD PERIOD

UNIT STRUCTURE

7.1 Learning Objectives

7.2 Introduction

7.3 Early Childhood Period

7.4 Characteristics of Early Childhood Period

7.5 Problems during Early Childhood

7.6 Educational Importance of Early Childhood

7.7 Let Us Sum Up

7.8 Further Reading

7.9 Answers to Check Your Progress.

7.10 Possible Questions

7.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- define the early childhood period.
- Know about the characteristics of this period.
- Identify the common problems during early childhood.
- describe the educational importance of this period.

7.2 INTRODUCTION

In the preceding unit we learnt infancy and babyhood. This unit deals with the early childhood stage. In this stage the helplessness and dependency of a child is replaced by his growing independence. He gradually becomes aware of some simple concepts of social and physical realities. Development psychologists attach great importance to this stage since this is a period of mental growth. During this year early childhood attitude, habits and patterns of behaviour begin to take shape. These attitudes help the child to adjust in life as he grows older. Children gradually start learning how to fit their behaviuor to the patterns accepted by school and society. Thus, early childhood as a period of development is of great significant from the point of view of a child's mental, emotional and social development.

The purpose of this unit is to familiarise you with the early childhood stage, its basic characteristics, its problems and the significance of this stage in human life.

7.3 THE EARLY CHILDHOOD PERIOD

Early Childhood stage is the foundation period of life covering 2 - 6 years of our life. It is a period of rapid - physical, mental, emotional, and social and language development of a child. Apart from these major developmental aspects such as, development of - understanding, moral values, some common interests, those are some common characteristics of Early Childhood stage. It is a period of slow growth and rapid development.

Early Childhood, which extends from two to six years, is labeled by the Parents as 'The Problem'; 'The Troubles some, or 'The Toy' age, by the Educators as '**The Pre-school age'**; and, by the Psychologists as 'The Pre-gang, 'The Exploratory', or 'The Questioning' age, because of its unique characteristics.

LET US KNOW

EARLY CHILDHOOD STAGE

- Age group 2-6 years.
- Period of rapid physical, mental, emotional, social and language development.
- It is the foundation period of life.
- It is a period of slow growth and rapid development.
- It is termed as 'Pre-School age.

CHECK YOUR PROGRESS

Q.1. Fill in the blanks:

i) It is a period of slow _____ and rapid _____.
ii) The Parents name early childhood age as _____.
iii) Educators term early childhood as _____.
iv) The Psychologists labeled this age as _____.

7.4 CHARACTERISTICS OF EARLY CHILDHOOD PERIOD

The Early period witnesses the all-round development of the child. This is one of the most important and impressionistic periods of human life. Let us now discuss the characteristics of the early childhood period:

- **A period of physical development:** The child gains height at the average rate of about 3 inches per year. Children at the end of this stage generally have a height of 3 feet and 6 inches. The weight of the child also increases. Body proportions change markedly, and the "baby look" disappears. Difference in body build becomes apparent for the first time in early childhood with some children having a fat body build, some muscular body build and some others having a thin body build. Regarding the development of teeth, generally during the last half year of early childhood, the baby teeth begin to be replaced by permanent teeth, coordination of the finer muscles. The child acquires various motor skills like - catching, throwing, running, jumping, climbing, riding a tricycle, self-feeding, dressing, balancing, colouring, drawing etc.
- **A period of language development:** Early childhood is popularly known as "the chatterbox age", because children are then able to speak with ease. By the time the children are two years old, most of the pre speech forms of communication they found so useful during babyhood are abandoned. Young children no longer babble, and their crying is greatly curtailed. They may use gestures, but mainly as supplements to speech. During early childhood, there is a strong motivation on the part of most of the children to learn to speak. Because,' learning to speak' is an essential tool in socialization and a tool in achieving independence.

Major improvements in speech during Early Childhood are:

i) **Improvement in comprehension:** Children at this stage, develop the power of understanding about what others say to them, which helps them to communicate with others.

ii) **Improvement in speech skills:** Early childhood is normally a time when rapid developments are made in the major tasks of learning to speak - mastering pronunciation, building up a vocabulary. It means that young children begin to learn more words and their meanings, and to combine words into sentences. Children can speak simple to complex sentences.

Disequilibrium: state of agitation, unbalance.

Tantrums : uncontrolled, outburst of anger**.**

- **A period of emotional development:** Emotions are especially intense during early childhood. This is a time of ***disequilibrium*** when children are unable to control their emotions. Some common emotions of early childhood period are - anger, fear, jealousy, curiosity, envy, joy, grief, affection etc. The most common causes of anger in young children are conflicts over playthings, un-fulfillment of wishes, attacks from another child etc. Children express anger through temper ***tantrums***, characterized by crying, screaming, stamping, kicking, jumping up and down, or striking.

  Another emotion which finds its expression is **Fear**. The child is afraid of many things which he does not know. Young children become **Jealous** when they think that their parents interest and attention are shifting toward someone else in the family, usually a new sibling. Young children may openly express their jealousy or they may show it by reverting to infantile behaviour to get attention. Children are **curious** about anything new that they see and also about their own bodies and the bodies of others and, as a result, they ask questions. Young children often become **Envious** of the abilities or material possessions of another child and they express their Envy in different ways. Young children derive **Joy** from such things as a sense of physical well-being, different situations, sudden or unexpected noise, slight calamities, playing pranks on others, completing different tasks etc. They express their joy by smiling, clapping, jumping, hugging etc. Another emotion which finds its expression is **Affection**. Young children learn to love the things are - people, pets, toys or other objects - which give them pleasure. They express their affection by kissing, hugging and patting. Young children are saddened by the loss of anything they love or that is important to them. They express their **Grief** by crying and by losing interest in their normal activities, including eating.
- **A period of Social Development:** One of the important developmental tasks of early childhood is acquiring the preliminary training and experience needed to become a member of a “Gang” in late childhood. Thus, early childhood is often called as “The Pregang age”. The foundations for socialization are laid by the family, neighborhood and by his pre-school. The child develops his social qualities in his family. A good family provides a good social atmosphere for the child to develop healthy social habits. Sometimes he goes to the neighbourhood. He finds that the atmosphere there is different from that at home and he tries to adjust with that atmosphere. He develops **Friendship** with other children of his age in the neighbourhood. He plays with his friends and

sometimes he also quarrels. He comes to know of teasing, imitating, quarrelling, sympathy, sharing, co-operation etc.

- **A period of Development of Understanding:** With increased intellectual abilities, specially the abilities to reason and to see relationships, young children's understanding of people, objects and situations increases rapidly. This increase in understanding comes from new meanings being associated with meanings learned during baby-hood. Children come to know about the simple relationships, like - parents, sibling, relatives etc. By the time they are three years old, most young children know their sex, their full names, and names of different parts of their bodies. During the early childhood, the young children develop the concepts of bodily functions, space, size, numbers, colours, shapes, time, self, beauty etc.
- **A period of Development of Interests:** Early childhood is also a period when some common interests develop. These include:
    i) Interest in play,
    ii) Interest in human body,
    iii) Interest in self,
    iv) Interest in clothes,
    v) Interest in Religion and
    vi) Interest in Sex.

The young children love to play at all the time. They become interested in the exterior of the body before the interior. But at the later part of early childhood, most young children develop an interest in the interiors of their bodies and want to know about the interior parts and their functions. After the helpless days of babyhood are over, many young children develop an interest in themselves. There are many ways by which the young children show their great interest in self, like - looking at themselves in mirrors, examining the different parts of their bodies and their clothes, asking questions about themselves, comparing their possessions with those of their playmates etc. Young children also have a strong interest in their clothes. The reason is that, at an early age, they discover that their clothing attracts attention.

Adults, they find, make favourable comments about their clothes and their playmates often admire them or envy them because of their clothes. Religious beliefs are, for the most part, meaningless to young children although they may show some interest in religious observances. So many of things often mystify children, such as - birth, death, growth and the elements. These are explained in religious terms by elders and they accept them. Even young children endow all their beliefs with an element of unreality; therefore, this stage has been called as "the fairytale stage" of

religious belief. Young children are also curious about where babies come from and ask many questions about this. Many children show their interest in sex by talking about it to their playmates when adults are not present, by looking at pictures, by enjoying the adult scenes in the T.V. shows and movies etc. Normally in this stage male child is attached to the mother and the female child to the father.

LET US KNOW

Characteristics of early childhood:

- A period of physical development.
- A period of language development.
- A period of emotional development.
- A period of social development.
- A period of development of understanding.
- A period of development of interests.

CHECK YOUR PROGRESS

Q.2. Physical Development of Early Childhood, explain.

7.5 PROBLEMS DURING EARLY CHILDHOOD

Now we are familiar with the characteristics of early childhood. We must also discuss the problems associated with this period. In learning to adjust to the world as children grow up, they often develop certain kinds of problem behaviour. The most common problems of early childhood are as follows–

- **Eating problems:** Children's eating problems have received considerable attention from theorists and practitioners. They have suggested that early eating experiences of children play a significant role in determining their later personality characteristics as eating has a direct relationship with the physical well-being of the child. There are a number of common eating problems among the young children as experienced by parents and other family members. The most common problems are -

i) Not eating,

ii) Vomiting,

iii) Dawdling, and

iv) Weaning.

Problems related to not eating tend to occur with considerable frequency during infancy and pre-school years. Vomiting is also frequent in young children. Children vary greatly in their proneness to vomit. Vomiting tends to occur during the highly stimulating events, changes in environment and stressful experiences associated with food. Dawdling means doing something in a slow, lingering way - taking more time to finish the act than is needed. Most of the young children at this age take more time to finish a meal. Dawdling creates so many problems to the parents and it also affects the child's health. Another problem of early childhood is weaning.

The introduction of new food is usually correlated with the weaning process and presents its own problems. Children tend to reject the food that is different from their regular food in either taste or consistency. They push the food out of their mouths, or if forced to eat, they vomit. These eating problems affects in child's physical as well as mental development.

- **Elimination Problem:** Next to eating, toilet training has perhaps been given the greatest attention. Method of toilet training have long term consequences for later personality characteristics. Toilet training is very important and the mother has a great role to play in this regard. Children vary greatly in their progress towards successful toilet training. The child who has a regular elimination pattern is easier to train. But sometimes it has been observed that a well-trained child begins to wet again or strongly resists sitting on the toilet; these kinds of behaviours create problems for the parents or the caretakers or the teachers.

  In this case, re-training must be provided. Proper toilet training should be provided from a very early age, otherwise elimination process will create lots of problem to the parents, caretakers and to the pre-school teachers.
- **Sleeping Problem:** Problems connected with sleep are certain to arise at some time. Unless they are dealt with correctly, they can lead to other more serious problems that may harm the general state of the child's health. Many of the sleeping problems that parents encounter in children occur when the child recognizes the discrepancy

between his hour of retiring and the bed time of the other family members. The child does not want to be left out of any activities by going to sleep early. The young child cries when he does not want to be put to bed. Sometimes the refusal to go to sleep is accompanied by emotional responses reflecting fear on the part of the child. Pre-school children are particularly prone to the development of fears. Events such as loud, sudden sounds and unfamiliar light patterns coming through the windows are sometimes sufficient for the conditioning of fear to the darkened bedroom.

Awakening during the night may be initiated by many different events: illness, nightmares, changes in daytime routine, bed wetting etc. Once the rhythmic sleep pattern has been broken, there is a tendency for the child to continue night time awakening in the absence of the original event. This situation may create stress on the parents. A child's sleeping problems not only create problems to parents, but also these will hamper the physical as well as mental well-being of the child.

 Accidents: Accidents in early childhood can be and often are one of the most serious problems that affect the physical well-being of children. Young children tend to have more accidents than the babies. Because young children are no longer as carefully supervised and protected as they were when they were babies. Nor are young children as aware of possible dangers and as careful as they will be when they grow older. Accidents can affect the head, feet, legs, hands, arms, body and face of a child.
Accidents affect the child both physically and psychologically, which may affect the child's personality development in his later life.

 Social **Adjustment Problems:** Children under 4 years of age cannot be expected to be have in a truly social manner. They will push, grab, fight and refuse to share their things with others. However, by the time they are 5 years old, children should have overcome some of these behaviours .Children who still behave in an unsocial way after other children of the same age have developed more socially acceptable patterns will find that they have no one to play with. Normally other people also dislike children with unsocial behaviour. As a result, these children will develop adjustment problem in the social environment. So, unsocial behaviour should be checked as soon as it appears problems during early childhood**.**

CHECK YOUR PROGRESS

Q.3. Mention three common eating problems of early childhood.

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Q.4. Write four lines about a child's social adjustment problem.

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7.6 EDUCATIONAL IMPORTANCE OF EARLY CHILDHOOD

This period of a child's life is of great educational significance. It has been correctly said by Watson that "the scope and intensity of learning during this period exceeds that of any other period of development." The following points should be kept in view both by parents and teachers while planning the education of the child at this stage.

- **Healthy Atmosphere:** Parents and teachers should see that the child can enjoy a healthy social atmosphere. The home for the child should be sweet and secured. In the school also the child should feel 'secure' and freedom must be provided for their balanced development.
- **A Rational Treatment:** The child expects that everybody should love him. The family members must be affectionate, caring, sympathetic and courteous towards the child.
- **Satisfaction of Curiosity:** The instinct of curiosity is at its peak of development at this stage. The child is very curious to know about his surroundings and the social environment. These should be explained to the child in a rational way by parents and teachers.
- **Developing Self-Sufficiency:** At home children depend on their parents for the satisfaction of their various needs. The parents and teachers should encourage them to be self-sufficient as a possible by assigning them works of minor responsibility.
- **Proper Method of Teaching:** Education may be imparted to children for their all-round development with the help of the methods like - Montessori Method, Kinder-garten method, play-way method etc.

- **Coordination between Maturation and Learning:** The teacher should keep in view that there is a definite relationship between maturation and learning. The teacher should keep in view that until and unless the child is able to learn a particular activity, he should not be forced to learn another.
- **Proper Method of Reward and Punishment:** Parents and teachers should encourage children and reward them occasionally when they develop good habits. Punishment should be avoided as for as possible.
- **Supply Good Reading Materials:** Children at this stage are interested in stories and multi-coloured pictures. So, colourful good stories and picture books should be provided by parents and teachers.
- **Learning by Doing:** At this age, children are very much fond of activities. The teacher should try to provide them as many activities as possible so that their proper physical, mental and creative power is developed and emotional, intellectual development can take place. Children must be provided scope to do activities in groups so that it will help in their social development.

CHECK YOUR PROGRESS

Q.5. Write four points of educational importance that parents and teachers must keep in mind for 3-6 years children while planning the education for them.

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7.7 LET US SUM UP

- Early Childhood, which extends, from 2-6 years, is labelled by parents as the problem, the troublesome, or the toy age; by educators as the pre-school age; and by Psychologists as the pre-gang, the exploratory, or the questioning age.
- Early childhood is a period of physical, mental, emotional, and social and language development.
- Various characteristics of Early Childhood stage are -
  i) A period of physical development,
  ii) A period of language development,
  ii) A period of emotional development,

iii) A period of social development,

v) A period of development of understanding, and

vi) A period of development of Interests.

- Some common problems during Early Childhood are -

i) Eating Problem

ii) Elimination Problem

iii) Sleeping Problems,

iv) Accidents and

v) Social Adjustment Problems.

- Early Childhood period has some Educational Importance, they are–

i) Healthy Atmosphere.

ii) A Rational Treatment.

iii) Satisfaction of Curiosity.

iv) Developing Self-Sufficiency.

v) Proper Method of Teaching.

vi) Coordination between Maturation and Learning.

vii) Proper Method of Reward and Punishment.

viii) Supply Good Reading Materials.

ix). Learning By Doing.

7.8 FURTHER READING

1) Aggarwal, J. C: *Essentials of Educational Psychology*, Vikas Publishing House Pvt. Ltd., New Delhi.

2) Mangal, Dr. S. K: *Psychological Foundations of Education*, Prakash Brothers, Ludhiana.

7.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1 : i)Growth Development.

ii)Toy age

iii) Pre-school age

iv) The Pre-gang age

Ans to Q. No. 2 : In early stage, the physical development of the children gains height at the average rate of about 3 inches per year and also at the end of this stage generally has a height of 3 feet and 6 inches. The weight of the child also increases. In this stage, body proportions change markedly, and the “baby

look" disappears. Difference in body build become apparent for the first time in early childhood, some children have a fat body build, some have a muscular body build and some have a thin body build. Regarding the development of teeth, generally during the last half year of early childhood, the baby teeth begin to be replaced by permanent teeth, coordination of this finer muscle. The child acquires various motor skills like - catching, throwing, running, jumping, climbing, riding a tricycle, self-feeding, dressing, balancing, colouring, drawing etc.

Ans to Q. No. 3 : i) Not eating; ii) Vomiting; iii) Dawdling

Ans to Q. No. 4 : i)They behave unsocially.

ii)They fight with other children.

iii) They never share things with others.

iv) They are disliked by others.

Ans to Q. No. 5 : i)Healthy atmosphere

ii)A Rational treatment

iii) Satisfaction of curiosity

iv) Proper method of Teaching.

7.10 POSSIBLE QUESTIONS

A) Short Questions (Answer within 150 words)

Q.1. Write a note on the early childhood stage.

Q.2. Mention the common interest of the early childhood stage.

B) Long Questions (Answer each question in about 300-500 words)

Q.1. Discuss the major characteristics of early childhood stage.

Q.2. Discuss about the common problems of early childhood stage of children faced by the Parents.

Q.3. "Early Childhood is a foundation period of Life" –why is early childhood called the foundation period of life? What steps should be taken by parents and teachers while planning for the education of the child at this stage?

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UNIT 8: PHYSICAL AND MOTOR DEVELOPMENT IN THE EARLY CHILDHOOD STAGE

UNIT STUCTURE

8.1 Learning objectives

8.2 Introduction

8.3 Physical Development during Early Childhood

8.4 Motor Development during Early Childhood

- 8.4.1 Gross Motor skills
- 8.4.2 Fine Motor skills

8.5 Let Us Sum Up

8.6 Further Reading

8.7 Answer to Check Your Progress

8.8 Possible Questions

8.1 LEARNING OBJECTIVES

After going through this Unit, you will be able to—

- discuss various physical changes that take place during early childhood
- know what motor development take place in pre-school children
- differentiate between gross and fine motor skills

8.2 INTRODUCTION

In the previous Units, you have studied about the different stages of human development, principles of child development, importance of prenatal stage and the factors affecting growth and development. In the preceding Unit, a clear description about the early childhood period had been presented. Here in this unit, we will be discussing the physical and motor developmental characteristics during early childhood stage. You already know that early childhood stage range from 2 to 6 years. Early childhood development refers to the many skills and milestones that the children are expected to reach by the time they reach the age of six. These milestones include learning how to run, how to talk using simple sentences and how to play with others and many more. Let us see these different aspects of development in the children one by one, first being the physical and motor development.

8.3 PHYSICAL DEVELOPMENT DURING EARLY CHILDHOOD

The physical growth and development refers to a process which brings bodily and physiological changes, internal as well as external in an organism. Early childhood Stage is characterized by marked physical development. But, growth during this stage proceeds at a slow rate as compared with the rapid rate of growth in babyhood. It is very important to know how children develop physically because physical development influences children's behavior directly and indirectly. It also determines what they can do and indirectly influences their attitude towards self and others. Moreover, personal and social adjustment of the children depends on the physical development. The physical development in early childhood stage are discussed under the following headings-

A. **Height:** The average annual increase in height is three inches. By the age of six, the average child measures about 46.6 inches.

B. **Weight:** The average annual increase in weight is 3 to 5 pounds. At age six, children normally weigh approximately seven times as much as they did at birth. The average pre-school girl weighs 48.5 pounds and the average boy weighs 49 pounds.

C. Body Proportion: There is marked change in body proportion in the pre-school children. During this stage, the "baby look" disappears that used to be in them during the babyhood period. Facial features remain small but the chin becomes more pronounced and the neck elongates. There is gradual decrease in the stockiness of the trunk and the body tends to become cone-shaped. Some of the other characteristics in terms of body proportion in the pre-school children are- flattened abdomen, broader and flatter chest and boarder and square sized shoulder.

D. Body Build: During this stage, differences in body build become apparent for the first time. Some children have a fat body (endomorphic), some have muscular body (mesomorphic) and some have thin body (ectomorphic).

E. **Bones and Muscles:** Ossification which means hardening of the bones is an important features of physical development in early childhood stage. The bones ossify at different rates in different parts of the body. The muscles become larger, stronger and heavier. As a result, children look thinner as early childhood progresses even though they weigh more.

F. **Fat:** Regarding fats in children, it has been observed from the research study that children with fat body have more fatty tissue (adipose tissue) than muscular tissue. Again children

with muscular body have more muscular tissue than fatty tissue. The children with thin body have both small muscles and little fatty tissue.

G. **Teeth:** During the first four to six month of early childhood stage or pre-school stage the last four baby teeth erupt. Again, during the last half year of early childhood stage, the baby teeth begin to be replaced by permanent teeth. With the end of early childhood stage, the child generally has one or two permanent teeth in front and some gaps where permanent teeth will eventually erupt.

H. **Nervous System:** The growth of the nervous system is very rapid before birth and during the first half of early childhood period. Before birth the development consist primarily of increased in the number and size of the nerve cells, because no new cells are formed after birth. As such, development in the first four years i.e. in the first half of early childhood stage consist of the development of immature cells present at birth. After the age of 3 or 4, growth of the nervous system proceeds at a relatively slow rate.

In spite of the predictable physical development in average pre-school children discussed above, there are individual differences in all aspects pf physical development in children. Children of superior intelligence tend to be taller in early childhood than those of average or below average intelligence and shed their temporary teeth sooner. Moreover, sex difference also impacts on physical development in children. Ossification of the bones and shedding of temporary teeth are more advanced age for age in girls than in boys. The nutrition, treatment and care provided by the family too matter a lot in the physical development of the child. Children from higher socio-economic groups tend to be better nourished and receive better pre-natal and post-natal care. These children tends to vary in height, weight and other physical development than the average.

LET US KNOW

- ✓ Ossification of the bones and shedding of temporary teeth are more advanced in girls than in boys
- ✓ Early childhood stage or pre-school stage is regarded as the teachable moment for acquiring different skills.
- ✓ **Hand Skills**: Self-feeding, dressing, brushing, throwing, catching, drawing, coloring.

- ✓ **Leg Skills**: hopping, skipping, galloping, jumping, climbing, tri-cycling, swimming, balancing, dancing.

CHECK YOUR PROGRESS

Q.4. Mention two physical characteristics of early childhood.

Q.2. What is the annual average increase of weight in pre-school children?

Q.3.What is ossification?

8.4 MOTOR DEVELOPMENT DURING EARLY CHILDHOOD

Physical development also entails the development of motor skills. The refinement of motor skills that use the large muscles of the body—as well as those that tap hand—eye coordination and require subtle movements—is an important developmental task of early childhood. During this period the child practices, refined, and masters gross and fine motor skills.

8.4.1 Gross Motor Development

Between the ages of 3 and 6 children make great advances in gross motor skills those that use the large muscles such as running and jumping. They become physically stronger, with increases in bone and muscle strength as well as lung capacity. Fundamental gross motor skills development during this period can be highlighted as below—

- Develop skill in movement, including jumping, stepping and landing, turning, changing direction.

- Learn to balance on different parts of the body, rolling, transferring weight from feet to hands.
- Use the floor and apparatus for climbing and swinging.
- Learn to lift, carry, place and use apparatus safely.
- Respond with gesture and stillness as appropriate.
- Improve their control, use different shapes, levels and directions of travel.
- Use their body movements expressively to reflect rhythms, moods of feelings conveyed by music.
- Create sequences of movements in response to music, and to perform their own sequences and traditional dances from various cultures. (see table below)

Table 8.1. Age-wise Gross Motor Skills during Early Childhood Stage

AGE	GROSS MOTOR SKILL
2-3 Years	Walks more smoothly, runs but cannot turn or stop suddenly, jumps, throws a ball with a rigid body and catches by trapping ball against chest, rides push toys using feet.
3-4 Years	Runs, ascends stairs alternating feet, jumps 15 to 24 inches, hops, pedals and steers a tricycle.
4-5 Years	Runs more smoothly with control over stopping and turning, descends stairs alternating feet, jumps 24 to 33 inches, skips, throws ball by rotating the body and transferring weight to one foot, catches ball with hands, rides tricycle and steers effectively.
5-6 Years	Runs more quickly, skips more effectively, throws and catches a ball like older children, makes a running jump of 28 to 36 inches, rides bicycle with training wheels.

8.4.2 Fine Motor Skills

Fine motor skills like the ability to button a shirt, pour milk into a glass, put puzzles together and draw pictures involve eye-hand and small muscle coordination. As children get better at these skills, they are able to become more independent and do more for themselves. Young

children become better at grasping eating utensils and become more self-sufficient at feeding. Fundamental fine motor skills development during this period can be highlighted as below-

- Handle increasingly small equipment skillfully, for example construction toys.
- Use pencils, pens and paintbrushes of varying sizes to support their individual development when mark-making, writing and making pictures.
- Use hammers, saws and nails to create their own models.
- Pour and measure liquids.
- Handle computer mouse with increasing control. (see table below)

Table 8.2. Age-wise Fine Motor Skills during Early Childhood Stage

AGE	FINE MOTOR SKILLS
2-3 Years	Unzips large zippers, put on and removes some clothing, uses a spoon.
3-4 Years	Serves food, can work large buttons, copies vertical line and circle, uses scissors.
4-5 Years	Uses scissors to cut along a line, uses fork effectively, copies simple shapes and some letters.
5-6 Years	Ties shoes, uses knife to cut soft food, copies numbers and simple words.

CHECK YOUR PROGRESS

Q.4. What are gross motor skills?

Q.5. What are fine motor skills?

Q.6. Write two points of differences between gross and fine motor skills.

8.5 LET US SUM UP

After going through this unit, it can be summarised as-

- Pre-school Stage is characterized by marked physical development.
- But, growth during pre-school stage proceeds at a slow rate as compared with the rapid rate of growth in babyhood.
- During this stage, the “baby look” disappears that used to be in them during the babyhood period.
- The average annual increase in height is three inches. By the age of six, the average child measures about 46.6 inches.
- With the end of early childhood stage, the child generally has one or two permanent teeth in front and some gaps where permanent teeth will eventually erupt.
- The developmental milestones of early childhood relates to the development of children’s body control and coordination of large movements, fine manipulative skills, spatial awareness and balance.
- Physical development also entails the development of motor skills

8.6 FURTHER READING

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8.7 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

1. The average annual increase in height is three inches. By the age of six, the average child measures about 46.6 inches.
2. The growth of the nervous system is very rapid before birth and during the first half of early childhood period.

ANSWER TO Q.NO.2:

The average pre-school girl weighs 48.5 pounds and the average boy weighs 49 pounds.

ANSWER TO Q.NO.3:

Ossification means hardening of the bones. It is an important features of physical development in early childhood stage. The bones ossify at different rates in different parts of the body.

ANSWER TO Q.NO.4:

Gross motor skills are developed skill in movement, including jumping, stepping and landing, turning, changing direction.

ANSWER TO Q.NO.5:

Fine motor skills are those like the ability to button a shirt, pour milk into a glass, put puzzles together and draw pictures involve eye-hand and small muscle coordination

ANSWER TO Q.NO.6:

Two points of differences-

a) Fine motor skills are more complex than the gross one
b) It is essential to acquire the gross motor to perform the fine one as such, gross motor skills are pre-requisite condition to accomplish the fine motor skills.

8.8 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words**)**

1. What is physical development?
2. What is motor development?
3. Write the short notes:
    a) Physical development during early childhood
    b) Fine motor skills
    c) Body proportion in children

B. Long Questions (Answer each questions in about 300-500 words**)**

1. Discuss the physical development during the early childhood period.
2. Elaborate the different motor development in pre-school children.
3. List out the different fine motor skills in children.

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UNIT 9: COGNITIVE AND CONCEPT DEVELOPMENT IN THE EARLY CHILDHOOD PERIOD

UNIT STUCTURE

9.1 Learning objectives

9.2 Introduction

9.3 Mental or Cognitive Development during Early Childhood

9.4 Concept Development during Early Childhood

9.5 Let us Sum Up

9.6 Further Reading

9.7 Answer to Check Your Progress

9.8 Possible Questions

9.1LEARNING OBJECTIVES

After going through this Unit, you will be able to—

- discuss various cognitive changes that take place during early childhood period
- identify different concepts formed during early childhood period

9.2 INTRODUCTION

The earlier chapter (unit 8) has helped you to understand and identify different physical changes that take place in pre-school children. Moreover, you are well acquainted with the motor skills developed by the young children during this stage. Physical changes or development in the young children is a significant features. Along with the physical changes, the young children are also encountered with some cognitive changes which are essential for their overall development and adjustment. In this unit, focus will be put on the cognitive or mental development of the young children. The unit will also cover the concept developmental aspects by the young children. As a pre-school teacher, you all must be well acquainted and familiar with these developmental aspect to know the children better. This will not only fuels to your teaching skill but also help to realize the real goal of early childhood education. Let's see the different cognitive developmental aspects in the children.

9.3 MENTAL OR COGNITIVE DEVELOPMENT DURING EARLY CHILDHOOD

Cognitive development or mental development is a continuous process which continues without interruption in every stage of growth. The process of mental growth and development of an individual's cognitive, mental or intellectual abilities like sensation, perception, conception, generalization, interpretation. These abilities are inter related and never developed in isolation. Childhood is a rapid mental growth and development. The child's mental functions and mental capacities which relate to his perception, memory, reasoning, concept formation, problem solving and creative thinking are important for tackling the many different problems of life and intimately related to his performance as a learner. Continuing from infancy, early childhood is a rapid period of brain growth with an increase in synapses and connections among brain regions. It is important to note here that, at age 2 years, the brain reaches 75% of its adult weight and 90% by age 5. However, children's increasing motor and cognitive abilities are not simply due to the increase in brain matter. There are some other factors related to mental or cognitive development in the children like family and pre-school environment, other aligned developmental aspects viz- language, motor etc.

Significantly, mental development comes from the maturation of the intellectual capacities of the child and from knowledge acquired by learning over a period of time. The second stage of cognitive development as analyzed by **Jean Piaget** is termed as pre-operational stage which extends from 2 to 6 years of life. Language development takes place during this period of early childhood stage which help the child to make use of symbols to represent objects.

LET US KNOW

- ✓ At age 2 years, the brain reaches 75% of its adult weight and 90% by age 5.
- ✓ Children's increasing motor and cognitive abilities are not simply due to the increase in brain matter.

The mental development in children during the early childhood period can be discussed under the following headings –

- ❖ **Perception**

  During the pre-school stage, the mental abilities of the child develop very rapidly. His perceptual powers increases and his curiosity are aroused to a great extent.
- ❖ **Curiosity**

With increased intellectual abilities and increased ability to speak and communication the pre-school children acquire the ability to ask questions in words.

- **Discrimination between people and object**

  With increased intellectual abilities, especially the abilities to reason and to see relationships, pre-school children's understanding of people, objects and situations increases rapidly. They can discriminate between people and object easily.

- **Understanding Relationship**

  During this period, children come to know about the simple relationships, like - parents, sibling, relatives etc. This increase in understanding comes from new meanings being associated with meanings learned during baby-hood.

- **Self-understanding**

  By the time they are three years old, most young children know their sex, their full names, and names of different parts of their bodies.

- **Meaningful concept**

  Pre-school children begin to notice details that formerly escaped their attention. As a result, their concept become more specific and meaningful to them.

CHECK YOUR PROGRESS

Q.1. What is meant by cognitive development?

Q.2. What are the two sources of mental development?

Q.3. What is the second stage of cognitive development as analyzed by Jean Piaget?

Besides these, fundamental mental or cognitive characteristics developed during this early childhood period can be listed as -

- The children are filled with varied experiences connected with his immediate environment
- he child can accumulate a heap of knowledge
- The child can understand the basic functional relationship between things and events
- The children develop high degree egocentrism and fantasy.
- They develop interest in adventurous activities increases
- There is rapid increase in memory, thinking and reasoning in the young children.
- Children develop creativity and imagination.
- The Sensory-perceptual learning begins in the children.
- They develop a desire for specific learning
- Children acquire considerable increases in vocabulary and language as tools of thought and imagination.
- Considerable mental stability is attained by the end of the early childhood period.

9.4CONCEPT DEVELOPMENT DURING EARLY CHILDHOOD

Concept Development

With the gradual development by age, the child's concept become more meaningful and specific to him. Concept development is a long and difficult process because of the limited knowledge and experience, the children possess. Understanding is based on concept. The young child's feelings and emotions have a marked influence on hid developing concept. Concepts may relate to objects, to people, to qualities or to relationship. Concept are important because they determine what one knows and believe. The accuracy or inaccuracy of a child's concepts affects understanding. Pre-school children develop many of the same concepts which they earn through their common learning experiences. Other concepts are individual and depend upon the learning opportunities of the particular child. For example, a young children who has travelled to other state, countries or region, may develop concept of people and pattern of life unlike those of a child whose experiences have been more limited. As such, we can say that development of concepts in young children depends upon the environment, he/ she receives. Moreover, the concept developed during early childhood stage may change or overcome in the later period with more refined knowledge and experiences. We can take an example-the children who develop the concept that babies are brought from hospital or send by Angel from the heaven will be able to develop the scientific fact or concept about birth when they take course on hygiene or sex

education in school. As such, there are differences in the concept children develop in their preschool years, but many of these differences overcomes when they go to school and subjected to similar learning experiences.

Some of the common concept that pre-school children develop are-

a) **Life:** Pre-school or young children tend to ascribe living qualities to inanimate objects-like doll and stuffed animals.
b) **Death:** Young children tend to associate death with anything that goes away but they are unable to comprehend the finality of death.
c) **Body Function:** Young children develop the concepts of bodily functions. With the entrance in school, these concepts are elaborated.
d) **Space:** Young children can judge short distance and judge left and right accurately.
e) **Weight:** Young children estimate weight almost exclusively in terms of size.
f) **Numbers:** Young children usually understand numbers up to an average number. The preschool experiences help the child in this context.
g) **Time:** Most of the young children know the day of the week and by they reach the end part of early childhood stage, they are able to categorize the month, season and year.
h) **Self:** By the time children are three years old, they know their sex, their full names and names of the different parts of their bodies. Play helps in the development of self-concept.
i) **Beauty:** Most young children prefer music with a definite tune or rhythm and they like simple design and bright colors.
j) **Sex Roles:** Clear concepts of appropriate sex roles are developed by the time boys are five years old but, for girls, these concepts are less clear because the approved sex roles for girls is not as clearly defined as for boys.
k) **Social awareness:** Before early childhood ends, most children are able to form definite opinion about others like-whether a person is nice, mean, or smart, dumb, funny etc. As such, they developed clear concept of social awareness
l) **Comic:** Among the things most often perceived as comic by young children are funny faces made by themselves or by others, socially inappropriate behavior and the antics of domestic animals.

CHECK YOUR PROGRESS

Q.4. What is concept development in young children?

Q.5. State three common concepts developed among young children?

These are some common concepts that are developed during early childhood period, but it is important to mention here that not all children develop all of these concept nor they develop these in same degree. No two individual will have identical concepts since nobody precisely has the same intellectual abilities. Individual difference is the factor influencing this differences. Concepts based on learning opportunities of that particular children. Thus the capacity to learn, remember and symbolize information and to solve problems exists at a simple level in young children, who can perform cognitive tasks such as discriminating animate and inanimate beings or recognizing small numbers of objects. Developmental advances in cognition are also related to experiences and learning.

9.5LET US SUM UP

After going through this unit, it can be summarised as-

- Along with the physical changes, the young children are also encountered with some cognitive changes which are essential for their overall development and adjustment.
- Cognitive development or mental development is a continuous process which continues without interruption in every stage of growth.
- The process of mental growth and development of an individual's cognitive, mental or intellectual abilities like sensation, perception, conception, generalization, interpretation.
- Mental development comes from the maturation of the intellectual capacities of the child and from knowledge acquired by learning over a period of time.
- Continuing from infancy, early childhood is a rapid period of brain growth with an increase in synapses and connections among brain regions
- There is rapid increase in memory, thinking and reasoning in the young children.

- Children acquire considerable increases in vocabulary and language as tools of thought and imagination.
- Concept development is a long and difficult process because of the limited knowledge and experience, the children possess. Understanding is based on concept.
- Pre-school children develop many of the same concepts which they earn through their common learning experiences.
- Some of the common concepts developed during early childhood period are-concept of life, death, space, number, relationship, beauty, sex roles etc.
- The concept developed during early childhood stage may change or overcome in the later period with more refined knowledge and experiences.
- Neither all children develop all of these concept nor do they develop these in same degree. Individual difference is the factor influencing this differences in concept development.

9.6 FURTHER READING

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3. Goswamee Gayatree (2008): Child Development and Child Care, Arun Prakashan, Guwahati, Assam.

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9.7 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

Cognitive development or mental development is a continuous process which continues without interruption in every stage of growth. The process of mental growth and development of an individual's cognitive, mental or intellectual abilities like sensation, perception, conception, generalization, interpretation.

ANSWER TO Q.NO.2:

Mental development comes from the ***maturation of the intellectual capacities*** of the child and from ***knowledge acquired by learning*** over a period of time.

ANSWER TO Q.NO.3:

The second stage of cognitive development as analyzed by **Jean Piaget** is termed as pre-operational stage which extends from 2 to 6 years of life

ANSWER TO Q.NO.4:

Pre-school children develop many of the same concepts which they earn through their common learning experiences. Other concepts are individual and depend upon the learning opportunities of the particular child.

ANSWER TO Q.NO.5:

Some of the common concept that pre-school children develop are-

a) **Life:** Young children tend to ascribe living qualities to inanimate objects-like doll and stuffed animals.
b) **Death:** Young children tend to associate death with anything that goes away but they are unable to comprehend the finality of death.
c) **Body Function:** Young children develop the concepts of bodily functions. With the entrance in school, these concepts are elaborated

9.8 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

1. What is meant by mental development in young children?
2. State some common characteristics of mental development during early childhood period.
3. What is the concept development?
4. What is self-understanding in young children?

B. Long Questions (Answer each questions in about 300-500 words)

1. Enumerate the cognitive development during early childhood period.
2. Highlight the different concepts developed by pre-school children.
3. Why is it essential for a pre-school teachers to be acquainted with cognitive development during early childhood period? Justify your answer.

UNIT 10: SOCIAL, LANGUAGE AND EMOTIONAL DEVELOPMENT DURING EARLY CHILDHOOD PERIOD

UNIT STRUCTURE

10.1 Learning Objectives

10.2 Introduction

10.3 Social Development during Early Childhood Period

10.4 Language Development during Early Childhood Period

10.5 Emotional Development during Early Childhood Period

10.6 Let us Sum Up

10.7 Further Reading

10.8 Answer to Check Your Progress

10.9 Possible Questions

10.1 LEARNING OBJECTIVES

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

- understand how social development take place during the early childhood period
- know the language developmental pattern during the early childhood period
- comprehend the emotional development in the preschool child

10.2 INTRODUCTION

Dear learners, it is assumed that the earlier units have helped you to understand the young children as well as the early childhood period. Till now, you have come across what physical and cognitive changes take place in children and how? All-round development is the motto of modern education. NEP2020 too focuses on holistic development in each children. For this, they are supposed to be grown up from all developmental aspects of personality. Along with a good physique and strong cognitive abilities, the child should also be developed from social perspectives. For social development he/she must acquire language development to establish communication with others as well as must know how to control his/her emotions. As a pre-school

teacher or parents or as community member, it is our prior responsibility to draw out their best qualities in these aspects so that they can acquire the balanced development. This unit will help you to understand the social, emotional and language development in the young children.

10.3 SOCIAL DEVELOPMENT DURING EARLY CHILDHOOD PERIOD

One of the most important development that take place in young children is social development. Social development means acquisition of the ability to behave in accordance with social expectation. During the childhood period, there is a strong drive to be with others and to be accepted by them. When this need is not meet, the child become unhappy. That's why parents, teacher and the member concerned should be very careful in fulfilling the social needs of children. As social aspect of personality plays a very important role in children's life.

It is important to mention here that ***early childhood period is also termed as pre-gang age*** it is because children acquire the preliminary training and experience needed to become a member of a "Gang" in late childhood. The foundations for socialization are laid by the family, neighborhood and by his pre-school. The child develops his social qualities in his family. A good family provides a good social atmosphere for the child to develop healthy social habits. Sometimes he goes to the neighborhood. He finds that the atmosphere there is different from that at home and he tries to adjust with that atmosphere. He develops friendship with other children of his age in the neighborhood. He plays with his friends and sometimes he also quarrels. Through this interaction, he acquires many social qualities. They come to know of teasing, imitating, quarrelling, sympathy, sharing, cooperation etc.

The following characteristics mark the social development during early childhood period–

- **Formation of social behavior**: The most important forms of social behavior necessary for successful social adjustment starts appearing and begin to develop at early childhood period. Though these forms are not fully developed however it is crucial in terms of establishing basic social attitudes and pattern of social behavior.
- **Establishment of social Contact**: During the early childhood period, children learn how to make social contacts and how to get along with the people outside the home, especially children of their own age. They learn to adapt themselves to others and how to co-operate in play activities.
- **Social awareness:** This period is marked by greater degree of social awareness. The pre-school children learn to share, co-operate and to do things with others. There is a great expansion of child's social world.

- **Peer interest:** During this period, the children tries to seek independence from his parents and other members of the family. Interest in playmates of his own age get increased. In the selection of companion, children prefer other children of their own age and levels of development who can do what they are able to do.
- **Gang influence:** Early childhood is termed as pre-gang age, because children acquire the preliminary training and experience needed to become a member of a "Gang" in late childhood. During this time, the numbers of contacts children have with other children increases and this determines how their social development will progress.
- **Development of regards for others:** The children by nature is largely self-centered. He wants everything for himself and he is jealous of his possessions. During the pre-school period, the child rises above this ego-centeredness and develops regard for others. Instead of keeping his own interest above everything else, he normally starts taking into consideration the interests of others.

Some of the common social behavior pattern in pre-school children:

It has already been mentioned that the most important form of social behavior begins to develop during the pre-school period. It is important to note that we cannot expect that children will always develop social pattern. Many of the social pattern appear to be unsocial or even antisocial. Here, we are going to mention about the social behavior pattern in pre-school children-

A. **Imitation:** Children imitate the attitude and behavior of a person whom they especially admire and want to be like.
B. **Rivalry:** The desire to excel others is apparent as early as the fourth year. It begins at home and later develops with children outside the home.
C. Cooperation: By the end of third year, cooperative play and group activities begin to develop and increase in both frequency and duration as the child's opportunities for play with other children increase.
D. Sympathy: Sympathy appears occasionally before the third year as it requires an understanding of the feelings and emotions of others. The more play contacts the child has, the sooner sympathy will develop.
E. **Empathy:** Like sympathy, empathy requires an understanding of the feelings and emotions of others but in addition, it requires the ability to imagine oneself in the place of the other person. A few children are able to do this until the early childhood ends.

F. **Social approval:** As early childhood draws to a close, peer approval becomes more important than adult approval. Young children find that naughty and disturbing behavior is a way of winning peer approval.

G. **Sharing:** Pre-school children discover from experience with others that one way to win social approval is to share what they have specially the toys with others. This sharing pattern in them replaces their selfishness.

H. **Attachment Behavior:** During this stage, the children try to attach their affection to people outside the home such as nursery school teachers or some inanimate objects.

Knowing what the pattern of social development is makes it possible to predict what the child's behavior in a social situation is likely to be at a given age. Generally the social behavior and attitude of a child reflect the treatment he/she receives in the home or pre-school. Hence, it is very much essential for the parents and the teachers to create conducive social environment at home and school so that sound social behavior can be expected from these children.

CHECK YOUR PROGRESS

Q.1 What is social Development in young children?

Q.2 Why is early childhood period considered as pre-gang age?

Q.3 Mention two common social behavior pattern in pre-school children.

10.4 LANGUAGE DEVELOPMENT DURING EARLY CHILDHOOD PERIOD

The development of language is indeed a very important milestone in the personality development of a child because language allows children to think in words rather than just images, to ask questions, to communicate their needs and wants to others and to form concepts. There are several stages of language development that all children experience, no matter what culture they live in or what language they will learn to speak (Brown, 1973).

1. **Cooing**: At around 2 months of age, babies begin to make vowel-like sounds.
2. **Babbling**: At about 6 months, infants add consonant sounds to the vowels to make a babbling sound, which at times can almost sound like real speech.
3. **One word speech**: Somewhere just before or around age 1 years, most children begin to say actual words. These words are typically nouns and may seem to represent an entire phrase of meaning. They are called holophrases. For example: a child might say “Milk” and mean “I want some milk” or “I drank my milk”
4. **Telegraphic speech**: At around a year and a half, toddlers begin to string words together to form short, simple sentences using nouns, verbs, and adjectives. “Baby eat”, “Mommy go” are examples of telegraphic speech. Only the words that carry the meaning of the sentence are used.
5. **Whole sentences**: As children move through the preschool years, they learn to use grammatical terms and increase the number of words in their sentences, until by age 6 years or so they are nearly as fluent as an adult, although the number of words they know is still limited when compared to adult vocabulary.

Language Development during Early Childhood Period:

- At the age of 4, most children have acquired the basic structures of the language. They can ask questions, give commands, give reports
- Children (3-4 year olds) begin to learn vocabulary at the rate of several words a day.
- They develop their ability in using the language in a widening social environment and variety of situations.
- Children also begin to develop metalinguistic awareness. For example, the ability to treat language as an object separate from the meaning it conveys.
- Children develop their language as they grow up.
- Reading gives a major boost to metalinguistic awareness (language is formed as well as meaning)
- In the school years, children also develop vocabularies.

CHECK YOUR PROGRESS

Q.4.What is holophrases?

Q.5. At What age children acquired the basic structures of the language?

10.5 EMOTIONAL DEVELOPMENT DURING EARLY CHILDHOOD PERIOD

Learners, you may have observed that children display their various emotions. Young children like adults experience many emotions during the course of a day. Emotional development is the basis for social development. It is because their social behaviour is shaped by their emotional development. Their emotional development in early childhood allows them to try to understand other people's emotional reactions and to begin to control and express their own emotions.

- **Expressing emotions:** During the early childhood years, emotions such as pride and guilt become more common. They are especially influenced by parents' responses to children's behavior. For example, a young child may experience shame when a parent says, "You should feel bad about biting your sister"
- **Understanding emotions:** Among the most important changes in emotional development in early childhood is an increased understanding of emotion. During early childhood, young children increasingly understand that certain situations are likely to evoke particular emotions; facial expressions indicate specific emotions and emotions affect behavior, and emotions can be used to influence others' emotions. For example, when a young child understands that a peer (friend) feels sad about being left out of a game.
- **Regulating emotions:** Emotion regulation especially plays a key role in children's ability to manage the demands and conflicts they face in interacting with others. For example, showing respect for others emotional state.

Fundamental emotional changes during this period can be highlighted as below—

- Love of classmates and associates of the same group takes place
- School life plays an important role in forming the emotional behavior of the child
- Love and sympathy develop during this period
- Number of learned fears increase
- School phobia may also develop
- Angry reactions also increase due to threat to one's own status of prestige
- Considerable emotional stability takes place during this period

10.6 LET US SUM UP

After going through this unit, it can be summarized as-

- Social Development means acquisition of the ability to behave in accordance with social expectations.
- Social development during the childhood period means acquisition of the ability to behave in accordance with social expectation, there is a strong drive to be with others and to be accepted by them.
- Some of the common social behavior pattern in pre-school children are- Imitation, Rivalry, Cooperation etc.
- The development of language is indeed a very important milestone in the overall development of a child because language allows children to think in words rather than just images, to ask questions, to communicate their needs and wants to others and to form concepts.
- Young children like adults experience many emotions during the course of a day.
- Their emotional development in early childhood allows them to try to make sense of other people's emotional reactions and to begin to control their own emotions.

10.7 FURTHER READING

1. Ahlawat Neetu(2010), *Developmental Psychology*, RBSA Publisher, Jaipur.

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10.8 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

Social development means acquisition of the ability to behave in accordance with social expectation. During the childhood period, there is a strong drive to be with others and to be accepted by them. When this need is not meet, the child become unhappy. That's why parents, teacher and the member concerned should be very careful in fulfilling the social needs of children.

ANSWER TO Q.NO.2:

Early childhood period is considered as pre-gang age because children acquire the preliminary training and experience needed to become a member of a "Gang" in late childhood.

ANSWER TO Q.NO.3:

Two common social behavior pattern in pre-school children are-

A. **Sympathy:** Sympathy appears occasionally before the third year as it requires an understanding of the feelings and emotions of others. The more play contacts the child has, the sooner sympathy will develop.
B. **Empathy:** Like sympathy, empathy requires an understanding of the feelings and emotions of others but in addition, it requires the ability to imagine oneself in the place of the other person. A few children are able to do this until the early childhood ends

ANSWER TO Q.NO.4:

Somewhere just before or around age 1 years, most children begin to say actual words. These words are typically nouns and may seem to represent an entire phrase of meaning. They are

called holophrases. For example: a child might say “Milk” and mean “I want some milk” or “I drank my milk”

ANSWER TO Q.NO.5:

At the age of 4, most children have acquired the basic structures of the language. They can ask questions, give commands, give reports

10.9 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

1What is Social behaviour?

2.Mention the common social behaviour in pre-school children.

3.What is telegraphic speech?

4. Give an example of regulating emotions

B. Long Questions (Answer each questions in about 300-500 words)

1.Discuss the social development in pre-school children.

2.Highlight the language development in pre-school children.

3. How do young children express emotions?

4. Why pre-school period is considered significant from social developmental perspective?

5. Discuss the importance of emotional development during early childhood.

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UNIT 11: DEVELOPMENTAL HAZARDS AMONG PRE-SCHOOL CHILDREN

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

11.3 Development Hazards during Early Childhood

11.3.1 Physical Hazards

11.3.2 Psychological Hazards

11.4 Let Us Sum Up

11.5 Further Reading

11.6 Answers to Check Your Progress

11.7 Possible Questions

11.1 LEARNING OBJECTIVES

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

- identify the physical developmental hazards of children; and
- discuss the psychological developmental hazards of children during early childhood

11.2 INTRODUCTION

In the earlier units of this course, you have gone through the various aspects of development of children starting from the pre-natal period to the preschool age children. So, it may be assumed that you have developed a thorough understanding on the concept of growth and development of young children including the various dimensions of their development, viz., physical, cognitive, social, language, emotional etc.

It is known to us that the period of childhood can be divided into two parts – early childhood and late childhood. Early childhood extends from two to six years, and the late childhood extends from age of six years to the time when children attain their puberty, which is approximately eleven years for girls and twelve years for boys. A child belonging to late childhood is also generally referred to as a school-age child as the formal school education begins at this age. This unit focuses on the developmental hazards of younger children. With regard to the developmental hazards, hazards that come in the way of development of older children or children in their late childhood are particularly related to their family and school environment.

11.3 DEVELOPMENTAL HAZARDS DURING EARLY CHILDHOOD

Development, as we know is a continuous and natural process. It follows a particular direction. A children acquire his/her developmental milestones as a result of maturation and learning. Heredity as well as environment too play crucial role in this process. Though it is a natural process but, children may face different hazards in the process of development. An individual may face developmental hazards at any stage of life-span. Developmental hazards of childhood period can be physical, psychological or both. Poor nutrition, for example, may affect the development of both physical and mental health. In the same way, excessive family friction can also lead to stress which in turn affect the development of children.

With regard to the developmental hazards of early childhood period, it has been found that during this period psychological hazards are more numerous than the physical hazards and are more damaging to the personal and psychological adjustment of a child.

Physical Hazards of early childhood, such as, illness, accidents, awkwardness, etc. have both psychological as well as physical repercussions. Some of the physical and psychological hazards of early childhood are discussed in the following sub-sections.

11.3.1 Physical Hazards

The physical hazards during the early childhood period can be listed as-

- **Mortality:** The mortality rate usually declines during the early childhood period than the babyhood. Deaths during this period are more often due to accidents than due to illness. It has been found that boys have more accidents than the girls and as such death rate of boys is higher than girls.
- **Illness:** Though young children are highly susceptible to all kinds of illness, but respiratory diseases are found to be most common among them. Due to compulsory and affordable immunisation and availability of medicines in the modern days, the duration of illness of children is much shorter. While most of the illness is found to be of physiological origin, however some are psychosomatic too and result from family tension.
- **Accidents:** Young children often experiences minor accidents such as cuts, bruises, infections, burns, broken bones, strained muscles, and the like and as stated earlier accidents are more common for boys. Some may even experience serious accidents which may disable them temporarily or permanently. Although most accidents are not fatal, yet many of them may leave permanent physical or psychological scars on the minds of the young children.

- **Unattractiveness:** It has been observed that children usually tend to become increasingly unattractive as the early childhood period progresses and reaches a low point as they enter the late childhood period. There may be several reasons for this. Firstly, children start looking skinny and gawky as their body shape undergoes changes. Secondly, their hair becomes coarser and thereby making it difficult to manage which gives them an un-kept look. Thirdly, the permanent teeth which have erupted in place of fallen baby teeth are proportionately too large in size and fourthly, the young children often looks dirty and ill-groomed as they care more about having a good time playing rather than looking neat and tidy. The less attractive appearance of young children added to their changing behaviour makes them less appealing to their family members and other adults which they often interpret as rejection and feel bitter about it.
- **Awkwardness:** Awkwardness in childhood occurs due to delay in motor as well as intellectual development. Awkward children are unable to keep up with their age-mates and as a result, they are left out of their play. This develops an inferiority complex in them. Delay in development may be due to brain damage at birth leading to intellectual deficiency, or may be due to over protectiveness, over rejection, over indulgence by parents.
- **Obesity:** Like people of any age group, children who are obese are more likely to develop health issues like diabetes, high blood pressure, heart problems, etc. than their peers with normal weight. In addition to being a health hazard, obesity also acts as hazard to attractiveness, as obese children are likely to be scorned by their peers and labelled as 'Fatty'.
- **Left-handedness:** Though there found to be no physical reason why it is better to be right-handed, yet people are right-handed in general. As such, being left-handed makes an individual different and most of the time being different is usually interpreted as being unequal, particularly during the childhood and adolescence years. There are other reasons too for considering being left-handed a hazard. It is difficult for a left-handed child to follow or imitate a right-handed person while learning a skill. Left-handedness can also affect children's educational success and later, their vocational success or their social adjustment. Some parents put a lot of pressure on their children to use right hand and may even punishes them for it. This type of parental behaviour can also be hazardous because this emphasises their difference, which young children interpret as their weakness and this in the long run cast a negative impact on their personality development as well.

CHECK YOUR PROGRESS

Q.1. Fill in the gaps

i. The mortality rate usually _____ during the early childhood period than the babyhood.

ii. _____diseases are found to be most common among the young children.

iii. Awkwardness in childhood occurs due to delay in _____ as well as _____ development

iv. In addition to being a health hazard, obesity also acts as hazard to _____.

11.3.2 Psychological Hazards

The most common psychological hazards associated with the early childhood period are discussed below:

- **Speech Hazards:** Speech is a tool for communication and is essential for social belonging. Children who are unable to communicate with their peers due to speech related problems will be socially handicapped and this leads to a feeling of inadequacy and inferiority in them. Speech hazards generally occur due to four reasons as follows:
    i. If the elders use unfamiliar words or speak too fast while speaking to children, it is difficult for the young children to understand or follow their elders. As a result, they fail to communicate effectively and this jeopardises their social contacts.
    ii. Ability of young children to communicate with others is even more jeopardised if their speech is unintelligible to others. This may happen due to imitating a poor model leading to mispronunciation and grammatical errors in their speech, or due to other speech defects like stuttering, lisping, or slurring.
    iii. Bilingualism also acts as a hazard to the social development of young children. When children speak in their mother tongue at home, but have to speak in a different language in school, their communication with their school mates gets adversely affected owing to limitation in their vocabulary, particularly during the early school years.
    iv. The fourth serious speech hazard in early childhood is use of language. Use of abusive language while speaking, making critical and derogatory comments about others or

speaking in an unsocial way may, in time, play havoc with their social adjustment. In this regard, parents have to be very careful about the language they use in front of their wards.

- **Emotional Hazards:** The emotional hazards of early childhood arise due to dominance of unpleasant emotions, such as, anger, jealousy, hatred, fear etc. There may be various reasons for development of unpleasant emotions in young children. For examples, absence of warm and stable relationship with the mother/mother substitute during babyhood which later on makes them unable to establish the *emphatic complex*- an emotional linkage between an individual and significant people in his or her life; lack of love and affection received from others likely to make them self-bound or egocentric; too strong attachment to one person may lead to feeling of insecurity in the absence of or change in behaviour of that particular person; failure to become emotionally attached to their toys or other inanimate objects, such as blankets etc. which may lead to feeling of insecurity in a new situation.

  In general, if young children experience too many of the unpleasant emotions and too less of the pleasant ones, then it tends to distort their outlook on life and encourage development of an unpleasant disposition. Children may also tend to acquire a facial expression that makes them look surly, sullen or generally disagreeable, a condition that contributes to the decline of their appealing-ness.

- **Social Hazards:** There are a number of common hazards in the way of good social adjustments in early childhood period. There are five types of social hazards which are specially identified to be common to all children. They are as follows:

  i. Some children due to their socially unacceptable behaviour or speech become unpopular amongst their peer and feel alienated or isolated. As such, they are deprived of the opportunities to learn socially approved behaviour and their chances of getting social acceptance worsen as time goes on.

  ii. Secondly, if children are put under tremendous pressure to play in a sex-appropriate way, sometimes they may overdo it and becomes unpopular amongst their peers. For example, young boy when try to be very masculine and aggressive in their play may annoy their peers and are avoided or rejected by the peer group.

  iii. Sometimes children in their early childhood receive negative or adverse treatment from their peers their due to their race, gender or ethnicity. Due to such unfavourable early social experiences, such children may develop unhealthy social attitude and shun contact with people outside the home and to some extent, even in the home.

iv. The fourth social hazard of early childhood is the use of imaginary companions and pets to compensate for lack of real ones. Children are very often likely to develop the habit of dominating such imaginary companions. However, when they move out with real companions and come to realisation that they cannot dominate the real ones, they may start showing maladjusted behaviour.

v. It is observed that young children are sometimes unable to stay away from their play mates. This often occurs in cases of those children who were put into child-care centres, nurseries or kindergarten from a very young age where they get lots of play mates. In such cases, children when left alone may fail to amuse themselves and no matter how many toys or play equipment are given to them, they still feel lonely and deserted.

- **Play Hazards:** When children do not get play mates to play with them, they often engage in solitary forms of play. Though a certain amount of solitary play is beneficial as it teaches children to be self-sufficient, yet in absence of play mates of their age, they do not get the opportunity to learn the social skills. Another issue with lonely children is that they often spend too much time in front of television. Even though there are benefits of learning many things from the television programmes, but on the other side it has lots harmful effects on the young children which included lack of exercise, sleeplessness, increased aggression and formation of distorted impression or misconception regarding certain matters or facts due to their inability of understanding the telecasted programmes properly. Even toys can also act as play hazards for young children sometimes. Some toys, such as a fully equipped doll house can destroy the creative urge of young children whereas some other toys such as guns, pistols etc. may make them aggressive.
- **Hazards in Concept Development:** There are three common hazards in development of concept in the early childhood. They are as follows:

    i. Hazard may arise due to inaccuracy in understanding. Because of their limited experience with people and thing, or because of their limited knowledge of vocabulary, children may not be able to understand properly what is being said to them and thus may develop inaccurate or faulty concepts. This may also happen if children learn from their peers or from adults having limited knowledge.

    ii. The second common hazard in concept development in early childhood is the development of concepts below the level of those of their peers. Situation like this greatly affect their personal and social adjustment. For example, young children having limited opportunities to associate with people outside the home do not

develop the needed social concepts to understand people better. As a result, sometimes they may say things which seem rude and their behaviour may annoy others.

iii. The third hazard in the way of concept development is the emotional weighting of concepts. For example, young children usually build up the concepts of Christmas in relation to Santa Clause. But when they discover that there is no Santa Clause, they may still be resistant to change their concept of Christmas because of its pleasurable emotional weighting and they may feel deceived by the elders.

- **Moral Hazards:** There are four common hazards with regard to moral development are observed during early childhood. They are as follows:

  i. Inconsistent disciplinary act on the parts of the elders hampers their process of learning as per social expectations. This often happens when different people have different rules relating to the same behaviour.

  ii. Secondly, if the children are not given punishment for their misbehaviour, it encourages them to repeat the same again and again.

  iii. Next, if punishment and rewards are not used judiciously, i.e. too much emphasis on punishment for misbehaviour and too little emphasis on reward for good behaviour can lead to unfavourable attitude in the minds of the young children towards those in authority. One should be very careful while giving punishment to the young children and a child should be punished only with regard to three justifications, viz., (i) when there is no other way to communicate a prohibition to a child, (ii) only when punishment can be given when the forbidden act is being carried out and (iii) it must be a rare event to be effective or otherwise it desensitizes the child to the entire purpose of punishment.

  iv. The last one and the most serious of all from the long-term point of view is giving more emphasis on authoritarian discipline that puts major emphasis on external controls. In case of authoritarian discipline, children are not encouraged to develop the internal controls over their behaviour that forms the foundation for the later development of their conscience. Development of internal controls must begin early and it can be accomplished through democratic forms of disciplines. This helps children in learning to conform to group expectations.

- **Hazards in Sex-Role Typing:** It is observed that there are three common and serious hazards with regard to sex-role typing during early childhood years. They are as follows:

i. If children do not learn the sex-role stereotype commonly accepted by their peers, they will be treated differently than their peer group. The situation becomes more and more serious as a child approaches the school going age.

ii. Secondly, in those families where girl children are trained to conform to traditional stereotypes for members of their sex, they develop a feeling that female in general mare physically and psychologically inferior to their male counterpart.

iii. Next, if children do not learn to behave according to the accepted stereotypical behaviours of their sex groups, they may find themselves socially misfits in their groups. This failure to sex-role type young children can be a social handicap to both boys and girls.

- **Family Relationship Hazards:** Deterioration in any human relationship is hazardous to good personal and social adjustment and more so in case of relationship between children and their parents. Strained family relationships bring about a feeling of insecurity in the minds of young children. The conditions responsible for deteriorated relationship between young children and their family members are observed to be different for boys and girls. In those families where boys are given more preferences over everything, the girl child may develop resentful attitude towards their parents as well as towards their brother(s). The boys of such families also tend to develop an attitude of smug superiority. With regard to boys, if there is lack of emotional warmth between the father and son, the boy child may develop more closeness with their mothers and in turn may acquire such interests and behaviour patterns which may cause their peers to regard or make fun of them as “sissy”. Other threats to good parent-child relationship during early childhood are working mothers and step parents, sibling quarrelling, which can deprive them of their companionship at an age that is most crucial in learning the rudiments of social behaviour, deterioration in relationship with the other family members due to various reasons, such as, on playing the role of substitute parents, child abuse by the elder family members or care-takers.

- **Personality Hazards**: The most serious personality hazard during early childhood is the development of an unfavourable self-concept. Unfavourable self-concept may be due to the treatment young children receive from family members and peers or also due to persistent egocentrism. Sometimes if the parents have unrealistically high aspirations which children are unable to fulfil, then they feel themselves as failures and develop negative self-concepts. Seriousness of unfavourable self-concepts is that they are tends to be persistent. However, as personality is dynamic, thus certain personality pattern of early childhood may change with time

as a result of advancing maturity, experience and social and cultural environment in which they live. Difficult children may become more docile, whereas contented, happy children may develop into sullen ones as they grow older.

CHECK YOUR PROGRESS

Q.2. Name any four most common psychological hazards associated with the development of children in early childhood.

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Q.3. How does bilingualism act as a developmental hazard in young children?

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……...

Q.4. The emotional hazards of early childhood arise due to dominance of …….. etc. (complete the sentence)

Q.5. How many types of social hazards are identified to be common to all children?

…….

Q.6. Give one example of emotional weighing of concepts that may stand as a hazard in concept development.

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Q.7. State some of the causes of formation of unfavourable self-concept in young children.

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11.4 LET US SUM UP

- Developmental hazards of childhood period can be physical, psychological or both.
- With regard to the developmental hazards of early childhood period, it has been found that during this period psychological hazards are more numerous than the physical hazards and are more damaging to the personal and psychological adjustment of a child.
- Some of the common physical hazards of early childhood are - mortality, illness, accidents, unattractiveness, awkwardness**,** obesity, left-handedness, etc.
- Some of the most common psychological hazards associated with the early childhood period are - speech hazards, emotional hazards, social hazards, play hazards, hazards in concept development, moral hazards, hazards in sex-role typing, family-relationship hazards, and personality hazards.

11.5 FURTHER READING

1. Agarwalla, S. (2021). Developmental Psychology. Guwahati: Union Book Publication
2. Goswami, G. (2008). Child Development and Child Care. Guwahati: Arun Prakashan
3. Hurlock, E. B. (2016). Developmental Psychology: A Life-Span Approach. New Delhi" McGraw Hill Education (India) Pvt. Ltd.
4. Sarma, P.D. & Goswami, G. (2017). Developmental Psychology. Guwahati: Shanti Prakashan

11.6 ANSWERS TO CHECK YOUR PROGRESS

ANSWER TO Q.1: (i) Declines (ii) Respiratory (iii) Motor, Intellectual (iv) Attractiveness

ANSWER TO Q 2: Any four psychological hazards associated with the development of children in early childhood are: Speech Hazards, Social Hazards, Emotional Hazards and Play Hazards

ANSWER TO Q 3: When children are bilingual, that is they speak in their mother tongue at home, but have to speak in a different language in school, their communication with their school mates gets adversely affected owing to limitation in their vocabulary, particularly during the early school years. This is in turn act as a hazard in the social development of young children.

ANSWER TO Q 4: The emotional hazards of early childhood arise due to dominance of unpleasant emotions, such as, anger, jealousy, hatred, fear etc.

ANSWER TO Q 5: Five types

ANSWER TO Q 6: Emotional weighting of concepts often acts as a hazard in the concept development of young children. As an example, young children usually build up the concepts of Christmas in relation to Santa Clause. But when they discover that there is no Santa Clause, they may still be resistant to change their concept of Christmas because of its pleasurable emotional weighting and they may feel deceived by the elders.

ANSWER TO Q 7: Unfavourable self-concept may develop in young children due various reasons. They may develop due to the treatment they receive from family members and peers or also due to persistent egocentrism. Sometimes if the parents have unrealistically high aspirations which children are unable to fulfil, then they feel themselves as failures and develop negative self-concepts.

11.7 POSSIBLE QUESTIONS

A. Short Questions (Answer each question in about 150 words)

Q.1 Is left-handedness a hazard in the developmental process of children? Give reasons for your response.

Q.2 What is play hazards?

Q.3.Explain briefly any two reasons for speech hazards in young children.

Q.4. State some of the reasons for arise of emotional hazards in early childhood period.

B. Long Questions (Answer each question in around 300- 500 words)

Q.1 Describe the physical hazards related to the development of children in their early childhood.

Q.2 How do sex-role typing and family relationship act as psychological hazards in young children? Explain with suitable examples.

Q.3. Discuss some of the most common psychological hazards associate with the early childhood period

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UNIT 12: NUTRITIONAL CARE FOR PRE-SCHOOL CHILDREN

UNIT STRUCTURE

12.1 Learning Objectives

12.2 Introduction

12.3 Importance of Nutrition for Children's Development

12.3.1 Nutritional Requirements of Children

12.4 Balanced Diet for Young children

12.4.1 Meal Planning for Children

12.4.2 Preparing Balanced Diet for Children

12.5 Nutritional Values of Locally Available Foods

12.6 Concept of Malnutrition

12.6.1 Types of Malnutrition in Children

12.6.2 Causes of Malnutrition in Children

12.6.3: Identifying Early Malnutrition in Children

12.6.4: Providing Basic Remedial Measures

12.7 Let Us Sum Up

12.8 Further Reading

12.9 Answer to Check Your Progress

12.10 Possible Questions

12.1 LEARNING OBJECTIVES

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

- grasp the importance of nutrition for children's development.

- discuss the importance of balanced diet and requirements of children
- prepare low-cost Nutritious Food and Balanced Menu for Children
- highlight the nutritional values of locally available foods.
- identify early malnutrition in children and provide basic remedial measures

12.2. INTRODUCTION

We know that the foundation of human life depends on the proper care and nutrition a child receives in the preliminary stage of his life. As the proper physical development relies on the food and nutrition, provided to a child. Physical development leads to other developmental aspects of a child's overall personality. A healthy child can learn and gain experience faster than the underdeveloped one. Therefore, food and nutrition have a very significant role in the development of young children. As a parent, or as pre-school teachers it is essential for one to learn about the nutritional care and its importance for the children. This unit will focus on the nutrition, diet aspects of children for their proper development. Besides this, a detailed study of this unit will help you to plan and prepare low-cost nutritious food and balanced menu for children of your school or centers.

12.3 IMPORTANCE OF NUTRITION FOR CHILDREN'S DEVELOPMENT

Nutrients are chemical components of food that are needed by the body in adequate amounts in order to grow, reproduce and lead a normal, healthy life. Nutrients include proteins, fats, carbohydrate, vitamins, minerals and water. Again, nutrition is defined as the science of food and its interaction with an organism to promote and maintain health. Thus, nutrition is a combination of processes by which all parts of the body receive and utilize the materials necessary for the performance of their respective functions and for the growth and renewal of all the components. Nutritional status is the state of our body as a result of the foods consumed and their use by the body.

Nutritional status can be good, fair or poor. The signs of good nutrition are an alert, good natured personality, a well-developed body, with normal weight for height, well developed and firm muscles, healthy skin, and reddish pink colour of eyelids and membranes of mouth, good layer of subcutaneous fat, clear eyes, smooth and glossy hair, good appetite and general health.

Childhood and adolescence are periods of continuous growth and development. An infant grows rapidly, doubling its birth weight by 5 months and tripling it by 1 year of age. During the

second year, the child increases not only in height by 7-8 cm but also gains 4 times of its birth weight. During the pre-adolescent period the child grows, on an average, 6-7 cm in height and 1.5 to 3 kg in weight every year and simultaneously development and maturation of various tissues and organs take place. Childhood is the stage in a human's life associated with growth and development. Growth proceeds rapidly in early life, slows down in middle childhood and accelerates at puberty before linear growth ceases. With increasing age there is also physical and psychomotor maturation and this influences activity, body composition, feeding skills and food choices. Adequate nutrition is essential for growth, health and development of children. Poor nutrition increases the risk of illness, and is responsible directly or indirectly for one third of the estimated 9.5 million deaths that occurred in 2006 in children less than 5 years of age. WHO had announced that inappropriate nutrition can also lead to childhood obesity.

12.3.1 Nutritional Requirements of Children

Nutrition is required for children in the form of well formulated balanced diets to ensure optimum growth and boost their immunity-

- A nutritionally adequate and balanced diet is essential for optimal growth and development.
- Appropriate diet and physical activity during childhood is essential for optimum body composition, Body Mass Index (BMI) and to reduce the risk of diet-related chronic diseases in later life and to prevent vitamin deficiency.
- Common infections and malnutrition contribute significantly to child morbidity and mortality. As such, nutrition is very essential.
- A child needs to eat more during and after episodes of infections to maintain good nutritional status.
- Children require good amount of carbohydrates and fats for energy. Therefore, it is very essential to give them a daily intake of energy rich foods in the form of whole grains (wheat and its products), nuts, vegetable oils, vegetables like potato, sweet potato, carrot etc and fruits like banana, orange etc.
- In case of children, proteins are essential for muscle building, repair and growth. So, it is necessary to include meat, egg, fish and dairy products in their daily diet.
- A child needs vitamins for the body to function properly and to boost the immune system. A variety of fruits and vegetables of different colours should be added in the food for children.

- Vitamin-A is essential for vision and a deficiency of the same can lead to night blindness (difficulty in seeing in night). Dark green leafy vegetables, yellow-orange coloured vegetables and fruits (such as carrots, papaya, mango, orange etc) are good sources of vitamin.
- The vitamin-D helps in bone growth and development and it is essential for absorption of calcium. Children get most of their vitamin-D from sunlight and small amount from some food items like (fish oils, fatty fish, cheese and egg yolks).

12.4 BALANCED DIET FOR YOUNG CHILDREN

A balanced diet lays the foundation for a healthy and active lifestyle and this further lowers the risk of long term health issues. Childhood is the most critical time for growth as well as for development of the mind and to fight infections. So, it is very essential that the children get a good dose of energy, proteins, vitamins and minerals. A well formulated balanced diet is necessary for children and adolescents to achieve optimum growth and boost their immunity. A balanced diet, playing outdoors, physical activities of a child is essential for optimum bodily requirement and to reduce the risk of diet related chronic conditions later in life and to prevent any sort of vitamin deficiency.

Balanced diet having all the food groups and nutrients in required qualities and quantities should be in terms of age, sex, physiological stress and strain, occupation and activities. A balanced diet should provide around 60-70% of total calories from carbohydrates, 10-12% from proteins and 20-25% of total calories from fat. A balanced diet must contain sufficient amount of carbohydrates, proteins, fats, vitamins, minerals and fibre in the required amounts. Each of these nutrients has a vital role in the all-round growth and development of children.

In addition, a balanced diet should provide bioactive benefits. Thus, a balanced diet enhances quality of life because-phytochemicals such as dietary fibre, antioxidants and other nutraceuticals which have positive health

- It meets nutritional requirements.
- It provides phytochemicals.
- It prevents degenerative diseases.
- It improves longevity.
- It prolongs productive life.
- It improves immunity.

- It develops optimum cognitive ability and also helps in coping up stress.

The following is the table of the nutritional requirements and balanced diet recommended by Indian Council of Medical Research (ICMR, 2010).

Table 12.1: Balanced Diet for Children (Number of Portions)

Food Groups	g/portion	1-3 years	4-6 years	7-9 years
Cereals and millets	30	2	4	6
Pulses	30	1	1	2
Milk & milk products	100	5	5	5
Roots and tubers	100	0.5	1	1
Green leafy vegetables	100	0.5	0.5	1
Other vegetables	100	0.5	1	1
Fruits	100	1	1	1
Sugar	5	3	4	4
Fats / oil	5	5	5	6

- One portion of pulse may be exchanged with one portion (50g) of egg/meat/chicken/fish.

The nutrition expert group of Indian Council of Medical Research (ICMR) India suggested a five food group plan---

1. Cereal, millets and its products
2. Pulses, legumes and its products
3. Milk, meat and its products
4. Fruits and vegetables
5. Fats, oil and sugars



Fig 12.1: Five Food Groups

The role of these five food groups in the diet is comprehensively shown in the Table1. It must be remembered that each group supplies some nutrients and not all nutrients. A combination of items selected from each of the five groups in the right proportion is ideal and will work towards a balanced diet.

Table 12.2: Nutrients from five food groups

Food Groups	**Food Stuff**	**Nutrients**
1.**Cereal, millets and its products**	Rice, wheat, jowar, bajra, ragi, maize and their products such as sooji, rice flakes, puffed rice, vermicelli, bread, noodles etc.	Rich source of carbohydrates and fair source of protein, important source of vitamin B, calcium and other minerals.
2.**Pulses, legumes and its products**	Peas, beans, dals, grain etc.	Fairly good sources of calories, a good source of protein. Provides vitamin B and minerals, vitamin C enhanced on sprouting.
3. **Milk, meat and its products**	Milk, curd, cheese, paneer, butter, eggs, meat, fish, liver, poultry etc.	Milk is complete food, good source of proteins and fats, calcium and fat soluble vitamins. Meat and meat products are rich source of proteins, phosphorous, vitamin-B complex, iron etc.
4**. Fruits and vegetables**	Apple, mango, guava, papaya, orange, brinjal, cauliflower, cabbage, spinach, carrot, potato, spinach, amaranth, fenugreek leaves etc.	Fairly good sources of minerals and vitamins. Potatoes are good sources of carbohydrates.

5. **Fats, oil and sugars**	All oils like ground nut, mustard, til, sunflower, soya, corn. All fats such as ghee, butter, vanaspati. Sugars like table sugar, sugar cubes, jaggery, honey etc.	Concentrated source of fat, calorie and fat soluble vitamins like vitamin A, D, E and K.

12.4.1 Meal Planning for children:

Diet or Meal planning or management is the process to provide meals that meet the nutritional and economic needs of the family and at the same time contribute to its social and aesthetic development. Meal planning is both an art and a science; art in the skillful blending of colour, texture and flavour and a science in the wise choice of food for optimum nutrition and digestion. Meal planning means planning for adequate nutrition. Adequate nutrition is a vital need for everyone in all ages. Body needs a balanced diet. It is defined as that diet which contains or includes different items of food in proper quantities and proportion so that the need for all the nutrients is adequately met.

The Characteristics of a well-planned nutritious meal:

A meal is well planned if it fulfills the following characteristics:

1. **Palatability**: First of all we have to see that food has to be palatable before it becomes nutritious as the majority of the people will not eat something they do not like even if it has excellent nutritive value. Appetite is the pleasurable anticipation of food and depends not only on hunger but also on the taste, texture, appearance and attractiveness of the foods.
2. **Judicious Combination of Foods**: Even the food may be adequate from the nutritional stand point but it should be within the purchasing capacity of the home maker. It means the planners must know the cost of the foods but their cost in relation to food value e.g. when the diet is lacking in milk, butter and eggs then carotene rich vegetables such as pumpkin and carrots are better choices.
3. **Effect of Cooking**: It is also very important before meal planning that how best the nutritive value of food can be preserved during cooking so that necessary losses can be avoided.
4. **Purchasing Power**: Meal planner should learn to budget carefully the time spent on cooking and use of procedures that will ensure economy of time, labour and fuel.

5. **Variety in Foods**: The attractiveness of meals can be greatly increased by introducing an interesting variety of foods. Planners should know the sources of different nutrients, equivalence of foods from the nutritional stand point and the widely different ways in which the same food stuff can be used.
6. **Low Cost Nutritious Foods**: It is not necessary to opt for expensive foods like butter, almond etc. Low cost substitutes can be used while planning the diets.
7. **Use of Time Saving Devices**: It is important to use both time and energy saving devices while preparing meals.

12.4.2 Preparing Balance Diet for Children

Development of bone mass is going on during this childhood period so inclusion of dairy products (curd, milk, cheese, yoghurt) and green leafy vegetables like spinach, amaranth, broccoli and celery which are rich in calcium is a must.

A child should be given a nutritional diet i.e. simple and attractive. So, the diet for pre-school child must contain all the five food groups in proper proportions (as mentioned above). Some low cost and nutritious food items for children are listed below:

- Stuffed parantha (stuffed with potato, mashed bengal gram dal or moong dal)
- Sprouted moong and bengal gram
- Vegetable sandwich
- Vegetable cutlet/ fish cutlet
- Paushtik roti (Add wheat, gram flour and green leafy vegetables)
- Sagoo porridge with milk
- Rice flakes with milk and jaggery
- Rice flour pan cake
- Puffed rice and peanut laddoo
- Mixed vegetable sooji/ upmah

Table 12.3: A Sample Balanced Menu for Children

Time	**Menu**	**Amount**
Early morning	Warm milk	1 glass
Breakfast	Stuffed parantha Mixed vegetable Sabji	2nos. 1 katori/cup

	Boiled egg	1no.
Mid-morning	Seasonal fruit (amla, orange, mango, jamun, ripe papaya etc.)	1no.
Lunch	Rice Fish curry with spinach Salad (cucumber, carrot, beet, tomato)	1 katori/cup 1 katori/cup ½ katori/cup
Evening	Rice flakes with milk and jaggery	½ katori/cup
Dinner	Plain rice Soyabean green banana kofta curry Pumpkin and potato Sabji Egg omellete	½ katori/cup 1 katori/cup ½ katori/cup 1 no.

CHECK YOUR PROGRESS

Q.1. Differentiate between Nutrients and nutrition.

Q.2. What is the essentiality of Vitamin D?

Q.3. What is the essential criteria of balanced diet

Q.4. What are the five food groups?

Q.5. What is meal planning?

12.5 NUTRITIONAL VALUES OF LOCALLY AVAILABLE FOODS

The nutritional value of food defines what food is made of and its impact on the body. The health benefits of nutritional values of locally available foods are:

1. **Local Foods are Fresh:** Fruits and vegetables begin to lose nutrients as soon as they are picked. Buying local produce cuts down travel time from farm/kitchen garden to table. Eg: fresh fruits and vegetables like amla, guava, berries, mango, papaya, potato, pumpkin, bottle gourd, carrot etc. and milk and its home made products such as paneer, sweets, curd etc.
2. **Local Foods are Seasonal**: Fresh tomatoes and berries all year round, but eating seasonally means avoiding “artificial ripening” with gases or other chemicals. Eating

seasonally results in the most delicious and nutrient-dense produce. Eg: banana, pomelo, jackfruit etc.

3. **Local Foods Promote Food Safety.** Less distance between food's source and kitchen table leaves less of a chance of contamination and makes people healthy and disease free.
4. **Local Foods Promote Variety.** Local foods create a greater variety of foods.
5. **Local Foods Support Local Economy:** Locally available foods are low cost as well as nutritious.

Table 12.4: Nutritive Value of Some Locally Available Foods

Food Groups	Carbohydrate g/100g	Protein g/100g	Fat g/100g	Energy Kcal/100g	Calcium mg/100g	Iron mg/100g
Cereal and its products						
Rice, parboiled, milled	79.0	6.4	0.4	346	9.0	1,0
Rice, raw, milled	78.2	6.8	0.5	345	10	0.7
Rice flakes	77.3	6.6	1.2	346	20	20
Puffed flakes	73.6	7.5	0.1	325	23	6.6
Wheat flour	69.4	12.1	1.7	341	48	4.9
Pulses and legumes						
Bengal gram dal	59.8	20.8	5.6	372	56	5.3
Bengal gram whole	60.9	17.1	5.3	360	202	4.6
Black gram dal	59.6	24.0	1.4	347	154	3.8
Green gram whole	56.7	24.0	1.3	334	124	4.4
Red gram dal	57.6	22.3	1.7	335	73	2.7
Green leafy vegetables						
Amaranth	3.8	5.2	0.3	38	330	18.7
Bathua leaves	2.9	3.7	0.4	30	150	4.2
Bottle gourd leaves	6.1	2.3	0.7	39	80	-

Cabbage	4.6	1.8	0.1	27	39	0.8
Colocasia leaves	8.1	6.8	2.0	77	460	0.98
Pumpkin leaves	7.9	4.6	0.8	57	392	-
Mint	5.8	4.8	0.6	48	200	15.6
Curry leaves	18.7	6.1	1.0	108	830	0.93
Spinach	2.9	2.0	0.7	26	73	1.14
Other vegetables						
Bottle gourd	2.5	0.2	0.1	12	20	0.46
Brinjal	4.0	1.4	0.3	24	18	0.38
Cauliflower	4.0	2.6	0.4	30	33	1.23
Jackfruit seeds	25.8	6.6	0.4	133	50	1.5
Pumpkin	4.6	1.4	0.1	25	10	0.44
Tomato	3.6	1.9	0.1	23	20	1.8
Papaya	5.7	0.7	0.2	27	28	0.9
Fruits						
Amla	13.7	0.5	0.1	58	50	1.2
Banana	27.2	1.2	0.3	116	17	3.6
Guava	11.2	0.9	0.3	51	10	0.27
Jackfruit	19.8	1.9	0.1	88	20	0.56
Mango	16.9	0.6	0.4	74	14	1.3
Jambu fruit	14	0.7	0.3	62	15	0.43

Human being require needs a wide range of nutrients to lead a normal healthy life. For providing these nutrients, good nutrition or proper intake of food in relation to the body's dietary needs is required. An adequate, well balanced diet is the corner stone of good health. Poor nutrition can lead to reduce immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.

A healthy diet consumed throughout the life-course in preventing malnutrition in all its forms as well as wide range of non-communicable diseases and conditions. Healthy dietary practices begin early in life. Breast feeding promotes healthy growth and improves cognitive

development, and may have longer-time health benefits, like reducing the risk of becoming overweight or obese later in life.

12.6 CONCEPT OF MALNUTRITION

Malnutrition is the condition when the child does not receive essential nutrients, minerals and calories which help in the development of vital organs in adequate quantities. Nutrients are important for all child to lead a disease free and healthy life. Lack of sufficient nutrition can lead to several disorders, both physical and behavioural. Here it is important to mention that malnutrition and hunger are not the same although the two might be associated. Hunger is felt when the stomach is empty whereas malnutrition is the lack of sufficient nutrients. Malnourished children can be prone to deficiencies which result in stunted growth and chronic sickness.

12.6.1 Types of Malnutrition in Children

Malnutrition is a cause of serious concern globally with more children falling prey to malnourishment each year. The effects of malnutrition can be devastating and far reaching and can cause stunted growth, mental retardation, GI tract infections, anaemia and death. Malnutrition is not only be caused due to lack of nutrients but also due to excessive intake of the same and hence a balanced diet is very important for the nourishment and health of the child. Malnutrition is caused by insufficient intake of essential micro-nutrients and the forms of malnourishment are divided into four categories. They are-

Underweight: This is a condition where a child does not grow in weight/height in accordance with his/her age and remains underweight due to wasting, stunting or both. This form of malnourishment is also known as growth failure malnutrition.

Stunted Growth: Stunted growth is also known as chronic malnutrition, the condition of stunting in the child begins before birth due to poor health of the mother during pregnancy leading to abnormal and disproportionate growth in the child. Stunted growth happens over a long period of time and hence it has long lasting consequences. The main reasons behind stunting of the baby are poor breast feeding, insufficient supply of nutrients to the body and continued infections.

Micronutrient Deficiency: Micronutrient deficiency or malnutrition indicates the lack of essential vitamins such as vitamin A, B, C and D in the body along with shortage of folate, calcium, iodine, zinc and selenium. Micronutrient deficiency is caused by prolonged lack of these nutrients in the body.

Wasting: Wasting or acute malnutrition is the situation of sudden and drastic weight loss and leads to three types of clinical malnutrition-

Kwashiorkor: In this condition, the under-nourished child looks plump because of fluid retention (bilateral pitting oedema) in legs and feet.

Marasmus: This type of malnutrition occurs when the body fat and tissues degenerate at a drastic rate to compensate for the lack of nutrients in the body. This slows down the activity of the immune system and internal processes in the body.

Marasmic-Kwashiorkar: This is a mix of both marasmus and kwashiorkor and characterised by severe wasting as well as oedema.

12.6.2 Causes of Malnutrition in Child

Malnutrition can be caused by lack of essential nutrients or by excessive consumption of the same. Following are the causes which can lead to malnutrition in the child-

Poor Diet: Lack of sufficient food intake can cause deficiency of necessary nutrients resulting in malnourishment of the child. A diet which contains food items that are indigestible and harmful can cause a loss of appetite leading to malnutrition.

Irregular Diet: Not consuming food at proper time and regular intervals can lead to indigestion and malnutrition.

Digestive Disorders: Some children might have digestive disorders such as Crohn's disease which limits the ability of the body to absorb nutrients even though healthy food is consumed.

Lack of Breastfeeding: Breastfeeding a new born is very important as breast milk supplies important nutrients to the baby which form the base for the child's development. Lack of breastfeeding can expose the child to malnourishment.

Diseases: Children with bodily diseases are prone to malnutrition and require special care and regulated food habits.

Lack of Physical Activity: Lack of sufficient physical activity can slow down the digestive process leading to malnutrition.

Other causes for malnutrition in children under five years include premature birth, excessive vomiting or diarrhoea, heart defects from birth and other long term diseases.

12.6.3 Identifying Early Malnutrition in Children

In order to treat malnutrition it is important to identify the root cause first. Once the root cause is established, the doctor will suggest specific changes to the diet plan to include supplements and correct quantities of food items to rectify under or over nourishment. Many of the adverse effects of malnutrition can be rectified and reversed if action is taken in time. Signs and symptoms of malnutrition in infants and children depend on the kind of nutritional deficiency the child suffer from. The following signs helps to identify early mal-nutrition in children -

Tiredness and Fatigue: When the child suffer from malnutrition, they do not show interest in playing, they prefer to sleep.

Irritability: Due to irritation, they keep crying.

Poor immune system increasing susceptibility of infections

Dry and Scaly skin

Poor, Stunted growth

Bloated Stomach

Longer Rcovery time from Wounds, Infections and Illness

Reduced Muscle Mass

Slow Behavioural and Intellectual Development

Impairment in Mental Function and Digestive Problem

12.6.4: Providing Basic Remedial Measures

Malnutrition is the obstacle to child development. Correct diagnosis of a malnourished baby and identification of the malnourishment is important so that necessary corrective measures can be taken to prevent long lasting and adverse effects of malnourishment. After diagnosing the health condition, the doctor will suggest medicines and supplement. However, to keep the child healthy is the first priority of parents and early childhood workers. Therefore, adoption of some remedies can prevent the child from initial stage of malnutrition. Some of the remedies are mentioned here-

a) **Home Remedies:** During the initial stages of malnutrition, proper care and consumption of a balanced and nutrient rich diet at home will help the child recover from the condition. Some home remedies to recover from malnutrition include:

- Consumption of nutritious food at regular intervals
- Ensuring a balanced diet for the child
- Following the diet plan suggested by the doctor
- Drinking more than 1.5 litres of water daily

b) **Medication at Hospital:** Depending on the severity and cause of malnutrition, the doctor will suggest necessary steps to recover from the condition:

- Consumption of medication and dietary supplements for the child at regular basis.
- Usage of feeding tubes for kids who are unable to eat on their own.
- Intensive care and continuous monitoring in case of severely malnutrition kids.

12.7 LET US SUM UP

After going through the unit, it can be summarised as-

- Nutrition is the result of the kinds of foods supplied to the body and how the body uses the food supplied
- Nutrients are chemical components of food that are needed by the body in adequate amounts in order to grow, reproduce and lead a normal, healthy life.
- The nutrition expert group of Indian Council of Medical Research (ICMR) India suggested a five food group plan-Cereal, millets and its products, Pulses, legumes and its products
- Milk, meat and its products, fruits and vegetables, fats, oil and sugars.
- A balanced diet should provide around 60-70% of total calories from carbohydrates, 10-12% from proteins and 20-25% of total calories from fat.
- Meal planning or management is the process to provide meals that meet the nutritional and economic needs of the family and at the same time contribute to its social and aesthetic development.
- Palatability, Judicious combination of foods, Effect of cooking; Purchasing power; Variety in foods are some of the characteristics of a well-planned nutritious meal
- Human needs a wide range of nutrients to lead a normal healthy life. For providing these nutrients, good nutrition or proper intake of food in relation to the body's dietary needs is required.
- Malnutrition is a cause of serious concern globally with more children falling prey to malnourishment each year. The effects of malnutrition can be devastating and far reaching and can cause stunted growth, mental retardation, GI tract infections, anaemia and death.

12.8 FURTHER READING

1. Aggarwal A., Garg N., Gupta S., 2007, *Text Book of Foods and Nutrition and Child Development.*

2. D., Kendall, G.E., Newnham, J.P., Landau, L.L. and Stanley, F.J., 2005. *Breastfeeding and overweight: longitudinal analysis in an Australian birth cohort*. Journal of Paediatrics, 147, pp. 56–61.

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12.9. ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

Nutrients are chemical components of food that are needed by the body in adequate amounts in order to grow, reproduce and lead a normal, healthy life. Nutrients include protein, fat, carbohydrate, vitamins, minerals and water. Again, nutrition is defined as the science of food and its interaction with an organism to promote and maintain health.

ANSWER TO Q.NO.2:

The vitamin-D helps in bone growth and development and it is essential for absorption of calcium. Children get most of their vitamin-D from sunlight and small amount from some food items like (fish oils, fatty fish, cheese and egg yolks).

ANSWER TO Q.NO.3:

A balanced diet should provide around 60-70% of total calories from carbohydrate, 10-12% from protein and 20-25% of total calories from fat. A balanced diet must contain sufficient amount of carbohydrate, protein, fat, vitamins, minerals and fibre in the required amounts.

ANSWER TO Q.NO.4:

The five food groups are- 1. Cereal, millets and its products, 2. Pulses, legumes and its products 3. Milk, meat and its products, 4. Fruits and vegetables, 5. Fats, oil and sugars

ANSWER TO Q.NO.5:

Diet or Meal planning or management is the process to provide meals that meet the nutritional and economic needs of the family and at the same time contribute to its social and aesthetic development.

12.10 POSSIBLE QUESTIONS

A. Short Questions (Answer each questions in about 150 words)

1. What are the Nutritional Requirements of Children?
2. State the benefits of balanced diet?

3. What are the sub foods under five food groups?

4. What are the Characteristics of a well-planned nutritious meal?

5. What do you understand by balanced diet?

6. What are the types of malnutrition?

B. Long Questions (Answer each questions in about 300-500 words**)**

1. Write details about nutritional importance and requirement of children.

2. Explain the nutritional requirements and balanced diet recommended by Indian Council of Medical Research (ICMR, 2010).

3. “Good diet is needed to sustain good health”- Explain it.

4. Prepare a sample balanced menu for children.

5. Discuss the causes of infections in children and how can it be prevented?

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UNIT 13: IDENTIFYING THE COMMON AILMENT IN PRE-SCHOOL CHILDREN

UNIT STRUCTURE

13.1 Learning Objectives

13.2 Introduction

13.3 Concept of Accidents and Precautions

13.4 Identification of Common Ailments and Infectious Diseases

13.5 Concept of First Aid

13.5.1 Principles and Practice of First Aid

13.5.2 Preparation and Administration of First Aid Box

13.6 Let us Sum up

13.7 Further Reading

13.8 Answer to Check your Progress

13.9 Possible Questions

13.1 LEARNING OBJECTIVES

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

- grasp the concept of accidents and precautions
- identify some of the common ailments and infectious diseases
- discuss the concept of first aid
- prepare and administer first aid

13.2 INTRODUCTION

Early childhood stage is that period of human life which is very sensitive and vulnerable to diseases, accidents and malnutrition due to their tender nature. We found that in our country India most of the children are subject to malnutrition. Keeping them healthy and free from all diseases and accidents is one of the primary tasks of early childhood workers. Therefore, it is essential for

them to be acquainted with the concept of different ailments and accidents as well as its preventive measures. In this unit, we will deal with some of such issues and concept.

13.3 CONCEPT OF ACCIDENTS AND PRECAUTIONS

An accident can result in death, injury, disease or infection, loss of property, damage to environment, or a combination thereof. Accidents can come with business consequences as well, such as compensation costs, loss of productivity, and a decrease in employee morale. World Health Organization has defined accidents as an unplanned, unforeseen, and unexpected occurrence which may involve injury. A number of human factors can cause accidents, such as-Unsafe conduct, Inattention, Negligence, Improper training, Inexperience, Drowsiness, fatigue, or illness. Some of the other factors like-working conditions, workplace designs, substandard safety processes and weather conditions are also responsible.

There are federal, state, and municipal laws and regulations aimed at preventing or reducing the number of accidents. Organisations are required to comply with these and are also expected or encouraged to follow industries for best practices.

Types of Accidents Among Children:

Physical:

Physical examples of accidents include unintended motor vehicle collisions or falls, being injured by touching something sharp, hot, moving objects, contacting electricity or ingesting poison.

Non-physical:

Non-physical examples are such as unintentionally revealing a secret or otherwise saying something incorrectly, accidental deletion of data, forgetting an appointment etc. The most severe **injuries among children** are associated with heat related accidents and fall from height. The power to sustain among older children are higher than the younger one after fracture. The percentage is higher among young children regarding burns and scalds and positioning and in gestation accidents

Precautions of Accident:

It is the responsibility of the parents and teachers to protect the children from unwanted incidents. A number of measures can be suggested to lower the injury rate:-

- Parents and teachers should choose toys appropriate to the age of the children.
- Teacher and parents should ensure that small and big object harmful to child are kept out of their reach.
- Some of the household objects like blinds for the window should be kept out of children's reach.
- Caretakers, parents and teachers should keep the objects like strings and *plastic bags out of children's reach*.
- Parents and teachers should ensure that foldable furniture and other equipment at home and school are properly placed and locked.
- Children should be clearly advised and instructed *not to play while eating*.
- Children should be always supervised while taking any kind of food.
- Children should *not be left alone in the bathroom* or in the basin.
- Adequate care should be provided while the children are *playing with peers*.

CHECK YOUR PROGRESS

Q.1. What are the human factors causing accidents?

Q.2. State some non-physical examples of accidents

Q.3. State any two precautions that pre-school teacher take to prevent Accident among young children

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13.4 IDENTIFICATION OF COMMON AILMENTS AND INFECTIOUS DISEASES

Keeping the child healthy and free from all kinds of ailments and diseases is the prime duty of the parents and early childhood teachers as they are more vulnerable to infections. To keep them healthy, the parents and teachers must take appropriate measures and protection. Therefore it is very important on their part to identify the common ailments and infectious diseases.

Common Diseases:

1. **Headache**

- It is one of the most common ailment by which everybody suffers on one or the other occasions. It may be simply due to fatigue, exhaustion, worry or some diseases.

  Symptoms

  Pain anywhere in head which may be constant, throbbing, or intermittent.

2. **Migraine**

Headache may follow lack of food, noise, heat, travelling or emotional disturbances.

Signs and Symptoms

- Flickering vision can precede headache.
- Nausea and vomiting.
- Intense throbbing headache.
- Inability to tolerate light or noise.

3. **Earache**

This can be very painful.

Sign and Symptoms

Constant/ throbbing pain in the ear.

4. **Toothache**

Most important cause are dental caries.

Sign and Symptoms

- Pain in the teeth or jaws, which may be constant, throbbing or intermittent.
- The pain may be made worse by cold or hot food and drink.

5. **Common cold and cough**

Sign and Symptoms

- Running nose.
- Headache.

- Watering of eyes.
- Mild fever.

6. **Neckache**

   Sign and Symptoms

   Pain anywhere in neck increased by movement.

7. **Backache**

   Same as in neckache.

8. **Pain in Abdomen**

   There are many causes of abdominal pain including, indigestion, colic, cramp, loose motions, constipation or food poisoning.

   Sign and Symptoms

   Pain anywhere in the abdomen which may be dull or sharp. Constant or intermittent, localized or generalized.

9. **Diarrhea and Dysentery**

   Watery loose motions are called diarrhea but if they are associated with blood and mucus then these are called dysentery.

   Sign and Symptoms

- Loose motion.
- Loose motion with blood and mucus.
- Vomiting.
- Fever.
- Malaise, weakness.
- Pain in abdomen.

10. **Constipation:**

    Incomplete evacuation of bowel in 48 hours is constipation.

11. **Vomiting**

    It occurs due to gastritis, food poisoning or travel sickness.

Infectious Disease:

Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another.

Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans. Some are-

- **Hepatitis A:** Hepatitis A (HAV) is a viral infection primarily affecting the liver. It can range in severity from a mild illness to a severely disabling one lasting for several months. Lifelong immunity follows a case of infection. Hepatitis A is highly infectious to close contacts and therefore spreads easily in very young age groups in settings such as nurseries and schools.
- **Poliomyelitis:** This is an infection caused by one of three types of virus. The virus most commonly invades the gastrointestinal tract and a viremia illness may develop. In some cases the virus invades and destroys the anterior horn cells of the spinal cord. This results in flaccid muscle paralysis, more commonly of the lower limbs.
- **Typhoid:** Typhoid fever (also known as enteric fever) is a severe systemic infection caused by the Gram negative bacterium Salmonella typhi. Ingestion of a large number of organisms is usually necessary for the disease to occur unless there is achlorhydria.
- **Diarrhea:** Diarrhea is a clinical syndrome in which there is frequent passage of unusually loose or watery bowel movements, usually three or more in a 24 hour period, sometimes accompanied by vomiting and fever, abdominal pain or cramps, faecal urgency, tenesmus, or the passage of bloody or mucoid stools.
- **Diphtheria:** This is a serious bacterial infection, usually of the throat, caused by Corynebacerium diphtheriae. The throat infection may obstruct breathing and cause death. The important feature of an isolate of C. diphtheriae is whether it is able to produce toxins.
- **Influenza:** Influenza, commonly known as flu, is one of the oldest and most common diseases known. Influenza is an acute respiratory illness caused by influenza viruses A and B. Laboratory tests are required to distinguish it from other acute respiratory infections.
- **Pertusis:** Pertussis (whooping cough) is a highly infectious acute bacterial disease involving the respiratory tract. The causative bacteria is Bordetella pertussis in more than 90% of cases or more rarely Bordatella parapertussis. Pertussis is transmitted by airborne contact with respiratory secretions of infected persons.
- **Mumps:** Mumps is an acute viral infection usually affecting the salivary glands, chiefly the parotid gland in 60% of cases; hence the term “infectious parotitis”. The virus is one of the paramyxovirus family, and commonly affects bilateral as opposed to unilateral parotid salivary glands. The virus may spread in the bloodstream to involve other organ systems and the central nervous system.
- **Rubella**: This is a mild febrile viral illness with a faint rash which is only of importance given the damage it may cause to the foetus when a mother contracts the infection during pregnancy.

- **Measles:** The measles virus is a paramyxovirus mainly affecting the mucous membranes of the respiratory tract and skin producing fever and rash. Measles can lead to fatal complications including pneumonia, diarrhea, and encephalitis (inflammation of the brain).

13.5 CONCEPT OF FIRST AID

First aid is the temporary and immediate treatment given to a person who is injured or suddenly becomes ill, using facilities or materials available at that time before regular medical help is imparted. First aid is the immediate and temporary care given to a victim of an incident or sudden illness until further medical services can be obtained. The primary objective of first aid is to save lives. A school teacher must know how to administer basic first aid. In an emergency, an error could have disastrous consequences to the patient. It is as important to know what to do as what not to do. A person will respond more quickly to treatment if he/she recognises that a competent person is administering the first aid.

13.5.1 Principles and Practice of First Aid

Principles of First Aid:

The general principles of First Aid are-

- Principle of preservation
- Principle of airway
- Principle of breathing
- Principle of preventing deterioration
- Principle of stopping bleeding
- Principle of treating shock
- Principle of treating injuries
- Principle of promoting recovery
- Principle of reassurance
- Principle of relief from pain
- Principle of handling with care
- Principle of protection from harm

Practice of first aid

While practicing first aid, the first aider, a common person who may have learnt a standard method at application of first aid best suited to his skill must follow the following responsibilities:

1. Gain access to the patient in easiest and safest way.
2. Observe the accident scene and access the situation.

3. To find out whether casualty is unconscious, conscious, alive or dead.
4. Identify the disease or condition from which the casualty is suffering.
5. Give immediate, appropriate and adequate treatment considering priority of first aid measures.
6. Should bear in mind that a casualty may have more than one injury and that some casualties will require more urgent attention than others.
7. Arranging without delay for shifting of the casualty to a doctor, hospital or home according to the condition in such a manner as not to complicate the injury or subject the victim to unnecessary discomfort.
8. Keeping the record of the patient, and of the incidence, addresses and witness.
9. Once a first aider has voluntarily started care he should not leave the scene, or stop the care until a qualified and responsible person relieves him.

CHECK YOUR PROGRESS

Q.4. Mention two common ailments among young children.

Q.5. What are Zoonotic diseases?

Q.6. Why is first aid important?

13.5.2 Preparation and Administration of First Aid Box

For preparation of first aid, following equipment are required:

- Bandages of all types
- Cotton balls and cotton tipped swabs
- Instant cold packs
- Thermometer
- Disposable latex or synthetic gloves
- Dressing/gauze pads.
- Adhesive tape.
- Eye protector.

- Stick for tourniquet.
- Upper extremity splint set.
- Lower extremity splint set.

Administration of First Aid:

To prevent from minor injuries, the first aid provider can administer first aid in the following ways-

A. To Prevent injury to the eye:

- Asking the child to lie down so that he/she is facing the light.
- The teacher or caretaker should stand behind the child and gently separate his/her eyelids with finger and thumb.
- Requesting the child to looks up and down and to their left and right so that examination of all parts of their eye is possible.
- If the object remains in place, the teacher or caretaker should seek professional help.

B. **To Prevent from nosebleeds (**bleeding from the nose)

- Asking the child to sit down and tilt his/her head forwards.
- Requesting the child to pinches the soft part of their nose and breathes slowly through the mouth.
- Advising them to refrain from speaking, swallowing, sniffing, coughing or spitting as this may prevent the bleeding from stopping.
- After 10 minutes, asking the child to release the pressure that he/she have been exerting on the soft part of their nose. If blood continues to flow, requesting to reapply pressure for two 10 minute periods. Once the bleeding has stopped, the patient should be advised to rest and refrain from blowing his/her nose

C. **To prevent from Insect Bites and Stings**

- Washing the affected area with soap and cold water and placing a cold compress over the area to lessen swelling.
- Asking the child to refrain from scratching the affected area.
- If the sting can be seen with the naked eye, brushing it off using the edge of a credit card.
- Applying a cold compress to the wound for at least 10 minutes and asking the patient to elevate the limb that has been stung.

- If swelling and pain persists, advising the child to visit the doctor.

D. To Prevent from Cuts and Scrapes

- **Washing hands:** First, washing up with soap and water to prevent from bacteria into the cut and causing of an infection.
- **Stopping the Bleeding:** Putting pressure on the cut with a gauze pad or clean cloth and keeping the pressure on for a few minutes.
- **Cleaning the Wound:** After stopping the bleeding, rinsing the cut under cool running water or using a saline wound wash. After that cleaning the area around the wound with soap and a wet washcloth.
- **Removing any Dirt or Debris.** Using a pair of tweezers cleaned with alcohol to gently pick out any dirt, gravel, glass, or other material in the cut

13.6 LET US SUM UP

After going through the unit, this can be summarised as:

- An accident can result in death, injury, disease or infection, loss of property, damage to environment, or a combination thereof.
- The most severe **injuries among children** are associated with heat related accidents and fall from height.
- Some of the common ailments and diseases during childhood are-headache, migraine, Toothache, Diarrhoea and Dysentery Hepatitis A Typhoid, Influenza, Rubella etc.
- First aid is the temporary and immediate treatment given to a person who is injured or suddenly becomes ill, using facilities or materials available at that time before regular medical help is imparted Principle of preservation
- Some of the principles of first aid are-Principle of Airway, Principle of Breathing, Principle of Preventing deterioration, Principle of stopping bleeding, Principle of treating shock.

13.7 FURTHER READING

1. Aggarwal A., Garg N., Gupta S. (2007), *Text Book of Foods and Nutrition and Child Development.*

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Web links:

https://www.caringforkids.cps.ca/handouts/healthy_eating_for_children

https://www.onlymyhealth.com/personal-hygiene-in-pregnancy-1324018223

13.8 ANSWER TO CHECK YOUR PROGRESS

ANSWER TO Q.NO.1:

Human factors that can cause accidents, such as-Unsafe conduct, Inattention, Negligence, Improper training, Inexperience, Drowsiness, fatigue, or illness

ANSWER TO Q.NO.2:

Some examples of Non-physical accidents are unintentionally revealing a secret or otherwise saying something incorrectly, accidental deletion of data, forgetting an appointment etc.

ANSWER TO Q.NO.3:

Two precautions that pre-school teacher should take to prevent accident among young children are-

- To keep the objects like strings and *plastic bags out of children's reach*.
- To provide adequate care while the children are *playing with peers*.

ANSWER TO Q.NO.4:

Two common ailments among young children are-

1. **Toothache**
2. **Common Cold and cough**

ANSWER TO Q.NO.5:

Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans. Some are-Hepatitis A, thyroid etc.

ANSWER TO Q.NO.6:

First aid is the immediate and temporary care given to a victim of an incident or sudden illness until further medical services can be obtained. The primary objective of first aid is to save lives. A school bus driver must know how to administer basic first aid. In an emergency, an error could have disastrous consequences to the patient

13.9 POSSIBLE QUESTIONS

C. Short Questions (Answer each questions in about 150 words)

1. What are the types of accidents?
2. Cite some examples of physical accidents.
3. Mention some common ailment among young children.
4. What is Measles?

D. Long Questions (Answer each questions in about 300-500 words)

1. What is the meaning of infectious diseases? Write about the various infectious diseases and their symptom

2. What is a first aid kit? Prepare immediate care and treatment plan during minor injuries and cut and scrapes.

3. What are the qualities of a good first aid provider? Write the responsibilities of early childhood worker as first aid provider.

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UNIT 14: EDUCATION FOR EXCEPTIONAL CHILDREN

UNIT STRUCTURE

14.1 Learning objectives

14.2 Introduction

14.3 Meaning and Definition of Exceptional Children

14.3.1 Needs of Exceptional Children

14.3.2 Objectives of Special Education for Exceptional Children

14.3.3 Principles of Education for Exceptional Children

14.4 Classification of Exceptional Children

14.5 Intellectually Exceptional Children

14.5.1 Gifted Children and Educational Programme

14.5.2 Backward Children and Educational Programme

14.5.3 Slow Learner and Educational Programme

14.6 Physically Exceptional Children

14.6.1 Visually Impaired Children

14.6.2 Children with Speech Impairment

14.6.3 Crippled or Orthopaedically Impaired Children

14.7 Let Us Sum Up

14.8 Further Reading

14.9 Answers to Check Your Progress

14.10 Possible Questions

14.1 LEARNING OBJECTIVE

After going through this unit, you will be able to

- define the meaning of the term 'exceptional children'
- classify the different types of exceptional children
- identify the educational programme for the exceptional children
- design the special programmes of education for these children

14.2 INTRODUCTION

In the previous units of this course, we have discussed the developmental process of normal children and its related aspects**.** This unit will introduce you to a special category of children-the

'exceptional Children'. Now –a-days, these children are termed as specially –abled. Till a few decades ago, much attention was not paid to these children especially in countries like ours. But every child, so to say, has the right to be educated like any other normal children.

Education is a process which develops the dormant qualities of an individual to the maximum possible extent. Today, education has become child-centric unlike earlier times when it was curriculum centric. As each child is different from another physically, mentally, intellectually and socially, it is the function of education to develop the child in the best possible manner. This unit deals with the meaning of the term 'exceptional children', their types, their needs, and the most suitable educational programmes for their development. As a pre-school teacher, you must identify those children having special needs, because the special needs of the children are identified during the initial years of their development.

14.3 MEANING AND DEFINITION OF EXCEPTION CHILDREN

It is not easy to define the term ‘exceptional children' because we know that each child is unique or exceptional and is different from the other. They differ from each other physically, mentally, socially and emotionally. Generally such differences are of little importance. When a child grows and develops according to certain yardsticks of medical and psychological experts, they are classified as 'normal'. But when there is deviation, in degree with regard to their physical, intellectual and emotional aspects, these children are classified as 'exceptional children'. Psychologists have made some attempts to define the term "exceptional children" but no single definition has been agreed upon by them.

Kirk has given a comprehensive definition of an exceptional child which is as 'An Exceptional child' is he who deviates from the normal or average child in mental, physical and social characteristics to such an extent that he requires a modification of school practices or special educational services or supplementary instruction in order to develop to his maximum capacity."

- According to W.M. Cruickshank "An exceptional child is he who deviates physically, intellectually, emotionally and socially so marked from normal growth and development that he cannot be benefited from a regular classroom programme and needs special treatment in school".
- Crow and Crow defined: "the term, 'typical or exceptional' is applied to a trait or to a person possessing the trait if the extent of deviation from normal possession of that trait is so great

that because of it the individual warrants and receives special attention from his fellows and his behaviour responses and activities are thereby affected".

An analysis of the above definitions reveals that the term 'exceptional children' represents children who deviate from the normal growth in different dimensions of development. These children are far enough below or far enough above the average range. They need specialised attention which is not provided in regular classrooms.

14.3.1 Needs of Exceptional Children

Now, we know that- 'exceptional children' are called so because they deviate from normal ones with regard to physical, intellectual and emotional capabilities. Hence they have such needs which are different from normal children. Some may have very high I.Q while others may have very low intelligence and some others may be even emotionally disturbed. Therefore, their development depends on the educational programmes designed for them, for example, special facilities must be provided to meet their physical, emotional and intellectual needs. Moreover, the content of the curriculum must be suitable, and specially qualified personnel must take the responsibility of educating and developing the 'exceptional children'. Before starting a training, it is however very important to identify the needs of these children which may vary from child to child. So, great significance must be laid on the objectives of the special education for the exceptional children. The UNO Declaration on the Rights of the Child (1959) stated, "The child who is physically, mentally or socially handicapped shall be given the special treatment, education and care required by his particular condition". India's National Policy for Children (1974) observes, "Children who are socially handicapped, who have become delinquent or have been forced to take to begging or are otherwise in distress, shall be provided facilities for education, training and rehabilitation and will be helped to become useful citizens." Further it states, "Special programmes shall be formulated to spot, encourage and assist gifted children, particularly those belonging to the weaker sections of society."

14.3.2 Objectives of Special Education for Exceptional Children

The objectives of special education for exceptional children are-

- ✓ All children must be treated as equal; no discrimination should be made between a gifted child and a backward child or normal child or handicapped child.
- ✓ Needs of exceptional children must be identified.
- ✓ These children must be properly motivated to learn.

- ✓ These children must be encouraged to participate in activities in school so that they do not feel neglected.
- ✓ Educate them in such a manner that they gain self-confidence and become self-reliant.
- ✓ Proper teaching procedures, effective curriculum and equipment to be provided to make the education of the exceptional children effective.

14.3.3 Principles of Education for Exceptional Children

There are certain principles of the education for exceptional children which are given below:

- Curriculum should include different types of subjects which may cater to the need of the different children.
- Goals to be achieved by the children must be clearly defined.
- Evaluation and re-evaluation of the children's progress must be done from time to time.
- Team of trained personnel like teachers, doctors, psychiatrists and social workers must work together to develop the exceptional children.
- Even after leaving school, the progress and development of the children must be looked into and assistance provided whenever needed.
- The society and state should organize programmes for the development of exceptional children and also provide job opportunities to them.

LET US KNOW

Exceptional children are those children who deviate from the ‘average’ or 'normal' children to such a degree that they need special attention. There children need special education services with trained professional personnel. It should include teachers, administrators, consultants, psychiatrists, psychotherapists physiotherapists etc. Special courses of study suiting different areas of exceptionality should be prepared by experts. They should be educated in such a manner that they gain self-confidence and become self-reliant. Even after leaving school, the progress and development of the children must be looked into and assistance be provided whenever needed.

CHECK YOUR PROGRESS

Q.1. Who is an 'exceptional child'?

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Q.2. What are the different types of exceptional children?

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Q.3. What are the principles to be followed in the education for exceptional children?

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14.4 CLASSIFICATION OF EXCEPTIONAL CHILDREN

In the previous section, we have learnt the meaning of exceptional children. Now we shall discuss its types. Psychologists have classified exceptional children into many broad categories, each of them having one or more types. Some of the major divisions are discussed below:

(1) Intellectually exceptional- a) the Gifted child. b) Slow learner,

c) Mentally Retarded Child.

(2) Physically exceptional- a) visually impaired, b) Speech Impairment, c) crippled.

(3) Emotionally and socially exceptional- the delinquent child.

They should be educated in such a manner that they gain self-confidence and become self-reliant. Even after leaving school, the progress and development of the children must be looked into and assistance provided whenever needed.

14.5 INTELLECTUALLY EXCEPTIONAL CHILDREN

In this section, we shall first discuss the intellectually exceptional children, the backward children and then we shall refer to the slow learners with particular reference to educational programmes needed for categories of each children.

14.5.1 Gifted Children and Educational Programme

Children who have very high I.Q. or those who have special abilities in different fields like sport, music, literature etc. are called gifted children. Gifted children show proficiency in the activities that they are involved in.

According to Havighurst "the talented or gifted is one who show consistently remarkable performance in any worthwhile line of endeavour".

Hollingworth also offers a comprehensive definition. "By a gifted child we mean one who is far more educable than the generality of children are. The greater educability may lie along the lines of one of the arts, as in music or drawing, it may be in the sphere of mechanical aptitude or it may consist in surpassing power to achieve literacy and abstract knowledge." Our conception of gifted children will be clear if we go through the characteristies of such children.

Characteristics of Gifted Children:

Some of the main characteristics of gifted children are:

- They have very high intelligence, their I.Q. is above 140.
- The gifted children have varied interests and are usually inquisitive in nature.
- The gifted children can concentrate on any activity for a longer period, and can adjust well in the environment.
- The gifted children always aspire to excel in whatever they do; they have the ability to judge things rationally and can reason letter.

Education Programme for the Gifted:

The education which are suitable for the gifted children are as follows:

Suitable Curriculum: The curriculum for the gifted should be designed differently from the one for the average student. The curriculum should include more activities which help to bring forth the creative abilities of the children, it must motivate the children to investigate and explore and lay greater emphasis on critical thinking and logical analysis.

Provision of double promotion: There should be provision for double promotion or early promotion for the gifted children. This will help to place each child in the class where he can express his potential to the best of his abilities. However, care should be taken while promoting, as maturity and health conditions of the child should be taken into consideration.

Enrichment opportunities: Programmes, both curricular and cocurricular should be stimulating, must lay greater emphasis on their creative expressions and proper insight into learning situations. The child must be given individual assignments within a stipulated time limit. This will enable the teacher to evaluate his progress properly. The curriculum should be flexible enough to cater to a gifted child's abilities to development him to the maximum possible extent.

CHECK YOUR PROGESS

Q.4. Who are the gifted children? Describe their characteristics.

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14.5.2 Backward Children and Educational Programme

In total contrast to the gifted, the backward children are those who lag behind the normal children in their capabilities. The backward children are usually identified with failure to answer simple classroom questions, inattention, and inability to complete relatively easy activities. They are therefore considered to have low I.Q.

Burton Hall stated that "backwardness in general, is applied to case where their educational attainment falls below the level of their natural abilities".

Burt C. has defined a backward child, "as one who in mid-school carrer is unable to do the work for the class next below which is normal for his age."

Backward children are of different types-some who have very low. I.Q. (between 30/35 and 50/55) are called mentally retarded and those who are called 'dull' have almost normal I.Q between 70 and 90.

Characteristics of Backward Children:

The backward children have the following characteristics:

- They cannot learn as speedily as the normal children.
- They learn mostly through initiation and more suggestible than average children.
- The ability of critical thinking and logical analysis is lacking in backward children.
- Unlike the gifted children who have varied interests, the backward children have limited interests.
- In backward children it is usually found that there is a lack of physical and mental coordination.
- Backward children have adjustment problems. They cannot complete the assigned tasks easily and must fall behind the desired level of achievement.
- They also lack motivation to learn and become worried at trivial matters.
- The backward child may sometimes become quite aggressive as he may suffer from feelings of insecurity and inferiority.

Causes of Backwardness:

Backwardness can be caused by the following factors:

Physical Condition: Poor physical growth, sight and hearing impairment, speech impairment are the causes of backwardness. A physically challenged child may find it different to keep pace with the achievements of the normal children.

Mental or intellectual Condition: Intellectual deficiency or low I.Q. is an important cause of backwardness. Children with intellectual backwardness, lack the capacity of critical and abstract thinking and find it difficult to correlate between different experiences and also to analyse the intricacies of problems rationally.

Emotional Condition: Usually, backward children are emotionally unstable. They become unusually excited or worried about the simplest of things. They suffer from frustration and depression as they are not capable of solving their problems. They also resort to telling lies most of the time**.**

Home Environment: Undesirable home environment causes backwardness in children. Poor economic condition, separated parents or broken homes, uneducated parents, alcoholic family members, unusually strict parents, negligence towards the children can cause backwardness even if they may be of normal intelligence.

School Environment: Inefficient teaching procedures, poor and ill organised school administration, partial behaviour of teachers, absence of proper guidance and counseling for students are the factors which further the cause of backwardness in children.

Social Condition: Unsympathetic attitude from the other members of the society, undesirable friends, discrimination of the child along the lines of caste, class, religion, sex etc. cause backwardness in children.

CHECK YOUR PROGRESS

Q.5. Whom do you call a backward child? What are the main characteristics of a Backward Child?

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Objectives of Education for Backward Children:

The following are the main objectives of the education for backward children:-

- One major objective is to help the backward child to develop his limited qualities to make himself reliant.

- Education must be such as to make the child to become socially adequate, or in other words, to help the child to conduct himself properly in the society.
- The education programmes for backward children should include those subjects which have practical implications. Opportunities should be provided to develop certain skills through repeated instructions and guidance and careful training.

Education for Backward Children:

Before any education is designed, the backwardness of a child must be ascertained. Today, there are different psychological tests and methods to examine and observe the levels of backwardness and consequently design the education programme for such children. The following are some of the ways and means by which the backward children in our schools can be helped.

- **Provision for remedial teaching:** The backward children should be given remedial teaching in a separate section or as a small separate group in the same section.
- **Individual attention:** Each individual backward child has his own academic problems. Therefore, the teacher should pay attention to these children individually.
- **Use of concrete teaching strategy:** Backward children can't understand the learning material easily. Therefore concrete objects or different types of teaching aids should be used in teaching
- **Framing special curriculum:** There should be simpler curriculum for such children with less of abstract concepts and of more facts and information, less of scholastic material and more of non-scholastic components.
- **Establishing separate schools:** There should be separate schools for backward children where rigour of academic curriculum will be less and emphasis on pleasant co-curricular activities will be more.

14.5.3 Slow learner and Educational Programme

The backward child, as we have seen above, is mentally retarded, that means he or she has low I.Q. The slow learner, on the other hand is educationally retarded, not due to low I.Q but due to some other reasons.

The problems of a slow learner are as the following:

- A slow learner has limited cognitive capacity. He or she finds it difficult to adjust himself to the classroom situation.
- A slow learner has poor memory. It occurs due to lack of concentration.
- A slow learner fails to get adequate motivation for learning due to either emotional problems arising out of situations at home or due to the lack of necessary facilities.
- A slow learner is unable to express ideas through language. He or she also lacks imagination and foresight.
- Due to frequent experience of failure, a slow learner can't bring necessary determination to bear upon any situation of facing new challenges.
- A slow learner builds up lot of defense mechanism to cover up their failures and frustrations and these, in turn, build up a lot of worry and anxiety.

Education of the Slow Learner:

In every classroom there are slow learners. While presenting lesson, the teacher should keep the following important things in mind.

- **Patience:** Slow learners acquire knowledge at a much slower rate than that of other children they make mistakes in listening, speaking, reading and writing. All these demands great patience on the part of the teacher.
- **Praise:** Slow learners often get beating, scolding, disapproval from teachers and such treatment make them apathetic to academic life. The teacher should, therefore develop the habit of praising the slow learners wherever an opportunity for doing so arises.
- **Simple assignment:** While giving assignments for classwork and homework, the teacher should try to frame simple questions and problems for slow learners.
- **Repeated drill:** Slow learners need repetitions for understanding. The teacher, therefore should arrange repeated drill for the slow learners.
- **Use of audio-visual aids:** Abstract thoughts and ideas are relatively more difficult to grasp than the qualities of concrete objects. Therefore, as far as possible, the teacher should use simple audio-visual aids in his teaching for the benefit of the slow learners.
- **Special Classes:** For the slow learners, special classes can be arranged from time to time to explain difficult topics of the syllabus.

CHECK YOUR PROGRESS

Q.6. What are the objectives of education for backward children?

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Q.7. How can the physically backward children be educated?

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Q.8. How can the slow learners be educated properly? Explain.

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14.6 PHYSICALLY EXCEPTIONAL CHILDREN

Let us now discuss physically exceptional children. You know that we acquire knowledge through five sensory organs, viz; eye, ear, nose, tongue and skin. When any one of these organs is impaired, education of the child suffers. Some children have organic disorders and orthopaedic problems that need special attention.

14.6.1 Visually Impaired Children

Blindness is regarded as the most severe and traumatic physical problems. The blind children cannot read the usual text and may need some learning aids such as braille in case of total blindness. Then again, there are partially sighted students. The vision of some students can be corrected. Some students can read only large print. The teacher should identify such children and provide them special help in their study. In order to reduce reading load on the children, we can train them in listening skills. Audio cassette will be very helpful for such children.

14.6.2 Children with Speech Impairment

Listening plays a significant role in academic communication and learning. Hearing problems interfere with learning and performance. Hearing problems may also cause speech problems. It is desirable to identify such students and take steps to meet their educational needs. The students displaying speech difficulty may be referred for a medical check-up. It is important to identify the degree of speech impairment. The parents also need to be informed.

14.6.3 Crippled or Orthopaedically Impaired Children

Orthopaedic problems are generally related to muscles and joints of the body which affect mobility of limbs and extremities. The students with such impairment may find difficulty in attempting those learning activities which need physical movement. Though they possess learning capability similar to other children, they may have some specific problems in learning. The teachers can play important role in helping this type of students to overcome physical impairment. Parent's support can be sought in this regard. In case of severe disability, the students may be referred for specialised treatment. All these children need specialised techniques of training and education.

14.7 LET US SUM UP

- In the beginning we focused on the meaning of the term 'exceptional children'. Exceptional children are those who deviate, in degree, in regard to physical, intellectual and emotional aspects from normal or average children.
- Exceptional children can be classified as intellectually exceptional i.e. either gifted or mentally retarded, physically impaired and emotionally or socially exceptional, i.e, the delinquent children.
- The objectives of the education for exceptional children, therefore, must be on the principles of equality, the children and adolescents should be motivated and encouraged to participate in group activities.
- The curriculum should include different subjects to cater to the needs of the exceptional children. Evaluation and revaluation of the children's progress must be done from time to time.
- We have also discussed, in detail, the meaning of gifted children, backward children and the slow learner, their characteristics and the special education programme for them, those are suitable according their needs.

14.8 FURTHER READING

1) Aggarwal, J.C., *"Essentials of Educational Psychology*", Vikas Publishing House Pvt. Ltd. New Delhi.

2) Safaya R.N., Shulka, C.S. Bhatia B.D*., "Modern Educational Psychology*", Dhanpat Rai Publishing Company (P) Ltd. New Delhi.

14.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: An exceptional child is he or she who deviates from normal ones in respect to physical, mental and social characteristics.

Ans to Q. No. 2: The different types of exceptional children are:-

- **The intellectually exceptional-** the gifted children or the mentally retarded and slow learners.
- **The physically exceptional-** visually impaired, hearing and speech impaired or the crippled.
- **The emotionally and socially exceptional-** the delinquent children.

Ans to Q. No. 3: The principles to be followed for the education of exceptional children are:-

- All children must be treated as equal and their needs be identified.
- All children and adolescents must be encouraged to participate in the school activities so that they do not feel neglected and are motivated to learn.
- Parents must cooperate with teachers to make education of the exceptional children effective.

Ans to Q. No. 4: Gifted children are those who have very high I.Q. and are more educable than normal or average children. The characteristics of gifted children are:- (a) They have very high intelligence, (b) have varied interest, (c) have high concentration for a longer period, (d) can adjust better in the environment.

Ans to Q. No. 5: The backward child is one who lags behind the normal children in respect to physical, intellectual and social capabilities. The main characteristics are:- (a) a backward child cannot learn speedily, (b) learning is mostly through initiations ability of critical thinking is lacking, (c) is not easily motivated to learn; (d) usually suffers from feelings of inferiority and insecurity.

Answer to Q. No. 6:

a) The main objectives of education for backward children is to make them self-reliant.

(b) The education programme should make the backward children socially adequate.

(c) Opportunities to develop certain practical skills so that they get employment and earn their livelihood. This will remove their feelings of insecurity and inferiority.

Ans to Q. No. 7: The physically challenged should not be discriminated for their backwardness. Suitable equipments and aids must be provided for their education. Special schools for these children should be set up. Teachers with special training should be appointed to impart education to the physically exceptional children.

Ans to Q. No. 8: The mentally retarded and slow learners need special care. These children must be given short and easy assignments and the specially trained teaching personnel must handle these children with immense patience. The teachers must also appreciate the creativity in these children so that the learners are motivated to learn more.

14.9 POSSIBLE QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q.1. What is meant by 'exceptional children'? What are their characteristics?

Q.2. What are the needs of exceptional children?

Q.3. What are the objectives of education for exceptional children?

Q.4. What types of education is needed for the slow learners?

B) Long Questions (Answer each question in about 300-500 words)

Q.1. How can you identify the gifted children? How should be the suitable education programme for gifted children?

Q.2. What are the characteristics of the backward children? What are the objectives of education for the backward children?

Q.3. What are the characteristics of the slow learners? What types of education should be designed for these learners?

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