

IVC Course Code : 412

**PRE-SCHOOL TEACHER TRAINING (P.S.T.T.)
First Year**

(w.e.f. 2018-19)

Intermediate Vocational Course

Paper I : Introduction to Child Development

Paper II : Organisation & Management of Creches

Paper III : Health & Nutrition



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EXAMINATION FOR VOCATIONAL COURSES
1ST YEAR PRE SCHOOL TEACHER TRAINING
COURSE

Part-A		Theory		Practicals		Total	
		Periods	Marks	Periods	Marks	Periods	Marks
1.	General Foundation Course	150	50	-	-	150	50
2.	English	150	50	-	-	150	50
Part-B		(VOCATIONAL SUBJECTS)					
3.	Paper-I Introduction to child development	135	50	135	50	270	100
4.	Paper-II Organization & management of Creches	135	50	135	50	270	100
5.	Paper-III Health & Nutrition	135	50	135	50	270	100
Part-c		On The Job Training: creche/anganawadi centre(Nov-Dec)					
6	OJT	-	-	363	100	363	100
TOTAL						1473	500

EVALUATION OF ON THE JOB TRAINING:

The “On the Job Training” shall carry 100 marks for each year and pass marks is 50. During on the job training the candidate shall put in a minimum of 90 % of attendance.

The evaluation shall be done in the last week of January.

Marks allotted for evaluation:

S.No	Name of the activity	Max. Marks allotted for each activity
1	Attendance and punctuality	30
2	Familiarity with technical terms	05
3	Familiarity with tools and material	05
4	Manual skills	05
5	Application of knowledge	10
6	Problem solving skills	10
7	Comprehension and observation	10
8	Human relations	05
9	Ability to communicate	10
10	Maintenance of dairy	10
	Total	100

NOTE: The On the Job Training mentioned is tentative. The spirit of On the Job training is to be maintained. The colleges are at liberty to conduct on the job training according to their local feasibility of institutions & industries. They may conduct the entire on the job training periods of I year and (450) II year either by conducting classes in morning session and send the students for OJT in afternoon session or two days in week or weekly or monthly or by any mode which is feasible for both the college and the institution. However, the total assigned periods for on the job training should be completed. The institutions are at liberty to conduct On the Job training during summer also, however there will not be any financial commitment to the department.

PRE-SCHOOL TEACHER TRAINING

Paper - I

INTRODUCTION TO CHILD DEVELOPMENT

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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 unit the 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 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 2011 date 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 12th 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 fire 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 desire 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 than those who do not go to preschools.

Contribution of Philosophers

Froebel

The German Educator Friedrich Froebel was one of the pioneers of early childhood education. He believed 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 an 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 millan 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 height 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 learning and 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 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 inheritance 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 changed 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 from 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 fellows, 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 feeling of Adequacy

The need for feeling 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 and 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 and 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 studying 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 life. The infant pushes forward in every area of development - Physical, emotional and intellectual. During infancy the child begins with little coordination and no control over his movements with no information about himself or 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 hereditary and 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 kgs initially a baby loses its 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 changing due to continuous changes in body proportions. At birth a baby has a large head and is top heavy. As it grows, the trunk and limbs 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, hormones, 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 and peel easily. Diaper 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 hereditary 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 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 within the age range mentioned. Some variations are bound to be there.

If these variations 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 sentences.

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 roll 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 position. 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 children's 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 are 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 feeling 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 subsides 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 stranger 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 minor 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 forehead.

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 play 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 to be able to 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 stage (2-7 years)
3. Concrete operational stage (7-12 years)
4. Formal 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 play 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 organize 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 thoughts and 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 hunger, pain, fatigue and other unpleasant bodily states and to satisfy their desire for attention.

Babbling:

Babies make simple sounds during the early months 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 babbling. 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 gestures 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 phrases or sentences

Increasing comprehension

The first step for communication is the ability to understand what other say. They understand through gestures 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: butterfly for butterfly and substitution of letters, syllables 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 phrase 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

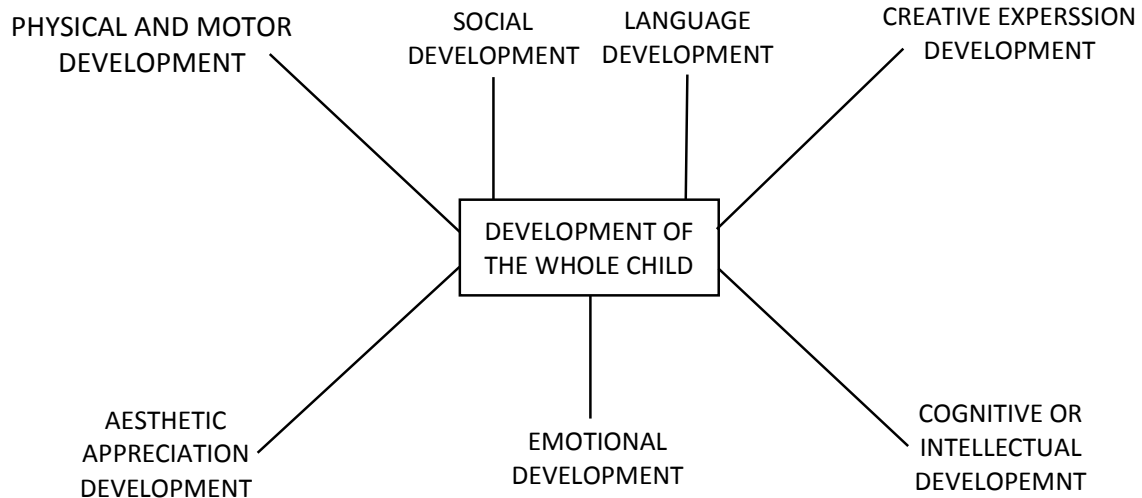
Receptive skills	Expressive skills
<p>It is what children acquire when they learn to listen and understand</p> <ul style="list-style-type: none"> • Conversations • Way of talking • Expressive languages • Way of asking questions 	<p>It includes words grammar elaboration</p>

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 to 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 preschool, 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 thereof require services or activities not ordinarily provided by the school (Public law of VS) (Section 902)

In 1972 Sidney Marland defined giftedness 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 mental 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
- Brain 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
- Tilt head or squints eyes to achieve better focus
- Uses one eye more than the other for reading

- Complaints 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 mental 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 sees 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, whereas 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 or 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 adversely affects his educational performance. "Hard of hearing" means a hearing impairment which adversely 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 in 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 background 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 supervision.

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 years old.

The period of infancy is subdivided into 2 parts

1. The period of parturition
2. The period of Neonate

The period of parturition 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 - Infants heart beat varies from 150 to 180 beats / 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 vigorously to 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

The helpless 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 is 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 cry, although occasionally he 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

At times there is a boggy swelling on one side (or rarely on both sides) of the head on the second or third day. This is due to a little bleeding under the outer layer of the bone of the head. The outer layer of the bones of 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 ranges 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° F is maintained. But the temperature will vary from 85° to 90° 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 and 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 stream. As a result the foetus grows and developed at a rapid rate. After birth nourishment must 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 stream. 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 pain 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 compared to adults.

Reflex irritability

The new born baby shows reflex action i.e. irritability when we touch 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 makeup 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 comes from the French word 'Jaune' 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 breaking down red blood cells that is most of the babies 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

While 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 trapped in the bottles.

Bottle should be cleaned after every feed. 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.

Bottle 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 germs and also to make proteins soft.

Refer Table No.-I

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°F or 32°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 dab 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 concentration 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. It 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 thyroidism

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 parturition 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 by 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 nurse (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 babies can 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 feed 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 through 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 handles these feedings she is fed progressively larger quantities.

4. Dropper Method

If the premature baby's sucking capacity is weak the baby can be given milk with a dropper and milk being dropped into the back of tongue from where he swallows. At present doctors 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 known 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 baby.

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

Summary

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

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

Pre-term infants have higher nutrient requirements 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 the gastrointestinal 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.
- Care 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°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 diet 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 Mother

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 11th 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 weak 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 made 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 weak. If the body is not kept warm 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 suction.

- 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.

PRE-SCHOOL TEACHER TRAINING

Paper - II

ORGANISATION & MANAGEMNT OF CREECHES

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**PRE – SCHOOL TEACHER TRAINING
PAPER-II**

ORGANIZATION AND MANAGEMENT OF CRECHES

UNIT 1: Introduction to Crèches

UNIT 2: Importance of Creche

UNIT 3: Physical setup of Creche

UNIT 4: Creche Staff

UNIT 5: Planning activities of Creche

UNIT 6: Maintenance of records

UNIT – 1

INTRODUCTION TO CRECHE STRUCTURE

1.0: Introduction to Child Care

1.1 : Definition of Creche

1.2 : Aims and Objectives of Creche

1.3 Types of Creches

Learning Objectives:

By the end of the unit, student will be able to

- Define day care centre.
- Understand Objectives of Creche.
- Know the types of Creches.

UNIT – 1

INTRODUCTION TO CRECHE

1.0 : Introduction to Child Care

Child care has become an important part of life for many families. In recent years more women are working outside the house due to necessity and also for higher education on par with the male members of the family.

The data on working mothers and the preschool children indicate that 47% of working women in the child bearing age have children under 6 years and only 47% of the preschool children whose mothers are working get some sort of institutional care. In a study on working mothers and early childhood education 78% of the sample felt that day care centers would lighten the mother's work load. The breakdown of joint families is another reason for mothers to seek child care services. Higher education, employment and equal participation of women in all spheres of life is forcing women to look for Creches.

In India day care centres were first started by the managements of various Industries as a welfare measures under the factory Act of 1948. Subsequent legislations made it obligatory for the employers employing fifty or more women to run a crèche in the work premises.

(a) Good Child Care / Ideal Child Care / Quality Care:

Quality care is the friendly and warm environment that provides the necessary ingredient for a child's healthy growth and development – intellectual, physical and social and emotional. Ideal child care provides safe, responsive, contestant care that enhances the child's growth and development.

Quality Care is loving care in a group setting for children whose parents are away for full day or part time of the day.

Day Care programme is a specialized program or facility that provides care for children from infancy through preschool age and is considered as a substitute for homecare women education and economic independence has improved the financial condition of the family but rearing children and caring for them have become a challenge for families if the couple are working. Hence, the day care centers assume an important role.

(b) Types of child care programmes

The number of child care options varies from family, community to community. Let's look three basic kinds of day care and consider some of the advantages and disadvantages of each day care programme.

1. Family Day Care
2. Home Care
3. Centre-Based Care.

1. Family Day Care:

The child will be sent to the child care worker's home for the whole day or part of the day. It is a loving care in a home setting. Housewife or an experienced mother may keep five to six children at home and provide day care in a family atmosphere. Most family day care providers accept children from infancy through school-age.

Advantages:

1. Family day care home may be in the neighborhood.
2. Home like, family atmosphere for child is provided.
3. Group size is small.
4. There are opportunities for child to interact with other children.
5. Sibling can be together.
6. Care schedule is often flexible.
7. It may be less expensive care.
8. Accept children up to school age.

Disadvantages:

1. It may be difficult to find a trained family day care provide.
2. She may enter another job little warning.

2. Home Care Centre:

In this type of child care, child care worker or turned ayah / servant comes home to take care of the child for full day or part of the day.

Advantages:

1. Child or children can be in their own home with own things.
2. Siblings can be together.
3. Schedule / Programme may be most flexible.
4. Worker often does house work as well as child care, but the child care must come first.
5. It may eliminate packing of food and transportation problems for parents.

6. It may eliminate the problems of transmittable / contagious diseases and keeps the child healthy.
7. Children may be safer and feel more secure in their own home.
8. Children receive individual care.
9. Care is still available when child is sick.
10. Parents are sure of the care their children are receiving.

Disadvantages:

1. It may be difficult to find trained family day care welfare.
2. The worker may quit the job with a little notice or warning.

3. Centre – Based Care:

Child attends a day care Centre / Creche for full day or part of the day. This centre may be organized by an individual or group of individuals or by any institution.

Advantages:

1. Children can interact with other children of their age.
2. Environment is designed specially to meet the needs of children.
3. Child Care usually continues in the same centre for as long as care is needed.
4. Some centers offer reduced rate for families with more than one child enrolled.
5. Centers may provide nutrition and health services.
6. Staff and trained supervised.
7. More resources and equipment are available.
8. Children shows better skills than those cared for at home because children have more opportunities to interact with other children and are exposed to more learning materials.

Disadvantages:

1. Lack of home like atmosphere.
2. Large groups may be unsuitable for some children.
3. Large group's size may make it difficult for centre to follow parent's wishes.
4. Less individual attention to each child.
5. It may be most expensive type of care (transportation charges)

1.1 Meaning of Creche:

A Creche takes care of the babies below the age of three years. A Creche is supposed to provide physical care, nutritive diet regular checkup, intellectual education through play and recreation.

Creche is a place where babies and young children are cared for during the working day. Creche is one kind of day care centers that take care of children below 3 years whose parents are at work.

Creches are known by different names such as Day care centres, day homes, nursery school, Leisure hour homes and kinder garden.

In India, day care centres were first started by the management of various Industries as a welfare measure under the factory Act of 1948. Subsequent legislations made it obligatory for the employers employing 50 or more women, it is compulsory to run a crèche in the work premises.



PICTURE 1.1: INFANT CARE IS PRECIOUS

1.2 Aims and Objectives of Creche:

1. To provide physical care.
2. To provide psycho-social stimulation to the children.
3. To provide nutritious diet.
4. To provide medical care.
5. To provide informal education to the children.
6. To educate mothers regarding child rearing practices.
7. To educate mothers regarding nutrition and health care of children.

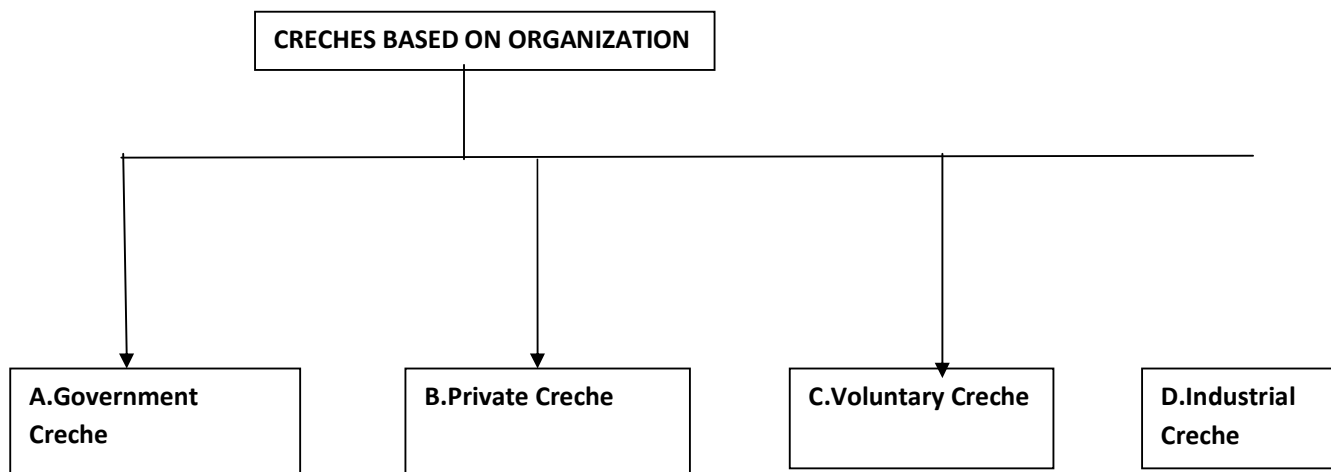
1.3 Types of Creches

Creches can be broadly classified into two types. They are

1. Based on organization
2. Based on location

1. Creches based on organization

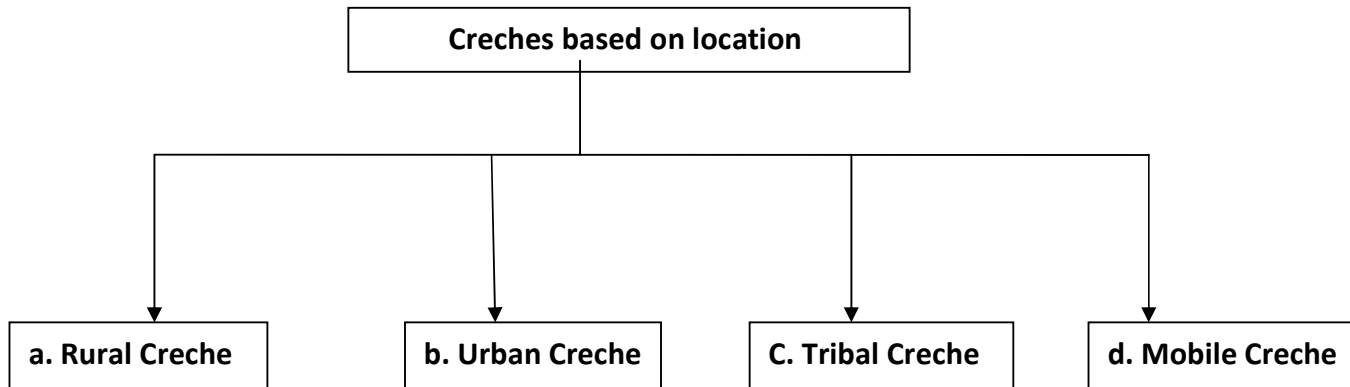
- a. Government Creche
- b. Private Creche
- c. Voluntary Creche
- d. Industrial Creche



- a. **Government Creche:** All the creches run by state or central Government institutions can be termed as Government Creche. They are situated in the premises of Government offices to help women employees.
- b. **Private Creche:** These are organized by private individuals in towns and cities like private nursery schools. These creches are run by profit and commercial basis. The food is not provided by the crèche and the fee charged is high.
- c. **Voluntary Creche:** Voluntary organizations interested in welfare of women and children establish crèches in rural, urban and tribal areas.
- d. **Industrial Creche:** Creche organized by an industry or factory either managed by government or private sectors are known as Industrial Creche. These Creches will be situated in the premises of the Industry, Good health and nutrition facilities are provided by these crèches. Many industries provide Milk, Biscuits, Fruits, sometimes common lunch to all children.

2. BASED ON LOCATION

- a. Rural Creche
- b. Urban Creche
- c. Tribal Creche
- d. Mobile Creche



- a. **Rural Creche:** A crèche located in a village or a rural area is known as rural crèche. These crèches are mainly seen by Government departments like women and child welfare and social welfare and some are seen by voluntary organizations. The budget or grant in and is released by Government.
- b. **Urban Creche:** A Creche situated in urban areas like towns and cities is known as urban crèche. These creches are run by state and central Government/institutions as well as by private individuals. The number of urban crèches is more compared by any other type of crèches.
- c. **Tribal Creche:** A crèches located in tribal region is known as tribal crèche. These crèches are purely managed by either Government or Voluntary organizations as the case with rural crèches. These crèches are run with minimum equipment and materials and meant for only tribal women.
- d. **Mobile Creche:** For the first time in the country mobile crèches were started in the year 1969 in Delhi. Mobile Creches are started for moving people like construction workers who move from one side to another. Children of unskilled workers / laborers working at agricultural fields, construction sites, road works etc., will be provided with simple accommodation and low cost materials for pay at work site itself.

These crèches are run by voluntary agencies or private individuals. These programmes make it possible to reach the under privileged and migrant population whose living conditions are very bad.

SUMMARY

1. Creches take care of children below 3 years of age.
2. Mobile Creche is meant for moving population.
3. Creche is an avenue for self employment for young and needy women.
4. Private Creches are more expensive than Government Creches.
5. Quality of service provided by a crèche depends upon the abilities of child care workers.
6. Now a day's number of crèches in towns and cities are increasing year by year.

SHORT ANSWER QUESTIONS:

1. What is a crèche?
2. What is a mobile Creche?
3. What is quality day care?
4. Give disadvantages of family day care programme.

LONG ANSWER QUESTIONS:

1. Write about Creches based on location.
2. Explain about crèches based on organization.
3. What are the types of child care programmes? Explain advantages and disadvantages of any one type

UNIT – 2

IMPORTANCE OF CRECHE STRUCTURE

2.1 Need for Creche

2.2 Role of Creche

LEARNING OBJECTIVES:

By the end of the unit, student will be able to

- Understand the need for crèche.
- Know the role of crèche in meeting the need of parents, children and community.

2.1 Need for Creche:

Research studies conducted by the psychologists and educationists all over the world have showed that an adequately enriched environment in early childhood brings about optimum development in various aspects. The planning commission of India in their sixth plan frame work states “Attention should be paid to all children their crucial development years”.

The rationale or starting a creche / day care centre for the young babies / infants is thus two fold to release the mother for the labour force and to release the child of school going age for school.

Under the contract labour regulation and abolition act of 1970, there is provision for the maintenance of crèches. The Act provides for a crèche to be located within 50 metres of every establishment where 20 or more women are ordinarily employed as contract labour.

According to the factories Act 1948, every industrial establishment employing certain number of women workers (30 or more women) has to provide services of a crèche for the babies of working mothers. The need for crèches is being increasingly recognized with rapid industrialization in the country. The government of India implemented a scheme on crèches for children through voluntary organization, which made a modest beginning with 247 creches to cover about 5000 children in 1974-75

The National policy on Education (1986) National policy for children (1994) National policy for Empowerment of women (2001) and National plan of Action for children (2005) emphasized the need for child care services.

Creches routine emphasizes cleanliness, habit formation, nutrition and close interaction with adults with one child care worker for every 10 children. Creches have become social necessity because of a number of reasons:-

1. Due to emancipation and gender equity more and more women being educated are preferring to work outside the home.
2. Due to economic necessity and high cost of living many mothers are taking up employment outside the home and hence need child care facilities.
3. Due to increased urbanization and breakdown of joint families, older members are no longer available to look after children. It is true even in the care where mothers are not employed or partly employed.

4. Creches provide services like supplementary nutrition, medicine, recreation and weekly health check-up. This is advantageous for poor, illiterate and under privileged population.

2.2 Role of Creche:

A. Role of Creche in meeting the needs of children.

Benefits to Children:

1. Attending the crèche help the child to adjust better in school.
2. Child gets to be in the company of other children helping his social adjustment.
3. Child in a day care centre get lot of physical facilities like space, toys, equipment and opportunities to explore which we would most have at home because now a day's families live in small apartments with limited space and resources.
4. Child in a day care centre gets nutritive diet and medical care which helps in his physical and mental development.
5. Child also receives informal education and early stimulation by attending crèche.
6. Creche provides opportunity for the older siblings, to attend anganwadi or primary school, especially true with children of rural area.

Benefits to parents:

1. Mothers of young children can take up jobs outside the home when children are in the crèche.
2. Mothers can supplement the family income through employment.
3. When children are in crèche, mothers have more time for higher education, for relaxation, to be with other family members and other pursuits.
4. Mothers are being educated on good child care practices, child health and nutrition day care staff.

Benefits to Community:

1. Families living in the community have the benefit of utilizing the day care services.
2. Because of the availability of child care serviced women come forward to take up employment outside the home.
3. Few job opportunities like child care worker/ayah are created for the people of the community.

Summary:

The demands for crèche or day care centre is increasing day by day in every part of the country because of increasing number of women working outside the home.

Children's early experiences have a significant impact on children's learning and development.

SHORT ANSWER QUESTIONS:

1. Write any two benefits of crèche for parents.
2. What are the provisions made under the Factories Act of 1948?

LONG ANSWER QUESTIONS:

1. Explain the need for organizing a crèche.
2. Write the benefits, children receive by attending a crèche.
3. Explain the role of crèche in meeting the needs of parents and community.

UNIT – 3

PHYSICAL SETUP OF CRECHE

STRUCTURE

3.1 Location of the Creche

3.2 Building requirements of Creche

3.3 Space requirements of Creche

3.4 Selection and care of equipment

Learning Objectives:

By the end of the unit, student will be able to

- Know the location of the crèche.
- Know the building requirements of crèches.
- Know the space requirements of crèche.
- Select suitable equipment for Creche.

3.1 Location of the Creche:

In urban areas, a crèche should be located near the places of work like the office area, industrial units etc. However in the rural areas, the crèches should be located near the fields. Orchards, plantation, small units of cottage industries. It should be conveniently approachable by the women labourer.

The main responsibility of a day care centre programme is to create an environment that is appropriate for young children. Low windows allow children to look out. There should be proper water and toilet facilities in the day care centre.

1. Creche should be located in an urban area having work places, in rural area, in tribal area and in work site or construction area.
2. Creche should be conveniently accessible to mothers.
3. Creches should not be in close proximity to any part of a factory where fume, dust, bad odour and noise exist.
4. Creches should be away from busy roads with heavy traffic and crowded areas.
5. Creche should be located in safe surroundings without any open manholes / drainage, wells and electric wiring.
6. Creches should be located on the ground floor.
7. Creches should be located in close proximity to primary health centre or a clinic with medical facilities.

3.2 Building requirements of Creche:

Generally the crèche building should consist of one big hall for play and activity, a kitchen a toilet and some outdoor space. Unfortunately in India the registration or licensing of the crèches is not required and hence the crèches are run with different standards. The government has not formulated rules regarding the size and number of rooms, the adult children ratio and the minimum (standard) facilities that need to be provided.

It is also observed that only Government and Industrial crèches have a separate building constructed for the purpose and sometimes a part of the big building is allotted for crèche.

The private crèches mostly are run in either a single room or at the most in two rooms of a residential house. A mobile crèche does not require any specific

building. In case of tribal and rural Creches, a beg room which can accommodate all children will be sufficient and it is known as multipurpose room.

The play room should be large enough for children to move freely. The amount of space should be adequate in relation to the number of children. The room should be free from hidden area to facilitate supervision. The walls should be coated with washable distemper and painted with attractive pictures at low levels, visible to the children. Shady outdoor space is essential for children to spend time in outdoor play.

Building requirements of a crèche:

1. The crèche building should be made of heat resisting material.
2. In towns, the Creche building should be made of bricks with finished cement surface and in rural areas, the floor and the walls could be mud plastered.
3. One big hall with adequate storage space, a kitchen sickroom and sufficient number of bathrooms should be made available.
4. Flooring which should not be too smooth / rough easy to clean.
5. The rooms should be provided with necessary doors and windows for adequate light and ventilation.
6. The height of the rooms should not be less than 10 feet from the floor.
7. There should be facilities for running water and filtered water for drinking.
8. There should be adequate number of toilets which are clean and well ventilated.
9. There should be a shady open play ground which is suitably fenced for older children.
10. There should be adequate storage space to store the equipment safely.
11. The roof of the building should be made of rain – proof materials.
12. There should be provision for sickrooms.
13. The building should be periodically inspected in – order to see that it is safe and is maintained under sanitary conditions.

3.3 Space requirements of Creche:

As children of those age group especially older children are tremendously active and are always running jumping, carrying things. They need enough space for movement.

**Ideal space requirement:**

Indoor-20 square feet of floor area per child.

Outdoor – 70 square feet of floor area per child.

Indoor Space: The furniture may be light in weight and painted in bright and attractive colors. The furniture should be arranged in such a way that there is more space provided to children to freely and play around indoor.



Outdoor play space: The outdoor area may have shaded place for children to be engaged in free play as well as running, climbing, jumping etc. There should be provision for sand pit, swings and slides. Small flowery shrubs may be planted along the boundaries to give attraction.



3.4: Selection and care of equipment:

Children require a stimulating environment which necessarily has a variety of materials to arouse curiosity and interest to promote learning.

Equipment for Creche can be grouped into four categories namely.

1. **Furniture:** It includes cradles, beds / cots small chairs and necessary furniture for the staff.
2. **Kitchen equipment:** Utensils, Stove, Sieving and feeding equipment.
3. **Play equipment:** Pull and push toys, squeeze toys balls mechanical toys and simple puzzles, building blocks etc.
4. **Miscellaneous equipment:** Cleaning materials bathroom accessories, medical kit, rubber sheets, blankets etc.

A. Play Equipment:

For running a Day Care Centre/ Creche play equipment is necessary. The teacher needs variety of equipment to provide the children with challenging and interesting learning experiences.



1. Indoor equipment:

Lots of simple play materials keep young children engaged in learning. For eg: Squeeze toys, simple puzzles pull and push toys, manipulative or

mechanical toys, boxes, blocks, nesting toys, big size wooden beads, fixing toys would help in muscle and eye hand coordination. Picture books identification, turning of pages and recognition

List of Indoor equipment:

All Creches should have minimum equipment which is strong and made out of local material. An Ideal Creche should have the following equipment.

1. Cradles for infants.
2. Beds for babies over one year.
3. Mattresses.
4. Cotton bed sheets.
5. Rubber sheets.
6. Blankets.
7. Small Pillows.
8. Cups / glasses for milk and feeding bottles.
9. Utensils for heating / preparing milk.
10. Toys.
11. Medical kit / First aid box.
12. Table and chair for the Creche supervisor.
13. Soaps, oil, towels, power and combs etc.

B. Selection of equipment:

The following criteria should be kept in mind while selecting equipment for crèche.

1. While selecting equipment we have to consider number, age and developmental needs of children.
2. Equipment should be sturdy, portable and in expensive.
3. Equipment should be strong and made out of local material.
4. Equipment should be bright with attractive colours.
5. Equipment should be durable and safe, should not have sharp edges, should be painted with safe paint, which does not contain lead.
6. Equipment must be of proper size and must be multipurpose in character whenever possible.

**C. Arrangement and care of equipment:**

1. Proper arrangement facilitates all children to use all the play equipment regularly.

2. Display of equipment enables the child care worker and parents to know the available equipment for children.
3. Play equipment should be arranged in low shelves, attractively to promote independence in children.
4. Care of equipment is also important to use the material for long time.



Licensing:

Licensing of child care programmes and establishing of regulatory standards are all done to protect health, safety, education and welfare of the families and children who enters child care programmes. Licensing of centres is required depending on the type of programme being planned and the geographical location of the centre. Licensing requirements will have to be met before a centre can open.

Licensing regulations:

1. Building safety.
2. Requirement for physical space.
3. Teacher Child ratio.
4. Transportation.
5. Staff Qualifications.

1. Building safety:

Licensing regulations always include at least the minimum fire, sanitation and building safety standards that apply to all public and private services. Building usually covers wiring, plumbing and building construction, Fire extinguishers etc. Sanitations regulations covers condition in all areas of the building with particular attention to the bathrooms and preparation and serving of food.

2. Physical state:

Licensing regulations usually specify the amount of space necessary for programmer for infants and toddlers. The requirements below three years 20 sq. feet per child indoor space. 60 sq.feet outdoor space. The source of light, fresh air, fencing of outdoor low windows, number of toys are also include in regulations covering physical state.

3. Teacher child ratio:

Most regulations required that two responsible adults be on the premises at all times. The ratios are established for protecting the safety of children that there is rarely a mention of the training of staff member.

4. Transportation:

In centres where transportation service is provided the service must meet the state motor vehicle department standards for school bus service. These standards regulate number of children, type of lights on vehicle appropriate licensing and the driver.

5. Staff Qualifications:

Care givers may require at least high school diploma, training in child development or early childhood education or preschool teacher training, nursing or paramedical training.

SUMMARY

1. Location is one of the important factors for success of a private crèche.
2. Outdoor space is also essential for young babies to play outdoor.
3. Good planning and preparation is needed for purchase of equipment.
4. The care givers should try to buy equipment which can be used for more than one purpose by more than one child.

Short Answer Questions

1. Write the space requirements of a crèche child.
2. Write short notes on indoor equipment.
3. Mention four factors to be considered for selecting building for crèche.

Long Answer Questions

1. Explain about location of the crèche.
2. Write in detail about building requirements of a crèche.
3. Explain about selection, arrangement and care of equipment.

UNIT – 4**CRECHE STAFF****STRUCTURE****4.1 Staff pattern****4.2 Responsibilities of Creche Supervisor****4.3 Responsibilities of Creche Ayah or Care Taker****Learning Objectives:**

Students will be able to understand

- The staff pattern of crèche.
- Responsibilities of crèche supervisor.
- Responsibilities of crèche ayah

4.1 Staff Pattern:

(A) Strength of the Crèche: Space arrangements, the ages of the children and the experience of the staff are some of the factors influencing the strength of the crèche. The total number of babies in a crèche should not exceed 25 and should not be less than 10 irrespective of the type of crèche.

(B) Staffing Pattern: The Staff was to consist of women with midwifery Qualification or nurse training or preschool teacher training or training as crèche supervisor and female ayahs.

1. The ratio between the babies and the staff should be.
 - a. One staff member for 5 babies up to one year.
 - b. One staff member for 10 babies between one – two years.
 - c. One staff member for 15 babies between two and three years.
2. Generally the ratio should be as under

Number of children	Staff members
10 children	1
10-25 children	2
25 and above	3

3. The Ayahs should not be less than 20 years of age.
4. Staff should have training, experience in handling babies and knowledge of child care.
5. Services of a part time medical attendant should be available to every crèche.

(C) Problems in Creche management:

1. Lack of trained crèche supervisor/child care worker.
2. Lack of sufficient finance.
3. Lack of proper building and required space.
4. Non-Co-operation of parents.

4.2 Responsibilities of crèche Supervisor:

The children of the day care centre/crèche are under the custody of child care worker or crèche Supervisor. The responsibility of providing a Quality day care/good care depends on the shoulders of the crèche supervisor. The crèche programme is built around health, nutrition and informal education for children.

(A) The following are the responsibilities of crèche supervisor and care worker.

1. Over all supervision of the crèche.
2. Plan daily, weekly and monthly programme of the crèche and implement the programme through participation.
3. Main admission, health records etc.
4. Conduct various stimulation activities for children.
5. Supervise the feeding programme.
6. Establish good relations between home and the creche.
7. Educate the parents in relation to child care health and nutrition.

(B) Interaction of child care worker with below one year children.

1. Make eye contact, smile, talk to the child affectionately.
2. Clap hands to get attention.
3. Use rattles and sound making toys,
4. Hold the child closer and sing songs.
5. Raise the child in the cradle.
6. Cuddle the child to provide sense of safety and security.
7. Show mobiles and pictures and talk to the child.
8. Arrange soft music when children are put to sleep.

(C) Interaction of child care worker with children between 1-2 years

1. Place different objects in front of the child and ask to name the objects.
2. Count while climbing steps or sorting beads or toys.
3. Hide toys and encourage the child to search.
4. Show and name objects during free play and while eating.
5. Verbalize actions during daily activities child listens and develops receptive language.
6. Encourage imitation of actions and sounds of animals.

4.3 Responsibilities of Creche ayah

1. Ayahs should keep the indoor and outdoor area clean.
2. They should feed children at regular intervals.
3. They should attend to the children's toilet needs and keep children dry.
4. They should understand each child's individual needs and pattern of behavior.
5. Ayah should establish attachment with few kids and form trusting relationship. She should maintain personal hygiene and show interest in taking care of children.
6. She should maintain personal hygiene and show interest in taking care of children.
7. She should be watchful of child's health and note the changes.
8. She should be gentle in handling young children.
9. She should engage children in play when they are awake.
10. She should be physically and mentally fit to deal with the young children.



SUMMARY

1. To facilitate working women, more number of crèches must be started.
2. Adult, children ratio is important for providing quality care.
3. Quality of service provided by a crèche depends upon the abilities of child care worker.

SHORT QUESTIONS

1. What is the minimum and maximum strength of a crèche?
2. What are the problems related to crèche management?

LONG ANSWER QUESTIONS

1. Explain about strength and staff pattern in a crèche.
2. Write about the responsibilities of crèche supervisor.
3. Explain about responsibilities of crèche Ayah.

UNIT – 5

PLANNING ACTIVITIES OF CRECHE

STRUCTURE:-

5.1 Importance of planning activities

5.2 A sample programme for a Day Care centre/Creche

5.3 Activities of a crèche – Freeplay, Feeding, Toilet training, Bathing & Washing; Sleeping

Learning Objectives:-

By the end of the unit student will be able to

- Learn to plan activities of Creche.
- Understand different activities of Creche.

5.1: Importance of planning daily activities

The Creche is really the second home or even a home substitute for the children of working mothers while planning activities or programmes for crèche, one must take into account the needs of the children and objectives of the crèche. The activities for infants need to be educational for all round development of children. The day of the crèche begins when the children are brought to the creche by their parents. So the very first activity in a crèche begins with welcoming the children are made to perform various activities which help them for their all round development. The two major activities of the crèche are care giving and free play. The main purpose of the crèche is to take care of the children in the absence of their parents and to keep them busy with such activities that children may enjoy the atmosphere of crèche and they feel homely with the crèche

5.2: A Sample programme for a Day Care Centre

Timing	Activity
9:00 A.M – 9:30 A.M	Arrival , Free play
9:30 A.M – 10:00 A.M	Circle time / Story time
10:00 A.M – 10:30 A.M	Milk / Morning Snack
10:30 A.M – 11:30 A.M	Indoor Play
11:30 A.M – 12:00 P.M	Rhymes / Picture Reading
12:00 P.M – 12:30 P.M	Lunch
12:30 P.M – 3:00 P.M	Sleep / Rest time
3:00 P.M – 3:30 P.M	Afternoon Snack
3:30 P.M – 4:30 P.M	Outdoor Play
4:30 P.M – 5:00 P.M	Ready to go home

The day care centre aims to foster growth and development of the young children through its daily programme or routine activities. These are

1. Meeting the biological needs of young children like food, sleep / rest activity / exercise and visceral needs.
2. Maintain safety and hygiene.
3. Understand and respect child's individual needs.
4. Be flexible and allow the child to have his own schedule of activities.
5. Provide stimulating activities for children.



5.3 The activities of the crèche or day care centre are follows.

- a. Free Play
- b. Feeding
- c. Toilet training
- d. Washing and bathing
- e. Sleeping / Napping

a. Free play:-

Planning a programme for infants play time is more informal. Child care worker must thoughtfully plan experiences over and beyond their physical care. Among these are physical activity toys to use and manipulate social stimulation and conversation, use of mobiles and pictures. Play time is sometimes in a cradle, sometimes in someone's arms, on a mat, on the floor, sometimes out of doors. Toys are necessary for a child to play and learn. From about three months, a baby needs stimulation in the form of simple play things. Noise – making toys such as bells or rattles are useful as soon as child learns to hold objects in his hands.

When children are at play child care worker should take care of the following

1. Encourage children to be as independent as possible.
2. Develop their language.
3. Offer much practice in small and large motor skills.
4. Give children opportunities to a wide variety of experiences and materials.
5. Organize free play area into a doll area. Construct toy area, a hard floor area for bikes and push toys, an area for music and manipulate toys.
6. Ensure the safety of all children that also encourages independence in play.
7. Supervise all the toy areas as toddlers play in largely centered on toys, not on other people.
8. Encourage incidental teaching by care givers.

**b.Fedding:-**

Meal time is an important social and emotional experience around which many kinds of communications between adults and children take place and much learning goes on.

Points to remember while feeding the children:-

1. Young children need to eat in the company of interested adults who create an environment favorable for eating and who help the children when needed.
2. There should be every possible provision for nursing mothers. Help the mother feel welcome and provide a place for her and her infant to be quiet and comfortable.
3. Care giver should sit and feed an infant while holding him or her caregivers should feed the same babies daily as far as possible.
4. Food should be served at room temperature.
5. Children like soft food rather than chewy food.
6. Young children need to be fed at regular intervals.
7. Children, who are fed well, enjoy good health.
8. The food if prepared at crèche should be cooked under hygienic conditions under the supervision of child care worker / Creche supervisor.
9. Children should be encouraged for self feeding by providing child sized unbreakable utensils, food that can be picked up like banana and give only small amounts of food.
10. Adults should understand each child's signals and interact responsively which leads to pleasant feeding experiences.
11. Child should be allowed to dislike and refuse food without being penalized.

12. Adult's reactions to specific foods will often influence the child's reaction of pleasure or dis-taste.
13. Adults must tolerate a certain amount of messiness in the child's eating behavior.



C.Toilet training:-

Control over bowel and bladder function is expected of most children in the second or third year. Coordination of the children efforts of parents and day care staff is important if the child is to master this developmental task without undue stress.

Points to remember in toilet training are:-

1. Toilet training happens as a part of normal development.
2. Readiness is important in toilet training.
3. Help children to feel physically secure by providing potties or very low toilets.
4. If appropriate, as parents to dress children in loose simple clothing. They can remove themselves.
5. Be gentle and understanding about toilet accidents.
6. Provide a physical and social atmosphere conducive to the mastery of the task.
7. Give clear clues to the child about what is expected of him.

d. Bathing and washing:-

Child relishes and learns from the social contact and from varied sensations as the experiences changes in temperature, texture, position, sight, sound and smell. The fact is that the bath calls for close adult attention makes it a marvelous opportunity to talk to an infant about himself and to stimulate the child's learning in a perfectly natural and informal manner.

1. Cleanliness can be a great point of conflict between parents and care givers if they have different standards.
2. Washing hands before meals should be encouraged.
3. Washing hands can be the most pleasant self help skills to learn if low sinks are available.
4. Washing hands can become a major activity because children greatly enjoy the sensory properties of soap and water.
5. Children should be encouraged to help to dress and undress themselves.
6. The floor and the toilets should kept clean to ensure health and cleanliness.

7. The bed linen should be changed every day and cleaned in warm water and mild soap.
8. Disinfectants should be used in cleaning the floor and washing clothes.
9. Toys should be washed once a week in soap solution.
10. The bath calls for close adult attention, makes it a marvelous opportunity to talk to an infant about himself, what is going on, what he is doing and how he is feeling.



e. Sleeping:-

Providing a routine or ritual in preparation for sleeping such as rocking the child, reading him a story or letting him look at a book, providing as much as possible the same place to sleep and a familiar adult providing a comforting toy or bottle are all appropriate ways of helping children rest.



1. It is important that infants be allowed to rest according to their individual needs rather than according to some one else schedule.
2. No one sleep schedule fit all babies in a programme and each baby personal schedule changes from time to time.
3. All babies do not express their need for rest in the same way. Care givers should understand each child's signals.
4. Parents are the best source of information about their baby's sleep patterns and needs.
5. Sleep is a guard against over stimulation.
6. Young children / infants require long hours of sleep.
7. Sleep may be disturbed by discomfort, hunger, digestive troubles etc.
8. Each baby should have a personal cradle located in the same spot every day. That kind of consistency and security may help the baby feel at home faster.
9. Older children can learn to rest according to a group schedule.
10. Make sure all children get plenty of fresh air.

11. Find out what kind of self calm behaviors a child has and encourage them. Eg: Stroke a blanket, twist hair, thumb sucking.
12. Provide a quiet, peaceful atmosphere with soft music if possible.
13. Do not let children get over tired. Some children have a hard time setting down to sleep when they are exhausted.

SUMMARY

- Care giving is one of the activities of the day care programme.
- During feeding attachments are formed between care givers and children hence feeding time is very important.
- There are great variations in the expectations and attitudes of individual parents regarding timing and methods of helping the child master bowel and bladder control.
- Care giver's responsibility is to see that all the children are comfortable in the crèche.

SHORT ANSWER QUESTIONS

1. What is a free play?
2. Who are the people with whom children interact in the crèche?

LONG ANSWER QUESTIONS

1. Explain briefly about importance of any two activities of a crèche.
2. What are the important parts to remember while feeding creche children?
3. Write short notes on following
 - a. Toilet training.
 - b. Sleeping

UNIT – 6

MAINTENANCE OF RECORD

STRUCTURE

- 6.1. Importance of maintaining records**
- 6.2. Types of Records**
- 6.3. Advantages of record keeping**

Learning Objectives:

By the end of the unit, student will be able to understand

- The importance of maintaining records.
- Know various types of records.
- Understand advantages of record keeping.

6.1 Importance of Maintaining records:

Records are documents bearing information preserved in permanent form. They are not maintained for the sake of storing information. Records in any institute are usually maintained to report the profile, programmes, achievement, financial and professional accountability and lay out for future. Crèches can also maintain record in order to note and follow – up children’s behavior and development.

For each child enrolled at the crèche, a variety of records are to be maintained. One of the responsibilities of crèche supervisors to maintain the records. When a child enrolled in the crèche, the supervisor fills in the child’s name, date of birth, date of enrollment and other related information, the immunization particulars of the child, address and phone number of child’s physician are also collected and the information is entered in admission and health registers respectively.

6.2 Types of Records:

- A.** Admission Register
- B.** Attendance Register
- C.** Health Register
- D.** Individual Case Records
- E.** Stock Register
- F.** Accounts Register
- G.** Menu Register
- H.** Visitors Register
- I.** Workers Register

Need and importance and procedures to be followed in maintaining various records and discussed below.

A. Admission Register:

As soon as the child is enrolled in the crèche, the information about the child should be entered in the columns given below.

This record should be maintained at the time of enrollment of children. This register should contain name of the child, particulars of the parent or guardian like parent name, occupation, income, caste, religion, address, date of discontinuation of the child. Contact telephone numbers of physician and parents should be recorded in this register.

Table-1 A model copy of enrollment record

Child's name	Date of Birth	Parent's address & phone number	Physician name address & phone numbers	Date of enrollment	Date of disenrolled

B. Attendance Register:

This register gives us the information on the strength of the crèche. Attendance need to be marked everyday to know whether the child is present or absent. The names of the children are to be written in alphabetical order and the presence of the child is to be indicated as (x) and the absence of the child should be indicated as (a). The attendance should be taken after one hour to make sure that all the children have arrived or not. Once the attendance is marked, the Supervisor has to countersign every day. This register mainly provides information on number of children present and number of children absent on each day.

Table-2 A model copy of Attendance register

Crèche attendance register for the month of 2018

S.no	Name of the child								Remarks

C. Health Record:

Health record is a record which contains information on child's health condition. The physician report will show the immunization record, height weight and health status. The height and weight of children should be taken once a month. Child health and weight shows child's nutritional status. Crèche supervisor can observe for vision and hearing problems. Medical checkups and recommendations can also be entered in health record.

Different vaccinations immunizations etc. given to child should be entered in health record time to time.

A number of routine health forms may be developed and presented to parents for signatures when a child is enrolled. The health file should have consent form obtained for emergency medical care for the child. It should have also have information on child's Immunization status.

Basic first aid training is needed for all staff members of the crèche. The supervisor should know the location of the house of the parents to contact in emergency condition in rural and tribal areas.

D. Individual Case Record:

This record must be maintained individually for all children, Individual case record provides the detailed information of child's family background and the behavioral development. The behavioral development of each child should be recorded periodically after careful observation and study of various skills. The various aspects of the record must be filled by the crèche supervisor. For example height and weight of the child should be recorded once in a month and family information should be recorded at the time of enrollment.

1. Model copy of individual case record :

A. General Information

- Child's name:
- Date of Birth:
- Order of Birth:
- Mother's Occupation:
- Mother's Education:
- Father's Occupation:
- Father's Education:
- Language spoken at home:
- Are there special word that would help us to communicate with your child?
- Does your child have any special problems
- Residential address
- Telephone no.
- Father's office phone no.
- Mother's office phone no.

B. Family Background

Type of family – joint / nuclear

Details of other family members in the house

S.no	Name of the family member	Age	Education	Occupation	Monthly Income	Relation with child

C. At Birth -----

At admission -----

weight :

weight:

Height:

Height:

Physical parameters	Age in months								
	7	8	9	10	11	12	13	-	-
Weight									
Height									

D. Motor development:

Age in years	Activities	Achieved / Not Achieved
Below 1 year	1. Puts objects in mouth maintain sitting position for 2 minutes stand with support takes a few steps without support	

1. Emergency medical treatment consent form**Dear parent/ Guardian:**

This form is provided to you to complete and leave with the crèche supervisor, if your child is in need of emergency medical treatment during your absence.

Child name

Date of Birth

Address

Home phone

Father's name

Work phone

Mother's name

Office phone no.

Child's physician

Home phone
Office phone no.

List any respiratory illness or medication allergies the child has

Date of last tetanus

Blood Group

Friend or relative that can be contacted.

1.

Phone no.

2.

Phone no.

Signature of parent /

Guardian

2. Day Care Centre Immunization information.

The following form should be submitted by parent at the time of admission.

Table – 3 information on Immunization

Name of the child:

Date of Birth:

Gender:

Place of birth:

Birth weight:

Birth order:

Family history: - Any significant illness in the family.

Age	Disease	Vaccination
At birth	Hepatitis b	Hep b vaccine – i
At birth	Polio	Oral P V o dose
Birth to 6 weeks	Tuberculosis	BCG
4 – 6 weeks	Hepatitis b	Hep b vaccine-ii
6 weeks	Diphtheria pert sis tetanus, polio	Dpt-i OPV-i
10 weeks	Diphtheria pert sis tetanus, polio, hepatitis b	Opt-ii, OPV-ii, hep b vaccine iv
14 weeks	Diphtheria pertusistetanus, polio	Dpt-iii. OPV-iii hep b vaccine iv
24 weeks	Hepatitis b	Hep b vaccine iii
9 – 12 Months	Polio, measles	OPV-iv measles
15 – 18 months	Mumps measles's Rubella	MMR
18 months	Diphtheria pert sis tetanus polio	Dpt- booster I OPV-V
24 months	Typhoid	Typhoid
4 – 5 years	Diphtheria pert sis tetanus polio	Dpt booster – ii OPV-Vi

E. Stock Register :

Stock register are maintained to record the assets and equipments of the crèche. Entry regarding the name of the article, date and place of purchase cost of item, quantity of the items and the total expenditure made. It is also records the issue and balance of items on a particular date.

The Stock register has to be maintained separately for Recurring items and Non recurring items. In case of non- recurring items such as weighing scales and almirahs, those are few in quantities and last a long time, list them with date received in the proforma given below.

Month & Date	Item particular	Quantity / Rate	Amount	Quantity Issued	Balance quantity	Remarks

Table – A model of stock register – Recurring items

For expendable items that are greater in number and replaced more often make a separate page for each item in the following Performa.

Month & Date	Item particulars	Opening	Issued / used	Lost / Damage	Balance	Remarks

Table – A model of stock register – Non – Recurring items

F. Accounts Register:

Accounts register is about sources of income and expenditure of the crèche / day care center. These are records of financial funds in the forms of fees, grants, aids and donations to the centre. The amount of fee paid per month is recorded in the register. Expenditure includes recurring and non recurring expenditure. Recurring expenditure means expenditure on food item, salaries etc. Non recurring expenditure includes furniture, play equipment etc.

G. Menu Register:

If a crèche is supplying food to children, this register is also contain the monthly food inventory report. Entries are to be made it on all feeding days when the supervisor takes out the days ration for cooking and whenever she receives stocks.

Nutritious food should be provided for the child's growth and body maintenance.

Each baby's need are very special and are likely to be very different from others. The proper amount and kind of formula is essential to the health and well being of the infants. Some crèches provide food for infants and some depend on the parents to bring food. In either case it must be handled properly and stored in the refrigerator or cool place.

Milk left in a bottle should be discarded after feeding. Crèche supervisor should hold the baby warmly while giving the bottle feeding. Breast feeding mothers should be encouraged to come to the crèche to feed then infants. The crèche supervisor ultimately responsible for the center's food service.

The supervisor should aware of the food requirements of young children for better menu planning.

Table – Suggested food requirements of 1 – 3 years of children.

Food Item	Quantity
Cereals	60 grams
Pulses	30 grams
Leafy Vegetables	50 grams
Other Vegetables	50 grams
Roots and tubers	100 grams
Milk	500 ml
Oils and fats	25 grams
Sugar / Jaggery	15 grams
Fruits	100 grams

Food supply in the crèche is important not only because nutrition effects the mental functioning and physical well being of the child nutritional habits and altitude towards eating are established during the early years.

A snack and one full meal that meet one third to one- half of the daily requirement must be served to ac child who spends five to eight hours at a crèche. The following points to be considered.

1. Nutritional considerations in meals planning for young children are necessary.
2. Children's appetite and food preferences must also be taken into consideration.
3. Children's foods must be neither too hot nor too cold.
4. Variation in texture, color and flavor are also important considerations in planning children's meals.
5. Further considerations are the availability of equipment and utensils and the preparation time for each menu item.

Meal and Menu planning can be systematized and simplified by using standardized recipes and sample menus. Some of the sample menus for breakfast, lunch and snacks are given below. These menu patterns can be repeated every three to four weeks.

Fig: G (a) Suggested Menus for breakfast 15 days

Milk Idly with chutney	Milk SUJI Upma	Milk Bread with omlate	Milk Dosa with chutney	Milk Vermicelli upma
Milk Poori with vegetable curry	Milk Vegetable Idli	Milk Rava Dosa	Milk Chapathi with Vegetable curry	Milk Pesarathu
Milk Wheat upma	Milk Roti	Milk Bread with Jam	Milk Ravva pongali	Milk Vegetable Dosa

Fig: G (b) Suggested menus for mid afternoon snack – 15 days

Ravva Laddus	Roasted Ground nuts	Ground nut chikki	Sprouted Green gram	Popcorn
Pakodi	Kesari	Coconut Burphy	Puffd rice roasted	Boiled Bengal gram whole
Vada	Carrot halwa	Boiled green peas	Biscuits	Namkens

H. Visitors Book:

The Creche should invite leading personalities from various fields including medicine, Engineering, education etc and should request them to address the children and to carry on a vacation workshop with them. Proper record of such visitors report should be maintained. Occasional arrivals of visitors from different works of life help us in maintaining true social and educational atmosphere of the crèche.

I. Worker's register:

A clear record of the different workers their individual duties, time of attendance, special behavior and abilities etc., if any should be carefully recorded. Work allotment should be based on educational qualities, special abilities and on the nature of the workers.

All the above records should be carefully maintained in a crèche. A careful record is very valuable source of basis of information.

6.3 Advantages of record keeping

Day care teacher should observe and monitor the overall development of the child and record it regularly. This would give an insight to the teacher to identify or understand the strengths and weaknesses of the child. Hence the teacher should know the importance of records and should develop the skills in maintaining them.

Uses of Record keeping:

1. Record keeping will facilitate smooth and proper functioning of the crèche.
2. Record keeping will provide entire information about the child health status, Developmental levels, family background etc.
3. Records are of great value to crèches in planning, executing evaluating programmes, methods and outcomes in relation to the objectives of the nursery schools in order to improve the capabilities of the teachers.
4. Record keeping also helps in knowing about children's age at admission/enrollment, duration of the stay in the crèche as well as equipment and facilities available in the day care centre.
5. Well maintained records are useful for conducting research on child growth and development.
6. In case of transfer / resignation of the supervisor, newly appointed supervisor will have all information needed about the each child.
7. Helps the teacher to determine the readiness of the children for preschool.
- 8.

SUMMARY

1. It is the responsibility of supervisor to maintain all the records.
2. Proper record keeping will enable the crèche to function effectively.
3. Crèche supervisor should know the records are maintained for the purpose of storage.
4. The children's records should be kept in a safe place to ensure confidentiality.

SHORT ANSWER QUESTIONS

1. Write about attendance register importance.
2. Write the major aspects of accounts register.

LONG ANSWER QUESTIONS

1. Write the maintenance of any two registers.
2. Explain about the maintenance of menu register.
3. Write about the contents of Individual case records.
4. List out the uses of record keeping in Crèche

GLOSSARY**Attachment:**

The primary social bond which develops between the infant and the caretaker.

Behavior:

Activities of the organism in response to external or internal stimulation.

Case history:

A study made of a particular child, family etc.

Child bearing age:

The period in a woman's life between puberty and menopause.

Child care:

Caring for the child or supervising the child.

Child Care Worker:

A person who is in – charge of providing care of children during the day or a person in – charge of the crèche or day care center.

Cognitive Skills:

They include a wide variety of abilities which are necessary for analyzing sounds, images, recalling information, making association between pieces of information and maintaining focus on a given task.

Creativity:

It is defined as tendency to generate or recognize ideals, alternatives or possibilities that may be useful in solving problems, communicating with others and entertaining ourselves.

Creche / Day Care Centre:

A center which provides care for children below three years of age.

Critical period:

It is a specific time during which an organism has to experience stimuli in order to progress through developmental stages properly.

Culture:

The system of shared beliefs, values, customs and behaviors that the members of society use to cope with their world and with one another and that are transmitted from generation to generation through learning.

Development:

A process involving many changes both qualitative and quantitative from generation through learning.

Disadvantaged children:

Children deprived of some of the basic necessities or advantage of life such as adequate housing, medical care or educational facilities.

Emotion:

A feeling or state with characteristic glandular and motor accompaniment.

Environment:

Environment literally means surrounding and everything that affects an organism during its life time is collectively known as its environment.

Growth:

The quantitative changes in the body dimensions that represent progress towards maturity.

House wife:

A married woman whose main occupation is caring for her family, managing household affairs and doing house work.

Imagination:

The power to create or reproduce ideally an object of sense previously perceived.

Immunization:

It is a way of protecting human body against infectious disease through vaccination.

Infancy:

The period of first two years during which one is totally dependent on one's well being on parental care.

Intellectual development:

Intellect pertains to the mind or understanding, and brain function. It is the growth and progress of the mind and its understanding.

Joint family:

A consanguine family unit that includes two or more generations of kindred through either the paternal or maternal line who maintain common residence and are subject to common social, economic and religious regulations.

Lactation:

The presence and secretion of milk which occurs automatically the breasts of the mother of a new born infant.

Learning:

Relatively enduring changes in behavior resulting from experience or by deliberate practice.

Legislation:

The exercise of the power and function of making rules that have the force of authority by virtue of their promulgation by an official organ of state or an organization.

Manipulative toy:

Toys that help children to improve their motor skills.

Maturation:

Developmental changes due to the process of growth of the structure in contrast to those derived from experience and learning.

Occasional care:

It is a center based care that supports families providing flexible care for children.

Protein:

A molecule containing amino acids.

Sibling:

A brother or sister. Sibling is one of two or more individuals having one or both parents in common.

Social development:

A process of change exhibited by individuals resulting from their interaction with other individuals, social institutions, social customs.

Socialization:

The process of transmitting and enforcing social and cultural norms and values to the new members of a group.

Social skills:

Ability to communicate, persuade and interact with other members of the society, without conflict or disharmony.

Supplementary nutrition:

When a particular nutritional substance is added to a diet to provide an essential nutrient.

Toddler:

The period of human development stage between 15 months to 30 months.

Weaning:

To accustom to food other than mother's milk or introduction of semi solids and solid food.

Voluntary organization:

It is one which relies on occasional or regular volunteers for its operations and may or may not have paid staff.

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PRE-SCHOOL TEACHER TRAINING

Paper - III

HEALTH & NUTRITION

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UNIT-1

CHILD HEALTH AND IMMUNISATION

STRUCTURE

- 1. MEANING, SIGNIFICANCE AND FACTORS INFLUENCING HEALTH***
- 2. IMPORTANCE OF PERSONAL AND ENVIRONMENTAL CLEANLINESS***
- 3. NEED AND IMPORTANCE OF IMMUNISATION, IMMUNISATION SCHEDULE-CARE BEFORE /AFTER VACCINATION.***

Learning objectives:

By the end of the unit ,

- Student will be able to understand the meaning, significance and factors influencing Health***
- Know the importance of Personal and Environmental cleanliness***
- Know the Immunization schedule for children***
- Know the care before/after vaccination***

Introduction

Children represent the future and ensuring their healthy growth and development ought to be prime concern of all societies.

Newborns are particularly vulnerable to malnutrition and infectious diseases many of which can be effectively prevented or treated.

Good child health is important not only for children and families but also for good health in adulthood. Health and education are important factors for the development of child.

Children health encompasses the physical, mental, emotional and social well being of children from infancy through adolescence.

Meaning of Health

Health is critical input for the overall development of the child and influences significantly the enrolment, retention and completion of school.

The word health was derived from the old English

word “hoelth” which meant a state of being sound and generally refers to soundness of the body.

Health is a complex entity which tells us about efficiency

of a living being . The World Health Organisation (WHO)

defined Health as “a state of complete physical, mental and

Social well being and not merely the absence of disease or infirmity” .

Health can also be defined as the state of absence of disease, normal function of a person as per his age and sex under the prevailing social and geographical conditions and his ability to work automatically on the basis of coordination and balance among different organs of his body.

Significance of Health for individual

Child’s health is important for proper growth and development of their mind and body. They require energy to spend entire day in school, pay attention in classrooms and participate in various activities. They need proper nutrition, balanced diet and regular health checkup which will prevent health problems in future.

Significance of Health for family

The family as a social institution has an impact on child’s health. From birth child grows in a family setting which protects, promotes health and prevents disease in children.

Family helps the child to develop stability and emotional maturity to be socialised and an accepted member of the society.

FACTORS INFLUENCING HEALTH:

Health is a multi dimensional phenomena which is influenced by various factors along with physical, mental, social and spiritual factors. Health is determined by many factors like behavioural pattern, political system, biological situations, socio economic conditions and environment. It means health is determined within the individual itself as well as society or environment in which he or she lives.

1. Behavioural determinants:

Health is the mirror of one's lifestyle because faulty and ill habits have adverse effect on the health of the child like lack of exercise, lack of sleep, eating too much or inadequate nutrition effects health.

2. Political system:

Political influences have the power and authority to regulate our surroundings in which health care is included. Implementation of any health program cannot be conducted properly without political will.

3. Biological determinants:

Heredity and genetic determinants have remarkable influence on the physical and mental health of the child.

4. Socio economic determinants:

Education, economy, occupational opportunities, housing, nutritional level, health care system, health resources , culture, customs, tradition, beliefs of the family and community will effect health.

5. Environmental determinants:

Environment has a direct impact on the health of individual family or community. Air, water, noise, radiation, housing, waste management all affects the health status and quality of life.

Importance of Personal and Environmental Cleanliness:

“Cleanliness is next to Godliness” – Mahatma Gandhi

Cleaning plays a vital role in our daily lives. Be it personal hygiene or setting a standard for environmental cleanliness. Effective cleaning is our first line of defence against viruses and infectious diseases.

A clean environment promotes a safe work place.

Healthy personal habits instilled in childhood often follow children into adulthood.

Health of man is associated with every element of environment. Since every change in environmental conditions affects the health. Clean and safe environment is the basis of good health.

Hygiene can be defined as “the science of health which includes all the factors contributing to healthy living”.

Personal hygiene refers to the comprehensive cleaning and caring of the body. It is important in every stage of life. Good cleanliness habits start in childhood.

Personal hygiene includes bathing, washing hands, brushing teeth and wearing clean clothing. It also includes making safe and healthy decisions when interacting. Hygiene practices has both health and social benefits.

Reasons for personal hygiene

- *Basic hygiene should be taught to children at an early age to help them to establish good habits.*
- *Parents can reinforce good hygienic behaviour by creating routines and by being good role models.*
- *One’s personal social and professional world is effected by hygiene habits.*
- *Personal hygiene helps in disease prevention.*
- *Nice smile*
- *Lowers health care costs*
- *Dandruff prevention*
- *Self esteem*
- *Sex appeal*
- *Social acceptance*
- *Professional*
- *Being a role model*
- *Pain prevention*

Consequences of poor personal hygiene

- *Body odour*
- *Bad breath*

- *Dental diseases*
- *General diseases*
- *Gender specific*
- *Smelling clothes*

Difference between cleanliness and hygiene

Cleaning is removing dirt, waste or unwanted things from the surface of objects using detergents and equipment while hygiene refers to prevention of disease through the use of cleaning as part of several inputs.

Types of personal hygiene



Care of body:

Taking a daily bath or shower using mild soap and warm water helps to wash away dirty and bacteria that may lead to body odour. Numerous diseases can be avoided or managed by simply keeping the body clean.

Care of hair

Washing hair with clean and luke warm water. Use separate comb and brush. Oil massage prevents dandruff.

Care of hands and feet

Hands and nails may get infected if not washed properly after coming in contact with edibles, equipment, clothes and after urination or defecation. If anything is eaten with infected hands infections are transmitted hence it is essential to keep hands clean.

- ***Nails should be cut short.***
- ***Apply soap or solution on every fingers and palm and should be rubbed***
- ***Clean towel should be used***
- ***Care of feet : Feet should be washed with clean water and kept free from dust, dirt and filth.***

Oral hygiene

Good oral hygiene includes brushing teeth twice a day. Brush should not be very hard or very soft. Sweets should not be consumed before going to bed.

Sleep

Early to bed early to rise make man healthy and wealthy. Good sleep helps in growth and development

Environmental cleanliness

Cleanliness is essential to lead a healthy life. It is a state of mind and heart that involves our morals and worship.

*Keep your
surroundings
pure & clean.
This hygiene will
keep you healthy,
physically and
mentally.*



Many adults do not set very good examples of cleanliness.

Habits like smoking, chewing tobacco and betel leaves and spitting on roads are very common in our society. Open defecation are left messy and stinking leading to many diseases

Litter on roads, polluted water bodies and poor sanitation make the public places as breeding grounds for pests. Rats, cockroaches, mice, flies and mosquitoes serve as hosts for spreading diseases. Lack of hygiene is an open invitation to infectious disease.

A healthy environment is necessary to live healthy. If the environment is dirty it effects the health of the people living around. We can lead a healthy life by means of having clean and healthy environment. Cleanliness in local environment is one of the most important means to prevent diseases. Cleanliness of house is necessary so also cleanliness in surroundings.

Awareness of the cleanliness in local environment and public places, no open defecation having proper toilet's not throwing garbage in open, compost pit for disposing garbage in rural areas, waste water to be used in house garden and disposing in soak pit are ways to keep environment clean.

NEED AND IMPORTANCE OF IMMUNISATION

Newborn babies are immune to many diseases because they have antibodies they got from their mothers. However the immunity goes away during the first year of life. Before vaccines many children died from diseases:

A vaccine is a medicine. It helps to protect the person from a disease.

Vaccination means actually getting the vaccine either through mouth or injection.

Immunisation means both getting the vaccine and being protected from the disease. Vaccine stimulate the body's own immune system to protect the person against subsequent infection or disease.

It is always better to prevent a disease than to beat it after it occurs. Diseases that used to be common in our country and around the world including Polio, Measles, Diphtheria, Pertussis (Whooping cough), Rubella (German measles), Mumps, Tetanus, Rotavirus and Haemophilus influenzae type (Hib) can now be prevented by vaccination. Through vaccination children can develop immunity without suffering from the actual disease that vaccines prevent.

Importance of Immunisation:

Immunisation is a very safe prevention.

- *It protects the child from serious illness, some of which can be life threatening.*
- *Immunisation helps to reduce the spread of disease to others and prevent epidemics.*
- *Effective way of protecting the self and family members of community and thus future generation*
- *If a vaccinated person comes in contact with disease, their immune system is able to respond more effectively. This either prevents the disease from developing or reduces the severity.*
- *Vaccination records might be needed to enrol the child care in school.*
- *With the use of immunisation in babies the mortality rate is dropped significantly.*
- *Saves family time and money.*

IMMUNIZATION SCHEDULE:

Immunisation is the modern scientific weapon for the control of many infectious diseases. Immunisation against preventable diseases is central to the concept of public health care. It is essential for child survival and child development.

Use of Immunisation has dramatically decreased the incidence of infectious diseases. It is recommended that Immunisation begin shortly after birth and be completed in early Childhood except for boosters. Immunisation may be given by injection, inhalation, oral solutions, or nasal sprays. They are frequently given in combination to minimise multiple injections.

The major vaccine preventable diseases are Poliomyelitis, Pertussis, Tetanus, Measles, Diphtheria, Tuberculosis nearly 20-30% of child deaths are due to these six diseases. Among these six, measles is the number one killer.

Refer table-1 For Immunisation Schedule

IMMUNISATION SCHEDULE IN INDIA 2018

S.No	Vaccine	Prevents	Min Age for Dose 1	Interval Between Dose 1 and Dose 2	Interval Between Dose 2 and Dose 3	Interval Between Dose 3 and Dose 4	Interval Between Dose 4 and Dose 5
1	BCG	TB & bladder cancer	Birth				
2	HepB	Hepatitis B	Birth	4 weeks	8 weeks		
3	Poliovirus	Polio	Birth	4 weeks	4 weeks		
4	DTP	Diphtheria, Tetanus & Pertussis	6 weeks	4 weeks	4 weeks	6 months (Booster 1)	3 years (Booster 2)
5	Hib	Infections caused by Bacteria	6 weeks	4 weeks	4 weeks	6 months (Booster 1)	
6	PCV	Pneumonia	6 weeks	4 weeks	4 weeks	6 months (Booster 1)	
7	RV	Severe Diarrheal Disease	6 weeks	4 weeks	4 weeks		

S.No	Vaccine	Prevents	Min Age for Dose 1	Interval Between Dose 1 and Dose 2	Interval Between Dose 2 and Dose 3	Interval Between Dose 3 and Dose 4	Interval Between Dose 4 and Dose 5
8	Typhoid	Typhoid Fever, Diarrhea	9 months	15 months (Booster 1)			
9	MMR	Measles, Mumps & Rubella	9 months	6 months	I		
10	Varicella	Chicken pox	1 year	3 months			
11	HepA	Liver disease	1 year	6 months			
12	Tdap	Diphtheria, Tetanus & Pertussis	7 years				
13	HPV	Some Cancers & Warts	9 years	For Child aged 9-14 years: 6 months. For Child aged 15 or more: 1 month	For Child aged 15 or more: 5 months		

CARE BEFORE/AFTER VACCINATION:

Making the choice to vaccinate the child is vital for their health and well being

BEFORE VACCINATION

- *Remain calm and confident.*
- *Bring your child's favourite stuffed toy or blanket.*
- *Breastfeed the baby before the shot and continue during and after the shot.*
- *Avoid pain relievers such as ibuprofen etc*
- *If the child is older, explain that he or she will get a vaccine in leg or arm with an needle. It will be like a pinch or pressure/pushing for few seconds.*
- *Don't tell the child it won't hurt.*

DURING THE SHOT: / AT Doctor's office

- *Hold the baby close. An older child may sit upright and held on lap with a hug.*
- *Distract the child with a favourite toy, singing, rattles, bubbles.*
- *Breast feed*
- *Stay calm*
- *Acknowledge child's pain don't focus on it*

AFTER THE SHOT:

- *Stay for 15 minutes and watch for any reaction.*
- *Child may have fever, pain, redness and/ or swelling at the injection site for 1 or 2 days after vaccination.*
- *Cold cloth can be placed over the site*
- *Encourage the child to move the limb*
- *Cuddle and comfort the child*
- *A lump may form under the skin and last one or four weeks*
- *dress the child lightly do not rap the child tightly*
- *Give the child lot of liquids*
- *It is normal for some reliever.*

FOR OLDER CHILDREN:

Be honest with the child. Explain that shots can pinch or sting, but that it won't hurt for long.

Engage others family members especially older siblings to support the child.

Avoid telling scary stories or making threats about shots.

SUMMARY

Health is state of complete physical mental and social well being and not merely the absence of disease or infirmity.

Personal hygiene is the act of maintaining cleanliness and grooming of the external body.

Immunisation is the way of protecting the human body against infectious diseases through vaccination.

Vaccines prevent disease in the people who receive them and protect those who come into contact with a vaccinated individuals.

There may be side effects after vaccination. So for each and every parent it is important to know how to take care of the children before and after vaccination.

Short answer type questions:

- 1) *Define health?*
- 2) *What is personal hygiene?*
- 3) *What is immunisation?*
- 4) *Write the need and importance of immunisation?*

Long answer type questions:

- 1) *Write the importance of personal and environmental cleanliness?*
- 2) *What are the factors influencing health?*
- 3) *Give in detail about the immunization schedule?*
- 4) *Mention the care to be taken for children before and after vaccination?*

UNIT-2

WEANING

STRUCTURE

2.1 IMPORTANCE OF WEANING

2.2 SUPPLEMENTARY FEEDING STAGE -LIQUID, SEMI SOLID& SOLID SUPPLEMENTARY FOODS DURING 6 MONTHS TO 2 YEARS

2.3 PRINCIPLES TO BE FOLLOWED WHILE INTRODUCING SUPPLEMENTARY FOODS

Learning objectives:

By the end of the unit,

The student will be able to understand the meaning and importance of weaning

Know the meaning of supplementary feeding

Understand the stages of supplementary feeding

Learn supplementary food for 6 months to 2 years children

Need for weaning

The baby's birth weight doubles by 6 months and triples by one year to support this growth baby's need a nutritious diet.

From six months of age neither human breast milk nor infant's formula intake alone is insufficient to meet baby's growing needs and introduction of solid food to the diet is essential.

Definitions:

The word weaning comes from the word "wemain" which means accustom.

According to Cambridge dictionary weaning is to cause a baby to stop feeding on its mother milk and to start eating other foods especially solid foods.

According to medical dictionary weaning is discontinuing of breast milk, permanent deprivation of breast milk and commencement of nourishment with other foods.

Weaning is substitution of solid foods for milk in an infant diet.

Weaning is the period of transition from breast feeding to eating solid foods.

Weaning is the introduction of solid foods into a baby's diet during the first year of life.

Importance of weaning:

- ***For the development of eating pattern: Which helps in proper maintaining of optimal health supplementary feeding is essential.***
- ***For the rapid growth of the baby child: During the first year of life the baby grows more quickly than any other time. For this rapid growth the baby needs increasing amounts of energy and nutrients.***
- ***Increasing needs of calories and proteins: Increasing needs of calories and proteins of growing children cannot be met by output of mother's milk. Milk is also poor source of vitamin C and D should be supplement in form of fruit juice. For the baby to maintain expected growth and to remain healthy and well nourished supplementary food is given from about six months of age.***
- ***Need of iron rich foods : Iron stored in the liver of the infant would last only upto four months. Hence iron rich foods should be given at least from six months onwards.***
- ***Imitating parents/Adults food habits: Imitation is one of the milestone in child's life. By copying adults during this year of growth children learn a vast array of skills. During the latter part of first year they may not want to held as close to mother as before showing an increased drive to move about. They can be helped to drink from a cup at about 5 months of age. By 8-9 months they enjoy imitating parents who drink fluids this manner.***

Weaning is important to infant health. It teaches him the value of separation from mother and parents.

- ***Separation anxiety***
- ***Fear of strangers***
- ***Beginning of language***
- ***Beginning of crawling and latter walking***
- ***Teething***
- ***Development of digestion of solids***
- ***Development of waste out processes***
- ***First night mares and language development.***

Fear of under nutrition:

Though Indian baby are given supplementary foods, the introduction difference is either too late or too early. The age of introduction of supplementation is 3-5 months in urban, elite and middle income group. The supplementation delayed in urban poor by 7-9 months and rural poor by 9-11 months. Introduction weaning food to late can need food under nutrition and increased diarrhoeal morbidity.

***PRINCIPLES TO BE FOLLOWED WHILE INTRODUCING SUPPLEMENTARY FOODS***

- ***Introduction to a solid food should be a pleasant experience.***
- ***A new solid food is introduced when the infants is relatively hungry.***
- ***A spoon with a small bowl and a long straight handle is used to place the food in the mouth of infants.***
- ***The food is placed toward the back of the infants tongue but no pressure is exerted since that would cause gagging.***
- ***A small serving 1 to 2 teaspoon of a new food is offered initially. The amount is gradually increased to 1 to 2 tablespoon at a feeding.***
- ***New foods are introduced one at a time.***

- *The infant should be permitted to touch the food and feel the textures of various foods.*
- *Food should be slightly seasoned.*
- *At first strained food, vegetables and cereals are given*
- *Infants should be permitted to stop eating when they indicate willingness to stop*
- *The infant should not be hurried nor coaxed to eat.*
- *A variety of new foods should be introduced during the second 6 month of the life because during the toddler period when growth slows down and the appetite is decreased the child will be less willing to try them.*

Some of the supplementary foods are

- *Fruit juices (4 months) (Tomato and orange juice)*
- *Greens soup (6 months)*
- *Stewed apple (8 months)*
- *Soft custard with egg yolk (8 months)*
- *Khichdi (pongal) (10- 12 months)*
- *Poshak (Cereal, pulse, groundnut and jaggery)*
- *Malted cereals and gruel made of rice flour, rice, rice flakes, corn flakes and milk.*

PROBLEM IN WEANING:

1. *Inadequacy in quantity and hence malnutrition.*
2. *Unhygienic feeding practices leading to enteric infections and diarrhoea.*
3. *Personal likes and dislikes of the child.*
4. *Refusal of the child to accept weaning foods.*
5. *Allergy*
6. *Choking*
7. *Obesity*



BABY FOOD

GUIDELINE

AGE	RECOMMENDED FOODS
4 - 6 MONTHS	<p>Check with pediatrician first; start tastes of cereals, fruits and vegetables.</p> 
6 - 8 MONTHS	<p>Main source of nutrition: Breast milk or formula $\frac{1}{4}$ cup of grains/cereals, twice a day. 2 tablespoons of vegetable purée, twice a day. 2 tablespoons of fruit purée, twice a day. 1 tablespoon of meat or poultry purée, twice a day.</p> 
8 - 10 MONTHS	<p>Main source of nutrition: Breast milk or formula $\frac{1}{2}$ cup of vegetables per day, offering a variety. $\frac{1}{2}$ cup of fruits per day, offering a variety. 1 ounce of meat or beans a day. 1 ounce of grains a day.</p> 
10 - 12 MONTHS	<p>3 meals and 2-3 snacks a day; begin weaning from breast milk or formula to whole milk. 2 cups of dairy a day, served in $\frac{1}{4}$ to $\frac{1}{2}$ cup servings. 2 ounces of grains, with half of the grains as whole grains. $\frac{3}{4}$ cup of vegetables. 1 cup of fruits. 1.5 ounces of meat/beans, thoroughly cooked and easy to chew. Whole milk or water to drink.</p> 

sheknows

Different stages involved in providing supplementary foods:

Liquid supplements:

Milk: At about the sixth month of life the frequency of breast feeding is reduced to 3 or 4 times per day and animal milk is substituted.

Juice of fresh fruits:

Oranges, tomatoes, sweet lime, grapes serve to supplement the protective nutrients not present in sufficient amounts in breast milk as well as in animal milk. It is advantageous to start feeding small quantities of fresh fruit juice even the 3rd or 4th month of life. In the early stages the fruit juice is diluted with an equal amount of boiled water and only a couple of teaspoonfuls are fed.

Soup from green leafy vegetables:

In case fresh fruits are not available, green leafy vegetables may be used as an alternative.

b.) Solid supplements mashed well before feeding:

Mashed food is started around the 7th or 8th month of life. Around this time the infant is already receiving animal milk, fruit juice or vegetable soup and fish liver oil.

Cereal and starchy gruel:

To meet the increased demands of calorie and protein well cooked mashed cereals mixed with milk and sugar can be given.

Other cereals like rice, rice flour, rice flakes, corn flakes can also be given on the form of porridge.

Vegetables:

Cooked, mashed vegetables like potato, green leafy vegetables, carrots etc. can be introduced to get vitamins and minerals and colours in the diet.

Fruits:

All fruits with the exception of banana which is mashed must be stewed and sieved for the one year old baby. There after it is given simply stewed with addition of little sugar and lime –juice for flavour.

Non vegetarian foods:

A small amount of hard boiled yolk of egg is given to start with and if the infant tolerates the amount may be gradually increased to a complete yolk of an egg.

Yolk is good source of vitamin A, iron and protein. Soft custard is also a suitable way in which to introduce egg yolk.

Pulses:

Well cooked pulses along with cereals in the form of khichdi/ pongal can be given or can be made into porridges. Pulse and meat preparation can be given alternate days.

Solid supplements unmashed:

When the baby starts cutting his teeth it is time to start changing him over to chopped and lumpy foods. Cooked cereals, pulses and vegetables can be given to the child. Vegetables may be chopped into small pieces, and boiled. Cooked potato can be given. After a year, leafy vegetables can be given well boiled and soft. A slice of a raw carrot or fruit segments with all skin and seeds removed are also good exercise for his gums. As the child grows it is better to give fruit segments instead of juice. Fruit provides bulk in the diet and good for bowel movement.

SUMMARY

Infants in our country thrive on breast milk alone up to six months of life and their growth rate during this period is satisfactory. Breast milk alone is not able to provide sufficient amounts of all the nutrients needed to maintain growth after the first six months. Increasing needs of calorie and proteins of growing children cannot be met by the diminishing output of mother milk's.

Weaning is the process in which infant's diet pattern is gradually changed from liquid foods like breast milk or substitute milk preparations to solid foods.

The foods that are given in addition to breast milk or bottle milk are called supplementary foods

After 5 or 6 months mother's milk or bottle milk alone cannot meet the requirements of the growing baby. Hence the parent should provide supplementary foods to the children.

During the first stage one should introduce liquid foods then semi solids foods and at last solid foods should be given.

Short answer type questions

- 1) *Define weaning and need for weaning.*
- 2) *List out the problems faced by adults while feeding the children?*

Long answer type questions

- 1) *What are the different stages involved in providing supplementary foods for children?*
- 2) *What are the principles to be followed while introducing supplementary foods for children?*

Unit -3

Nutritional needs of children (Birth – 3 years)

Structure

3.1 Importance of nutrition, relationship between food and health, functions of food.

3.2 Nutrient requirements of children

3.3 Planning balanced diet

Learning objectives

By the end of the unit

The student will be able to understand

Know the importance of nutrition.

Understand the nutrient requirements of children.

Plan balanced diet.

Introduction

Good nutrition is essential for maintaining life. The objectives of good nutrition for children are to promote optimal growth and development, to prevent nutritional deficiency, to help prevent acute and chronic illnesses and to provide reserves for stress. Every child needs nutrition to grow and to develop into a happy and healthy child.

The child growth is determined by heredity which is provided by food and conditions favourable to the physiological process that convert food into body tissues.

Gain in weight and height are best indications to assess the child growth. Muscles grow in size and strength which require protein and in organs salts to develop. The brain, kidney, digestive systems help the infant to handle more and more complex food items starting from breast milk at birth to solid food by the end of the year.

RELATION BETWEEN NUTRITION AND HEALTH:

Food affects health and nutrition that nutrition can be the limiting factor in growth and development.

A child who does not eat the right food or does not eat enough is malnourished and it is called malnutrition. It is very common among children in India.

The word nutrition comes from the word nourish which implies the food consumed by us and all the reactions through which it is utilised for physical growth, energy and better health.

Nutrients are naturally occurring chemical substances present in the food which are

(1)Carbohydrates

(2)Proteins

(3)Fats

(4)Vitamins

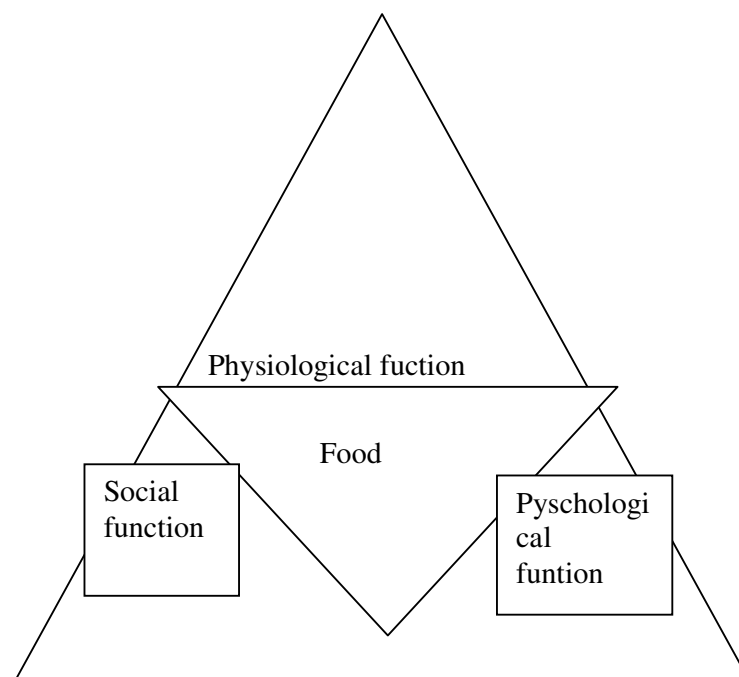
(5)Minerals

(6)Water

Here is a comparison of the effects on children of good nutrition and malnutrition.

<i>GOOD NUTRITION</i>	<i>MALNUTRITION</i>
<i>Correct weight for height and age</i>	<i>Weight too much or too little</i>
<i>Strong muscles</i>	<i>Weak muscles</i>
<i>Limbs straight</i>	<i>Bow legs or knock knees</i>
<i>Smooth clear skin good colour</i>	<i>Skin dry and rough</i>
<i>Healthy bright eyes clear sight</i>	<i>Eyes dull ,poor sight or loss of sight</i>
<i>Hearing good</i>	<i>Hearing poor</i>
<i>Teeth well formed from dental caries</i>	<i>Uneven teeth ,dental caries, spongy gum</i>
<i>Erect posture in sitting ,</i>	<i>Round shouldered</i>
<i>Standing and walking</i>	<i>Protuding abdomen</i>
<i>Plenty of energy</i>	<i>Tired and listless</i>

<i>Good resistance to infections</i>	<i>Poor resistance to infections</i>
--------------------------------------	--------------------------------------

FOOD PERFORMS THREE FUNCTIONS

Physiological function - giving energy, building body and protecting the body

Social function - foods served at social events to share happiness and joy.

Psychological function

When a mother cooks food that a child likes and serves it to her child, the basic psychological need that is love and affection is satisfied through the medium of food.



NUTRIENTS REQUIREMENTS OF CHILDREN: 0-3 years:

For maintaining good health physical efficiency, the diet should provide adequate amounts of all nutrients

The term recommended dietary allowances is defined as the amount of nutrients sufficient for maintenance of health in nearly all people .

The RDI'S for infants are given in two stages (ie 0-6 months and 6-12 months) as rapid growth takes place during the first 6 months

Table-1 Recommended Dietary Allowances for children up to 3 years

<i>NUTRIENTS</i>	<i>0-6 MONTHS</i>	<i>6-12 MONTHS</i>	<i>1. 3years</i>
<i>ENERGY(Kcal)</i>	<i>108/Kg</i>	<i>98/Kg</i>	<i>1240</i>

PROTEIN(g)	2.05/Kg	1.65/Kg	22
CALICUM(mg)	500	500	400
IRON(mg)	70/Kg	70/Kg	12
VITAMIN A(mcg)	350	350	400
THIAMINE(mg)	55/kg	50/kg	0.6
RIBOFLAVIN (mg)	65/Kg	60/Kg	0.7
NIACIN(g)	701/Kg	650/Kg	8
PYRIDOXINE (mg)	0.1	0.4	0.9
ASCROBIC ACID(mg)	25	25	40
FOLIC ACID(g)	25	25	30
VITAMINB12 (g)	25	25	0.2-1

The total amount of nutrients required infants may be smaller as compared to but when expressed in terms of per kg body weight the need is over twice as much for most nutrients.

Calories:

The calorie requirement depends on physical activity, body size and composition, age, sex, physiological state and climate and environment.

The daily calorie requirement (kcal) recommended by the nutrition expert group ICMR are as follows: Infants (upto 1year) 120/kg Infants (7-12 months)100/kg; children (aged 1-3 years)1200.

As growth during infancy is very rapid dietary adaptation is required. During early infancy much of the nutrients requirements are met by breast feeding the child Infants require

more energy than adults. Infants require 108 K.Cal/ kg body weight whereas an adult requires only 40kg body weight. For one month old infants 50 percent for activity and 25 percent for growth. Extremely active children may require up to 40 percent for activity. A child who walks or crawls will not gain weight unless additional calories are supplied for proper growth

Seventy percent of the calories for infants can be met by milk alone and rest of the calories has to be supplied by the supplementary foods after 6 months.

- *Carbohydrates supply energy to the body. One gram of carbohydrates provides four calories of energy.*
- *Carbohydrates in food contain dietary fibres that help in the digestion of food and removal of wastes from the body.*

Food rich in carbohydrates:

All foods that contain starch are rich in Carbohydrates.

Cereals and millets such as rice, wheat, ragi, oats, jowar and bajra are some rich sources of Carbohydrates . Other foods such as sugar, jiggery, honey, ripe fruits and undergoes vegetables like yam and colocasia also provide a high content of Carbohydrates pulses nuts and oil seeds also provide carbohydrates

PROTEIN

Like calories infants protein requirements are higher per kg body weight compared to adults due to increased demands for skeletal and muscle growth. Human milk provides all the aminoacid more than required amount needed for proper growth. Protein content of human milk is 1.1 ml or 6% total energy protein requirement per kg. Body weight decreases gradually during the first 12 months as do energy requirements.

Proteins help a child

- *In the growth of body and for the maintenance and repair of tissues.*
- *For the production of antibodies to prevent children from diseases.*
- *For the production of enzymes and hormones for regulating the body function.*
- *Foods rich in proteins*

- *From what foods can a child get proteins?*
- *Proteins are available in both plants and animal products. Pulses and legumes such as dals, soyabeans and their commercial products such as soya milk, soya nuggets and soya granules are also rich sources of proteins. Nuts and oil seeds such as ground nuts, gingerly seeds are some rich sources of proteins from plants.*
- *Milk and milk products are also rich in proteins. Animal products like eggs, meat, poultry and sea foods contain good quality proteins.*

FAT AND FATTY ACIDS

Linoleic acid is the most important essential fatty acid for an infant. Infants maintained on diets adequate in all nutrients except fat develop skin lesions and diarrhoea and growth is retarded. With supplementation of linoleic acid, symptoms disappear. Food and nutrition board suggest 2% calorie intake should be a EFA. Both cow's milk and mother's milk satisfy the requirements of EFA

FATS

Fats provide:

- *Double the quantity of energy as compared to carbohydrates one gram of fat gives nine calories of energy.*
- *Essential fatty acids.*
- *Fats dissolve fat soluble vitamins like vitamin A, D, E and K.*
- *Fats provide protection to the vital organs of the body.*
- *Fats help in maintenance of the body temperature.*

Foods rich in fats

Fats are present in vegetable oil like groundnut, til, soybean, sunflower, etc. They are also found in animal products such as butter, ghee, cream, cheeses, and meat.

Calcium and phosphorus:

Rapid growth requires large amount of calcium and phosphorus . adequate prenatal nutrition supply a store of bone minerals to prevent rickets provided post –natal care furnishes a liberal supply of calcium and phosphorus. Large percentage of calcium from breast milk is retained by the infant .Bones are poorly calcified at birth .Rapid rate of calcification of bone is needed to support the weight of body by the time the baby walks

when sufficient calcium is not supplied to the infant, his motor development is delayed. High phosphorus can lead to hypocalcemic neonatal tetany.

Iron:

RDA of iron for an infant is 1mg/kg/day starting from 3 months. At birth body contains 75mg./kg. This is about 3 times that of an adult. During the first 4 months, the baby's blood volume doubles and concentration of iron in haemoglobin falls to about half that present at birth. That is why infant doubles his birth weight by six months without depending on dietary iron. Low birth weight infant, requires dietary iron earlier in life. Premature infants are susceptible to anaemia. Hypochromic anaemia can occur in infants due to (a) depletion of fetal stores (b) greater need for iron during growth and (c) inadequate dietary supply.

Zinc:

High levels are present in colostrum and it promotes normal growth. Zinc is necessary for normal brain development.

Sodium :

Intake of sodium by breast fed infant is less than 1/3rd that of one fed on cow's milk. This smaller amount present in human milk is considered adequate.

Iodine:

Goitre in mothers during pregnancy leads to children born as cretins. They are mentally retarded and condition is irreversible even after treatment.

Vitamin A:

The RDA for vitamin A is 350mcg or beta carotene 1200mcg. The amount of vitamin A content of breast milk is sufficient. Provided mother's diet is rich in vitamin A. A healthy infant has sufficient stores of vitamin A in liver at birth which may last for six months. Egg yolk is supplemented in the infants' diet for vitamin A. Excess vitamin A leads to anorexia, hyper irritability and desquamation of skin.

Vitamin D:

It is essential for utilisation and retention of calcium and phosphorus. Neither human nor cows milk provide vitamin D to prevent rickets. A good supply of vitamin D during pregnancy benefits the mother and helps satisfactory development of the infant. The vitamin D requirement of child is placed between 200-400 I. U. This requirement may be obtained in great measure in tropical countries through exposure to adequate sunlight. It is necessary to avoid large amount of vitamin D to prevent hypervitaminosis D.

Vitamin E:

Food and nutrition board has prescribed 5 I.U of vitamin E for first year . cows milk is a poor source of vitamin E

Vitamin K:

The new born is susceptible to haemorrhage caused by lack of vitamin K. Breast fed baby is more susceptible than artificially fed. Deficiency of vitamin K in children can occur if mothers have received anticoagulants .A single dose does of 1mg of water miscible form of vitamin K immediately after birth is considered adequate to prevent haemorrhage . Excess dosage is harmful.

Vitamin B :

RDA for B vitamins is based on the weight of the infant which is in reality determined on calorie consumption .B vitamin requirements of Indian infants are not directly determined experimentally and they are computed on the basis of their calorie needs . If the mothers are suffering from thiamine deficiency, there is very little thiamine content in the breast milk The onset of infinite beriberi is sudden in infants who are healthy Anorexia ,vomiting, breathlessness are developed and death may occur unless treatment thiamine is given by intramuscular infection . When antibiotics are taken by the infant the requirements for B 12 is increased .

Vitamin C:

The RDA prescribed ICMR is 25 mg. Human milk contains twice the ascorbic acid in comparison to cow's milk though both are not good source of vitamin C .Deficiency in mothers during pregnancy and lactation results in very little reserve of vitamin C in body . If less vitamin C is present in breast milk infant may develop scurvy. Suddenly the body swells due to internal bleeding and condition is fatal. Fruit juice should be introduced in sufficient amounts in the diet from the 4th month onward to prevent scurvy.

Refer table ii for vitamins and minerals their sources and functions

Vitamins	Functions	Rich sources
Vitamin A	<i>Growth Healthy of eyes (necessary for clear vision in dim light) Health of skin</i>	<i>Dark green vegetables, yellow fruits and vegetables, Butter, ghee, egg yolk, fish</i>
Vitamin D	<i>Formation of bones and teeth, calcium metabolism</i>	<i>Milk, butter, ghee, fish, egg yolk, natural sunlight</i>

<i>Vitamin E</i>	<i>For health of heart, sex hormones</i>	<i>All vegetable oil</i>
<i>Vitamin K</i>	<i>For blood clotting</i>	<i>Green leafy vegetables, cereals</i>
<i>Vitamin C</i>	<i>For gum formation, healing of infections and wounds</i>	<i>All citrus and fresh fruits and vegetable sprouts</i>
<i>Vitamin B</i>	<i>Growth, carbohydrate metabolism working of heart and nerves</i>	<i>Unpolished rice, wheat, yeast, pulses</i>
<i>Vitamin B2</i>	<i>Growth protein metabolism health of eye</i>	<i>Milk and milk products, yeast, green vegetables, eggs, liver, meat</i>
<i>Naicin</i>	<i>Growth for carbohydrate, fat and protein metabolism</i>	<i>Wheat, pulses, nuts, tomatoes, green leafy vegetables</i>
<i>Vitamin B6</i>	<i>Growth health of skin, muscles and nerves</i>	<i>Green vegetables, meat, liver</i>
<i>Vitamin B12</i>	<i>Formation of blood</i>	<i>Milk, meat and liver</i>
<i>Folic acid</i>	<i>Formation of blood</i>	<i>Green vegetables, pulses</i>

<i>Minerals</i>	<i>Functions</i>	<i>Rich sources</i>
<i>Calcium and phosphorous</i>	<ul style="list-style-type: none"> ➤ <i>Formation of bones and teeth</i> ➤ <i>Clotting of blood, proper functioning of heart muscles</i> 	<i>Milk and milk products, green leafy vegetables, cabbage, ragi, bajra, jowar and gingely seeds.</i>

<i>Iron</i>	<i>Formation of blood</i>	<i>Green leafy vegetables, egg yolk, gingely seeds, dry fruits, jiggery and animal products, cereals and millets</i>
<i>iodine</i>	<i>For production of thyroid hormone, for mental and physical growth</i>	<i>Fish and iodised salts</i>

PLANNING OF BALANCED DIETS:

Before planning the balanced diet one must know what is a balanced diet and importance of different food groups.

The infants as well as young child needs more nourishing food than an adult. An active and healthy child needs food for energy. Maintenance of the body and repair of wear and rear of the body tissues. In addition, extra nourishment is required to provide for the continuous growth of the body and for the increased range of activities as the child grows. These nutritional requirements of a child can only be fulfilled by providing a well balanced diet.

A balanced diet may be defined as one which contains the various groups of food stuffs such as energy yielding foods, body building foods and protective foods in the correct proportions .so that an individual is assured of obtaining the minimum requirements of all nutrients. The components of a balanced diet will differ according to age, sex, physical activity, economic status and the physiological state, viz, pregnancy, lactation, etc.

Food groups

<i>Food groups</i>	<i>Example</i>
<i>1) Cereals and millets</i>	<i>Rice wheat oats maize barley jowar bsjra ragi.</i>
<i>2) Pulses and legumes</i>	<i>Dals like thoor dal chana dal urad dal moong dal beans</i>
<i>3) Eggs</i>	

4)	<i>Nuts and oil seeds</i>	<i>Groundnut coconut walnut pista gingely sunflower safflower</i>
5)	<i>Vegetables</i>	<i>Root leafy and other vegetables</i>
6)	<i>Fruits</i>	<i>Ripe and seasonal fruits</i>
7)	<i>Milk and milk products</i>	<i>Milk curds buttermilk cheese paneer</i>
8)	<i>Animal foods</i>	<i>Meat chicken and sea foods</i>
9)	<i>Oils and fats</i>	<i>Vegetables oils, butter and ghee</i>
10)	<i>Sugar and jiggery</i>	<i>Refined sugar and jiggery</i>
11)	<i>Condiments and spices</i>	<i>Turmeric chilly ginger garlic coriander fenugreek etc</i>

Balanced diets at high cost:

Such diets will include liberal amounts of costly foods such as milk, eggs, meat, fish and fruits and moderate quantities of cereals, pulses, nuts and fats.

Balanced diets at moderate cost:

These diets will include moderate amounts of milk, eggs, meat, fish, fruits, and fats and liberal amounts of cereals, pulses, nuts, and green leafy vegetables.

Balanced diet at low cost

These diets will include small amounts of milk, eggs, meat, fish and fats and liberal amounts of cereals, pulses, nuts and green leafy vegetables.

Planning of balanced diet:

Before planning a diet to children one should follow the dietary guide lines which were given as follows

The diet should be adequate in quantity and quality of different nutrients in addition to the amount of milk, the pre school child should have two small servings of protein rich foods. when the child is about 18 months old, finger foods such as carrots can be given.

Proper elimination is usually maintained by a diet of fruits, vegetables and whole grain products.

The diet should include a variety of foods. the child who is taught to eat everything on his plate is much more likely to enjoy optimal health than is the one who picks and chooses. the child should have access to all items from all food groups on a regular basis.

Their food intake will improve if the food is interesting and attractive ,for example chapathis,puris can be made into different shapes or can be served in attractive plates .flavour or colour milk can be changed to encourage the child to drink more milk.

Foods should be slightly seasoned so that they taste better and the child likes the tastes and takes it well .

Child should never be forced to eat more than he can take .

The person feeding the child with the food should not show any disinterest or dislike of that food in front of the child . this may lead to rejection of food by the child.

Children are sensitive to flavours , any changes in flavour of daily food may lead to its rejection .

Food preferences of the child should be taken in consideration.

Regularity of meal times is essential .

Different cooking methods and new attractive combinations encourage the child to eat more.

The child should never be hurried while taking the food . the atmosphere should be pleasant , peaceful and lacking distraction.

The energy density should be 1.0 to 1.2k. cal/ml. this can be achieved by adding milk and oil to the diet. Malted foods can also be included in the diet to increase the calorie density of food.

Unripe bananas and apples should not be given as they are difficult to chew and may choke the child.

Young children should not be fed with bulky staple foods which fill the child's stomach and lessens the child's hunger without meeting the energy needs.

Balanced diet for a child belonging to 1-3 years old for a day

Sample menu :

Balanced diet for 1 to 3 years

Sample menu

Early morning (6.30 a.m.) Milk 1 cup

Breakfast (7.30 a. m.) Dosa 2+ chutney and sambar (veg)

Or

Two slices of brown bread and omlette (non veg)

Mid morning (10.30 a.m.) Any fruit + chikki.

*Lunch (12.30 p.m.) Rice -1 katori , vegetable curry -1/2 katori,
thick dal-1/2 katori.*

Snack (4. 30 p.m.) Murmura mixture -1 katori , ragi malt-1 cup ,fruit -

Dinner (7.00 p.m.) Chapathi -2 , green dal -1/2 katori

Sprout salad -1 tbsp & curd rice -1/2 katori

Or

*Rice -1 katori , meat / chicken / fish curry -1/2
katori , and vegetable raita*

Bed time (9.00 p.m.) Milk 1 cup.

Summary:

Nutrition is the basic human need and prerequisite to a healthy life.

Nutrients that we obtain through food have vital effects on physical growth and development ,maintenance of normal body function, physical activity and health .nutritious food is thus needed to sustain life and activity.

The first years of life (up to 3years of age), characterised by rapid physical development is a period in which many changes that affect feeding and food intake occur .the adequacy of nutrient intake affects the interaction of children with their environment .diet has a remarkable effect on child's physical and mental development.

Diet affects the health of the child in two ways . Directly as deficiency diseases like kwashiorkor ,marasmus etc and indirectly by reducing the resistance power of an individual.

Healthy well nourished children have the energy to respond to and learn from the stimuli in their environment and interact with their parents and care givers in a manner that encourages bonding and attachment.

. The diet should be adequate in quantity and quality of different nutrients.

. Regularity of meal times is essential.

. Many factors like cultural, social and family etc influences the meal planning.

. Mothers or care givers have a big job for planning different kinds of diets to fulfil the nutritional needs of the children.

SHORT ANSWER TYPE QUESTIONS:

- 1. Enlighten on importance of nutrition for a healthy life?*
- 2. What is balanced diet?*
- 3. Write about the importance of zinc , sodium and Iodine during the infancy stage?*

LONG ANSWER TYPE QUESTIONS:

- 1. Write in detail about the nutritional requirements of children up to 3 years?*
- 2. What are the steps involved in planning a balanced diet for children of 1-3 years?*

UNIT -4

STRUCTURE

4.1 Meaning of nutritional deficiency disease

4.2 Some of the nutritional deficiency disease

LEARNING OBJECTIVES

By the end of unit, student will be able to:

- . Learn the meaning of nutritional deficiency disease**
- . Recognise the symptoms of different kinds of nutritional deficiency diseases**
- . Know the cause of nutritional deficiency disease**
- . Suggest prevention of nutritional deficiency disease**

Meaning of Nutritional deficiency disease

Nutrition is a major factor in bringing out the maximum potentially that one is endowed with both physically and mentally. Good nutrition depends on an adequate food supply and food distribution

Deficiency of one or two nutrients in diet is called nutritional deficiency. Generally it is expressed as malnutrition.

A nutritional deficiency occurs when the body doesn't absorb or get from food the necessary amount of nutrients. Deficiencies can lead to a variety of health problems. These can include digestion problems, skin disorders, stunted or defective bone growth and even dementia.

Nutrient deficiency diseases occur when there is absence of nutrients which is essential for growth and health. Lack of food leading either malnutrition or starvation gives rise to these diseases. Another cause for a deficiency disease may be due to a structural or biological imbalance in the individual metabolic system.

Though malnutrition can occur at any age the main victims are children. Kwashiorkor, marasmus and keratomalacia which used to be a major public health problem till the 1960s have declined since. However population at large is affected by hidden malnutrition which may not be easy to diagnose.

SOME OF THE NUTRITIONAL DEFICIENCY DISEASES:

- 1) *Protein energy malnutrition.*
- 2) *Kwashiorkor.*
- 3) *Nutritional marasmus.*
- 4) *Vitamin A deficiency.*
- 5) *Vitamin B deficiency.*
- 6) *Vitamin C deficiency.*
- 7) *Vitamin D deficiency.*
- 8) *Iron deficiency.*

PROTEIN ENERGY MALNUTRITION:

The concept has recently been advanced that protein energy malnutrition especially in early childhood, should be regarded as a spectrum of disease. At one end there is kwashiorkor in which the essential features of quantitative and qualitative deficiency of protein. Calories are often restricted but may even be in excess of requirements. At the other end is nutritional marasmus which is a total initiation of the infant usually under 1 year of age and due to a severe and continuous restriction of calories and protein as well as other nutrients. In the middle of the spectrum is marasmic kwashiorkor in which children have the clinical features of both disorders.

Symptoms

- *The muscle look wasted and the child looks thin*
- *The belly looks prominent*
- *Child is restless and not responsive*
- *Hair looks light or reddish instead of dark*

Causes

- *Due to poverty mother is not able to provide sufficient food for children resulting in under nutrition*
- *The starchy gruel (semi solid food) made from rice, bajra, ragi, jowar and maize would result in dietary bulk with low calorie intake and the child is not able to meet calorie requirement. Malted foods meet the calorie requirement*

- *Abrupt weaning, late weaning, ignorance of importance of weaning.*
- *Malnutrition*
- *Chronic infections*
- *Infestation like ascariasis particularly giardiasis may lead to anorexia*

Prevention:

- *Providing a nutrition education to mothers of children below 6 years of age*
- *Introducing supplementary foods at the right age*
- *Eliminate faulty food habits*
- *Make use of locally available food (fruits and vegetables)*

KWASHIORKOR:

It is malnutrition produced by a severely inadequate amount of protein in the diet. This is known as edematous malnutrition because of its association with edema. It is a nutritional disorder most often seen in regions experiencing famine.

Symptoms of kwashiorkor:

- *Change in skin and hair colour*
- *Fatigue*
- *Diarrhoea*
- *Loss of muscle mass*
- *Failure to grow or gain weight.*
- *Edema*
- *Damaged immune system which can lead to more frequent and severe*
- *Sagging cheeks*
- *Swollen eye lids*
- *Enlarged liver*
- *Flaky rash*

Diagnosis

- ***If kwashiorkor is suspected***

The following is the procedure of diagnosis

- ***Checking for enlarged liver and swelling.***
- ***Blood and urine tests(to measure the level of protein and sugar in one's/person's blood)***
- ***Tests for muscle break down***
- ***Tests of kidney function***

These tests are included

- ***Arterial blood gas***
- ***Blood urea nitrogen***
- ***Blood levels of creatinine***
- ***Blood levels of potassium***
- ***Urianalysis***
- ***Complete blood count***

Treatment

Kwashiorkor treatment consists of diet modification. Slow increase in calories followed by an increase in protein.

Supportive care: Oral dehydration therapy

Self care

High protein diet Vitamin and mineral breast feeding supplementation and infants formulae.

MARASMUS:

The word marasmus comes from the greek word marasmus- withering

Marasmus is a form of severe malnutrition characterised by protein deficiency. It can occur in anyone with severe malnutrition but usually occurs in children. A child with marasmus looks emaciated. Baby weight is reduced to less than 62.36% of normal body weight for the age

Cardinal features of marasmus

- *Severe growth*
- *Loss of muscle mass and subcutaneous fat mass*
- *Severe muscle wasting*
- *Dry skin*
- *Brittle hair*

In children with marasmus the following can also occur:

- *Chronic diarrhoea*
- *Respiratory infections*
- *Intellectual disability*
- *Stunted growth*
- *Dehydration*
- *Tachypnea*

Marasmus can also make children short tempered and irritable.

Treatment:

Patients with marasmus should isolated from other patients especially children with infections.

Bathing should be avoided to limit hypothermia

Oral antibiotics

Good sanitation and hygiene

Using boiled water for cooking, drinking diet treatment rich in nutrients.

Carbohydrates and calories : Feeding is usually done in small amounts and through tubes to the veins and stomach.

Prevention

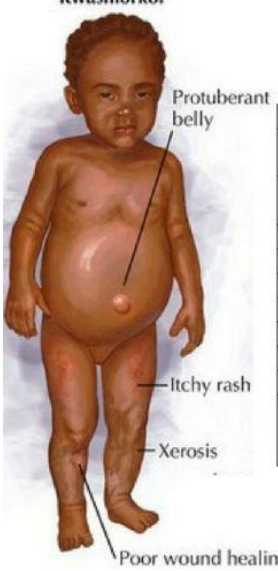
The best way to prevent marasmus is to have a well balance diet. Foods rich in protein like skimmed milk. Fish, eggs, nuts, Fresh vegetables, fruits etc are avoiding malnutrition very important.

10 Differences between Kwashiorkor and Marasmus

www.majordifferences.com

Comparison Table

Kwashiorkor	Marasmus
It develops in children whose diets are deficient of protein.	It is due to deficiency of proteins and calories.
It occurs in children between 6 months and 3 years of age.	It is common in infants under 1 year of age.
Subcutaneous fat is preserved.	Subcutaneous fat is not preserved.
Oedema is present.	Oedema is absent
Enlarged fatty liver.	No fatty liver.
Ribs are not very prominent.	Ribs become very prominent.
Lethargic	Alert and irritable.
Muscle wasting mild or absent.	Severe muscle wasting
Poor appetite.	Voracious feeder.
The person suffering from Kwashiorkor needs adequate amounts of proteins.	The person suffering from Marasmus needs adequate amount of protein, fats and carbohydrates.



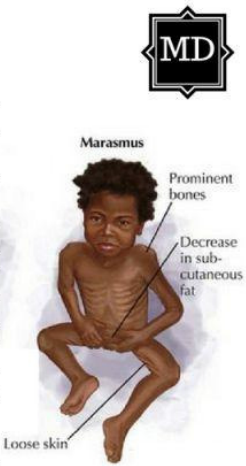
Kwashiorkor

Protuberant belly

Itchy rash

Xerosis

Poor wound healing



Marasmus

Prominent bones

Decrease in subcutaneous fat

Loose skin

Kwashiorkor vs Marasmus



Differences between marasmus and kwashiorkor:

Marasmus

kwashiorkor

<i>Weight loss dehydration stomach shrinkage diarrhea</i>	<i>An inability to grown or gain weight edema or swelling of hands and feet stomach bulging</i>
<i>It develops in children whose diet are deficient of protein and calories</i>	<i>It develops in children whose diets are deficient of protein</i>
<i>It is common in infants under 1 year of age</i>	<i>It occurs in children between 6 months and 3 years of age</i>
<i>Subcutaneous fat is not present</i>	<i>Subcutaneous fat is present</i>
<i>Oedema is absent</i>	<i>Oedema is present</i>
<i>No fatty liver</i>	<i>Enlarged of liver</i>
<i>Ribs become very prominent</i>	<i>Ribs are not very prominent</i>
<i>Aleet and critable</i>	<i>Lethargic</i>
<i>Serve muscle wasting voracious feeder</i>	<i>Muscle wasting mild or absent poor appetite.</i>

MARASMIC KWASHIORKOR:

The child shows a mixture of some of the features of marasmus and kwashiorkor. This is due to the varying nature of the dietary deficiency and the social factors responsible for the disease.

NUTRITIONAL DWARFING OR STUNTING:

Some children adapt to prolonged insufficiently of food energy and protein by a marked retardation of growth.

THE UNDER WEIGHT CHILD:

Children with subclinical PEM can be detected by their weight for age or weight for height which are significantly below normal.

PREVENTION:

Promotion of breast milk

PEM can be controlled by health promotion – measures directed to pregnant and lactating mother

Development of lost cost weaning foods.

Measures to improve the family diet

Nutrition education.



VITAMIN A DEFICINECY:

Vitamins are a group of substances needed in small amounts by the body to maintain health. Vitamin A cannot be made by the human body and so it is essential part of the diet. Vitamin A is important for healthy eyes good eye sight, healthy skin and to help fight infections. Vitamin A is sometimes also called retinol . It is only present in foods of animal origin and food that contain Vitamin A are

- *Milk, yoghurt and cheese*
- *Eggs*
- *Oily fish*
- *Fortified low fat spreads*
- *Liver, fish liver oils*

Plants contains carotenoids some of which have vitamin A. Most important amongst the carotenoids which is found in green leafy and orange yellow vegetables and fruits can also be converted by our body to vitamin A. A good food sources of beta carotene in your diet include. Vegetables such as carrots, sweet potatoes and red peppers, and green leafy vegetables such as spinach . Orange/yellow coloured fruit eg mango, papaya and apricots. Mild form of vitamin A deficiency can usually be treated without any long term problems. Vitamin A deficiency is much more common in developing countries where it is often very severe and can cause loss of vision and even death.

How much vitamin A child need?

The recommended daily amount of vitamin A an adult needs is 0.7mg for men and 0.6 for women.

A very high intake of vitamin A can cause problems such as rough skin, dry hair and enlarged liver.

High levels of vitamin A in pregnant women may also cause the unborn baby develop birth defeat. Therefore women who are pregnant are advised not to take any vitamin A supplements. Women who pregnant should also not eat liver or food containing liver such as liver pate or liver sausage.

Vitamin A deficiency

Deficiency or a lack of Vitamin A in one's body happen because of lack of a sufficient amounts of vitamin A in diet. Over time a lack of vitamin A means you may develop problems with vision and be less able to fight infections.

Causes of vitamin A deficiency:

Vitamin A deficiency may also occur when our body is unable to make use of the vitamin A in your diet. This may occur in a variety of illnesses including:

- *Coeliac disease*
- *Cron's disease*
- *Giardiasis*
- *Cystic fibrosis*
- *Diseases affecting the pancreas*
- *Liver cirrhosis*

SYMPTOMS:

Xerophthalmia is a nutritional problem. This exhibits all ocular conditions of vitamin A deficiency. Ordinarily, this is called as "dry eye". This disease is prominently found in children between 1-3 years of age and is connected with weaning.

1) Night blindness :

The speed with which the eye recovers its full powers after exposure to bright light is directly related to the amount of vitamin A that is available to form rhodopsin. When vitamin A is deficient the formation of rhodopsin is impaired giving rise to night blindness. Night blindness is an early symptom of vitamin A deficiency.

unctival Xerosis :

It manifests as dry patches on non wettable conjunctiva. It may be associated with various degrees of thickening, wrinkling and pigmentation (muddy colouring) of the conjunctiva.

2) Bitot spots:

It is more an extension of the xerotic process. The spots are raised muddy and dry triangular patches.

3) Corneal Xerosis:

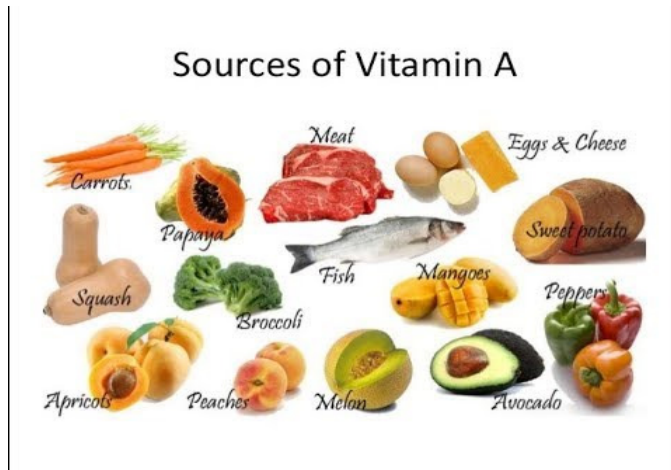
When dryness spreads to the cornea there is a dull hazy lacklustre appearance.

5)Keratomalacia:

In this condition softening and dissolution of the cornea occurs.

Sources of vitamin A:

Cod liver oil, shark liver oil and liver, butter, ghee, egg, yolk, carrots, green leafy vegetables and ripe mangoes



Doses:

Infants 400IU, children 600IU, Adults 750IU

Treatment:

Xerophthalmia 200,000IU of retinyl acetate orally (or)

100,000 IU of retinyl palmitate IM.

Infants <12 months half the dose



Vitamin C deficiency:

Vitamin C cannot be made by the human body and so is essential component of the diet. It is needed for the health and repair of various tissues in your body, including skin, bone, teeth and cartilage. Persistent lack of vitamin C leads to scurvy. Symptoms are easy bruising easy bleeding and joint and muscle pains. It can be treated with supplements of vitamin C and diet rich in vitamin C

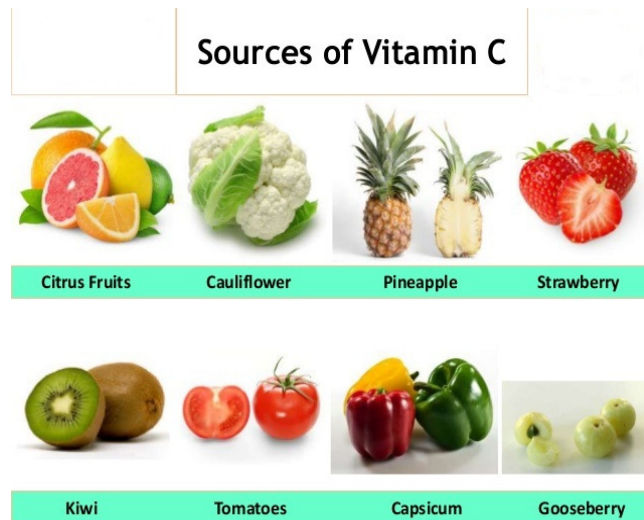
What is vitamin C:

Vitamin C is also called ascorbic acid which cannot be made by body. Vitamin C is needed to make a substance called collagen which is required for the health and repair of various tissues in the body including

- *Skin*
- *Bone*
- *Cartilage*
- *Ligaments and tendons*
- *Blood vessel walls*
- *Teeth*

Sources

- *Citrus fruits like orange, grapes, lime and lemon*
- *Berries like black currant, strawberries, raspberries, blueberries and cranberries*
- *Cantaloupe melon and water melon*
- *Kiwi fruit*
- *Vegetables like Spanish, green and red pepper, tomatoes, cauliflower, cabbage, broccoli and sprouts and potatoes*
- *Fresh milk, fish, liver and kidney*



The recommended dietary intake of vitamin C depends on age and sex

Children aged 1-10 years need 30mg of vitamin per/day

Signs and symptoms

- *Tiredness and weakness*
- *Easy bruising*
- *Spots like tiny red-blue bruises in skin*
- *Dry skin*
- *Splitting hair*
- *Swelling and discolouration of gums*
- *Sudden and unexpected bleeding from gums*
- *Nose bleeds*
- *Poor healing of wounds*
- *Changes in bones*
- *Tooth loss*
- *Weight loss*

*If untreated it can lead to shortness of breath, nerve problems high temperature and fits.
Bleeding inside brain and heart can cause death*

Diagnosis:

A blood test can be taken to measure vitamin C levels and helps to confirm the diagnosis

X-ray may be suggested because specific changes to the bones ,including ‘thinning’ of bones ,are often seen in vitamin C deficiency.

Treatment

Vitamin C supplements should be added in the diet

Foods rich in vitamin C can be consumed

Consulting a dietician for health

Prevention

By taking a balanced diet containing plenty of fruits and vegetables rich in vitamin C

Taking an orange will provide enough vitamin C .

B Complex Deficiency Diseases

Beri Beri



Cheilosis



Pellagra_Niacin Def



B complex deficiency:

B vitamins are a group of water –soluble vitamins that play important roles in cell metabolism. In general supplements containing all eight are referred to as a vitamin B

complex. Individual B vitamin supplements are referred to by the specific name of each vitamin (B1, B2, B3, B5, B6, B7, B9 and B12).

VITAMIN B1 (THIAMINE)

Thiamine deficiency is usually associated with low calorie intake and deficiency of other factors of vitamin B complex.

Causes

Taking refined cereals, poor absorption, excessive demand during pregnancy lactation will result in deficiency

Severe deficiency of thiamine produces a disease known as beriberi. It is mainly of three varieties

- 1) Dry beriberi.*
- 2) Wet beriberi.*
- 3) Infantile beriberi.*

DRY BERIBERI.

In this disease there is involvement of peripheral nerves mainly first legs and then of arms.

Signs and symptoms

Loss of appetite

Tingling numbness and burning sensation

Calf muscle are tender, wasting of muscles complete loss of sensation also in hands and legs.

WET BERIBERI:

Signs and symptoms

Enlargement of heart

Right side heart failure such as pitting edema on extremities

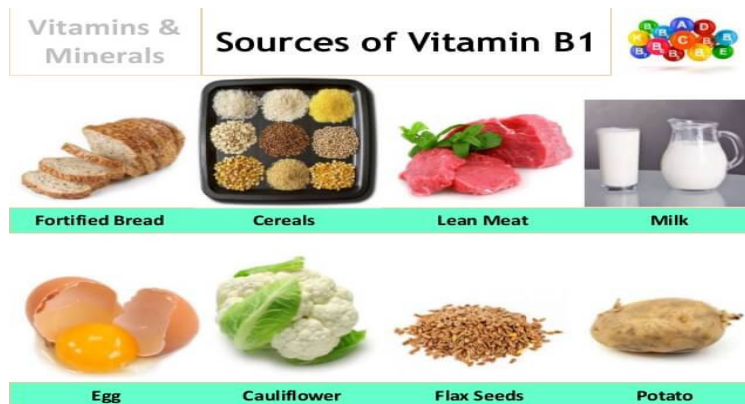
Accumulation of fluid in abdomen and chest

Palpitation

INFANTILE BERIBERI

Signs and symptoms

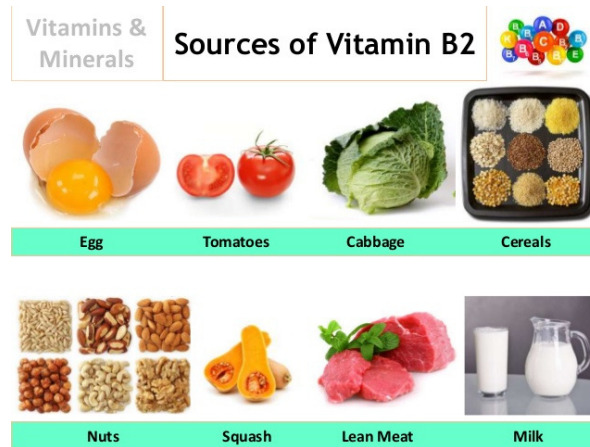
- *Constipation*
- *Well nourished.*
- *Water logging.*
- *Muffled.*
- *Edema of glottis causes peculiar cry.*
- *Breathlessness.*



VITAMIN B2 (RIBOFLAVIN)

Signs and symptoms of deficiency

- 1) *Angular stomatitis, cheilitis and nasolabial seborrhoea*
- 2) *There is glossitis*
- 3) *There may be scrotal dermatitis.*
- 4) *Skin dryness.*
- 5) *Redness of eyes*
- 6) *Ulceration of face.*



VITAMIN B3 DEFICINECY

Deficiency of nicotinic acid causes a disease known as pellagra.

- 1) Dermatitis***
- 2) Diarrhoea***
- 3) Dementia***

Dermatitis: name pellagra comes from pelle skin and agra rough. Marked changes occur in the skin especially in the skin exposed to the sun and friction areas like elbows, extensor surfaces of arms, knees, scrotal and perineal region

Diarrhoea: Diarrhoea enhances the deficiency state.

Dementia: It occurs due to involvement of nervous system.

VITAMIN B6 (PYRIDOXINE)

Vitamin B6 is also called pyridoxine which is a water soluble nutrient that is part of the B vitamin family. These help

- To support adrenal functions***
- To maintain healthy nervous system***
- Necessary for key metabolic processes***
- Liver function, skin health, eye health as well as***
- It helps to boost levels of energy***
- It helps to make haemoglobin that carries oxygen in red blood cell through the body***

- *To provide energy from the food that we eat*
- *To balance blood sugar levels*
- *To act as a natural pain treatment*
- *To boost mood*
- *To create antibodies that our immune system uses to protect us*

Symptoms

- *Change in mood*
- *Irritability*
- *Anxiety*
- *Depression*
- *Confusion*

Vitamin B6 several derivatives (Pyridoxal, pyridoxal 5 – phosphate and pyridoxamine) these are all important compounds involved in numerous biological functions. Vitamin B6 is used by the body in many functions including movement memory energy expenditure and blood flow

Vitamin B7 :

Sources

Liver, yeast, bran of wheat or rice are very good sources. Cow milk is rather poor in niacin.



Pellagra

Deficiency of niacin leads to pellagra in the earlier parts of 20th century affected millions of people in the southern areas of USA as well as latin American Countries. Pellagra was common in Italy, Rumania and Rajasthan of India. It is even now see in Africa and telangana of India poor people living chiefly on maize are the usual victims of pellagra. After Goldberger discovered the international between niacin and pellagra and subsequently produced experimental lesions in dog. Niacin came to be known as pellagra preventive factors.

Signs and symptoms

Signs and symptoms of pellagra are popularly described by three D's i.e DD and D. They stand for (i)dermatitis (the word pellagra means rough skin) (ii)diarrhoea and(iii)dementia. If not treated the fourth D (iv)death supervenes. There are usually some other signs which are due to deficiency of other vitamins.

Mild degree deficiency produces sub clinical pellagra characterised by mental irritability burning sensation of the feet and hands and gastrointestinal disorder. it is possible windows complaining of burning sensation of hands and feet are really victims of subclinical pellagra

VITAMIN B12 DEFICIENCY:

Cause

Deficiency occurs in pure vegetarians who do not take milk or milk products.

SYMPTOMS:

- *Causes pernicious anaemia*
- *Decreased of RBC count*
- *Decreased haemoglobin content in blood.*
- *Soreness and inflammation of tongue*
- *Loss of sensation in fingers.*
- *Deformity of spinal cord.*

Edema, weakness, insomnia, and may lose voice



VITAMIN D DEFICINECY

Vitamin D is a fat soluble vitamin which helps in absorption of calcium and phosphorous. Deficiency occurs due to inadequate exposure to sunlight, inadequate intake, altered metabolism due to liver and kidney damage.

Signs and symptoms

Rickets:

It is common in economically poor countries. The manifestation of rickets are seen most frequently toward the end of the first year and during the second year of life.

In rickets the child's bone get deformed

- *Enlargement of ends of long bones*
- *Bending of legs knock knee*
- *Sunken chest rickety rosary chest*
- *Beading of ribs and bones.*
- *The child to be constipated.*
- *Early rickets causes nervousness and irritability.*

PREVENTION:

Encourage outdoor playing for children (sunlight)

Dietary supplementation with adequate amounts of vitamin D.

IRON DEFICIENCY)

This a most common form anaemia throughout the world affecting mainly women in their reproductive years infants and children

CAUSES:

Infants and children suffer from iron deficiency anaemia due to premature birth and also due to iron deficiency in mother and prolonged breast feeding.

- *Inadequate utilisation of iron.*
- *Less spaced pregnancies, resurgence of malaria*
- *Deficiency of iron in the diet during periods of accelerated demand like infancy*
- *Inadequate absorption of iron can occur in diarrhoea.*

SYMPTOMS

Defects arise in structure and function epithelial tissues especially of the tongue nails mouth and stomach.

Skin appears pale and inside the eye lid may be light pink instead of red.

Fingernails become thin and flat and eventually koilonychia (spoon shaped nails)

The general symptoms are

- *Lassitude fatigue*
- *Breathlessness on exertion*
- *Palpitations*
- *Dizziness*
- *Tinnitus headache*
- *Dimness of vision*
- *Insomnia*
- *Paresthesia in fingers and toes*

- *Angina.*
- *Pica temper*
- *Tantrum*
- *Breath holding spells by children*
- *Abnormal cognitive development in children.*

PREVENTION

Give the child a diet with iron rich foods such as iron fortified breads and iron fortified cereals and lean meat.

Foods that are a good source of iron are:

- 1) *Liver*
- 2) *Lean red meats, including beef, pork, lamb*
- 3) *Sea foods*
- 4) *Beans, cereals, green leafy vegetables, banana, mango, spices like jeera.*
- 5) *Nuts, dry fruits, such as raisins, dates, apricots and egg yolk.*

SUMMARY

Deficiency of one or two nutrients in diet is called nutritional deficiency. Generally it is expressed as malnutrition. Nutrition is a major factor in bringing out the maximum potentially that one is endowed with both physically and mentally. Good nutrition depends on an adequate food supply and food distribution.

The social economic, cultural and agricultural factors are the basic causes of nutritional diseases. Some of the common nutritional deficiency diseases observed in children are protein energy malnutrition, kwashiorkor, nutritional marasmus, Vitamin A deficiency, vitamin B deficiency, vitamin C deficiency vitamin D deficiency, and iron deficiency.

<i>Nutrients</i>	<i>Source</i>	<i>deficiency</i>
<i>Energy, protein</i>	<i>Fat, sugar, cereals, egg, meat</i>	<i>Marasmus, kwashikor</i>
<i>Calcium</i>	<i>Milk and vegetables</i>	<i>Rickets, tetany osteomalacia</i>
<i>Iron</i>	<i>Liver, green leafy vegetables, jiggery</i>	<i>Anemia</i>
<i>Vitamin A</i>	<i>Carrot, liver, egg yolk</i>	<i>Night blindness</i>
<i>Thiamin</i>	<i>Yeast, pulses, nuts</i>	<i>Pain and weakness</i>
<i>Niacin</i>	<i>Groundnuts, whole cereals, pulses</i>	<i>Dementia, diarrhoea, dermatitis</i>
<i>Vitamin B6</i>	<i>Meat, liver, vegetables</i>	<i>Anemia and angular stomatits</i>
<i>Folic acid</i>	<i>Green vegetables, cluster beans</i>	<i>Megaloblastic anemia</i>
<i>Vitamin B12</i>	<i>Yeast, fermented foods</i>	<i>Pernicious anemia</i>
<i>Vitamin C</i>	<i>Citrus fruits, amla, guava</i>	<i>Bleeding gums</i>
<i>Vitamin D</i>	<i>Egg, sunlight, meat</i>	<i>Rickets, osteomalacia.</i>

Short answer type question

- 1) ***Write a note on PEM.***
- 2) ***Write the meaning of nutritional deficiency disease?***
- 3) ***Write on anaemia?***
- 4) ***Briefly write on Rickets?***
- 5) ***Give details on foods rich vitamin A and vitamin C?***

Long answer type questions

- 1) ***Explain the symptoms causes and prevention of PEM, kwashiorkor and marasmus?***
- 2) ***Write on the B complex deficiency disease, their symptoms, causes and prevention?***
- 3) ***Describe the symptoms, causes and prevention of vitamin A and vitamin C deficiency disease?***

Unit- 5

Common ailments in children

Structure

5.1 Introduction

5.2 Common ailments in children

Learning objectives

By the end of the unit student will be able to :

Know the common ailments seen in children.

Understand the symptoms and causes of the common ailments.

Care to be taken during the time when an ailment is observed in the children

Learn the precautions for treating a sick child.

understand problems in teething.

5.1 Introduction

Being sick is part of childhood and caring for a sick child is part of being a parent. They are prone to illness more than adults as their immune systems are still developing.

Knowing the signs and symptoms can help them to right treatment early. Ensuring a child for balanced and varied diet will keep them healthy and boost their immune system.

Ailment can be defined as an often persistent bodily disorder or a disease.

5.2 Common ailments in children :

Some of the ailments which are observed in children commonly are discussed as follows .

- 1) Red sore buttocks.***
- 2) Constipation.***
- 3) Diarrhoea.***
- 4) Ear ache .***
- 5) Cold and cough .***
- 6) Fever.***
- 7) Vomiting.***
- 8) Colic.***



1) Red sore buttocks:

The ailment is commonly seen in infants (especially of children below 1 year.) This may be due to infections of bacterial origin or fungal infections. These fungal infections mainly occur due to moisture on the buttocks, lack of adequate cleanliness of the buttocks and malnutrition or may be due to vitamin deficiency also.

Causes:

- *Soreness of buttocks can be both external and internal.*
- *Contact with urine and faeces, prolonged exposure to urine and faeces can irritate the skin. Digestive enzymes in faeces can increase the risk of diaper rash.*
- *Tight fitting diapers that chafe the skin can cause diaper rash.*
- *Infants and children with preexisting skin conditions such as eczema and atopic.*
- *Infections.*
- *Contact with irritating chemicals.*
- *Allergy to diaper elastic chemicals.*
- *Using antibiotics.*

Symptoms

- *Redness on the skin with shiny patches and some pimply spots.*
- *Infants are irritable cry during diaper change.*
- *Rash is found in diaper area usually in the buttocks, upper thighs and genitalia.*

Prevention

- *Zinc oxide and petroleum jelly can be used.*
- *Avoid using products that irritate the skin such as fragrances or lanolin.*
- *Changing diaper often.*
- *Cleaning skin gently and keeping it dry.*
- *Rinse the baby bottom with warm water and unscented soap after each diaper change.*
- *Use diapers that draw moisture away from the skin.*

Treatment:

- *Protein diet with sufficient vitamins and minerals.*
- *Bed rest, ointments for external applications are needed.*
- *Personal hygiene is very important.*
-

2.) Constipation:

The condition when the waste matter in the bowel is too hard to pass easily is known as constipation. Different children have different bowel habits. Each child according to his individual body make up, his diet, his exercise, his eating habits, his intake of fluids, and so on develops a pattern of bowel movement.

Symptoms:

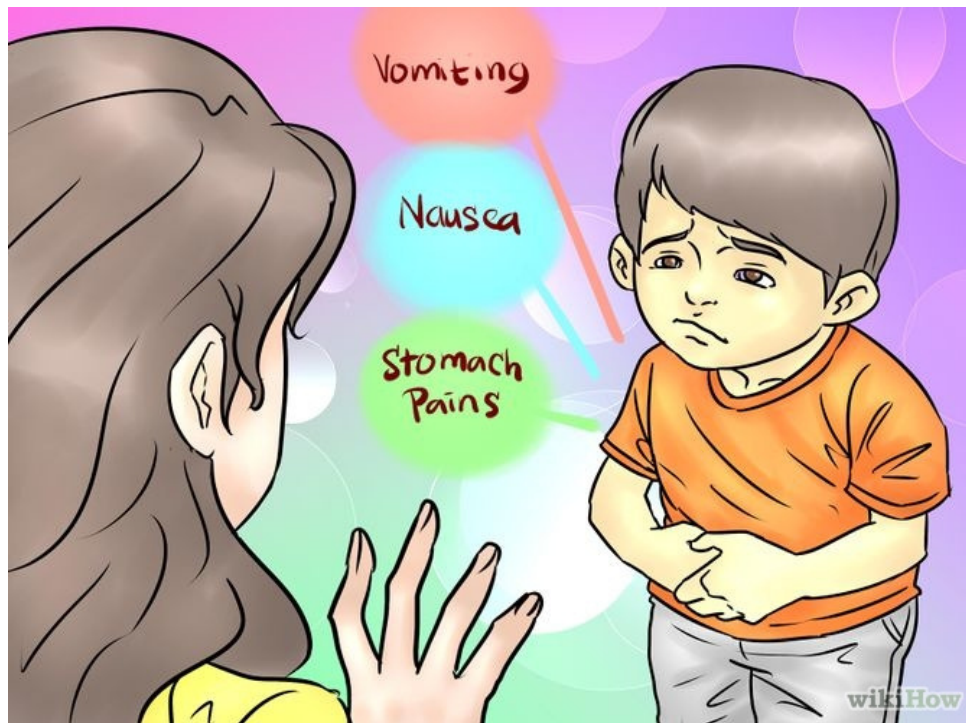
- *Hard stools*
- *Irregularity in bowel movement*
- *Abdominal pain*
- *Loss of appetite*
- *Vomiting*
- *Failure to gain weight*
- *Urinary infections*

Causes of constipation:

- *Irregularity in elimination habits.*
- *Irregularity in eating habits.*
- *Non availability of food according to the child need.*
- *Absence of green leafy vegetables in food*
- *Any type of sickness.*
- *Insufficient physical activity*
- *Emotional disturbance.*

Treatment:

- *Elimination habits should be made regular*
- *The child should given water and fruit juice.*
- *A sufficient amount of roughage should be included specially leafy vegetables and whole grains cereals in the diet.*
- *The child should be encouraged to do extra physical as they are habit forming.*
- *The doctor should be consulted for a chronic condition.*



3.) Diarrhoea:

Diarrhoeal diseases rank among the most leading causes of children's death in developing countries.

Diarrhoea means increased frequency of loose stools. It is a water borne disease . Sometimes there is blood and mucous in these stools or the stools may be green in colour. Stools become green if they are passed so quickly that the green bile does not have time to become brown. Diarrhoea with blood and mucous is named as dysentery.

Causes of diarrhoea

- *It is most frequent under the age of 2 years with peak incidence between 6-9 months*
- *More common in summer months with maximum frequency in rainy season.*
- *Children from poor families*
- *Poorly nourished children*
- *More common in artificially fed infants than breast fed*
- *Improper feeding*

- *Due to bacterial or virus infection.*
- *Dirty water and poor sanitation*
- *Unhygienic living conditions*
- *Malnutrition*
- *Faulty eating habits*
- *Allergies.*

Treatment

- *The diarrhoea patient should be given full rest .*
- *The patient with acute diarrhoea should be kept on a liquid diet consisting of barley water, whey water , butter milk , pomegranate juice, lemon juice, rice kanji with salt.*
- *Avoid laxative fruits like papaya, mango, guava etc. And green leafy vegetables.*
- *If the cause of diarrhoea is food –poisoning then an anaemia should be given to clean his intestine , so that infected food is not left in the intestine.*
- *The traditional practice of not giving any food to a person having diarrhoea should be given up .intake of fluid and continued feeding should be normal .*
- *To compensate dehydration , the child should be given an extra amount of water . Home –made electrol water –by mixing sugar , a pinch of salt in a glass of boiled and cooled water should be given at small intervals.*
- *In severe diarrhoea the doctor should be consulted immediately.*

4.) Ear ache:

Ear infections are common in small children and can lead to serious complication and loss of hearing. It has many causes including ear infections(otitis media) swimmers ear infection(skin in the ear canal) pressure from cold or sinus infection, teeth pain radiating to other up to jaw to ear and others.

Although there are many possible causes the chief one is bacterial infection in the middle ear.

Mothers clean ear with all sorts of things which may damage the ear canal and even children are found of putting small things in the ear.

Causes:

Ear infections can be caused by bacteria or a virus. When fluid accumulate behinds baby eardrum and become infected. This fluids flows through eustachian tubes which middle ear to back of nose and throat. But if the tube is block the fluid gets trapped in middle ear which leads to acute otitis media(AOM).

Symptoms:

- *Irritability*
- *Pulling or bathing at ear*
- *Loss of appetite*
- *Trouble sleeping*
- *Fever*
- *Fluid oozing from ear*
- *Dizziness.*

Treatment

Most ear infections clear on their own but serve causes need to be treated with antibiotics.

Keep the child away from tobacco smoke.

Bed rest and plenty of fluids should be given ear should be cleaned with hydrogen peroxide frequently

Prevention:

- *Breast feeding.*
- *Avoid smoke.*
- *Proper bottle position.*
- *Healthy environment.*

Home remedies:

Warm compress warm moist compress over the child ear for about 15 minutes which reduce pain

Warm oil olive oil or sesame oil can be put in affected ear

Give lot of fluids, Swallowing helps to drain the trapped fluid.

Elevate child's head

***Cold and cough:***

It is believed that 50 or more different viruses can cause the symptoms known as “the common cold” sore throat , stuffy and runny nose, sneezing, coughing and watery eyes. A high fever is not a normal symptom of cold.

Colds are caught by transfer of the virus from the nose and mouth discharge of an infected child. The transfer may be through direct contact through droplets released in sneezing, coughing or talking or indirectly through contact with eating in utensils or other article of the infected child

There is no cure for a cold so far. All we can do is to make the child comfortable.

Symptoms:

- *Congested or runny nose*
- *Fever*
- *Sneezing*
- *Coughing*
- *Decreased appetite*
- *Irritability*
- *Difficulty in sleeping*

Treatment:

- *No quick cure for a cold*
- *Get well within a week*
- *Child should be kept warm, have rest and given plenty to drink*
- *Nose should be frequently wiped clean*
- *Sitting position makes breathing easier.*
- *Breast feeding to be continued*

Prevention:

- *Children with cold should be isolated from other children*
- *Good food and lots of fruits.*
- *Care to be taken to prevent complications*

Cough

Cough is usually a sign in child body is trying to rid itself of an irritant from mucus to a foreign object. It is a symptom of a respiratory infection but it may be caused by other respiratory diseases like asthma. Coughing is an important reflex because it removes like extra mucus and let air pass through wind pipe and into the lungs which help the child to breathe.

A child cough is often worse when the child is lying in bed because the mucus can collect in the back of the throat

Symptoms:

- *Fever*
- *Runny nose*
- *Difficulty in breathing*

Treatment

- *Provide comfortable bed to take rest*
- *Bedding and bed clothes must be clean*
- *Cover if the air is cool*
- *Change positions frequently to prevent bed sores and pneumonia*
- *Encourage to drink plenty of oral fluids*
- *Check temperature every 4th hourly*
- *Cold sponging according to the temperature*

Fever:

When a person body temperature is above normal it is called fever. Fever itself is not a sickness but is a sign of many different sickness. Infections and communicable diseases often cause the body to react with fever.

If the patient feels hot he can be checked by using thermometer. The normal temperature is 37 c(98.4f) if it is above 37.2c(99f) the person has fever

Symptoms:

- *Skin feels hot and dry and the mouth is dry*
- *Furred tongue, lack of appetite, nausea, vomiting constipation*
- *Less urine is passed and it is highly concentrated*
- *Pulse and respiration rates are usually increased and the pulse may feel very strong.*
- *Head ache and body aches*

- *Restlessness, delirium and convulsion*
- *Pulse rate for babies (100 – 140 per minutes) and for children(80-100 per minutes)*
- *Sore throat cough and ear ache*

They are three types of fever :

1) Continuous fever:

Constant or continuous fever when temperature remains high and varies not more than 2F between night and morning

Example :

Lobar pneumonia , typhoid etc,

Intermittent fever :

The temperature varies from normal or subnormal to high fever and back at regular intervals

Example :

Malaria

Remittent fever :

Temperature varies more than 2F between the morning and evening but does not come down to normal

Example:

Septicemia

4.) Relapsing fever:

It is one in which periods of fever are followed by one or two days of normal temperature

Prevention:

- *Barely water, whey water, butter milk, pomegranate juice, lemon juice, rice kanji with salt*
- *Avoid laxative fruits like papaya, mango, guava and green leafy vegetables.*
- *If children have no nausea, vomiting or abdominal distention they should be encouraged to drink oral electrolyte solution.*

- *Continue breast feeding during diarrhoea*
- *Diet should be easily digestible and nutritionally balanced*
- *Care of the skin at perineum and buttocks is important as it can cause irritation and reduces*
- *General hygiene care should be provided*

Vomiting:

Vomiting means the expulsion of the contents of the upper gastrointestinal tract. Vomiting may be due to undigested food particles in the stomach some infections in the stomach food poisoning or ulcers of the stomach and duodenum

Causes:

- 1) Gas infections and chills may cause sour smelling vomiting after a meal.*
- 2) In bottle fed babies it may indicate that the milk is either too much in quantity or not fresh.*
- 3) With breast fed babies ,it may mean that the mother's milk contains something that is upsetting the baby.*
- 4) Sometimes food allergy may be the cause for vomiting.*
- 5) When the baby is not feeling well.*
- 6) Sometimes an obstruction in the digestive track may make the child to vomit.*

Treatment:

- 1) Drugs which stop vomiting are called antiemetics such as perinorm, avomin etc are to be used.*
- 2) Rest to the patient and intravenous administration of fluids.*
- 3) Gastric lavage, use of antibiotics if vomiting is due to infection.*

Colic:

This usually occur in babies who are only a few weeks or months old. A baby with colic is apt to pull up her legs and arms, clench her fists, yell lustily turn red face , and expel gas all more or less simultaneously. But despite the baby's discomfort, this condition is not serious . The attack however occurs at the same time of the day particularly in the evening and hence it is sometimes called evening colic.

Causes

- *Swallowing of air while feeding*
- *Indigestion*
- *Emotional tension on the part of the mother or baby*
- *Artificially fed babies suffers more than those who are breast fed*
- *Constipation or diarrhoea*
- *Insufficient exercise and lack of activity of limbs and body.*

These are three types of colic

- 1) *Intestinal colic: Is due to presence of worm infestations and undigested food material.*
- 2) *Renal colic: It is a type of abdominal pain caused mby kidney stones*
- 3) *Biliary colic: It is due to irritation of the viscera secondary to cholecystitis and gallstones.*

Symptoms:

- *Fussing and crying*
- *Facial discolouration such as reddening of the face or paler skin around the mouth*
- *Bodily tension*

Treatment:

- *Pain can be relived by keeping the baby in prone position*
- *Burp him and give some water to drink*
- *Mothers should be instructed about the correct feeding techniques*
- *Do not permit the baby to nurse or eat too rapidly*
- *Stop feeding at frequent intervals and let her burp*
- *Change in baby diet*
- *Child should be more relaxed and less stimulated*

Precautions for treating a sick child:

The following precautions should be taken in treating a sick child

- ***Bed rest, warmth, cleanliness of the body, plenty of fluids by mouth or by intravenous injections are to be given***
- ***Wash your and child hands frequently***
- ***In case of vomiting in children the child has to be hydrated giving bland food***
- ***Deworming must be done***
- ***If the sickness is severe hospitalisation of the patient must be done***
- ***Comforting the patient is essential***
- ***Observation is required for sinus and complications***
- ***Good food hygiene must be maintained***
- ***Isolation of the patient must be done in case of infectious diseases like measles and chicken pox.***
- ***If child cannot go to sleep put him to sleep by reading a suitable story.***
- ***Analgesic drugs for pain and antispasmodic drugs are to be administered if there is any pain in the abdomen.***
- ***Anti diarrhoeal drugs for diarrhoea or dysentery may be administered.***
- ***If there is any food poisoning gastric lavage.***
- ***Follow the doctors or nurses instructions.***
- ***Encourage the child who has been ordered by the doctor.***

Teething:

Teething is the process by which an infant's first teeth ("baby teeth" or "milk teeth") sequentially appear by emerging through the gums

A child's first teeth are the twenty baby or deciduous , teeth which are eventually replaced by thirty-two permanent teeth . Both baby teeth and permanent teeth begin to develop before the child is born . Because of this it is vitally important that an

expectant mothers diet should be rich in calcium, phosphorous and vitamins, which are necessary for the health of the child's teeth.

Some babies are slower than other in cutting teeth, but the deciduous teeth generally appear between six and nine months of age. Usually all baby teeth have come through by the time the child is two – and – a- half years old.

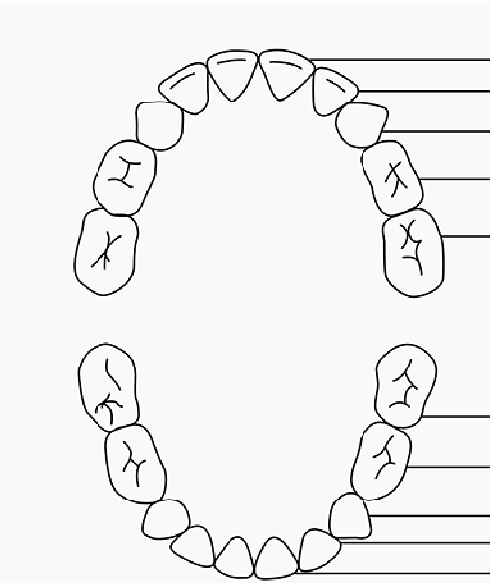
Teething

Teething is the process by which an infant 's first teeth “(baby teeth” or milk teeth”) sequentially appear by emerging through the gums. Teething may starts as early as three months or as late as twelve months. The first teeth typically appear between six and nine months. It can take several years for all 20 teeth to complete the tooth eruption they typically arrive in pairs. Though the process of teething is sometimes referred to as cutting teeth, when teeth emerge through the gums they do not cut through the flesh. Instead special chemicals are released within the body that causes some cells in the gums to die and separate, allowing the teeth to come through. Teeth help us in digestion of food. They are used for aiding expression forming words during speech, making sounds and in many other ways

Sequence of appearance

Teeth start to form during the 3rd or 4th month of pregnancy but they erupt after 6th month or so after the birth of the child. The age at which babies cut their teeth has been found to be far less important than the sequence of eruption. The infant teeth tend to emerge in pairs- first one lower incisor emerges then the other lower incisor emerges before the next set begins to emerge. The general pattern of emergence is:

- *Lower central incisors(2) at approximately 6 months*
- *Upper central incisors(2)at approximately 8 months*
- *Upper lateral incisors(2)at approximately 10 months*
- *Lower lateral incisors (2) at approximately 10 months*
- *First molars(4)at approximately 14 months*
- *Canines (4) at approximately 18 months*
- *Second molars(4)at approximately 2-3 years*



The diagram illustrates the eruption and loss of primary teeth in a baby's mouth. It shows two rows of teeth: the upper arch (top) and the lower arch (bottom). Each tooth is labeled with its name, the age range when it typically erupts, and the age range when it is typically lost. The upper teeth are listed from front to back: Central incisor, Lateral incisor, Canine (cuspid), First molar, and Second molar. The lower teeth are listed from back to front: Second molar, First molar, Canine (cuspid), Lateral incisor, and Central incisor.

Upper Teeth	Tooth Erupts	Tooth Lost
Central incisor	8-12 months	6-7 years
Lateral incisor	9-13 months	7-8 years
Canine (cuspid)	16-22 months	10-12 years
First molar	13-19 months	9-11 years
Second molar	25-33 months	10-12 years

Lower Teeth	Tooth Erupts	Tooth Lost
Second molar	23-31 months	10-12 years
First molar	14-18 months	9-11 years
Canine (cuspid)	17-23 months	9-12 years
Lateral incisor	10-16 months	7-8 years
Central incisor	6-10 months	6-7 years

Milk teeth tend to emerge sooner in females than in males. The exact pattern and initial starting times of teething appear to be hereditary. When and how teeth appear in an infant has no bearing on the health of the child but the process of teething may cause a slightly elevated temperature, but rising into the feverish range. Higher temperatures during teething are due to some form of infection such as a herpes virus initial infection which is extremely widespread among the children of teething age.

Teething problems

As the primary teeth erupt in the process of occlusion takes place. Occlusion means the contact between maxillary and mandibular teeth which approach each other as occurs during chewing or rest. It helps to chew by moving jaw up and down side ways forward and backward. Malocclusion is misalignment of teeth and jaws or simply a bad bite. Which can cause lot of health and dental problems. If the teething takes place properly there is no chance of malocclusion and will have correct mastication of food without effecting general health. Irregular tooth position will retain food and will result in bacterial growth which leads to tooth decay and gums diseases

Teething may make the baby

- *Mild fever*
- *Irritability and fussiness*
- *Child refuse feeds*
- *Difficulty in sleeping*

- *Excessive salivation*
- *Finger and thumb sucking increases during teething*
- *Rub their gums with various objects*
- *Red and swollen gums, grabbing ears*
- *Loose weight*
- *Disturbed sleep*
- *Get red patches on cheeks*
- *Dribble due to increase in saliva*
- *Child's teeth should be cleaned regularly and mouth should be rinsed well*

Symptoms:

The symptoms of teething are extremely mild. Babies lose immunity acquired from mother at about six months and coincidentally pick up new infection at the time of teething

- *Sore and tender gums*
- *Flushed cheeks*
- *Excessive dribbling*
- *Inflammation in the mouth*
- *Excessive chewing*
- *Restless sleep*

Summary

Sick days are part of being a kid worrying about childhood illness is part of being a parent .

Usually simple ailments do not require medical attention but they should not be neglected .

Some of the common ailments seen in children and red sores, cold, cough, fever, diarrhoea etc.

Young children also face problems during teething .

Bed rest, warmth , cleanliness of the body , plenty of fluids by mouth or by intravenous injection are to be given

Children feel bored, insecure and irritable when sick.

Sick children should be provided with love, company and sense of security,

Short answer type questions:

- 1. What is fever and how many types of fever are there?*
- 2. Describe the causes and treatment of constipation?*
- 3. Write on the sequence of appearance of teething?*

Long answer type question :

- 1. Explain any five common ailments observed in children including the symptoms, causes and treatment?*
- 2. Explain the precautions to be taken for treating a sick child?*
- 3. Write about teething and the complications or problems during teething?*

UNIT – 6

HABIT FORMATION

Structure

6.1 Introduction

Importance of habit formation – Eating habits, sleeping habits, toilet training, dressing.

Introduction

Man is often described as a creature of habits. Habits in relation to dressing, eating, work and other everyday activities are so readymade that most people unfold without thinking.

Childhood is the best time to practice and develop good habits. This is entirely due to the fact that children have a really good grasping power. They can easily learn what is told to them, and put them to use. In fact, a child's grasping power is approximately 25% more than an adult's grasping power. Therefore, it is easier to inculcate good habits in them whilst they are young and agile minded.

A child's mind is pure and innocent. He believes that his parents do everything for his own good. In order to inculcate good habits in them, their parents should show them the right way to behave at the right time, in a fun manner. This can be done by performing activities along with them, showing them both the good and the bad sides of acting in a certain manner, towards a particular situation.

Habit is the name given to behaviour which when repeated often becomes automatic. A habitual action is one which is performed with little or no thought and approximately always in same manner.

Characteristics of habits:

- *They are acquired through repetition*
- *They are semi mechanical and automatic that is they do not require any attention once they are acquired*
- *They can be performed only under similar conditions*

Types of habits:

Habit may be divided into three group

Bodily habit

Habit of character and disposition

Habits of thought.

Bodily habits: Are the those habits which are connected with the way in which we use limbs, with such actions such as walking, speaking, washing the teeth, gaining proficiency in the use of bodily powers in activities such as games and exercises. Routine habits such as eating, sleeping, dressing, toilet training come under bodily habits

Habits of character and disposition: are habits such as obedience, telling the truth, hospitality, tolerance, tidiness and punctuality.

Habits of thoughts: Are the habits such as accuracy of thinking for oneself, seeking for reason and causes, correct observation and testing results.

6.2 IMPORTANCE OF HABIT FORMATION

It has to be appreciated that habits that get formed before the child is just three or five years old tend to become life habits. If the child gets on to good habits it repeats the same when he or she grows old so also with bad habit.

Mother has a big role in formation of good habits. When a good habit is formed it starts bringing harmony to others. When parents and teacher are good role models, good habits get formed very quickly.

A change in bad habits leads to a change in life. Children learn from the influences around them. It is essential to encourage good habits of children in their early years. The habits learnt in this phase will stay with him for the rest of his life. Habits are formed by doing and children learn by doing. Habits give satisfaction to the child.

- *Habits reduce fatigue*
- *They make movements and tasks simple*
- *Through habit formation it is possible to do many things at a time.*
- *Habit saves individual time and thought.*
- *At times habits can cause danger*
- *Habits make things accurate*

- *Habits endure greater speed*
- *Habits can be both good and bad habits*
- *Bad habits are thumb sucking, nail biting, lying down and reading etc*
- *Bad habits are difficult to get rid off*
- *Habits kill feelings and make us in different.*

There is a statement that “personality is clothed in habits”. Habits are the very garment of the soul. The ability to form habits is the most striking and most useful characteristic of man whether is an infant adolescent or a old man. A child when he first begins to go to school he takes lot of time to dress up especially to lace his shoes but after some days he is able to do quickly and easily.

The aim of all education both at home and school should be to inculcate the right habits

HOW HABITS DEVELOP:

The cultivation of habits should begin very early in life. The younger the child the more receptive his mind will be able to acquire the right habits.

Habits are formed by frequent repetitions and it also takes quite a long time to acquire habits. For proper habit formation we must start with a strong emotional stimulus. In the formation of a new habit there should be no exceptions and the actions should be persistently performed without a break.

Formation of good habits among children should be rewarded by giving gifts and praising children. Habits give some satisfaction to the child. Occasionally approval is the best form of giving satisfaction to the child while he is learning

10 WAYS TO DEVELOP GOOD HABITS IN CHILDREN

- *Keep things positive.*
- *Be realistic with your expectation.*
- *Encourage family bonding.*
- *Set strong ground rules.*
- *Introduce healthy food habits.*
- *Reward your child.*
- *Encourage physical activity.*
- *Family dinners.*
- *Introduce good literature.*
- *Good manners – an early start.*

BREAKING OF BAD HABITS:

Everybody has a few or more undesirable habits. Hence habit breaking is very important. If reinforcement is withdrawn from a habit it becomes weak and finally disappears. Punishment is another method to break a bad habit. There are many methods to break habits.

- 1) Substitution method: In this method one tries to prevent an undesirable habit by replacing it with another response.*
- 2) Toleration method: It consists of gradual substitution of an undesirable habit with a desirable one. This method is effective in treating fear.*
- 3) Change of- Cue method: One of most widely practised and in many cases least effective methods of breaking an undesirable habit is to remove the organism from the situation where the habit is developed and to place him in an entirely new one*
- 4) Maturation and habit breaking: The importance of maturation in eliminating many undesirable responses should never be overlooked. The teacher who gives her three years old child a crayon and a 12 by 12 inch piece of paper to keep him busy can expect him to extend his creative masterpiece beyond the edges of the paper onto the table. The child has not really misbehaved. A three year old child naturally*

makes large gross motions when he moves his hands. Training a three year old within the confines of a 12 x 12 inch piece of paper is difficult because his neural and muscular organisation has not matured sufficiently to enable him to confine his drawing to a small piece of paper

Healthy *Eating Habits* You Should Adopt

Keep only healthy food in your house
Eat sitting down
Drink water instead of liquid calories
Put leftovers away
Snack on fruit instead of chips
Colorful salads every day
Chew your food well

Vegetable salads are a great way of bringing a variety of nutrients to your body



If you always keep fruit in your house, you will form a habit of eating it

EATING HABITS:

Most of the problems of food acceptance begin in the toddler stage. The problem starts with the mother, who thinks that the child should be well fed, and tries to feed the child more food than it needs. The child will show a marked decrease in appetite in the second year, because he grows in slower rate in the second year as compared to the first year. So it is important to give small portions of food and let him enjoy it. Allow the child some freedom to decide when he is satisfied. Allow some flexibility in choices and help the child form good food habits gradually. As long as the child seems fit, healthy and active and is growing well it is obvious that he is receiving enough nourishment.

Points to remember:

- 1) *The child should be taught to wash his hands before and after the meal properly.*
- 2) *Encourage the child to eat slowly.*

- 3) Discourage eating meals or snacks while watching TV.*
- 4) The child should have his meal at regular intervals.*
- 5) Try not to use food to punish or reward the child.*
- 6) Eat meals together as a family as often as possible.*
- 7) The meal should look attractive and meet nutritive needs of the child.*
- 8) Encourage the child to drink more water.*
- 9) Be a good role model.*
- 10) Keep offering new foods*
- 11) They must be encouraged to feed himself without spilling*
- 12) The child should always have a clean place, a small and comfortable chair and table.*

	CLEAN UP PLAYROOM
	PUT ON PAJAMAS
	GO POTTY
	BRUSH TEETH
	READ A STORY OR TWO
	SAY GOODNIGHT!
	LIGHTS OUT!

SLEEPING HABITS

Sleep is important at all ages. Sleep problems are common among infants and toddlers, affecting both the child and the parents. Sleep habits are easily established in early infancy, will be maintained only if the baby continues to get satisfaction out of them. The child learns to associate going to sleep with pleasant feeling of the food, warmth in the bed and sleepiness he had after his feeding or meals.

How much sleep a child needs each day depends on age. Newborns sleep about 16 to 20 hours and are awake about 1 to 2 hours between periods of sleep. Infants sleep about 13 to 15 hours including nighttime sleep, morning naps and afternoon naps. Toddlers sleep about 12 hours including an afternoon nap.

By establishing regular hours for his rest and sleep, contributes for the child's well being. Many schools arrange for periods of rest on mats or cots.

POINTS TO REMEMBERED IN SLEEPING HABITS

- 1. The baby should not be put to bed when hungry.*
- 2. Child should put to sleep when he is sleepy.*
- 3. Have a nighttime routine and a regular sleep schedule.*
- Set a bedtime for your child. Be sure to stick with the time you select by putting your baby to bed at the same time every night.*
- Start a night time routine that includes feeding, bath, bedtime story, etc.*
- 4. Do not let your child nap for too long or too late in the day.*
- 5. Do not put your child in bed with a bottle or cup. Sleeping with milk or juice in the mouth can lead to cavities and tooth decay.*
- 6. Consider offering a pacifier at nap time and bedtime.*
- 7. Children should be helped to go to toilet before going to bed.*
- 8. Activities which drags child's excitement should be avoided.*
- 9. It is preferable to discourage the habit of sleeping only when rocked or patted*

Toilet training

There is a wide spread belief that good health is acquired through regular bowel and bladder movement. The toilet training includes the training of bowel and bladder movements.

Baby potty training is the practice of introducing the baby to the toilet or potty before his [first birthday](#).

Babies aren't physically or emotionally ready to be [toilet trained](#) in the way we usually understand the term until they are between [18 months](#) and [three years old](#). They develop the ability to [control their bladders](#) between 18 months and [two years](#).

The time to begin toilet training depends on the child. He can perform this task when he is physiologically and psychologically mature.

Toilet training should begin at 18 months at that time the child is ready he can sit on the potty without any support. The important factor is the comfortableness of the bowel movement. The

baby who have painful hard movement will naturally fear to go to toilet seat which may leads to constipation.

All children become toilet trained by the time they are 3 years of age. Usually bowel control comes first and then bladder control is achieved.

Points to be remembered:

- 1) Toilet training should be child oriented.*
- 2) Potty should be attractive and comfortable.*
- 3) Do not flush the toilet when the child is in. It may frighten him both by the noise and by the fact the part of his is being taken away.*
- 4) Praise your child and treat his control as an accomplishment.*
- 5) Do not delay once the child has signalled his need since control is only possible for a short time.*
- 6) Any accidents if occurred should always be ignored and forgiven.*
- 7) Parents should have patience while training the child. Do not expect perfection immediately.*
- 8) Good toilet habits should be inculcated.*

DRESSING HABITS:

The time between 1 ½ and 2 ½ years is the most important for learning self dressing skills. This is the time when babies are very eager to learn to dress themselves. Undressing comes before putting on clothes because it is easier.

There are few ways to make learning self dressing skills easier

- Clothes should be chosen that have aids to self dressing in mind zippers for example can be used instead of buttons. Front opening is preferable*
- Parents can help with the dressing taking over the hard parts etc. Until the major tasks are mastered.*

It's important to let your toddler have a go at doing as much as she can as she grows. [Dressing and undressing](#) helps her to coordinate [her arms and legs](#) better. And trying to put on clothes also helps her to learn about using her fingers for those fiddly tasks (Herts NHS 2011).

It'll be a slow process, but from around [12 months old](#), the toddler may start to show an interest in helping to get her dressed. But however determined she becomes to do things for herself, she'll need your help for a long time yet. At this stage, she may just hold out her arm for a sleeve and a foot for a shoe (British Association for Early Childhood Education 2012: 25, Sheridan 2008: 24).

By [18 months old](#), your toddler may be able to pull off her shoes, socks, and hat (Sheridan 2008: 35, Thomson Delmar Learning 2007). But she will still struggle to put them back on herself (Sheridan 2008: 31). She isn't likely to be able to put on her shoes, socks, and hat until she is about [two years old](#) (Sheridan 2008: 35).

Between the ages of two years old and [three years old](#), your toddler may learn how to pull down the zip on a jacket and pull on a hat (British Association for Early Childhood Education 2012: 26, Thomson Delmar Learning 2007). But she probably won't be able to get dressed by herself until she is about four years old. And even then, she'll probably still struggle with zips, laces, ties, and back buttons, and will need your help (Sheridan 2008: 46).

Girls tend to learn how to dress themselves earlier than boys. But this is a very general rule and can vary a great deal (Einon 2006: 166).

Undressing before bed and helping to put on pyjamas is a good time to start practicing. You may have more time to allow the child to practice in the [evening](#) than in the morning (Herts NHS 2011).

Take the same approach for each item of clothing. For example, always help the toddler to put her top on in the same way. Pull the top over her head first, and then put her arms through the sleeves (Herts NHS 2011).

Let the toddler do as much or as little as she can by herself. If she struggles, encourage her to keep trying by leaving a last small step for her to finish. For example, pulling off a sock you've already tugged down a little, or pulling up her trousers from just below the waist (British Association for Early Childhood Education 2012: 26). Be patient and tell her how well she's doing every time.

Arrange the toddler's clothes on the back of a chair in the order that they need to be put on. Put socks and shoes underneath the chair. The toddler can then keep returning to the chair for the next layer.

From around 18 months old, the toddler may enjoy dressing up. It's a great way for her to practise getting dressed and undressed.

Practice makes perfect, so encourage the toddler to hone her dressing skills on a special toy with buttons, zips, and laces. These will help her to master the tricky art of fastenings. It's best not to use tiny doll clothes, though. These are too intricate for toddlers and will only lead to tears of frustration.

SUMMARY

Habits form the foundation of an individual's personality. We are defined by our habits everywhere we go. Hence, in order to establish good reputation in the society, it is very important to develop good habits.

When a good habit is formed it starts bringing harmony to others. When parents and teacher are good role models, good habits get formed very quickly.

A change in bad habits leads to a change in life. Children learn from the influenced around them. It is essential to encourage good habits of children in their early years. The habits learnt in this phase will stay with him for the rest of his life.

Help the child develop healthy habits early in life that will bring lifelong benefits.

The different habits that the child learns are eating, dressing, toilet training

Short answer type question

- 1) Define habit?*
- 2) Write about importance of habit formation?*
- 3) What are advantages and disadvantage of habit*

Long answer type question

- 1) What are the points to be kept in mind while developing good habit?*
- 2) Write about eating habits in children?*
- 3) Write about sleeping habits in children?*
- 4) Write about toilet training habits in children?*
- 5) Write about dressing habits in children?*

PRESCHOOL TEACHER TRAINING

BLUE PRINT

I YEAR

PART-B VOCATIONAL SUBJECT

PAPER- I INTRODUCTION TO CHILD DEVELOPMENT.

Periods/week: 05

Periods/Year: 135

Max.marks: 50

S.No	NAME OF THE UNIT	No. Of Periods	Weightage in marks	Short answer questions	Essay/ Problem questions
1	Introduction to Pre- School Teacher Training:	15	08	01	01
2	Concepts in child development	15	08	01	01
3	Areas of development- Development during Infancy.	30	16	02	02
4	Development of Exception Children:	30	14	02	02
5	New born baby	20	08	02	01
6	Post-natal care	25	14	02	01
	Total	135	68	10	08

PRESCHOOL TEACHER TRAINING

BLUE PRINT

I YEAR

PART-B VOCATIONAL SUBJECT

PAPER- II ORGANIZATION AND MANAGEMENT OF CRECHES

Periods/week: 05

Periods/Year: 135

Max.marks: 50

S.No	NAME OF THE UNIT	No. Of Periods	Weight age in marks	Short answer questions	Essay/ Problem questions
01	1.0. Introduction to crèche	25	12	03	01
2	Importance of crèche	15	08	01	01
3	Physical set up of crèche	30	14	01	02
4	Crèche staff	20	08	01	01
5	5.0. Planning activities for crèche	35	18	03	02
6	Maintenance of records	10	08	01	01
	TOTAL	135	68	10	08

MODEL QUESTION PAPER
PRESCHOOL TEACHER TRAINING I
I YEAR

PART-B VOCATIONAL SUBJECT
BLUE PRINT

PAPER- III HEALTH AND NUTRITION

Max.marks: 50

Periods/week: 05
Periods/Year: 135

S.No	NAME OF THE UNIT	No. Of Periods	Weight age in marks	Short answer questions	Essay type Questions
1	Child Health & Immunization 1.1: Meaning and Significance and factors Influencing Health, 1.2:Importance of personal and Environmental Cleanliness,1.3:Need and importance of immunization – immunization schedule – care before / after vaccination.	20	08	01	01
2	Weaning 2.1:Importance of weaning 2.2:Supplementary feeding stages Liquid, Semi-solid, solid Supplementary foods during 6 months to 2 years 2.3:Principles to be followed while introducing supplementary foods	20	10	02	01
3	Nutritional needs of children (Birth -3 years) 3.1:Importance of nutrition,3.2: Nutrient requirements of children,3.3:Planning of balanced diet.	20	10	02	01
4	Nutritional deficiency diseases- Meaning, Symptoms, Causes and prevention of— Protein Energy Mal nutrition (PEM)—kwashiorkar— Marasmus— Vitamin 'A' deficiency — Vitamin 'B' deficiency— Vitamin 'C' deficiency - Vitamin 'D' deficiency— Iron deficiency	30	16	02	02
5	Common ailments in children Symptoms, causes and care during Redsore buttocks- Constipation - Diarrohea— Ear ache— Cold and cough— Fever— Vomiting— Stomach Ache— Precautions for treating sick child— Teething problems.	30	16	02	02
6	Habit formation 6.1:Importance of habit formation-Eating habits- Sleeping habits- Toilet Training- Dressing	15	08	01	01
	TOTAL	135	68	10	08

MODEL QUESTION PAPER
PRE SCHOOL TEACHER TRAINING

I Year

PAPER – I INTRODUCTION TO CHILD DEVELOPMENT

Time: 3 Hours

Max.Marks: 50

Section-A

Note: (i) answer all the Questions (ii) Each Question carries 2 marks 10X2=20

1. What is the need for Pre-School teacher Training?
2. What is 'Heredity'?
3. What is Growth?
4. Mention the stages of cognitive development.
5. How do you identify Deaf children?
6. What is sterilization?
7. What is Incubator?
8. Mention the types of emotions with examples.
9. What is delayed development?
10. Write about the importance of Colostrum.

Section-B

Note: (i) Answer any five Questions (ii) Each Question carries 6 marks

5X6=30

11. Explain the contribution of Maria Montessori towards Pre-School Education.
12. Explain the physical development of crèche children.
13. What is Motor development? Explain the types of Motor development?
14. Explain the characteristics of a new born baby?
15. Explain the services available for differently abled children?
16. Write the causes of physically challenged children?
17. Discuss the advantages of breast feeding.
18. Write short notes on the following:
 - (a) Care of breast
 - (b) Clothing for infant.

MODEL QUESTION PAPER

PRE SCHOOL TEACHER TRAINING

I Year

PAPER – II ORGANIZATION AND MANAGEMENT OF CRECHES

Time: 3 Hours

Max.Marks: 50

Section-A

Note: (I) Answer all the Questions (ii) Each Question carries 2 marks

10X2=20

1. Define Crèche.
2. Write about mobile crèche
3. Mention the types of crèches based on organization.
4. Write any two sentences about the need for crèche?
5. How do you arrange equipment in a crèche?
6. Write the staff pattern of a crèche?
7. What is free play?
8. How do you give toilet training for a child?
9. Mention the space requirements of a crèche child?
10. What is the importance of Attendance register?

Section-B

Note: (I) Answer any five Questions (ii) Each Question carries 6 marks

5X6=30

11. Explain the types of crèches based on location
12. What is the role of crèche in meeting the needs of parents and society?
13. Explain the responsibilities of a crèche supervisor.
14. Explain the Building requirement of a crèche
15. Write in detail about any two routine activities of a crèche.
16. Write short notes on the following:
 - (a) Location of a crèche
 - (b) Importance of planning daily activities
17. Write about attendance register and individual case record?
18. Write about the selection of equipment for a crèche.

MODEL QUESTION PAPER
PRE SCHOOL TEACHER TRAINING
I Year
PAPER – III HEALTH AND NUTRITION

Time: 3 Hours

Max.Marks: 50

Section-A

Note: (I) Answer all the Questions (ii) Each Question carries 2 marks

10X2=20

1. Mention the factors that influence the health.
2. What is weaning?
3. Write the supplementary feeding stages.
4. Write the functions of calcium.
5. Write the rich sources of vitamin 'A'?
6. Mention the symptoms of Marasmus.
7. What is Anemia?
8. Write any two causes of Constipation.
9. Write about Stomach ache in children.
10. What are the primary habits to be developed in children?

Section-B

Note: (I) Answer any five Questions (ii) Each Question carries 6 marks

5X6=30

11. Write about Immunization schedule.
12. Write the principles to be followed while introducing supplementary foods to the children?
13. Write the protein functions and good food sources.
14. Write the symptoms, causes and prevention of Kwashiorkor.
15. What are the vitamin 'B' deficiency diseases? Explain about any one.
16. Write the symptoms, causes and care during Red sore buttocks?
17. Explain the importance of habit formation in children?
18. Write short notes on the following:
 - (a) Diarrhoea
 - (b) Ear ache.