PRE-SCHOOL TEACHER TRAINING

Paper - I

INTRODUCTION TO CHILD DEVELOPMENT

INDEX

Unit-I

Introduction to Preschool Teacher Training

Structure

1.1 Philosophical basis of Preschool Teacher Training

1.2 Need and purpose of Preschool Teacher Training

1.3 Development of Preschool Education in India

1.4 Contribution of philosophers - Frobel, Maria Montessori, Rabindranath Tagore and Margaret Sisters

Learning objectives:

By the end of this unitthe student will be able to understand

- The philosophical basis of Preschool Teacher Training.
- Need and purpose of Preschool Teacher Training.
- Development of preschool education in India.
- Contribution of Frobel, Maria Montessori, Rabindranath Tagore and Margaret Sisters.

1.1 Philosophical basis of Preschool Teacher Training

The American Commission on Teacher Education rightly observes

"The quality of a nation depends upon the quality of its citizens, the quality of its citizens depends not exclusively but in critical measure upon the quality of their education, the quality of their people into teaching and give them the highest quality preparation and training.

According to the Rigveda, a teacher was selected and then educated or trained effectively. Teaching in the upanishadic period was known for the personal attention given to the student. The freedom to accept a disciple rested with in the teacher and a disciple or student had the freedom to choose his teacher. Oral explanation was one of the important method of teaching.

The monastic system was important feature of Buddhism and that every novice the Suddiviharika was placed under the supervision and guidance of a perceptor (upaighaya) this method become vogue during medieval times. The teacher was held in high esteem and respected by the society and students.

Modern period was Characterized by 'the Britishers in India' various committees were instituted like woods despatch.

Government of India Resolution in education policy of 1904 etc. hold good for the present time too.

India has accepted a ten year general school system divided into three stages. The Preschool Education, Elementary Education and Secondary Education.

Teacher Education for Pre-primary level

Pre-primary Education is not the stage for formal education, literacy is not the concern at this level though it prepare them for elementary school. Learning at this stage is through group activities. Play way techniques, language and number games and activities directed to promote socialization and environmental awareness among children and help them in the process of attaining physical, mental and emotional maturity. Approaches in developing life skills and the formation of good habits and living together need to be addressed with great care.

To ensure happy and healthy childhood by means of varied activities have to be the main focus.

Development of preschool education in India

Early childhood is defined as the period from conception through birth to eight years of age.

In India according to census 2011date there are 164.48 million children of 0-6 years of age.

According to article 21A free and compulsory education for 6-14 years old children and Article 45 provide ECCE for all children until they complete the age of six years.

ECCE is not recognized as a compulsory provision by RTE but RTE urges states to provide free preschool education for children's above three years. The 12^{th} five year plan recognized the importance of ECCE and improving school preparedness.

The government of India approved the National Early childhood Care & Education (ECCE) policy in 2013. Which includes National curriculum framework and quality standards for ECCE.

The policy caters to all children under 6 years of age and provide quality education. The ministry of women and child development (MWCD) is the nodal department of ECCE. It is also responsible for ICDs programmes which sponsors ECCE programmes covering 38 million children through 1.4 million anganwadis.

ECCE aims at psycho social development of children and developing school readiness. According to a report by UNICEF despite the recognition of ECE by government of India the challenges in implementation still remain. A number of pre-schoolers are not enrolled still; dropout rate continues. They are poor in literacy skills which urges to develop adequate school readiness through quality ECE programmes.

Early childhood Education affects the academic performance of a child at primary and secondary levels. It is important to provide quality preschool learning available to children especially from disadvantaged sections.

To empower them to inculcate the art of living good life.

1.2 Need and purpose of Preschool Teacher Training

In India as well as rest of the world preschools are spreading like wild fury and every neighbourhood has a preschool that follow Maria Montessori or Kindergarten Method. Not all these are run by trained preschool teachers who have the knowledge of facilitating learning in young children in the best possible manner.

Purpose of Preschool Teacher Training

- To help teachers to know the basic principles and goals of preschool education
- Help the teacher to foster holistic development of a child and understand internationally practised philosophies.
- To understand the importance of health, nutrition and welfare services to the child.
- Develop necessary skills, knowledge ability and attitude to handle pre-schoolers affectively.
- Familiarize them with methods, equipment and material with their effective use

The specific objectives for teacher education at this stage may be following.

- To prepare teachers for helping, physical, mental, social emotional aesthetic and linguistic development of children by means of individual and group activities.
- To impart them relevant knowledge of child psychology basics of cultural anthropology, sociology, Indian heritage and child's environment.
- To develop among them the capacity and deserve for obtaining parental cooperation and establish coordination with the agencies working in similar areas.
- To empower them to organize educational games and supplementary activities for children.

- To arrange field trips for nature study and train their power of observation and appreciation.
- To enable them to prepare, select and use different kinds of material at low cost with a focus and sensory and motor development of children.
- To empower them to develop self-concept, self-esteem and the art of self-expression and sense of discrimination and appreciation among the children.
- To enable them to develop environmental awareness among children.

1.3 Need for preschool Education

Preschool education is the need of the time as most of the parents are working and they don't have quality time to spend with their children. They are left with elders or helpers who are not able to guide them the way they should be.

Preschool is not a place for mastering in academic curriculum instead it is a place where children do all kinds of activities that are appealing to them and teach them in a special way.

Preschool education helps in child's emotional, social and personal growth and development, although a child learns to talk at home constant interaction and exposure with children of same age group and teachers helps them to enhance their communication skills. Self-confidence gained by learning in a playful manner adds to the personality development of the child.

They learn better when they interact with their peers and their parents and instructors. They bloom well in a tension free environment.

Those who attend preschool will have better pre reading maths and science skills them those who do not to preschools.

Contribution of Philosophers

Froebel

The German Educator Friedrich Froebel was one of the pioneers of early childhood education. He behaved that every child possessed at birth, his full educational potential and that an appropriate environment was necessary to encourage the child to grow and develop in a optimal manner (Staff, 1998).

According to himself activity is the necessary form of preschool education. He provided many stimulating activities to entrance their creative powers and abilities. He designed a series of instructional materials which he called gifts and occupations.

Frobel's Contributions

Teachers are the translators of the cultural heritage and as mediators can guide the child in making the link between the interior and exterior world. The teacher may or many not see the signs and significance of the images made by the child. It is important for the teacher to let the child speak and ask open ended questions. In this way a dialogue starts between the child and its drawing or clay figure.

Maria Montessori

The Montessori Teacher and Her Role: Learning more about the method.

The teacher when she begins to work in our schools must have a fond of faith that the child will reveal himself through work. She must free herself from all preconceived ideas concerning the levels at which the children may be the many different types of children. Must not worry her. The teacher must believe that the child before her will show his true nature when he finds a piece of work that attracts him. So what must she look out for? that one child or another will begin to concentrate.

The Montessori Teacher and Her Role: Learning more about the Methods.

Working as a guide and facilitator the Montessori teacher creates as well prepared Montessori environment and an atmosphere of learning and inquisitiveness designed to move students from one activity and level to the next. A Montessori teacher often steps back while the children are working allowing them to learn from their own discoveries and draw their own. Conclusion rather than supplying children with answers, the Montessori teacher asks them how they would solve the problem, actively engaging children in the learning process and enhancing critical thinking skills. In most cases children learn directly from the environment and other children, rather than the teacher.

Rabindranath Tagore

1. Tagore gave a important place to teachers and asked them to carry out the following activities.
2. Believing in purity and in his own experiences, innocence of child, the teacher should behave with him great love and affection, sympathy, affection.

3. Instead of emphasizing on book learning the teacher should provide conducive environment to the child so that he engage himself in useful and constructive and learn by his own experiences.
4. The teacher should always be busy with motivating the creative capacities of the children so that they remain busy with constructive activities and experience.
5. Education can be successfully imparted by understanding childhood and giving oneself totally is love and union with it.

Mac million sisters Rachel and Margaret opened nursery schools and training centers in 1914. Their philosophy was that children learn through exploration and achieve full potential through first-hand experience and active learning. Activities such as free play, craft, water activities, outplay are given importance. They focused on education via a child's senses of wonder and believe teacher must know what attracts children and engages their attention she has to facilitate an environment that fosters learning support the emotional development, social development and provides children with foots they need to explore and experience their environment.

Summary

There is no legal framework that specifies requirements of ECCE teacher training programmes in India. The diploma granted to teachers who completed NTT programme is an essential qualification for teaching in some public schools and government run preschools. The ECCE teaching training is included in the curriculum of the upper secondary education as occasional education.

Various philosophers like Frobel, Maria Montessori, Ravindranath Tagore and Margarte Sisters have stressed the importance of the early childhood. Education should lead to the realization of universal man.

Short Answer Type questions:

1. What is the need for preschool teacher training?
2. What is the contribution of Frobel to Education?
3. Write about Nursery Schools.

Long Answer Type Questions

1. Write the philosophical basis of preschool Teacher Training.
2. Write the purpose of preschool teacher training.
3. Write the contribution of Ravindranath Tagore views on education.
4. Write the principles behind Montessori System of Education.

Unit-2
Concepts in child development

2.1 Growth and development - Introduction and principles

2.2 Maturation and learning - Meaning - interrelationship

2.3 Heredity and environment - Meaning - importance

2.4 Developmental Needs

2.5 Developmental tasks of children
(Birth - 3 years)

Introduction

Every nation is composed of the society that it represents, and the society, in turn is made up of families and individual members in its fold. The mental and physical health of the individual and his/her adult behaviour patterns are factors that contribute to the well-being of the society, and therefore, to the progress of the nation.

In the older days, children were regarded as assets to the family and as security for the parents as well as for the continuity of the race. Naturally, therefore, children were breed with great hope and treated like young adults. This old saying has proved to be wrong by psychological experiments and detailed psychological analysis. The child has to be studied as an individual in the growing and developing process in order to understand him. Detailed study of his needs, aspirations, potential limitations, accomplishments, desires, interests and personality traits are essential to know him and to influence his behaviour.

This changed the entire focus of children's upbringing and more and more studies were presented of the child hood stage.

Growth and development

Child development is a specialised area of study which concerns itself with the growth and development of the child. It can be defined as a systematic study of growth and development of an individual from conception to maturity.

Meaning of Growth and development

Many people use the terms Growth and development inter changeably in reality they are different though they are inseparable.

Growth and development are two different terms used to point out the qualitative and quantitative changes taking place in the body. 'Growth' refers to quantitative changes - increase in size and structure. Not only does the child become larger physically but the size and structure of the internal organs and the brain increases. Increase in high and weight, increase in the size of Liver, Heart etc., all these changes can be easily measured in various units i.e. height in cm, weight in kg.

'Development' is a progressive series of changes that occur as a result of Maturation and experience. Development is a continuous process, which starts even before birth. It is a progressive series of orderly, coherent changes, leading towards the goal of maturity. The changes are not by chance or casual.

There is a definite relationship between each stage and each change. It is not merely a qualitative change. The other meaning of development is progressive series of changes that occur as a result of motivation and learningand the changes are qualitative as well as quantitative. It is difficult to measure developmental changes in any units e.g. changes in social behaviour or changes in emotions are not measurable.

Principles of development

The prolonged process of development occurs according to certain general principles. They are as follows.

1. Development is continuous and orderly process

The development is continuous from the moment of conception to death, but it occurs differently, sometime slowly and at other times rapidly. The rate of development differ from individual to in individual, yet the development of human beings in general follows an orderly sequence. For instance children start walking at different ages but walking will always follow sitting. Similarly, speech does not come overnight, but it is a follow up of cries and babbling. This order remains unchanged and is never reversed.

2. Development follows a similar pattern

There is always similarity in development pattern with one stage leading to the next. There are two laws of the directional sequence of development.

(i) Cephalocaudal Law

(ii) Proximodistal Law

According to Cephalocaudal Law, development spreads over, the body from head to foot. This means that improvements in structure and function came first in the head region, then in the trunk, and last in the Leg region. According to Proximodistal Law development proceeds from the central line of the body outward towards the peripheral or distant parts. For example, children in the early years are more adept at controlling the large muscle that move limbs, than controlling finer muscles that are required for the manipulation of tiny objects with fingers.

3. Development proceeds from general to specific

This principle states that development proceeds from the simple to the complex from the general to the specific. In prenatal and postnatal development and in every developmental stage a child's & responses are general to specific especially muscular responses.

4. Development proceeds at different rates

Though the development is similar are to all, rate of development varies for different parts of the body, from very slow to very fast, at different developmental periods or stages of development.

5. Individual differences in development

Every person is biologically and genetically different from each other. Although the patters of development is similar for all children but evidence shows that each child follows a predictable pattern in his own way and at her own rate.

6. Development comes from Maturation and Learning

Developmental changes occur as a process that is guided by the interaction of maturation and learning.Learning is development that comes from exercise and effort on the individual's part.

7. All areas of development are inter related

There is inter-relationship among all the areas of development like social, emotional, physical, motor, intellectual, and mental, social and emotional development for instance, depends upon physical and motor development.

8. Periods in the development patterns

The lives of individuals follow a predictable pattern from birth until death

These periods are listed as follows:

1. Prenatal period (conception to birth)
2. Neonatal period (Birth to 10/14 days)
3. Toddlerhood or Baby hood (2 weeks to 2½ Years)
4. Childhood (2 to 14 years)
    a. Early childhood (2 to 6 years)or Preschool stage (6 to 13 years girls and 6 to 14 years boys)
5. Puberty (11 to 15 years girls and 12 to 16 years boys)
6. Adolescence (13 or 14 to 21 years)

Maturation and Learning

Maturation can be defined as a natural way of development of the organs in an orderly manner without effect of any environmental factors. Due to Maturation the individual is able to perform various activities. Maturation of certain organs may or may not need the influence of environmental factors, but is natural and continuous process which has resulted in that particular activity, in phylogenetic functions such as creeping, crawling, sitting and walking. Maturation is essential. The child is unable to do all these processes simply by exercise and practice.

Learning is a change in behaviour as a result of experience. It aids development and growth in the individual due to exercise and effort on his part. Learning helps the child to bring about Maturation of his physical structure and behaviour and acquire competence in using his heredity resources. Learning is essential to bring out the child`s potential development for e.g., the child may have an aptitude for vocal singing because of his superior neuromuscular sensory co-ordination. But if he is deprived of opportunities to use his vocal chords for practice and training he cannot achieve his maximum potential in singing. Maturation has a significant influence on the competence of the child’s learning.

Heredity

Heredity is one of the important factors influencing growth and development. It influences the physical traits that is height, weight and mental traits such as intelligence,

aptitude and nature which is responsible for personality development. Heredity can be defined as biological in heritance or donation of characteristics from one generation to another. At the time of conception the parent's cells donate the chromosomes which are responsible for heredity endowment and characteristics. The child permanently gains these by way of fertilisation which cannot be charged or influenced after birth.

Heredity - Endowment

Every child receives 23 chromosomes from each parental cell. At the time of conception genes in the chromosomes combine together in various ways to transmit the hereditary characters, which they receive from their parents. These characteristics in turn have been received from their parents. Because of this, children, show various characteristics inherited form their parents and /or grandparents.

Environment

After fertilization and conception the factor which affects development is environment there are two types of environment

1. Pre-natal environment
2. Post-natal environment

Environment covers also the social, moral, economic, political, physical and intellectual factors which influence the development of individual from time to time each individual enters the world with certain hereditary characteristics transmitted to him through his parents. He grows up in a certain environment with its human, social and material surroundings everything he does as a child or adult results from the complex interactions between heredity and environment. The potency of environment is not merely so great as, commonly supposed. A child's abilities are determined by his ancestors and all that environment can do is to give the opportunity for the development of his potentialities. It cannot create new power or additional abilities (Pintaer, 1920)

Heredity and environment appear to be the co-acting influences; both are essential to achievement. The colour of a child's hair and eyes, his physique, strength are primarily inherited, while his mother tongue depends upon the locality in which he was born and reared up and hence is environmentally determined. Heredity provides the raw material from which a person is made how the material moulded and what he becomes depend chiefly on environment.

Developmental needs

Children are the vanguards and supreme powers of the world of tomorrow. Therefore a sound knowledge of the need of children is essential for guiding them properly.

The term 'need' is commonly used in circumstances in which there is an object or organism with certain requirements and an environment or a society which can contribute to the fulfilment of these requirements (Fleming, 1969).

Types of Needs

Needs are of many types. They can be broadly classified into the following three categories

A. Biological
B. Psycho-Social
C. Egoistic

A. Biological needs

Biological needs include

1. Visceral needs such as food, water, oxygen, sleep, elimination, rest, clothing and shelter.
2. Safety needs such as suitable temperature protection from danger and external treats.
3. Sex urges which are basic to the perpetuation of the species and important to individual fulfilment; and
4. Sensory motor needs which are sensory and motor activities essential for the body to develop and function properly.

B. Psycho-social needs

The psycho - social needs include the following:

1. Need for love and affection
2. Need for approval
3. Need for nurturance
4. Need for affiliation, sense of belonging
5. Need for orientation
6. Need for the feeling of adequacy
7. Spiritual (special) needs

1. **Need for love and affection**

All human beings need love and affection throughout the life span although the ways of satisfying these needs are different at successive stages whatever is its source, love is universal and powerful in childhood behaviour.

Studies of children in orphanages have shown that babies do not develop friendly personalities, nor do they really flourish physically until they are assured of love and affection. The sense of touch is the most elemental form of communication and the one that babies understand best. Hence all babies need a lot of caressing and cuddling for the development of happy and assured personalities.

2. **Need for approval**

The desire to gain and hold the esteem of one's follows, friends and family and friends to be praised looked-up to or rewarded in some way-constitutes a powerful social needs. A child like all other individuals, needs the experience of the evidence that he is a valued person. He demands the confirming evidence that his self has worth and strives unceasingly to satisfy their basic needs to be approved.

3. **Need for Nurturance**

A group of actions have as their goal the sheltering comforting protecting and assisting of persons who are weak or in need for help.

4. **Need for affiliation - sense of belonging**

One common goal for which individual's strive in association with other people. They possess the gregarious instinct. A child always tends to associate with other children and from groups all children have this need in some degree and show it in everyday life.

5. **Need of orientation**

The need for orientation about the world of person and objects is a basic human urge in the socialization process. Out of interaction with his fellows, the child is oriented to what is 'Mine and thine'. As he perceives the rights of others, he is meeting in part his need for orientation to the world of persons.

6. Need for the felling of Adequacy

The need for felling Adequate appears very rarely in life. Unfortunately many parents and adults frustrate this need by trying to do everything for their child or by under estimating the Childs ability when he is eager and ready to do things for himself. They may make mistakes because they lack understanding of the importance of readiness in the Childs learning.

7. Spiritual needs

Spiritual needs are related to the Childs perceptual part of personality. There is necessity for sound religious orientation for the achievement of mental peace and stability.

C. Egoistic needs

A large part of human behaviour is directed towards needs and goals in which other human beings do not play an important role. Such needs are said to be egoistic in nature. They include 1. Need for dominance 2. Need for autonomy 3. Need for achievement 4. Need for acquisition 5. Need for cognizance 6. Need for attention and need for destructions.

1. Needs for dominance

One of the most conspicuous and common form of egoistic behaviour is found in the attempts of a child to set himself in a position of authority from which he can control, influence are lead others.

2. Need for autonomy

There seems to be a fundamental striving by the children against external control. As children grow older, the restraints placed upon them are apt to be more psychological than physical then they develop a strong tendency to defy authority are free themselves of any form of restraint or coercion and to assert themselves as independent individuals.

3. Need for Achievement

To excel or achieve in a particular field of activity is a common goal of human endeavour. A child may strive to be best runner, dancer, player or poet.

4. **Need for Acquisition**

   A common characteristics of human beings in the tendency to acquire objects. Some children strive for acquiring clothes. Some for play materials and some for money.

5. **Need for cognizance**

   This is a need to explain man's inquisitive, inquiring and exploratory behaviour. Whenever a child seeks to find out 'why' or 'how' or 'what' the child is expressing a need for cognizance.

6. **Need for Attention**

   A large part of the behaviour of many children has the goal of attracting attentions to themselves.

7. **Need for destruction**

   They are many behaviour patterns that have destruction on their goal. Children destroy objects and things in big and little ways at time and often.

8. **Development tasks of children**

   By developmental tasks, Havighurst means certain problems which arrives during a particular period in life. Success full handling of these problems leads to satisfaction and success with later tasks; failure lead to dissatisfaction in the individual, societal disapproval and difficulties with subsequent tasks.

Infancy and early childhood

The developmental tasks of these period are enumerated in terms of the following broad units

1. Learning to walk
2. Learning to take solid foods
3. Learning to talk
4. Learning to control elimination of body wastes
5. Learning sex differences and sexual modesty
6. Achieving Physiological homeostasis
7. Forming simple concepts of social and physical reality
8. Learning to relate self emotionally to parents, siblings and others
9. Learning to distinguish right from wrong, and developing a conscience

Summary

The terms growth and development have different meaning but are often used synonymously. Development depends upon maturation and learning. They are closely interrelated and together lead to behavioural changes.

Every person has the same basic needs. These needs are physical, emotional, social intellectual and spiritual needs.

Heredity has a major effect on the physical and motor development. Heredity is determined by genes and chromosomes. Environment is determined by family, school, and neighbourhood.

Short Answer type questions:

1. Define growth and development.
2. What is heredity? Write its importance.
3. Define developmental task. Mention any four developmental tasks of infancy period.

Long Answer type questions:

1. Write about the principles of growth and development.
2. Explain the psychological needs of children.
3. Write short notes on a. Maturation b. learning
4. Write about the physical needs.

Unit-3
Areas of Development - Development during Infancy

Structure

3.1 Physical Development

3.2 Motor Development

3.3 Emotional Development

3.4 Social Development

3.5 Cognitive Development

3.6 Language Development

Learning objectives

After studding this unit the student will be able to know meaning of physical development - development pattern and developmental milestones.

Meaning of Motor development - Types gross motor and fine motor skills

Meaning of Emotional development - Types - Positive and Negative Emotions

Meaning of Social development and stages of social development

Meaning of Cognitive development - stages of cognitive development - sensory motor, pre operational, concrete and formal operational stages

Language development - meaning, listening, speaking and expressive skills

Introduction

The period of infancy from birth to about the age of 2 years is the basic formative period in a child's live. The infant pushes forward in every area of development - Physical, emotional and intellectual. During infancy the child beings with little coordination and no control over his movements with no information about himself are the world around him and without any knowledge that there is a difference between himself and world.

Areas of development

- Physical development
- Motor development
- Emotional development
- Social development
- Cognitive development
- Language development

Physical development

It refers to the development of the structure of the body and its components. It includes height, weight, skeleton muscles, bones, teeth and body proportions.

Components of physical development

Body size -is controlled by hereditaryand environmental influences**.**

Height -The average length of a new born infant is about 50 cms and the height measured around 60 cms / 6 months and at 2 years approximately 86 cms.

Weight- The average birth weight of an Indian child is 2.8 to 3.0 kgsinitially a baby losses it weight and regains in 10 days after birth. The weight doubles by 4 months. Later on the weight gain is less rapid. The weight triples by the end of first year (12 months).

Physical Proportions- The baby's looks keep chaining due to continues changes in body proportions. At birth a baby has a large head and is top heavy. As it grows, that trunk and links which are least developed at birth develop fast. The stomach flattens and the shoulders become broader.

Skeleton/Body Frame- This includes

- Bone development
- Muscle development

Bone development

- The earliest form of bone is the cartilage which is very soft and pliable.
- The cartilage gradually becomes a bone through the process of ossification.
- Ossification is a process that involves the deposition of calcium and other minerals on the surface of cartilage to make the bone hard and rigid.
- Girls are developmentally more advanced than boys.

Muscles

The neonate has all muscle fibres. These fibres are small in relation to the overall size of the infant. These muscle tissues make up about 20 to 25% of an infant's weight at birth.

During infancy muscles grow in size, increase in length, breadth and thickness. Muscle fibres are small watery and underdeveloped.

- Proportion of water decreases as protein and other substances are added which is influenced by nutrition, harmons, exercise and health (Valadian and porter 1977).

Skin

Infants have a larger skin surface in proportion to their body weight than adults. The infants skin is normally dry and may flake are peel easily. Diapers rash, heat rash, allergies and skin infections are common because of their delicate skin.

Teeth

The first tooth cuts through the gum, generally between the ages of 6 and 8 months. The lower central incisors come out first, followed by the upper incisors.

By the age of one year the average baby has 4 to 6 teeth and by the second year 16. The time of eruption of teeth depends upon babies' health, nutrition and hereditory factors.

Developmental norms / milestones

What is a developmental milestone?

A developmental milestone is described as a set of functional skill or age specific tasks that an average child is able to perform when he reaches a specific age.

Importance of developmental milestone

The developmental milestone is used by parents, teachers and paediatricians to make sure that the child is developing is at a normal pace and is not suffering from any growth related problems.

It is important to note that it is not necessary for the child to do a specific task with in the age range mentioned. Some variations are bound to be there.

If these variation are too many then a need for worry arises.

Developmental Norms/milestones birth to 2 years

Norms are stages related to the age at which the various traits, skills or other characteristics appear.

Norms are worked out with respect to growth of intelligence social behaviour and language development. But these norms indicate the average age at which certain behavioural characteristics manifest themselves. The norms help us to understand normal behaviour and development.

Table-1

AGE	DEVELOPMENT
2 months	Turns head towards light
2 - 3 months	Smiles, recognizes mother, turns head towards sound
3 - 4 months	Can hold his head
4 - 5 months	Can turn on his head
5 - 6 months	Sits with support, makes gurgling sounds
6-7 months	Sits on his own, the first tooth appears
7-9 months	Crawls
9-12 months	Stand with support
12-15 months	Walks alone, speaks few words
15-17 months	Walks upstairs with support
17-24 months	Stands up right without support, jumps off floor and speaks short sentenses.

Motor development

Motor development has been defined by Hurlock as the development of control over bodily movements through the coordinated activity of the nerve centres, the nerves and the muscles.

This control comes from the development of the reflexes and mass activity present at birth.

It helps the child to grow from a helpless infant who cannot move or reach out to a child who can within a short span of time move and manipulate independently of others.

Motor development includes fine motor and gross motor skills.

Motor skills are fine coordination in which the smaller muscles play a major role.

The fine motor system governs the movement of hands, fingers, feet, toes and lips.

Gross motor system governs the movement of head, body arms and legs.

Sequence of Motor development

Refer Table No-1

Some of the common babyhood skills are:

- Hand skills
- Leg skills

Hand skills

Self feeding skills, self dressing skills, self grooming skills, writing, copying, self throwing and catching and block building.

Self feeding

By the age of 8 months babies can hold their bottles after having been placed in their mouth. A month later they can remove the bottle as well as put back in their mouth.

10-12 months old babies can hold their cups and try to feed themselves with their spoons.

By the end of second year young children can use forks as well as spoons. During third year they can spread jam on bread with a knife.

Ball throwing and catching

Some babies role and may even attempt to throw balls before they are two years old. It is easy to throw than to catch.

Leg skills

Climbing

Even before babies can walk, they climb steps by crawling and creeping.

Before babies are two years old, they can walk upstairs and down stairs with the help holding the railing of the stairs or the hand of a person. This they do in an upright positon. At first one foot is placed on the step and other is drawn up to it.

Social development

Early social experiences play an important role in determining the childrens attitudes towards social relationships and patterns of behaviour in his relationship with others.

At birth babies are non gregarious. So long as their bodily needs of taken care of they have no interest in people.

Social development is a process where by an individual's attitude, skills, motives, standards and behaviour are shaped by the society. These behaviours are desirable and appropriate according to the society.

The pattern of social development is similar for all children. They must learn social skills how to make adjustment to others.

Socialization in the form of gregarious behaviour begins around the third month. When babies distinguish between people and objects. They follow look at people and objects and follow their movements and to see them clearly.

Reaction to adults

By three month they turn their heads when they hear human voices and smile in response to a smile.

Social smile appears at this age.

3 months - babies cry when left alone. They stop crying when they are talked or diverted. Recognise mother and familiar people and show fear of strangers.

4 months - babies make adjustments to being lifted or show selective attention to faces, they look in the direction of the person. Who leaves them.

5 to 6 months - react differently to smiling and scolding and between friendly and angry voices.

7 to 9 months - imitate speech sounds makes simple gestures and acts.

12 months- refrain from doing things in response to "no-no" They show their fear and dislike of strangers by drawing away and crying when a stranger approaches them.

15 months - babies show increasing interest in adults and a strong desire to be with them and imitate them.

At 2 years - cooperate with adults in a number of simple activities such as helping with their baths or with their dressing.

Social reactions towards babies and children develop rapidly during the second year.

Tri cycling and Bicycling

By the end of two years a few toddlers can ride tricycles

Dressing skills

While dressing the first baby's removes his clothes. By 2 years they can remove all their garments. They can hold a comb, brush, their hair and also brush their teeth with a tooth brush.

The baby can open boxes, unscrew lids from bottles or jars, turn the leaves of a book, build a tower with blocks before he is 2 years old.

Emotional development

Emotions can be defined as positive or negative experience that is associated with a particular pattern of physiological activity.

According to David G Meyers emotion involves physiological arousal, expressive behaviours and conscious experience.

It is a complex state of feeding that results in physical and psychological changes that influence thought and behaviour.

Types of Emotions:

After the early months of babyhood, differentiated emotional patterns emerge. the most common patterns are:

Fear: The most common fear provoking stimuli in babyhood are loud noises, animals, dark rooms, high places, sudden changes, being alone, pain and strange persons, places and objects.

Fear responses: in babies is typically one of helplessness. Cries are babies' calls for help. They hide their faces and get as far away from the feared object or person as possible. After they are able to creep or walk, they hide behind a person or furniture and remain until the fear subsidies or until they feel it is safe to emerge.

Shyness- is a form of fear characterized by shrinking from contact with others who are strange and unfamiliar. It is always aroused by people never by objects, animals or situations. This is very common at this age level that it is often labeled as the strange age or the period of infantile fearfulness.

In babies the usual response is crying turning the head away from the stanger and clinging to a familiar person for protection or hide as they do when they are frightened.

Anger- is most frequently expressed emotion in children - the situations that give rise to anger involve restraint, interference with movements? Children wish to make, blocking of activities. Thwarting of wishes.

Babies respond with angry outbursts to miner physical discomforts impositions or restraining with physical activities as bathing and dressing. It is displayed in screaming throwing objects, kicking the legs and waving the arms in a random fashion; hold their breathe jump up and down, throw themselves on the ground.

Curiosity

For the first 2 or 3 months of life until eye coordination is well developed, only strong stimuli directed towards the baby will attract his attention. A baby expresses his curiosity by tensing his facial muscles opening his mouth and stretching out his tongue and wrinkling his fore head.

At 6 months he turns his head towards the object that aroused his curiosity when he grasps it, he handles, pulls sucks shakes and rattles.

Joy- by the end of 3rd month of life all situations will give rise to smiling and laughing and several months later, the baby responds joyfully to tickling. The common situations are playing with toys, watching other children's at play. And funny sounds. Joy is expressed in smiles and laughter. At 18 months the baby smiles mostly at his own activities.

At 2 years smiles is related to another person and accompanied by verbalization.

Affection- an affectionate response is when a baby fixes his gaze on a person's face, kicks holds out and waves his arms, smiles and tries to raise his body to reach for that person. As the children grow older they enquire border range of emotions. Typical response are hugging, patting or kicking the loved object or person.

During the last half of the second year babies regard paly material as a means of establishing social relationships

Cognitive development

Cognition is the process or faculty that children use to acquire knowledge. To think is toable acquire and apply knowledge by using conscious thought and memory, children think about themselves, others and the world.

Cognitive development refers to qualitative and quantitative changes in thinking, organizing, perceiving, reasoning and problem solving.

Cognitive process deals with perception of receiving information about the environment through the sensory system.

Piaget's stage of cognitive development

Jean piaget was the most influential developmental psychologist of the 20th century according to piaget cognitive development takes place in 4 stages.

They are

1. Sensory Motor stage (0-2 years)
2. Preoperational state (2-7 years)
3. Concentrate operational stage (7-12 years)
4. Farmal operational stage (12 and above)

Sensory motor stage (Birth - 2 years)

Behaviours that develop during this stage are based on sense perceptions and simple motor activities.

- Understanding basic properties of objects and spatial relationships
- Learning to differentiate herself from the environment
- In ability to look for objects that disappear
- Can solve simple problems with few trails

The sensory motor stage is subdivided into six stages. Each stage occurs in proper sequence and is necessary for the next.

Stage	Period	Behaviour
1	Birth - 1 month	Reflex action. no distinction between self and other objects
2	1 - 4months	Hand mouth coordination differentiates sensations through grasping curiosity.
3	4 - 8 months	Eye - hand coordination manipulation of objects
4	8 - 12 months	Active imitation and anticipation
5	12 - 18 months	Discovers new ways to solve the problems understand independent existence at external world
6	18 - 24 months	Starts speaking and imagining

During these stages infants differentiates himself from other objects. He seeks stimulations for the following - attainment of object permanence, primitive understanding of causality, time and space, beginning of initiation of imaginative paly and symbolic thought.

During the preoperational period child is able to represent events in their minds and becomes less dependent on their direct actions for solving problems.

Pre-operational stage (2 to 7 years)

Pre-operational thinking is perception bound. They tend to oganize their thinking around the perceptual appearance of things.

Piaget used the term operation which means an action or mental representation carried out through logical thinking preoperational means pre logical thinkers.

The main general characteristics of this stage are

- Elementary forms of speech are used in communication
- The use of symbols is developed

- Thinking is marked still by ego centrism and animistic thinking is evident i.e. objects are regarded as alive on aware.
- There is a preparation for concrete operation; pre operational period is divided into
  1. Pre conceptual stage (2-4 years)
  2. Pre logical or imitative stage (4-7 years)

During the pre-conceptual stage development of language is rapid but somewhat generalization.

Ex: all men may be 'Daddy'

Prelogical reasoning is based on perceptual appearance child's thinking is characterized by immediate perception and experience rather than mental operations.

The tendency to concentrate on a single outstanding characteristic of an object while excluding its other feature for example if liquid is poured in the identical glasses of same level the child would agree that each contained the same amount. But if liquid is to be presented in different sizes and shape of containers that child would be confused.

During this stage the child has some typical characteristics such as

1. **Development of relational concepts**

   ex: Bigger, older, taller, smaller etc.

2. **Egocentrism**

   If we give some wooden block to a group of children each will be doing her own things with them like parallel play.

3. **Animism**

   They treat living and non-living similar

ex: sun and moon follow them.

4. **Child's failure to conserve**

Experiment with liquid in glasses and marbles in bottles

5. **Irreversibility of thought**

Children will be able to count in series as 1, 2, 3, - - - - - 20 and say letters of alphabets A B C - - - - - - - - - Z in one way and not in reverse order

6. Perception of similar objects

Similar things are considered alike car for trucks, trains, bicycles.

7. Failure to decentre thinking

In piaget experiment a 5 year old child is given 27 wooden beads 20 of the beads were white and seven were brown when asked if there were more white or more brown beads the child responded correctly white. However when the child was asked if there are more white beads or more wooden beads the question was not followed by him. This is because once the beads are thought of by the child are brown or white they cannot be thought of in other terms such as wooden or non wooden the child centered his thinking around colour and was unable to decentre it to the composition of beads.

The states of concrete and formal operations are more similar to adult thought i.e. 7 year onwards.

Language development

Language encompasses every means of communication in which thoughtsand feelings are symbolized so as to convey meaning to others.

Learning to talk is a long and laborious task. The baby is not maturationally ready for such complicated learning during the first year of life.

First forms of communication are pre speech forms

They are:

1. Crying
2. Babbling
3. Gestures

Crying: is one of the first ways in which the infant is able to communicate with the world at large. Through cries, babies make known their needs for someone to realize their huger, pain, fatigue and other unpleasant bodily states and to satisfy their desire for attention**.**

Babbling:

Babies make simple sounds during the early month of life such as grunts of pain, delight, yawn, smeezes, sighs, coughing, that sound like the whine of a young pig or the bleat of a goat.

Babbling -as the baby's vocal mechanism develops he is capable of producing a large number of explosive sounds than was possible at birth. Some of these sounds will be retained and will develop into bobbling. By the end of six months, the baby can combine certain vocal and constant sounds such as 'ma-ma', 'da-da' or 'na-na' (MC Carthy, 1960).

Gestures

The baby uses gestrues as a substitute for speech by out stretching his arms and smiling. Even after he is able to speak a few words, the baby will continue to use gestures combining them with the words he knows to make his first sentences.

eg: pushes out for object - wants to have it

smacks lips or eject tongue - hungry.

Emotional expressions

The fourth pre speech form of communication is emotional expression through facial and bodily changes.

Ex: pleasant emotions - cooing & laughing

Unpleasant emotions - whimpering & crying

Learning to speak

Learning to speak involves the tasks of learning how to pronounce words so that they will be understood by others, associating meanings with words and thus building a vocabulary for communication and combining these words into sentences.

The major tasks in learning to speak are

1. Increasing comprehension
2. Building vocabulary
3. Mastering pronunciation
4. Combining words into phases or sentences

Increasing comprehension

The first step for communication is the ability to understand what other say. They understand through gestrues and facial expressions that accompany the words spoken.

Pronunciation

The first task in learning to speak is learning to pronounce words. It is learned by imitation as children “pick up” the communication from the people with whom they associate.

Baby talk takes different forms, the most common of which are the omission of one or more syllables eg: buttfly for butterfly and substitution of letters, syllabes or even words for the words as ‘didly’ for oddly and check. Check for train consonants and consonant blends

are difficult to pronounce these vowels. Z, W, S, D and G and the difficult blends are st, sk, dv.

Vocabulary Building

In order to speak, the baby must learn words associated with objects, people and activities. Unless he knows the word means he cannot use in proper context.

The baby's early vocabulary consists primarily of nouns related to persons and objects in his environment and of words such as give and hold.

Children learn two kinds of vocabularies

The general vocabulary consists of such words as nice and go special vocabularies are those which are used in special occasions.

Once children understand the sound and word connection (by 12-18 months) they add around 3 word per month to their vocabulary. After 18-24 months a vocabulary explosion often occurs in which children quickly acquire a large number of words at a rapid rate. By the age of 2 years they invent new words by changing a noun to verb passive language or learning to understand language proceeds the spoken language. Some studies point out that normal children have 3 words at 12 months, 20 words at 18 months, 300 words at 24 months, 900 to 1000 words at 36 months and so on.

Children's ability to understand language called receptive language proceeds their ability to produce language or expressive language. The first words are usually the names of common objects or people which are present in their immediate, social setting ex: Mama for mother dad for dad.

The ability to say words indicate a remarkable increase in children's level of abstract thinking. They now understand the correspondence between a mental concept and the set of sounds. The child's first words are holo phrases, individual words that convey as much meaning as sentences.

Sentence development

The formation of sentences follows a fairly a definite and predictable pattern in early childhood four stages of sentence development have been identified.

1. **Single word stage**

   At about 12 months, the child enters single word stage. Ex: Mummy, gone holo pharse stage. At about 18 months, many children produce sequence of words, usually separated by long pauses. They shift from using holo phases to true sentences.

2. **Early sentence stage**

By two years child uses sentence of one or two words which convey meaning of the total sentence. In sentences nouns are pre dominant and there is lack of articles, auxiliaries verbs, preposition and conjunctions. Go Shop (I am going to the shop) children earliest sentences are called telegraphic speech because they contain only the most essential and informative words. The speech gradually becomes elaborated as children develop more sophisticated language skills.

3. **Short sentence stage**

Sentence consists of 3 to 5 words having the characteristics of the proceeding stages but to a lesser degree.

4. **Complete sentence stage**

At about 4 years the child beings to use 6 to 8 words in all parts of speech.

Language skills in early childhood

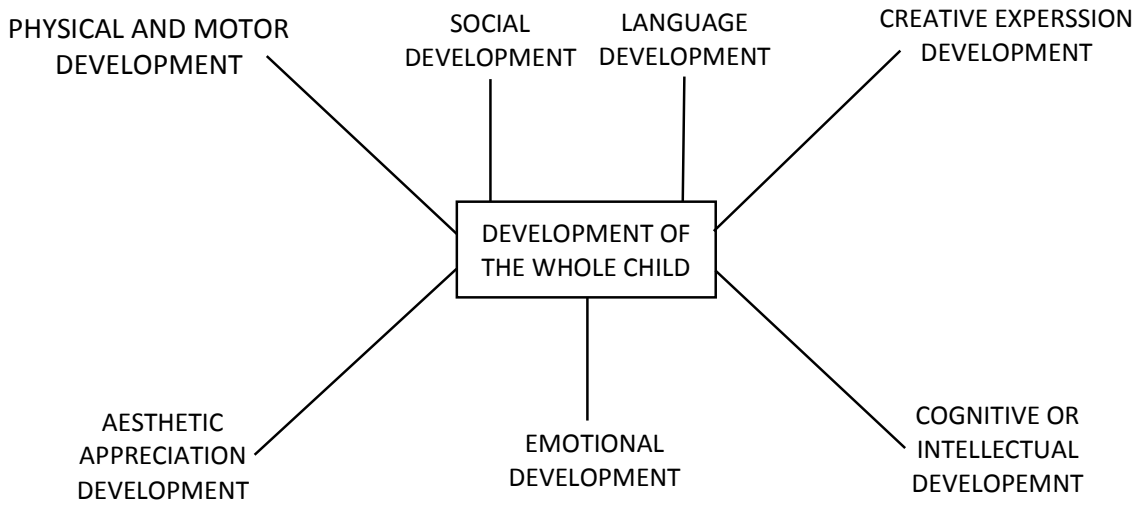
Receptive skills	Expressive skills
It is what children acquire when they learn to listen and understand • Conversations • Way of talking • Expressive languages • Way of asking questions	It includes words grammar elaboration

Listening skills

Concentration and attention to spoken words around is critically important for language development.

Expressive skills

Children's ability to understand language called receptive language, precodes their ability to produce language or expressive language encouragement and reward to speak and the opportunity for reinforcement of language helps the child to prmote expressive skills/language.



Summary

Rapid growth in both physical and psychological aspects of a baby is observed especially during the first year maturation and learning during babyhood enables the baby to sit, stand and walk and to manipulate objects. Growth in height and weight, which likewise are paralleled by intellectual growth and change.

The way parents speak to their children plays an important role in language development. There is perhaps nothing more remarkable than the emergence of language in children. Researchers have found that language development begins before a child is even born, as a foetus is able to identify the speech and sound patterns of the mother's voice.

Infancy is the period for the formation of social and adaptive skills.

Infants exhibits his first social smile around three months, when he sees his mother. They exhibit different types of behaviour bouncing up and down, making a funny face, wrinkling up their nose to attract person. By the age of 2 years the child can cooperate with adults in different situations.

Short Answer Type Questions

1. Define physical development.
2. What is meant by motor development?
3. Define Emotion.
4. Mention the prespeech forms.
5. What are expressive skills?
6. Write briefly about pronunciation.
7. What is social development?
8. What is cognitive development?
9. Mention the sub stages of sensory motor stage.

Long Answer Type Questions

1. Explain the speech development in children.
2. What are the stages of sentence form? Explain them with examples.
3. Explain the types of emotions during infancy.
4. Write about the stages of social development in infants.
5. Explain the stages of cognitive development.

Unit-4

Development of Exceptional Children

4.1 Gifted children - meaning and definitions needs and problems

4.2 Children with delayed development - meaning - differently abled children - identification - role of the teacher

4.3 Mentally challenged - meaning causes and categories

4.4 Physically challenge - blind and deaf

4.5 Services for differently abled children

The term gifted is used is designate people who are intellectually, creatively, academically or superior to a comparison group of peers or older age mates. These children are also referred to as genius because their strengths are far beyond even those of their peers who are perceived as smart, bright and artistic. These children are recognized and considered exceptional because of the contributions they make and the performances they demonstrate.

Meaning and definition

The term gifted refers to people with superior intellectual or cognitive performance, while the term talented is usually used to refer to people who show outstanding performance in a specific area such as the performing or visual arts.

The term gifted means children who are identified at the preshool, elementary or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative specific academic or leadership ability or in performing and visual arts and who by reason there of require services or activities not ordinarily provided by the school (Public law of VS) (Section 902)

In 1972 Sidney Marland defined gift ness as children who are gifted and talented. Those identified by professionally qualified persons, who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular program in order to realize their contribution to self and society.

Characteristics and related problems of children who are gifted and talented

Refer the Table below

Characteristics of Gifted Children and Talented Children	**Possible Associated Problems**
Gifted and talented children may:	Gifted and talented children may:
Learn quickly and easily have the ability to abstract and reason critically; see relationships between ideas and events	Become bored and frustrated; dislike repetition and shallow curriculum; hide abilities to gain acceptance; receive negative adult attitudes to smartness
Exhibit verbal proficiency	Dominate discussion; have difficulty with listening skills; exhibit manipulative behaviour
Have a high energy level	Need less sleep; become frustrated with inactivity, lack of challenge or active inquiry
Exhibit heightened curiosity	Take on too many activities
Be extremely persistent; concentrate on tasks of high interest for extended periods	Disrupt class routine; feel stifled by restrictions; resist interruption or schedules; be perceived as stubborn, uncooperative
Exhibit different learning styles - accelerated: desiring mastery, achievement and/or - enriched: desiring depth of knowledge, the need to experience, emotional investment in subject, imagination	Become frustrated with absence of progress; be prone to being 'overdriven' and/or not be motivated by results; be resistant to interruption; be seen as time wasting or preoccupied
Exhibit unusual emotional depth and intensity	Be unusually vulnerable; feel confused if thoughts and feelings not taken seriously
Be highly sensitive; be acutely perceptive	Be perceived as immature; try to mask feelings to conform; be vulnerable to criticism
Be concerned with adult/moral issues; be idealistic	Attempt unrealistic reforms; feel frustrated, angry. Depressed; develop a cynical attitude; receive intolerance from age peers
Aim at perfection	Set unrealistically high goals; feel inadequate; feel frustrated with others; fear failure, inhibiting attempts in new areas
Exhibit independence, nonconformity	Have a tendency to challenge and question indiscreetly; have difficulty with rigid conformity; may be penalised; exhibit rebellious behaviour
Have heightened self awareness, feelings of being different	Experience social isolation; regard difference as bad, worthless, resulting in low self esteem
Have a keen sense of humour	Use humour inappropriately or to attack others; feel confused when humour not understood; feel rejected by others
Possess unusual imagination	Be seen as weird; feel stifled by lack of creative opportunities
Respond and relate to older children and adults	Experience social isolation; be seen as show off, odd, superior, critical; be rejected by older children

There are individual differences among children the differences among most children are relatively small enabling them to benefit from general education programme. The term exceptional children includes both children who experiences difficulties in learning and children whose performance is so superior that special education is necessary to help them fulfil their potential.

The term exceptional children refers to children whos needs are very different from those of the majority of children in society. They differ from the average to such an extent in physical and psychological characteristics that the traditional school programme does not allow all around development and progress for them.

Kirk defined exceptional child as the child who deviates from the average or normal child in mental characteristics, in sensory abilities, in neuro muscular or physical characteristics, in social or emotional behaviour, in communication abilities, in multiple handicaps to such an extent that he requires a modification of social practices or special educational services in order to develop to his maximum capacity.

Characteristics and related problems of children who are gifted and talented

Area	Characteristics	Potential Problems
Cognitive	Outstanding memory, much information at higher level, abstract thinking, preference for complex and challenging tasks, simultaneous thinking unusual information processing abilities creativity	Boredom with mode of instruction, perceived as show off by peers and other students. Too many questions, resistance to conventional approach to instruction.
Academic	High performance, ease in learning even complex content, high content master, high problem solving	Alienation from peers expectations from parents for achievement in at areas, resistance for repetitive tasks
Physical	Discrepancies between physical and mental abilities	Limited development of other than mental abilities
Behavioural	Unusual sensitivity to needs of	Especially vulnerable to criticism,

	others, sharp sense of humour unusual intensity persistent, goal directed orientation	perfectionism intolerance and reflection from peer perceived as stubborn.
Communication	Higher level language development, excellent listening and speaking vocabularies	Alienation from peers perceived as show off.

The world health organization clearly defines the terms impairment, disabilities and handicap.

Impairment means abnormalities of body structure and appearance and organ or system function resulting from any cause in principle. It represents disturbances at organ level (WHO 1976).

Disability - impairment in terms of functional performance and activity by the individual (WHO 1976)

Handicap - any disadvantage from impairment an impairment and disability that limits or prevent the fulfilment of a role that is normal for an average individual.

Disease - Impairment - Disability - Handicap (WHO 1980)

Categories of Exceptional Children

Exceptional Children have been classified into following subcategories

1. Gifted and talented
2. Mentally retarded
3. Learning disabilities
4. Emotional and behaviour disorders
5. Communication disorders
6. Visual impairment
7. Hearing impairment
8. Orthopaedic impairment
9. Attention deficit hyperactivity disorders
10. Autism
11. Other health impairments and multiple handicaps

The Role of teacher:

- Learn about the child's handicapping condition
- Common characteristics
- Child's expected performance
- Common difficulties disabled child experiences
- Learn about the appliances and special materials child uses. example pushing a wheel chair up or down stairs
- Determine if any special methods, techniques or adaptations are needed for the disabled child to function more independently and successfully
- Meet special education teacher to determine specific strengths, weakness and needs of the handicapped children.
- Prepare classroom, remove obstacles and make necessary adaptations to furniture. Rearrange furniture to help the special needs of the student.
- Identify strengths and weakness of the student
- Develop special programmes
- Develop plans for using human and material resources
- Evaluate child's present level of functioning

Mentally challenged meaning causes and categories

A mentally retarded child is slow or lacking in the development of metal functioning when compared to those of his age level.

According to American Association of Mental Retardation (AAMR) mental retardation refers to significantly sub average general intellectual functioning resulting in or associated with concurrent impairment in adaptive behaviour manifested during developmental period.

Causes - Preconceptional, Prenatal factors and postnatal factors

Preconceptional factors:

- History of mental retardation in the family
- Age of conception
- Repeated abortion or infertility

Prenatal factors:

- Infection in the mother such as jaundice, chicken pox and measles in first 3 months of pregnancy.
- Injury to abdomen of the mother
- X-ray exposure
- Drug intake without medical advice
- Attempted abortion
- RH blood incompatibility
- Fits in mother
- Malnutrition in mother

Natal Causes:

- Premature delivery
- Prolonged labour
- Inappropriate use of forceps
- Delayed birth cry of the baby

Postnatal causes:

- Low birth weight
- Metabolic disorders
- Brian fever
- Head injury
- Poor nutrition & jaundice in infancy

Identification of visually impaired children

- Child frequently experience watery eyes
- Frequently experience red or inflamed eyes
- Eye movements are jumpy or not synchronized
- Difficulty in reading small print
- Difficulty in moving around the classroom
- Difficulty in identifying small details in pictures or illustrations
- Complains of dizziness after reading a passage
- Tills head or squints eyes to achieve better focus
- Uses one eye more than the other for reading

- Complains of headaches or eye infection

Role of the teacher

1. Seating arrangement should be done in such a way that his/her movements do not disturb the class
2. Child to child help should be encouraged in the class
3. Orientation is a metal map of our environment and mobility is the ability to get around in our environment

Physically challenged - Blind and Deaf

Visual impairment is defined in terms of visual activity, a field of vision and visual efficiency. It is measured by hearing people read letters or discriminate objects at a distance of 20 feet. Those who are able to read the letters correctly have normal vision. The expression 20/20 vision describes normal vision.

A person who see the capital letter E from a distance of 20 feet instead of 200 feet are considered legally blind. These children need to be taught through braille or aural methods such as audiotapes and records.

1. Low vision or residual vision

   They read large prints and they do not require visual aids in reading and writing
2. Partial sighted - Those children whose visual activity does not exceed 20/70 are considered partial sighted.

   Low vision is defined in terms of clarity reduction, where as partial sightless is defined in terms of distance from the Sneddon chart.

Which is a must for blind

Listening skills training

Braille

Hearing impairment

There are two types of hearing impairment they include children who are deaf and those who are hard of hearing.

Hearing impairment - How can we identify the hearing impaired?

Hearing impairment means the degree in the loss of hearing on the inability to hear. The term impairment covers both the deaf and those who are hard of hearing. Deaf means a hearing impairment which is so severe that a child is incapable of processing spoken information through hearing which adversly affect his educational performance. “Hard of hearing” means a hearing impairment which adversly affects hearing but is not included under the definition of deaf.

Identification

Given below are clues for the identification of a hearing impaired child

- Restlessness
- Inattention
- Asks the teacher for repetition of instruction
- Scratching ear frequently
- Complaining of pain in the ear frequently
- Discharge from the ear
- Withdrawal behaviour
- Defects in speech

Auditory defects can be found is either one or both ears infection in any part of the ear can lead to a hearing loss.

The role of the regular class room teacher is helping the hearing impaired

- Use visual methods with teaching aids
- Call children by name
- Keep back ground noise at low level
- Follow role playing and dramatization methods
- Speak slowly and clearly so that the child can read lip movement

In India where poverty, caste and gender push, disability to the lowest of the priorities article 41 is the only one that explicitly mentions disabled people. India has witnessed a phenomenal expansion of educational opportunities in the post-Independence period. But unfortunately, disabled children have not benefited substantially from the growth in educational facilities. Hence teachers can play an important role in counselling parents and encouraging them to use the special services available for the disabled children.

1. Hospitalization is meant for those who are severely handicapped and need full time clinical facilities for learning daily life skills. Hospitalization may be considered as secondary option if possible

   One to one service is required for those who are severely handicapped. Such children can neither be integrated in normal schools nor enrolled in special schools. They can only be trained to learn the daily life skills under super vision.

   Following are the special educational services available
2. **Residential special schools:** They are designed for those who are severely handicapped and cannot go to schools every day to life risks on the road and for those who stay away from the school.
3. **Special day schools**: They provide services for those who are severely handicapped and for those who stay within walkable distance from the school who have attendants at their homes for bringing them homes to schools and from schools to homes.
4. **Home bound programme**: It provides facilities for those who are mildly and moderately handicapped. Additional coaching is provided to them for better learning.
5. **Resource room Support**: This is meant for those who are mildly and moderately handicapped. They can be educated through normal schools with the additional facilities of the resource room support.
6. **Itinerant programme**: They serve those who are mildly and moderately handicapped. Here one special teacher is in charge of a cluster of schools.

Summary

The needs of children with disabilities are not different in nature from those of other children. There are two types of children; those who are handicapped and those who are not. Children who may require special education have more general needs in common with other children than they have different ones.

The disabled children under different categories have specific characteristics, exhibit specific behaviour and have special needs understanding these characteristics and behaviour will help a teacher in dealing with them and in imparting knowledge effectively.

Short answer type questions

1. How do you identify the gifted child?
2. Who is a visually impaired or blind child?
3. Who is a partial sighted child?
4. What is mental retardation?

Long answer type questions

1. Write about the classification, causes and identification of mentally retarded children.
2. How do you identify the hearing impaired children?
3. Discuss about the services available for differently abled children.
4. How do you identify physically handicapped children?

Unit-5
New born baby

Structure

Infancy period

Characteristics of new born baby

Adjustmental problems of new born baby

Sensory capabilities of new born baby

Care of umbilical cord

Learning objectives

After studying the unit, the student will be able to understand the

- Characteristics of a new born baby
- APGAR Test / Assessment
- Physical and physiological functions
- Adjustmental problems of new born
- Sensory capabilities of new born
- Care of new born baby
- Neonatal Jaundice

A stage is a period during which certain changes occur. Every stage is built upon the foundation of the development of the previous stage. Each stage is designated according to the child's activities during that period.

Infancy period (Birth to 2 years)

Infancy or the period of the new born is the shortest of all the developmental stages. It begins at birth and ends when the infant is approximately 2 weeks old.

The period of infancy is subdivided into 2 parts

1. The period of partunate
2. The period of Neonate

The period of partunate lasts for the first 15 to 30 minutes when the infant emerges from the mother into the world until the umbilical cord is cut.

The Cutting of the umbilical cord marks the beginning of the second period of the infancy - period of neonate. The neonate is no longer dependent on uterine protection but is

characterized by several adjustments in the new environment in the world outside. A neonate is called infant when his physiological process become operative and fairly well adjusted.

Characteristics of New born baby:

APGAR score:

APGAR score system is developed by Virginia Apgar in 1952. Each item is given a score of 0, 1, 2. The assessment starts immediately at birth, at one minute after birth and at five minutes after birth.

S.No	Signs	0	1	2
1	Heartrate	Absent	Below 100	Above 100
2	Respiratory	Absent	Slow, irregular rate	Good crying
3	Muscle tone	Flaccid	Some flexion	Active movement
4	Reflex irritability	No Grimace	Sneezes	Response
5	Colour	Blue, Pale, Extremities blue	Body pink, hands blue	Completely pink

Normal score is 8 - 9 within first minute after birth. The score of 5 - 7 shows moderate difficulty of the new born.

The score of 4 or below 4 shows saviour distress and may require incubation.

A - Appearance/colour of the skin

P - Pulse rate / Heart rate

G - Grimace / Reflex irritability

A - Activity / muscle tone

R - Respiration

A - Appearance / colour of the skin - A healthy pink colour of the skin indicates the proper functioning of heart and lungs. The absence of pink colour may indicate respiratory or heart problem.

P - Pulse rate / Heart rate - Infantsheartbeat varies from 150 to 180 beets / minute then decrease to 135 per minute after one hour of birth. A heart beat less than 100 may indicate difficulty.

G - Grimace - The new born should respond vigorouslyto external stimuli. No response should indicate impairment of central nervous system.

A - Activity level - It is evaluated by the degree of infants resistance when attempted to extend its limbs.

R - Respiration - Regulation of respiration usually accompanies a healthy cry.

Physical appearance/ characteristics of new born baby.

Size

At birth the neonate is approximately 50 cms (20") long and weight 2.8 to 3.0 kgs.

Boys are slightly longer and heavier than girls.

The neonate loses weight during the first few days of life and regain his birth weight after a week. There after again the weight gradually doubles the birth weight by 5 months. Triples the birth weight by 1 year.

The table gives an idea of average weight and height of well-nourished Indian children at various ages.

Age	Weight in kilogram		Height in centimetres	
	Boys	Girls	Boys	Girls
Birth	3.0	2.9	-	-
6 Months	7.5	7.0	-	-
1 year	9.5	9.0	72.5	72.5
2 years	11.5	11.0	83	83
3 years	14.0	13.5	92	92
4 years	15.5	14.5	99	99
5 years	17.5	16.5	107.0	105.5

Birth cry:

Crying begins at birth the cry of the new born is uttered with force and loud ness and is characterized by regulating of breathing. The purpose of birth cry is to inflate the lungs. Which makes breathing possible and supplies the blood with sufficient oxygen.

Cry at birth is a must because the lungs were solid and non-functioning in mother's womb with cry they inflate.

1. Physiological features

The special physiological features of infants are:

1. The muscles of the new born infant are soft, small and uncontrolled.
2. At birth, less development has taken place in the muscles of the neck and legs than in hands and arms.
3. The bones, like the muscles are soft and flexible being composed chiefly of cartilage or gristle. They can be easily misshaped because of their flexibility.
4. The skin is soft, deep pink in colour and often blotchy.
5. The flesh is firm and elastic
6. Soft hair is found on the head and back.
7. The tear glands are in active at first. However, in full term babies, tears appears within the first day of life.
8. Natural teeth occurs approximately once in every 2000 births they are the 'baby' type and are usually central incisors.

2. Physical proportions

As for the physical proportions of the infant, the following are the salient features:

1. The infants head is approximately one fourth of his body length. The adult head, by comparison is approximately one seventh of the total body length.
2. The cranial region, the area over the eyes is proportionately much large than the rest of the head, while the chin is proportionally too small.
3. The eyes are almost mature in size, but because of the weakness of the eye muscles, they move in an uncontrolled way in the sockets.
4. The nose is very small, while the tiny mouth looks like a slit, because of the narrow lips.
5. The neck is short and almost invisible. The skin covering the neck lies in thick folds or creases.
6. The shoulders are narrow, while the abdomen is large and bulging.
7. Proportionally, the arms and legs of the infant are much too short for his head and trunk.

3. Physiological functions

Thehelpless condition of the infant at birth to maintain homeostasis changes rapidly as the autonomic nervous system matures. As a result, homeostasis improves.

With the birth cry, the lungs are inflated and respiration begins (Smith, 1963). The respiration rate at first, ranges from 40 to 45 breathing moments per minute and is more stable than it was at first.

Neonatal heart - beat is more rapid than that of the adult because the infants heart it small when compared to his activities.

More rapid heartbeat is necessary to maintain normal blood pressure (Grossman and Green berg 1957)

Reflex sucking movements occur when the infant is hungry or when his lips are touched. Breast fed infants develop stronger sucking reflexes than the infants fed by the bottle (Spock, 1964) regardless of the method of taking nourishment, there is an increase in the rate of sucking and in the amount of nutrients consumed.

Elimination of waste products brings a few hours after birth. The infant sleeps for approximately 80 percent of the time.

By the age of one year, the infants sleep comes down to 50 percent of the time.

4. Mass Activity

Mass activity includes general movements of the whole body. When a sensory stimulus is applied to any part of the body, activity occurs throughout the body.

Specific Activity

Specific activity involves certain limited areas of the body. It includes (a) reflexes, which are definite responses to specific sensory stimuli and which remain unchanged with repetition of the sense stimuli and (b) generalized responses, which use large groups of muscles than those involved in reflexes and which may be aroused by either external or internal stimuli.

5.

(a) Reflexes

Most of the important reflexes of the body, such as the pupillary, lip, tongues, sucking, flexion, knee jerk, sneezing and others are present at birth.

6. Generalized Responses

Generalized responses involve large portions of the body than the reflexes. Like the reflexes, they are present at birth and are direct responses to external or internal stimuli.

Vocalisation of the new born

Most of the infant's vocalisation are his crisis, although occasionally re utters other sounds. During infancy and the early months of baby hood.

7. Breast Enlargement

Most new born babies have a small breast swelling which is a sign of a mature healthy body.

8. Bleeding from the vagina

Sometimes a baby may bleed from her vagina on the second or third day. This is usually very small in quantity and does no harm. This is also due to withdrawal of the mother's hormones.

9. Cephalematoma

It times there is a boggy swelling on one side (or rarely on both sides) the head on the second or third day. This is due to it a little bleeding under the outer layer of the bone due the outer layer of the bones due to the head being squeezed through the birth canal. This disappears in few weeks and needs no treatment.

10. Physiological functions

1. The basal heart rate of an infant at birth range from 130 to 150 beats per minute, after birth 117 beats per minute.
2. Breathing is rapid and irregular.
3. The heart is small and it should therefore beat more rapidly to maintain normal blood pressure.
4. The new born child sleeps from 15 to 20 hours / day.
5. The baby's stomach empties in 3 to 4 hours / day.

11. The infant must make four major adjustments before he can resume his developmental process. They are adjustments to (a) temperature changes (b) breathing (c) sucking and swallowing and (d) elimination of waste products

Adjustment to temperature changes

In the mother's uterus, a constant temperature of approximately 99^{o} F is maintained. But the temperature will vary from 85^{o} to 90^{o} F in the hospital or home where the child is born.

Adjustment to breathing

During the prenatal life, the necessary supply of oxygen come to the foetus from the placenta through the umbilical cord. With the cutting of the umbilical cord oxygen must be obtained from inhaling ah exhaling air through the lungs. Before this process is possible the lungs of new born must be inflated. This normally occurs with birth cry.

Adjustment to sucking and swallowing

During prenatal life nourishment comes in a constant supply through the placenta and umbilical cord to the foetus from the nutrients in the maternal blood steam. As a result the foetus grows and developed at a rapid rate. After birth nourishment mush come from the infant's own efforts of sucking and swallowing.

Adjustment of elimination

Waste products during the prenatal life are eliminated from the foetal body through the umbilical cord and the placenta into the maternal blood steam. Within a few minutes or hour after birth the infant's organ of excretion begin to function. This takes care the elimination of waste product from his body.

12. Sensory activities

Sensory activities of the infant include sight, hearing, smell, taste and feelings. There are marked variations in the sensory abilities of infants just as in the other areas of their development.

Sight

The retina of the eye which contains the sense cells for vision does not reach its maturity at birth. Fixation of the eye is very immature.

Hearing

Hearing of all the sensory activities hearing is at the lowest stage of development at birth. The average new born gives no evidence of hearing ordinary sound during the first two days of his life.

Smell

The sense of smell is well developed at birth or within a few days after birth infants can not only smell but they can also distinguish between different odours.

Taste

The sense of taste is also well developed at birth reaction to sweet is positive and negative for sour, bitter and salty taste.

Skin sensitivities

The skin sensitiveness to touch, pressure, temperature and pair are present at birth some parts of the body are however more sensitive to touch than others especially the lips. Skin on thigh, trunk, forearms and other parts of the body are less sensitive.

Organic sensitivities

Hunger contractions are fully developed at birth and they occur at more frequent intervals compare to adults.

Reflex irritability

The new born baby shows reflex action i.e. irritability when we tough in different areas (reflex action).

13. Emotions of new born

The new born's emotional reactions can be divided into two groups: the pleasant or positive responses and the unpleasant or negative responses. Pleasurable responses can be elicited by patting, rocking, warmth and sucking.

Unpleasant responses can be elicited by changing the infants' position abruptly by sudden loud noises, by hampering the infant's movements or by a wet diaper. The outstanding characteristics of the infants' emotional make up is the complete absence of gradations of responses, showing different degrees of intensity. Whatever the stimulus, the resultant emotion is intense and sudden.

14. Care of umbilical cord

Care must be taken to prevent tetanus of the new born using properly sterilized instruments and cord ties use clean thread for tying the cord. use a new, clean blade for cutting the cord, should not apply anything to the cord. This is because the opening in the muscle wall of the abdomen through which he originally received his nourishment is not quite closed. This is called umbilical hernia. This will close in few weeks' time as the baby's abdominal muscles grow and develop.

15. Jaundice come from the French word 'Jann' which means yellow. The yellowish colour is caused by an excess amount of bilirubin in the baby's skin. Bilirubin is released when red blood cells are broken, the new born baby's liver is not fully developed and can't work as hard and fast as the adult liver. Thus there is some delay in eliminating the bilirubin. This type of jaundice is called physiological jaundice. Because it is called the process of breathing down red blood cells that is most of the batteries have physiological jaundice.

Care of the new born baby:

Physical care: It involves careful lighting of the babies, diapering, clothing, bathing and feeding.

Lifting babies: A small baby should be lifted by grasping both his feet or thighs with the right hand and slipping left hand under his neck and head and raised upon the left arm

Feeding: It is one of the basic needs of the child that has to be fulfilled for his survival. In traditional families experienced woman help a new mother. They encourage to feed her baby but in towns due to many pressures on the mother and no helper nearby she may be forced to give artificial feeds.

Types of feeding

1. Breast feeding
2. Bottle feeding

Breast feeding The American Academy of paediatrics (AAP) recommends that babies should be breast fed exclusively for about first 6 months.

Advantages

1. It is a natural perfect food for a baby's digestive system.
2. It has all the nutrients a new born needs - Lactose, protein (Whey and casein) and fat.
3. It has antibodies that help protect babies from infections, illnesses, including diarrhoea and respiratory infections.
4. Breast fed babies develop less medical problems such as diabetes, asthma, allergies.
5. Breast feeding may decrease the chances that a child may become overweight or obese.
6. It saves time as no preparation needed.
7. It is of right temperate.
8. Gives emotional security to the baby - skin to skin contact.
9. This is the first immunization which a baby receives.
10. It is always ready to give to the baby.

Benefits of breast feeding to the mother

1. It burns calories so that mother gets back to shape quicker.
2. Protects from breast cancer and ovarian cancer.
3. It serves as a natural family methods.
4. It is economical, convenient and less expensive.
5. Helps mother feel confident in her ability to care for her new born.

6. The mother hugs and cuddles her baby several times during feeding which will help her know her baby better.

Diet for nursing mother

It takes lot of calories and water produce milk. She needs about 500 calories each over the pre pregnancy diet. She must take more fluids, should eat simple food such as boiled and cooked food for first month.

Bottle feeding: is the artificial feeding of infants. Which is usually with cow's or buffalo's milk. It is nutritious alternative to breast milk. It offers more freedom and flexibility for mothers. As it digest slowly than breast milk a baby requires fewer feeding than breast feeds.

- It makes it easier to feed the baby in public.
- Helps father and other family member to feed the baby which can enhance bonding.

Disadvantages

- Requires organization and preparation.
- Expensive.
- It can be adulterated.
- Bottle have to be sterilized every time to avoid infections.
- Ensure enough formula on hand.
- Temperature must be adjusted to suit the baby's needs or it may cause burn baby's mouth.
- Chances for constipation and indigestion.
- Acute recurrent chronic diarrhoea is most common complication of bottle feeding leading to malnutrition.
- Bottle feeding is dangerous in developing countries as large number of poor families do not have any facility to clean and sterilize the bottles. They can't afford to buy good and safe bottles.
- It leads to high rate of sickness and mortality in low socio economic groups.

How to bottle feed the baby

The baby should be held warmly and comfortably in the rock of arm or nipple lied on the bed. The bottle is kept in upward which ensures that the teat full of milk at all times. The appearance of bubbles rising in the bottle shows that the teat is not blocked the baby would swallow air if he is not given feed in proper position he may be comfortable after swallowing air during feed. The cause of air swallowing are position of the bottle, size of the hole of the teat, soft teat etc. When teat is used for long duration it becomes soft and flattens while feeding. Thus vacuum is created and baby starts sucking air. That is why burping is required

after giving the feed. Deciding to breast feed or bottle feed is usually based on mothers comfort level with breast feeding and her life style.

Burping

White feeding, a baby may swallow air which has to be expelled or burped for the baby to feel comfortable. A bottle fed baby usually swallows in air more often than a breast fed baby because of the way in which milk flows from an artificial nipple. After each feed the baby should be held over the adults shoulder and his back gently patted from waist to neck. This brings up any air taken into the stomach with the feed and is known as burping. Another method is to raise the baby slowly in a sitting position the baby head and neck need support during the feeding and burping process.

Care of the bottles:

Bottle feeding should be encouraged only when breast feeding is not possible.

In case of bottle feeding

1. Maintenance of hygienic in preparation of food and washing of bottles.
2. Adequacy of food:

Poly carbon feeding bottles are used nowadays instead of glass ones. They are unbreakable, easy to clean and can be sterilized.

Care of feeding equipment

The bottle and the teat should be cleaned thoroughly to prevent infections. Sterilization is done by using chemical (sodium hypo chloride) solution or by boiling wash the bottles and teats with soap or detergent, using a bottle brush for the bottle. Salt can be used to clean teat. For boiling wash the bottle and teats and put them in a large pan with a lid. Make sure that no air bubbles are tapped in the bottles.

Bottle should be cleaned after every fed. After use remove the nipple empty the bottle rinse it well warm water. Fill with cool water aside and a tray in a safe place wash the nipples and caps inside and out with brush, removing every bit of milk.

Keep the nipples in a dry jar.

Sterilization process kills the microorganisms present in the bottle and free from infections and provide good hygiene.

Bootle Feeding:

When a baby has to be fed other than human milk it is known as bottle feeding this is an nutritious alternative to breast milk. Cow's milk is best substitute for mother's milk. It should be boiled to kill gems and also to make proteins soft.

Refer Table No.-l

Recommended dilutions of artificial feed (cow's milk dilution)

Age	Composition
0-15 days	1 part milk + 1 part water
2-6 weeks	2 parts milk + 1 part water
6 weeks - 3 months	3 parts milk + 1 part water
3 months onwards	Whole milk should be given

Nutrients available in human milk and cow's milk

Nutrients	Human Milk percent	Cow's Milk percent
Proteins	1.5 gms	3.5 gms
Fat	4.0 gms	4.0 gms
Sugar	6.0 gms	4.5 gms
Salts	0.2 gms	0.7 gms
Water	88.3	87.3
Total	100.0	100.0
Reaction	Alkaline	Acidic

Bathing

At birth the body of a baby is covered with a greasy oily material known as vernia caseoss. It should be removed very gently by smearing with olive oil which dissolves the vernis.

Sponge Bath

For the first week it is good to give sponge bath with a warm, damp wash cloth. Wash his face and hands frequently and through clean his genital area after each diaper change.

Bathing a baby in a bath tub

After the umbilical card stump dries up, falls off and the area heals newborn baby given a tub bath every few days. Small plastic baby tubs filled with warm water instead of standard tub.

How to baths your baby:

- Gather all bath supplies (mild soap, a wash cloth and a plastic cup) and towel, clean diaper and clothes room must be warm so that the baby doesn't get chilled.
- Fill the tub with 3 inches of water that feels warm but not hot to the inside of wrist about 90^{o}F or 32^{o}C or a few degree warmer.
- Bring the baby to bath area and undress her completely.
- Gradually step the baby into the tub feet first, using one hand to support her neck and head. Pour cupfuls of bath water over her regularly during the bath so she does not get too cold.

- Use mild soap and wash her with hand from top to bottom, front and back, wash her scalp, clean eyes and face if mucus collects in the corners of baby's nostrils or eyes dap it several times to soften it before it is wiped out.

6. Rinse the body thoroughly with cupfuls of water and wipe her with a clean washcloths. Then carefully lift her and wipe with a clean wash cloth.

Cloths - Then left out of the tub with one hand supporting neck and head and other hand supporting bottom. Wrap your fingers around the thigh (babies are slippery when wet). If its possible, have another adult help by receiving your baby in a dry towel.

7. Wrap your baby in a hooded towel and put her dry. If her skin is still peeling from birth, you can apply a mild baby lotion after her bath, but this is generally dead skin that needs to come off any way, not dry skin. Then diaper her, dress her and give her a kiss on her sweet smiling head.

Infantile Jaundice:

Bilirubin is a yellow coloured material which the liver breaks it down and it is flushed out of the body through stools bilirubin is created while replacing old red blood cells in the blood. The concertation of RBC in babies is higher than in adults. When bilirubin is very high it results in Neonatal Jaundice.

Cause:

Higher level of pigment - bilirubin in the blood.

There are various types of Jaundice

1. **Physiological Jaundice**

   During pregnancy baby's bilirubin is removed by the placenta. After delivery the baby's liver must get rid of bilirubin. If occurs during 2 to 3 day and disappear by 2 week

2. Breast feeding jaundice is common in babies not receiving plenty of breast milk.
3. Breast milk jaundice is seen in breast fed babies.
4. Blood group incompatibility

   Incompatibility in the blood groups of mother and baby can cause jaundice.

5. Prematurity - babies born earlier than 37 weeks of pregnancy have higher risk of getting jaundice.

Other causes:

- Blood infection
- Maternal diabetes
- Internal bleeding
- Hypo thyrodism

Signs and symptoms

- Yellow coloured skin - first appears on the face and then spreads to other parts of the body.
- Drowsiness
- Seizures, high pitched cry
- Baby passes dark and yellow urine.
- Baby is not feeding or sucking appropriately.
- Hepatitis
- Yellow coloured sclera

Treatment

Phototherapy - Moderate jaundice can be treated using phototherapy. This treatment uses light to bring down bilirubin levels. Due to this photooxidation occurs. Which adds oxygen to bilirubin which dissolves in water and enables liver to remove from the body.

Exchange transfusion for neonatal jaundice.

If it is not treated with phototherapy this treatment is followed

Treatment at home:

- Doctors recommends change in feeding patterns
- Supplement milk formula if there is problem with breast feeding
- Supplement of sunlight not direct sunlight

Prevention:

- Pregnant mother's blood group must be tested.
- Baby is well hydrated.

Summary

Infancy or the period of the new born is the shortest of all the developmental stages. The period of infancy is subdivided into two parts a. Period of partunate and the period of neonate.

APGAR score helps in assessing the baby's condition at birth.

Care of the new infant involves careful lighting of the babies, diapering, clothing, bathing and feeding.

Infantile jaundice is caused due to excessive levels of bilirubin in the body and it can be treated is the phototherapy.

Short Answer Type Questions:

1. What is APGAR assessment?
2. What is the importance of birth cry?

Long Answer Type Question:

1. Explain the characteristics of new born baby?
2. Write about sensory activities in children.
3. Write short notes on the following
    a. Adjustment problems of new born baby
    b. Care of umbilical cord
    c. Neonatal Jaundice
4. Write about care of the infant.

Premature Baby

Structure

Introduction

Meaning and identification

Causes of prematurity

Care of premature baby

Feeding methods

Introduction

A premature baby is one who has been born too early. Human pregnancy is 40 weeks and a premature birth is between 28 and 37 weeks. According to WHO a baby weighing 2500 gms or less at birth irrespective of his period of gestation is called low birth weight.

Classification: Low birth weight includes the following three types of babies

a. Preterm
b. Small for date (SFD)
c. Small for date and preterm

Preterm babies - are those who are born before the end of 37 weeks of gestation and whose rate of intrauterine growth was normal.

Small for date (SFD) are infants whose rate of growth was slow and who were delivered at term or later.

SFD and preterm are infants whose rate of intrauterine growth was retarded and who were delivered prematurity.

Characteristics of pre mature baby

Physical characteristics:

- Height and weight - compared to normal term infants low birth weight baby is tiny and small
- Weight - less than 2500 gms
- Length - less than 47 cms
- Head Circumference - less than 33 cms

- Chest circumference - less than head

Circumference but more than 3 cm General activity is poor, cry is weak, reflexes like sucking, and swallowing are sluggish or incomplete.

Skin is red, shiny, loose, thin and delicate subcutaneous fat is less, veins over abdomen and scalp are visible deep creases over the sole and palm are not present, nails are soft.

Head is large in proportion to the rest of the body, skull bone are soft.

Physiological characteristics

Respiratory system is poorly developed. It is shallow and irregular

Premature babies have poor sucking and swallowing reflexes.

- Baby has little or no immunity and easily picks up infection.
- Blood vessels have weak walls and bleeding can easily occur.
- There is little iron stored in baby's liver and he may become anaemic in the first month.

Causes of prematurity

Maternal causes

- Malnutrition
- Severe anaemia
- Heavy physical work during pregnancy
- Hypertension
- Malaria
- Toxaemia
- Smoking
- Low economic status
- Very young age
- High parity and close birth spacing
- Placental insufficiency and placental abnormalities

Foetal causes:

- Foetal abnormalities
- Intrauterine infections

- Multiple gestation
- Chromosomal abnormality

Care of the premature baby

Premature babies are not fully equipped to deal with in our world. Their little bodies still have under develop parts that include the lungs, digestive system, immune system and skin, thank fully, medical technology has made it possible for preemies to survive the first few days, week or month of life until they are strong enough to make it on their own.

Neonatal Intensive care unit

A Neonatal intensive care unit (NICU), also know as intensive care nursey (ICN), is an intensive care unit specializing in the care of ill or premature new born infants. Neonatal refers to the first 28 days of life Most preterm babies with developmental problems are kept in neonatal intensive care unit till they reach 5.5 pounds or 3.3 kgs on normal weight gain. First step is to stable the new born body temperature and to prevent loss of warmth. If respiratory problems are present, oxygen needs to be given. Otherwise brain damage may occur due to anaemia. Heart respiration and other vital signs are closely monitored phototherapy should be given to prevent jaundice. The levels should be monitored twice a day during the first week. Studies reveal that neonatal intensive care unit improves the survival rates of pre mature infants.

Nutritional needs of preterm infants

Caloric requirement

The estimated “basal” on maintenance metabolic rate of LBW infants, including an irreducible amount of physical activity, is lower in the first week after birth than later, and in a thermoneutral environment is approximately 50kcal/kg/d by 2 to 3 weeks of age,

Common obstacles faced by a pre-term baby

- Staying warm
- Feeding
- Breathing
- Infections
- Brain
- Eyes

1. **Staying warm:** Preterm babies lose body heat more easily, putting, them at risk of life threatening hypothermia
2. **Feeding:**Preterm babiescan have trouble feeding because the coordinated suck and swallow reflex is not yet fully developed
3. **Breathing:** Many preterm babies were breathing their own when they are born, but other need to be resuscitated.
4. **Infections:** severe infections are more common among preterm babies
5. **Brain:** preterm babies can also have brain injuries from a lack of oxygen. Bleeding or lack of oxygen to the brain can result in cerebral palsy, developmental delays and learning difficulties.
6. **Eyes:** preterm babies are not ready for the outside world. They can be damaged by abnormal growth of blood vessels in the retina.

Pre-term

Pre-term babies are at risk of developing of disabilities that will affect them for their entire lives. The extent to which this will affect their life strongly depends on how early they were born, the quality of care they received during and around birth and the days and weeks that follow.

Specific Nutrition for pre term baby

Pre-term infants have higher nutrient requirement than term infants. They require 110-135 kcal/kg/per day

The protein requirements are

- Infant body weight 1-1.8kg 3.5-4g/kg/day
- Infant body weight <1kg 4-4.5g/kg/day

Breast milk is the feed of choice for preterm infants

Preterm infants require additional quantities of certain vitamins and iron to prevent anaemia in children. Nearly all the preterm babies receive additional calcium and phosphorous either by adding fortifier to breast milk or directly through specific formula for preterm babies pre-term babies need 8-10 feedings a day one should not wait longer than 4 hours between feedings otherwise the baby may get dehydration (Lacking fluids), 6-8 wet diapers a day show that baby is getting enough breast milk.

Starting Solid food

The pre-term baby can be introduced solid food at six months after the original due date (not the date of birth).

Growth monitoring

Pre-term babies may not grow at the rate as a full term baby for the first year weight should be recorded on every alternative day until he reaches normal birth weight. These children need to gain 20-40 grams per day.

Feeding methods of premature babies:

There are different ways to teed premature babies

1. Breast feeding
2. Intravenous
3. Through a feeding tube
4. Directly by mouth

They may receive three different kinds of nutrition. Total parenteral nutrition (TPN), Breast milk and Infant formula.

What a pre mature baby is fed depends on their gestational age and any complication in gastro intestinal tract.

Breast feeding

Mothers are encouraged to pump their milk right away so that the flow of milk began and continues pumped breast milk can be given to the baby when he is ready for either gavage breast feeding or bottle feeding.

2. Intravenous feeding

Premature babies are fed this way. In such cases premature babies are fed in a way that by passes the digestive system altogether and delivers nutrition directly to the baby's blood stream through an intravenous line (IV) on a catheter.

3. Gavage feeding

Once the premature baby is stable enough to receive feeding through the gut. She can be given gavage or nasogastric (NG) feedings a small tube is inserted thought the nose or mouth and run directly into the baby's stomach. Small amount of expressed breast milk of

formula are then gently allowed to flow into the stomach. If the baby handler these feedings she is feds progressively larger quantities.

4. Dropper Method

If the premature baby's sucking capacity is weak the bay can be given milk with a dropper and milk being dropped into the back of tongue from where he swallows. At present doctor or nurses are not using the dropper method because of the poor results of the system.

The baby born before 37 weeks of pregnancy and if the birth, weight of infant is less than 2.5 kgs are know as premature babies

The premature are found to be somewhat backward in all the developmental areas as compared with full preterm babies.

Incubator plays an important role in controlling the temperature of a premature babies.

The special methods to feed premature are tube feeding, intravenous feeding, dropper method.

Summary

A premature baby is one who has been born to early according to WHO a baby weighing 2500 grams or less at birth irrespective of his period gestation is called low birth weight. The cause of prematurity are malnutrition, severer anaemia, heavy physical work during the pregnancy, very young age etc. which come under maternal causes. The foetal causes include inter uteri infections, chromosomal abnormality etc.

A neonatal intensive care unit (NICU) is a specializing unit in the care of ill or premature new born infants. This neonatal intensive care unit improves the survival rates of premature infants.

Pre-term infants have higher nutrient requirement than term infants. The pre-term infants require additional quantities of certain vitamins and iron to prevent anaemia.

What a premature baby is fed depends on their gestational age and any complication in gastro intestinal tract.

Short Answer Type Questions

1. Who is a premature baby?
2. How do you identify premature baby?
3. Mention the feeding methods of premature babies.
4. What is incubation? And write its importance.
5. Mention the causes for pre maturity.

Long Answer Type Question

1. How do you take care of premature baby?
2. Write about the criteria of pre maturity.
3. Explain the characteristics of a premature baby.

Unit-6
Post Natal Care

Structure

6.0 Introduction

6.1 Care of mother

6.2 Care of the new born baby

6.3 Care of feeding equipment

Learning objectives

After studying this unit, the student will be able to know

- Care of mother's diet, bathing, clothing and medical aid, care of breast.
- Car of infant breast feeding and its advantages and
- Importance of sterilization - method, bathing, clothing and sleeping.

Introduction

The Postnatal period is a critical phase in the lives of mother and new born babies. The postnatal period begins after the delivery of the baby and ends when the mother's body has nearly returned to its pre-pregnant stage. This period usually lasts six to eight weeks.

The postnatal care includes the prevention, early detection and treatment of complications, and several aspects such as feeding the baby, care of the mother's breasts, diet of the lactating mother, her digestion and physical fitness, bathing, clothing, birth spacing, immunization and maternal nutrition.

Mother's vital signs like temperature, pulse rate, and blood pressure are within normal range pulse and blood pressure should be checked every one hour and temperature at least once in first six hours.

Check if uterus is contracting normally, clean the mother's belly, genitals and legs.

Check the other problems - Bleeding under the skin (haematoma) or pain in the vagina - help the mother to urinate.

In traditional families, the mother is given complete rest for first ten days and is kept on light diet. The mother is given protein foods in order to establish good lactation, pan or betal but leaves with pure lime, nuts and other ingredients are also given to the mother after

each meal. There is a belief that helps the mother for easy digestion and also supplies calcium and iron.

Care of mother

(a) Pulse of mother - generally after delivery the pulse rate returns to normal in 34 - 48 hours. If the pulse rate is more than 100 it should be reported to the medical officer. A rapid pulse rate may be due to fear, shock or haemorrhage

(b) Temperature: After delivery the temperature may rise to 100^{o}f but this returns to normal within 24 hours. If the temperature rises after 24 hours reported should be considered abnormal, should be reported to the doctor.

(c) Perineal care: the perineum should be cleaned daily with swabs soaked in dettol solution. The mother should be advised to clean the body part after urination and to use sterile pads.

(d) Rest and exercise: The mother should not get over tired. Light house hold work is advised but not lifting heavy weight. The mother is allowed to rest in bed on the first day after delivery.

Regarding exercise gradual resumption of household duties is good enough in case of working class women for others exercises involving deep breathing contracting and relaxing of pelvic and abdominal muscles should be prescribed. A brisk walk or tennis are also good exercise.

Diet of the mother

Most mothers are ready to eat soon after the delivery and it is good for them to eat any kind of nutritious food they want.

If she is not hungry she can be given something to drink; Fruit juice or tea can be given, orange juice can be given.

The die of a mother should be planned with utmost care. During lactation, the nutritional requirement of the mother increase progressively. Additional calories and nutrients are required by the mother for milk production which should increase steadily to meet the needs of the fast growing baby, unless a nursing mother has an adequate diet she will not produce milk adequate in quantity and quality for her baby and may lose in weight and health. She should eat about 10% more than before she was pregnant.

The baby receives all the nutrients from mother's milk. She must eat nutritionally adequate diet.

Recommended daily nutritional requirement of lactating Mohter

Item	Quantity per day
Calories	2800 K. cals
Proteins	75 gms
Calcium	1000 mg
Iron	30 mg
Vitamin - A	950 mg
Thiamine	1.4 mg
Riboflavin	1.6 mg
Niacin	18 mgs
Ascorbic Acid	80 mg

What to eat?

Ghee - Taking Ghee helps to gain strength it provides nutrition to baby and also helps in bowel movement panjiri made with ghee, wheat flour and sugar is given to mother.

Aniseeds - are good for mother and the baby. It aids in digestion and clean the uterus.

Fenugreek - is high in proteins and helps in baby's growth and mother to recover as they contain lots vitamins, proteins and helps to reduce backaches.

Liquids - It helps to hydrate the body and helps in milk formation. Mother can take coconut water, vegetable soups and hot milk.

Khichdi - with vegetables is given as it contains all nutrients and it is easy to digest as it is in semi solid form.

Cumin seeds and fennel seed:

Cumin water taken twice a day helps to fight infections and keeps the stomach healthy. Fennel seeds helps in digestion improves immunity and facilitate milk production.

- High proteins, high energy foods – meat, milk, fish oil, nuts, seeds, cereals, beans and cheese.
- Micro nutrient supplement should be given to prevent deficiency disorders and anaemia.

- Iodine deficiency, vitamin a deficiency should be prevented so that mothers can have good resistance to infection and to produce nourishing breast milk.
- Include whole grains such as whole wheat breads, pasta, cereal and oat meal in her daily diet.
- Yellow vegetables, carrots, yellow fruits - mangoes and dark as cabbage and spinach.
- Should drink water to satisfy the thirst many women find they are thirst while breast feeding.
- Dietary restrictions from pregnancy do not apply to breastfeeding moms.

Good routine postnatal care includes counselling her about her nutritional needs.

Emotional support for the mother after they came back. That they are not isolated postnatal care of Indian mothers is different from western country. A new mother has to adjust to new routine and has to take instruction for even a smallest thing. Midwives also called dias or Japa maids come from rural areas and they take care of mother and baby. They massage mother and baby which strengthen their muscles keeps the baby warm and helps mother to tone her body and her skin.

Bathing

In some families the mothers start bath after the delivery and in some from 11^{th} day onwards. It depends upon the type of delivery, oil massage given daily to mother and child for 2 to 3 months. Even if it is a normal delivery mother may feel week lower body. Massaging back hip, waist will help mother to gain strength.

Swimming should be avoided at least for the first 6 weeks after delivery.

Mother needs assistance in bathing without hurting the stitches. The incisions heal and dry at a slow pace.

If there are stitches at vagina betadine bath is advised wherein hot water is filled in a tub and betadine solution is poured and mother is make to sit in the tub. It is antiseptic and helps in healing stitches fast and prevent infection.

Pouring hot water on back, help reduces body pain and gains strength within weeks.

Clothing

The mother should wear loose fitting clothes. They should be of front opening for feeding purpose. It is better to use well-fitting brassiere to prevent excessive stretching of the skin under the weight of large breast.

A lot of blood and placental lining after childbirth is last for about 40 days and hence comfortable underwear with panty liners should be worn to avoid staining.

Mothers feel cold after delivery due to weakness in the body. Indian mothers wear a scarf to cover their head and ears. After delivery the body becomes sore and week. If the body is not kept worm mother may develop headaches and pain in the body. Wearing socks will speed up healing process.

Rest - Sleeping is the best recovery and healing, sleep when the body sleeps.

Regular health check-up: Greater emphasis should be placed on inducing the mother to come to the clinic for postnatal examination of herself as well as her infant 6-8 weeks after delivery. The doctor examines her pelvis, check her weight, blood pressure and her general conditions and suggest appropriate means for her welfare at the postnatal clinic mothers are granted to adopt suitable method for spacing the next birth for limiting the family size.

Care of Breasts: It is important to wash hand with soap and water before touching the nipples to avoid infection. The nipples are usually wiped with boiled warm water and a clean cloth before and after nursing the baby.

A good fitting brassiere which is essential to support the breasts during pregnancy and after delivery. A small pad or piece of cotton kept inside the bra or blouse will absorb any oozing of breast milk. If there are any cracks they should be treated instantly. Bacterial organism colonise in the cracked nipple and cause mastitis; which is a very painful condition. Such breasts conditions are to be treated with antibiotics. The baby is permitted to be nourished on the unaffected breast.

Sore Nipples: The baby sucking from a wrong position is a most common cause of sore nipples. If he does not have enough of the areola in his mouth he sucks only the tip of the nipple, frequent washing with soap also contributes the problem.

To prevent sore Nipples

- Advise mother not to wash their nipples with soap. They should wash them only while having a bath.
- Help the baby to fix on the nipple in the correct way.
- To take the baby off the breast at the end of a feed, advise the mother to wait until the baby himself releases the nipple. If he does not the mother should put her finger gently in the baby's mouth break the suctions.

- If the pain continue the milk should be removed by hand expression or with a pump and feed to the baby from a cup or with a spoon.

Challenges faced by a new mother.

- A lot of care and attention on the part of mother and needs to be handled delicately.
- Baby wake up at odd hours and mother hardly sleeps. She taken rest when baby is a sleep.
- Avoid stress, watching TV, Climbing steps and lifting heavy weights.
- Child birth and hormonal changes make her feel over whelmed.
- Lot of responsibilities and duties along with motherhood.
- Needs lot of support from family especially husband.
- Needs emotional support and helping hand.

Summary

The postnatal period is a critical phase which begins after the delivery of the baby and ends when the mothers body has nearly return to its pre pregnant state. The care of the mother includes pulse rate, temperature and perineal care. Rest and exercises serve well in taking care of the nourishing mother.

The diet of the mother should be rich in calcium and iron as this is needed by the growing baby. Regular health check-up should be emphasised.

Short Answer Type Questions

1. Write about the clothing for postnatal mother.
2. How to prevent sour nipples?
3. What are the challenged by the new mother?

Long Answer Type Questions

1. Write about the diet of mother and infant during postnatal care / period.
2. Write short notes on
    a. Care of breast
    b. Clothing for a new born baby
3. Postnatal care is much important for mother and child why? Discuss.