

Paper-3

HEALTH, NUTRITION AND CARE OF CHILDREN-WORKING WITH PARENTS AND COMMUNITY

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UNIT-1: CONCEPT OF HEALTH AND NUTRITION

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Definition of Good health and signs thereof
- 1.3 Basic five food groups, functions and sources
- 1.4 Nutrition values of foods available in the region
- 1.5 Planning a balanced diet
- 1.6 Deficiency diseases: protein – calorie, vitamins, iron and iodine deficiencies
- 1.7 Symptoms, prevention and Remedial measure Summary

1.0 Introduction

Nutritional requirements of pre-school children need special attention as compared to grown up children. The pre-school period is a continuous growing period and pre-school children are affected adversely when the diet is poor in quality and quantity causing repeated infections and poor health. The rate of growth and development of pre-school children depends to a large extent on the adequacy of the diet consumed by them. Frequent attacks of infectious diseases increases the requirements of various nutrients.

1.1 Objectives

On completion of the chapter the student should be able to

1. Understand the concept of nutrition.
2. Know the nutritional requirements of pre-school children based on ICMR standards.
3. Understand about the different functions of foods.
4. Provide nutrition supplementation and health education to children and their parents.

1.2 Definition of Health :

Do you think health is only absence of diseases? No...

According to the World Health Organization, health is not merely an absence of disease, but is a state of complete physical, mental social and emotional wellbeing of a person.

Concept of Nutrition – What is nutrition about?

Nutrition is the scientific study of food and how it is used by the body. This study enables us to answer important questions as to how much and what should one eat to keep healthy. Further, what happens when a person eats

too much or too little food and the survival of life is possible because of the presence of nutrients in the food.

1.3 Basic five food groups, functions and sources

Nutrients are the naturally occurring chemical substances present in food. They are

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

Macro-nutrients

- Carbohydrates, Fats, proteins and water are known as macro-nutrients as our body requires them in large quantities...

Micro-nutrients

- Vitamins and Minerals are known as micro-nutrients as our body requires them in small quantities. Every day we require nearly 42 types of nutrients to keep us healthy.

Nutrients are essential for the growth of a child:

Carbohydrates: What are these?

Carbohydrates are energy giving foods. A child needs energy to perform various physical and mental activities.

Functions–How do they help us?

- Carbohydrates supply energy to the body. 1 gm of carbohydrate provides 4 calories of energy.
- Carbohydrates in food contain dietary fibres that help in digestion and removal of wastes from the body.

Foods rich in carbohydrates – How can the child get them?

All foods that contain starch are rich in carbohydrates. Cereals and millets such as rice, wheat, ragi, oats, jowar, and bajra, are some of the rich sources of carbohydrates. Other foods such as sugar, jaggery, honey, sago, ripe fruits and underground vegetables like Yam and colocasia also provide a high content of carbohydrate. Pulses, nuts and oil seeds also provide carbohydrates.

Proteins – What are they?

Proteins are the building blocks of our body. They are required for the growth and development in children. The protein requirement therefore is more during the pre-school period.

Functions –How do 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 plant and animal products. Pulses, legumes such as all type of dals, Soyabeans and its commercial products such as soya milk, soya nuggets and soya granules are also rich sources of protein. Nuts and oil seeds such as ground nuts, gingelly seeds are some of the rich sources of proteins from plant sources.

Milk and milk products are also rich in proteins. Animal products like eggs, meat, Poultry and sea foods contain proteins.

Fats:

Fat makes a child strong and energetic.

Functions – What are the functions of Fats?

Fat provides,

- Fats provide double the quantity of energy as compared to carbohydrates 1gm of fat gives 9 calories of energy
- Fats provide 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 with the maintenance of body temperature.

Foods rich in fats – How can a child get fats from foods?

Fats are present in vegetable oils like groundnut, til, soybean, sunflower. It is also found in animal products such as butter, ghee, cream, cheese and meat.

Vitamins: Vitamins are required in very small quantities but they play a very important role in the proper functioning of the body.

Vitamins:

Vitamins are required to regulate different body processes and protect the body from various diseases. Vitamins are classified as Fat soluble vitamins □ vitamins A,D,E and K. Water soluble Vitamins □ Vitamin C and B complex.

Vitamins – their functions and rich sources

Vitamin	Functions	Rich sources
Vitamin – A	Growth Health of eyes Health of the skin	Dark green vegetables, Yellow fruits and vegetables butter, ghee, yellow of eggs, fish
Vitamin – D	Formation of bones and Teeth	Milk, butter, ghee, fish, egg yolk, natural sunlight
Vitamin –K	For blood clotting	Green leafy vegetables, cereals
Vitamin –E	For health of heart, Sex hormones	All vegetables oils
Vitamin –C	For gum formation for healing infections and wounds	All citrus and fresh fruits and vegetables, sprouts
Vitamin –B (thiamine)	Growth, carbohydrate metabolism, working of heart and nerves	Unpolished rice, wheat, yeast, pulses
Vitamin –B ₂ (Riboflavin)	Growth, protein metabolism, health of eyes	Milk and milk products, yeast, green vegetables, eggs, liver, meat
Niacin	Growth, carbohydrate, fat and protein metabolism (use)	Wheat, pulses, nuts, tomatoes, green leafy vegetables.
Vitamin –B ₆	Growth, health of skin, muscles and nerves	Green vegetables, meat, liver
Vitamin –B ₁₂	Formation of blood	Milk, meat and liver
Folic Acid	Formation of blood	Green vegetables, pulses

Minerals:

Minerals are chemical nutrients like Calcium, Iron, Phosphorus, Iodine, etc., are essential for body functions.

Minerals – their functions and rich sources

Minerals	Functions	Rich sources
Calcium & Phosphorous	→ Formation of bones and teeth → Clotting of blood, Proper functioning of heart and muscles	Milk and milk products, green leafy vegetables, Cabbage, ragi, bajra, jowar and gingelly seeds.

Iron	Formation of blood	Green leafy vegetables, egg yolk, gingelly seeds, dry fruits and jaggery and animal products.
Iodine	For production of thyroid Hormone, for mental and physical growth	Fish and iodised salts

Recommended Dietary Allowances (ICMR):

Indian Council of Medical Research recommended daily nutritional requirements for various age groups. The requirements for the age group of 1-3 years and 4-6 years are given below □

Age (years)	Net Energy (K cal)	Protein (gms)	Fat (gms)	Calcium (mg s)	Iron (mgs)	Vit.A Retinol	Thiamine (mgs)	Riboflavin (mgs)	Niacin (mgs)	Vit.c (mgs)
1-3	1240	22	25	400	12	400	0.6	0.7	8	40
4-6	1690	30	25	400	18	400	0.9	1.0	11	40

1.4 BALANCED DIET

Introduction

The infant as well as a young child needs more nourishing food than an adult. The active and healthy child needs food for energy, maintenance, wear and tear of body tissues. In addition, extra nourishment is required to provide for the continuous growth of the body. Moreover, the child as it grows increases its range of activities. These requirements of a child can only be fulfilled by providing a well balanced diet.

Objectives

On completion of the chapter the student will be able to □

1. Understand the importance of a balanced diet.
2. Know the different types of food groups.
3. Recommend the quantities required for a balanced diet for a pre-school child.
4. Find out the nutrient content of a balanced diet.
5. Plan a balanced diet by considering dietary guidelines for a pre-school child.

Meaning of a Balanced Diet – How can we keep the child healthy?

A child can be kept healthy by providing him a balanced diet. A balanced diet is one which provides all the nutrients in required amounts and proper proportions according to age, sex and physical activity of a person. A balanced diet can be achieved by consuming varieties of food every day from the different types of food groups.

Food Groups : Foods are broadly grouped as follows

Food Group	Example
1. Cereals and millets	Rice, wheat, oats, maize, barley, Jowar, bajra, Ragi
2. Pulses and legumes	Dals like Turdal, Chanadal, Udad dal, Moong dal, Beans, Soyabeans
3.	
4. Nuts and oil seeds	Groundnut, coconut, walnut, pista, gingerly, sunflower, safflower etc
5. Vegetables	Root, leafy vegetables, other vegetables
6. Fruits	Ripe and seasonal fruits
7. Milk and milk products	Milk, curds, buttermilk, cheese, paneer
8. Animal products	Egg, Meat, chicken and sea-products
9. Oils and Fats	Vegetable oils, butter and ghee.
10. Sugar and jaggery	Refined sugar and gud
11. Condiments and spices	Turmeric, chilly, cinnamon, ginger, garlic, coriander, fenugreek etc



Figure Showing the food groups

Balanced diet for a pre-school child – What are the quantities of different food groups required for providing a balanced diet to a preschool child?

Sl. No.	Foods	1-3 years	4-6 years
1	Cereals	175 gms	270 gms
2	Pulses and legumes	35 gms	35 gms
3	Green leafy vegetables	40 gms	50 gms

4	Other vegetables	20 gms	30 gms
5	Root vegetables	10 gms	20 gms
6	Fruits	1-2	1-2
7	Milk and milk products	300 ml	250 ml
8	Sugar and Jaggery	30 gms	40 gms
9	Oils and fat	15 gms	25 gms
10	Animal Product	10 gms	10 gms

Sources of nutrients from different food groups:

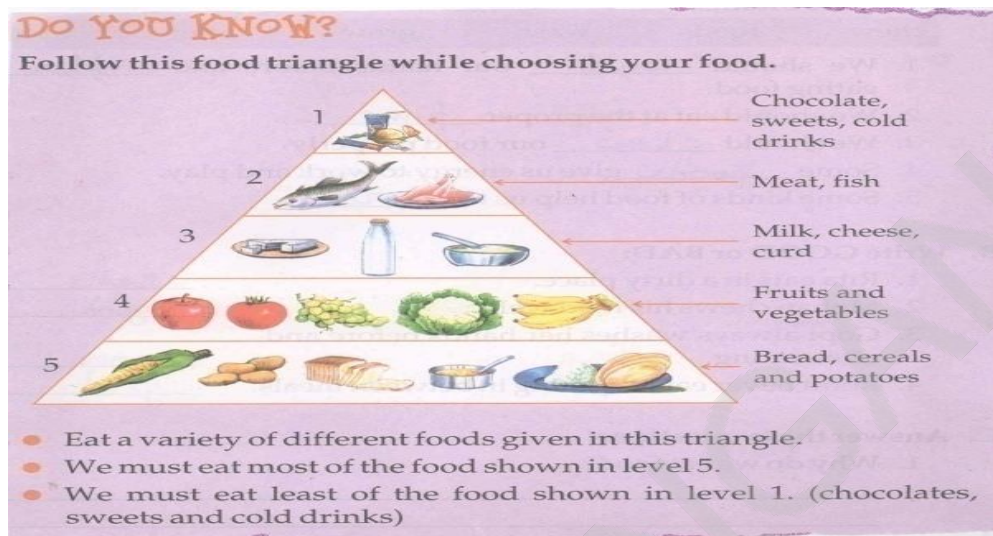
Type of Food	Major Nutrients
1. Energy Rich Food	Carbohydrates and fats □ cereals, millets, oils, nuts and sugars.
2. Body Building Foods	Proteins □ pulses and legumes, nuts and oil seeds, milk and milk products egg, fish, meat and poultry.
3. Protective foods □	Vitamins and minerals □ green leafy vegetables, root vegetables, other vegetables, fruits, milk and animal products.

1.5 Planning a balanced diet for a preschool child:

SAMPLE MENUE FOR 4-6 Yrs

Early Morning (6.30 A.M.)	Milk 1 cup
Break Fast (7.30 A.M.)	Dosa 2 + Chutney
Mid Morning (10.30 A.M.)	Any Fruit + Chikky
Lunch (12.30 P.M.)	Rice 1K + Vegetable curry ½ K Thick Dal ½ K
Snack (4.30 P.M.)	Murmura Mixture Ragi Malt 1 Cup + Fruit
Dinner (7.00P.M.)	Chapati 2 + Green Dal ½ K Sprout Salad 1 Tbl Sp Curd Rice ½ K
Bed Time (9.00 P.M.)	Milk 1 cup

Dietary Guidelines for a pre-school teacher



- A nutritionally adequate diet should be consumed through a wise choice from a variety of foods.
- Use a combination of cereals and pulses. Nuts and oil seeds in small quantity should be provided as they are rich in proteins, calories, vitamins and minerals.
- Prefer fresh vegetables and seasonal fruits in plenty.
- Include green leafy vegetables every day.
- Include foods of animal origin particularly eggs for children as they are rich in proteins.
- Milk which provides good quality proteins and calcium must be given twice daily to children.
- 5-6 glasses of pure drinking water is a must.
- Healthy cooking methods that retain nutrients should be used.
- Restrict giving processed, preserved, colored foods and also soft drinks to children.

Healthy cooking methods:

- Repeated washing of rice should be avoided.
- Soaking of dhal 15mts before cooking should be encouraged.
- Vegetables should be washed first and then cut.
- While cooking vegetables it is advisable to cover the vessel with lid.
- Repeated cooling and heating of food to be avoided.
- Deep fried oil should not be reused.

Points to remember

Dos	Don'ts
1. Include variety of foods from each of the foods groups in each meal.	1. Never give child only one type of food. ex: rice & dal or rice & curry only
2. Provide small and frequent meals Ex: breakfast, lunch, snacks and dinner	2. Never give food in large quantities only during lunch and dinner.
3. Include nutritious snacks between meals.	3. Never should snacks take the place of meals
4. Prepare meals according to the likes and dislikes of the child.	4. Avoid serving food that are too hot or too cold.
5. Provide soft food which is easily digestible during illness.	5. Never starve the child during illness.
6. Foods served should be attractive and colorful.	6. Avoid junk foods.

1.6 Malnutrition and deficiency diseases

Introduction:

Pre-school period is a period of rapid growth and development. The child has to depend on his mother for his food and care. Extra nourishment is required to provide for the continuous increase in the size of every part of the body. Poor quality and quantity of food intake result in nutritional deficiency diseases related to lack of one or more nutrients in the child's diet. A brief account of the deficiency diseases found among pre-school children will be discussed in this chapter.

Objectives

After completion of the chapter the student will be able to

1. Explain the concept of malnutrition.
2. Understand the various parameters of good health.
3. Identify various nutritional deficiency diseases.
4. Understand the prevention and treatment of nutritional deficiency diseases.

Concept of malnutrition

Malnutrition is a condition which occurs when the child does not get proper kind of food in the amounts that are needed for the maintenance of good health. Under nutrition and over nutrition are related to malnutrition. Severe malnutrition not only affects the health but also causes permanent damage or death to the child.

Causes of malnutrition

Malnutrition occurs due to

1. Poverty
2. Ignorance about food
3. Late supplementation
4. Lack of spacing between children
5. Faulty dietary habits
6. Poor personal hygiene and community sanitation
7. Repeated infections
8. Inadequate medical facilities

Indications to test whether the child is growing well or suffering from malnutrition

1. Sense of well-being - alert, cheerful and interested in activities.
2. Weight - in proportion to height.
3. Posture - straight legs, arms, chest out.
4. Teeth - straight, white, well shaped jaw.
5. Gum - firm, pink, no signs of bleeding.
6. Skin - smooth, moist, healthy glow
7. Eyes - bright, clear with no dark circles.
8. Hair - smooth, lustrous with no dandruff.
9. Muscles - well developed
10. Nervous control - good attention and concentration
11. Digestion - good appetite and excretion.

Protein - Energy Malnutrition(PEM):

PEM is widely seen among children of 0-6 years. It occurs due to the deficiency of proteins and energy. Marasmus and Kwashiorkor are the two forms of PEM.

Marasmus:

This is common among young children below one year who belong to the lower income group. Children who are fed only on breast milk after 4 to 6 months and those children who do not get sufficient mother's milk suffer from Marasmus as their nutritional requirements are inadequate and not met.

Symptoms:

1. Growth failure - the child is stunted, does not grow and is both underweight and under sized.
2. The muscles start wasting and the child is reduced to bones because of lack of muscles and fat resembles old man's looks.
3. Skin starts folding and gets wrinkled.

4. Severe diarrhoea is seen.
5. Loss of appetite
6. Apathy(lack of interest)
7. Pot belly
8. Irritability



Kwashiorkar:

This disease occurs between the age of 1-5 years where protein is the major cause.



Kwashiorkar child

Symptoms:

1. Oedema – generalized odema due to water retention throughout the body. Moon face also seen.
2. Failure to grow – low body weight due to wastage of muscles
3. Skin changes – the skin becomes ulcerated(dermatitis)
4. Discoloration of the hair from black to brown
5. The hair is easily pluckable and sparse.
6. Severe anaemia
7. Severe anorexia(loss of appetite)
8. Apathy
9. Diarrhoea
10. Irritability
11. Can lead to mental retardation

Treatment:

- Improving mother's diet as the baby depends on mother's milk
- Providing supplementary foods rich in protein, calcium, vitamins and minerals to the child from six months onwards.
- Providing a diet rich in good quality proteins (a combination of cereals and pulses and animal food products) to both mother and child.

Vitamin A deficiency:

Night blindness is a type of Vitamin A deficiency disease that occurs during 1 to 5 years of age. If mother during pregnancy do not get vitamin A rich foods, babies born to them suffer from the deficiency Vitamin A.



Vitamin -A deficiency

Symptoms

1. Night Blindness – The child is unable to see clearly in a dim light.
2. Xerophthalmia – The white portion of the eye becomes dry, dull muddy coloured or wrecked.
3. Bitot's spots – Formation of triangular grey colour spots on white portion of the eyes.
4. Keratomalacia – The liquidification of cornea of eye takes place that causes infections.
5. Total Blindness.
6. Night Blindness – The child is unable to see clearly in a dim light.

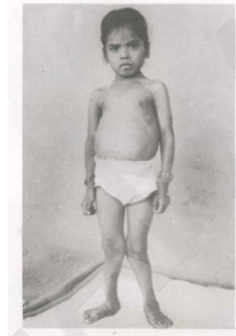
Prevention and treatment:

1. Improve mother's nutrition during pregnancy.
2. Include dark green leafy vegetable, orange coloured fruits and vegetables in child's diet.

3. Administration of high doses of Vitamin A to the child to prevent vitamin A deficiency in the children.

Rickets:

Ricket is a deficiency of Vitamin D and Calcium which affects the formation of bones. Children who are not exposed to sunlight suffer from rickets.



Rickets

Symptoms:

1. Knock knees.
2. Bow legs.
3. Box – shaped face
4. Pigeon chest.
5. Ricketic Rosary(Bead like structure of the ribs)
6. Enlargement of wrist bones.
7. Bossing (Enlargement of frontal bone on the forehead)

Prevention and treatment:

- Administration of high doses of Vitamin-D in severe conditions of rickets.
- Exposure of child to the early morning sunlight.

Deficiency of Vitamin C

Scurvy results from Vitamin C deficiency. The symptoms are irritability, tenderness of the bones and spongy bleeding gums.

Treatment

The inclusion of fresh fruits and leafy vegetables in the diet meets the requirement of Vitamin C in the diet.

Anaemia

Anaemia Is a condition in which the haemoglobin level of blood falls below the normal level. It occurs due to the deficiency of Iron in the diet and is commonly seen in pre-school children, pregnant and lactating mothers.



Anaemia

Symptoms:

1. Pallor (pale look seen in the skin , nails, palms , tongue etc.)
2. Loss of appetite
3. Early fatigue
4. Breathlessness
5. Spoon shaped nails
6. Lack of concentration

Prevention and treatment:

1. Inclusion of green leafy vegetables daily.
2. For non-vegetarians animal products such as liver and spleen should be included in the diet.
3. In severe cases supplementation of diet with iron tablets.

1.6 Iodine deficiency: symptoms, prevention and remedial measures

Thyroid gland, a butterfly shaped gland is situated in neck region requires Iodine for the production of Thyroid hormone which is necessary for maintaining the physical and mental metabolism of the body.

Low levels of iodine affects the functioning of the thyroid gland and can cause an abnormal enlargement of thyroid gland known as goitre, hypothyroidism (less amount of thyroid hormone) or hyperthyroidism (excess amount of thyroid hormone). In children it can cause mental

disabilities. If the pregnant mother suffers from thyroid problem during pregnancy, the new born baby will get affected with mental retardation.

Symptoms:

- swelling of the thyroid gland in the neck
- fatigue
- coldness
- constipation
- dry skin
- weight gain in hypothyroidism
- weight loss in hyperthyroidism
- face looks swollen
- weakness in muscles
- pain in joints
- depression
- poor memory and poor learning
- frequent chocking
- poor growth in children
- poor mental development

Prevention: The Iodine deficiency can be prevented by improving the diet of the pregnant and lactating mother .The child's diet should be a balanced diet that includes good quality proteins, carbohydrates, fats, vitamins and minerals. For iodine intake the following foods should be included

Fish, eggs, nuts, dairy products and iodised salt.

Remedial measures : The thyroid deficiency can be prevented by introducing iodised salt by replacing the intake of common salt, including iodine rich foods in the diet and if the child is suffering from severe deficiency taking thyroid hormone medicines under the guidance of doctor. The pregnant and lactating mother's should take extra precaution by consuming iodine rich foods so that the baby can get required amount of iodine from the mother's milk.

Summary

According to WHO health is not merely the absence of diseases but it is a state of complete well being of an individual in physical, mental, social, emotional and spiritual development. Nutrition is a very important factor for the growth and development of the child particularly during early years. Nutrients are naturally occurring substances in foods and are classified as macro nutrients such as carbohydrates, proteins, fats and micro nutrients as vitamins and minerals. A judicious use of combination of foods provides a well balanced diet to a child. Nutritional deficiency diseases occur due to the lack of particular nutrient in the diet. The common deficiency diseases found in children during early years are protein calorie malnutrition, vitamins, and iron and iodine deficiency diseases.

UNIT-2: NUTRITION AND CARE DURING PREGNANCY AND LACTATION

2.0 INTRODUCTION

Nutritional requirements of pregnant woman need special attention during prenatal stage compare to other stages of growth and development as the fetus growing in mother's womb completely depends on mother. The health of the pregnant woman depends on good nutrition which in turn helps for healthy development of the fetus. Similarly after delivery, for proper secretion of milk Google balanced diet is necessary for the lactating mother. Poor diet affects the health of the pregnant woman and adversely affect the growth of the baby.

2.1 OBJECTIVES

On completion of the chapter the student should be able to

- understand the importance of nutrition during pregnancy
- know the nutritional requirements of pregnant woman
- understand the ill effects of malnutrition during pregnancy
- understand the nutritional requirements of lactating mother
- know how to plan diet for lactating mother

2.1 Importance of Nutrition And Care During Pregnancy

Child bearing imposes a great strain on the body and it is important that the mother leads a healthy life during pregnancy. One of the major factors that promote good health and wellbeing of the mother and fetus is good nourishment. Balanced diet is necessary during pregnancy for the following reasons.

1. Growth of fetus-A pregnant woman creates a new life in her womb during nine months period. In the first 8to 12 weeks of pregnancy the embryo grows and changes to embryo. The fastest growing embryo weighs from 15gm to 3kg till birth. During this period all the body organs, bones, blood and muscles take place. For healthy development of the baby good nutrition of the mother is necessary because the fetus gets all the nourishment from the mother's body through her blood stream. It is therefore necessary that throughout pregnancy the mother should pay attention to the quantity and quality of food she eats since this will determine the health of her baby.

2. Changes in mother -During the development of the baby , important changes takes place in the pregnant mother's body like increase in the breast size, increase in size of uterus, increase in blood circulation. During first 3 months mother faces the problem of nausea and vomiting which affect her food intake also. Frequent small easily digestible food should be given to her.
3. Birth weight of the baby- The mother's diet has a direct influence on the normal weight of a baby. The baby having low birth weight always have poor immunity and suffer throughout their life due to ill health.
4. Nutrition during pregnancy- Additional foods are required to increase the body weight of a pregnant woman. They should eat a wide variety of foods to meet their nutritional needs as well as those of growing fetus. A combination of cereals, pulses, nuts, milk and milk products, vegetables and fruits to meet the vitamin and mineral requirements. Daily supplements of iron, folic acid, vitamin B12 and Calcium are also recommended to maintain proper health.

Care during pregnancy

The following are the important factors necessary to maintain good health and normal development of the baby.

- Good sleep
- Balanced diet
- Sufficient clean and fresh drinking water
- Stress free environment
- Regular walk
- Light Exercises
- Meditation
- Regular bath and maintain cleanliness of breast

Check your progress

- 1) What is importance of nutrition during pregnancy
- 2) Write about the brief care to be taken during pregnancy

2.3 Effects of malnutrition on the mother and her fetus

Good proper balanced diet is necessary for the normal development of the baby as the poor diet not only affects the child's health but also have ill effect on the health of the mother. When her diet does not supply the nutrients essential for her health and growing baby, she supplies nutrients from her body to the baby growing in the womb till 9 months in spite of malnutrition. The following are the effects of malnutrition

- Weakness-quantity of food intake is less and also equality of food is bad
- Inability to sustain growing baby weight
- Anemia-due to poor consumption of green leafy vegetables, animal products and eggs
- Abortion-due to anemia and protein calorie malnutrition
- Premature delivery
- Stillbirth
- Intrauterine death
- low birth weight infants
- high delivery death
- Neonatal (new born) death
- Infant mortality
- Vitamin A, Iron, Zinc, Folic acid and Iodine deficiency cause difficult delivery and complications.

To reduce the effects of malnutrition during pregnancy additional food supplementation like high protein powder, dry fruits laddoo, green soups, dal, rice, laddoo etc should be included in mother's diet.

Check your answer :

1. Why proper balanced diet is necessary during pregnancy
2. What are the effects of malnutrition on the woman and her foetus

2.4 Planning of Nutritious Diet For A Pregnant Woman

The pregnant woman must eat well balanced diet containing all the food groups that provide essential nutrients to supply energy like carbohydrates, proteins for growth and development of the foetus and vitamins and minerals for maintenance of good health. The nutritional status of the pregnant mother and healthy development of the foetus depend on the food intake during pregnancy. Balanced diet with extra quantity of energy, protein, vitamin, folic are needed by pregnant woman to maintain the growth of the foetus. A diet containing a variety of cereals, pulses, fruits, vegetables including green leafy vegetables, eggs and milk should be included in the diet of the pregnant woman.

Balanced diet for a pregnant woman

Food Group.	Food Stuff.	Amount per day
1.	Rice, wheat and millets. Oil, butter, ghee. Sugar and jaggery.	+300g 30g 20g

1.	Milk, curds etc	50g
2	Pulses, dried beans, nuts.	60g
3	Meat, fish, eggs.	20g
4	Fruits	200g
5	Vegetables	350g
6	Green leafy vegetables.	150g
7	Other vegetables.	120g
8	Roots and tubers.	100g

Dietary Guidelines for a pregnant woman

In order to maintain good health during complete 9 months period the following important guidelines are important

- Include varieties of food groups
- include different kinds of dal
- greens should be part of daily meal
- include plenty of other vegetables in the form of curry and some in the form of salads
- more-consumption of milk and milk products
- include 1egg daily
- dry nuts and dry fruits can be added in the form of powder in milk
- avoid giving oily ,spicy foods
- avoid preserved and processed foods
- include easily digestible food like Khichadi
- frequent ,small quantity of food should be given

Sample menu for a pregnant woman

Morning (7-8AM) -Breakfast	Idlies -4 with sambar and chutney
Mid morning (10AM)	Banana or any seasonal fruit
Lunch (12PM)	Rice or Chapati Curry Dal
Snack (4PM)	Salads Curd Pulse Ladoo Fruit Milk
Dinner (7-7.30PM)	Khichadi Green soup Salad

Check your progress

1. What are the different points to consider while planning a diet for a pregnant woman.
1. Suggest a meal for a pregnant woman

2.5 Diet of a lactating woman

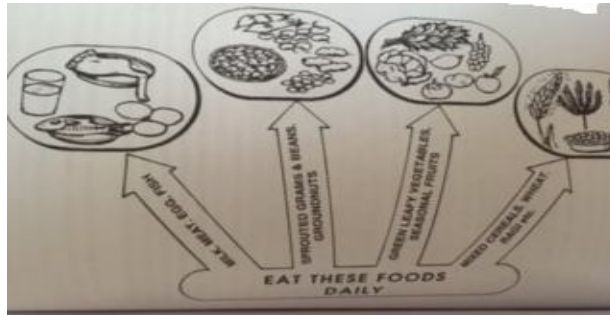
Breast feeding imposes a greater strain than pregnancy on the mother as the mother nourishes a fully developed baby whose food needs increases day by day. If the mother's diet is satisfactory during pregnancy she will have good storage of nutrients for supplying sufficient quantity of milk.

For healthy breast feeding the mother's should continue to eat balanced diet containing energy giving foods, body building foods and protective foods to get continuous supply of milk. The quantity and quality of mother's milk depends on the quality and quantity of mother's diet. Nursing mothers should be encouraged to feed her baby at least for 1 year period. Breast fed babies develop good immunity, health and happiness in their life. The balanced diet for lactating mother contains same kinds of food as those given during pregnancy but slightly in more amount as mother's milk is the means by which the baby gets all the nutrients. The additional regional foods should be included which help to increase milk production. These foods are known as galactogogens which are traditional foods.

Balanced diet for a lactating mother

Name of the food	Recommended weight in grams
Rice, wheat and millets -	330gms
Sugar and jaggery	20 gms
Oil, ghee, butter	30gms
Milk, curds - 500g	500gms
Pulses, dried beans, nuts- 90g	90gms
Meat ,fish, egg (for non-vegetarian)- 30g or 1 egg	30gms or 1 egg
Fruits -200g	200gms
Green leafy vegetables - 350g	350gms
Other vegetables -130g	130gms
Roots -120g	120gms

Diet of a lactating Woman



Points to consider for planning a diet for lactating mother

- include varieties of cereals and millets like jowar ,bajra and ragi
- include moong dal
- boiled sprouts should be added daily
- green leafy vegetables should be given daily
- include seasonal fruits daily
- twice milk intake is necessary
- include galactogogs to increase the production of milk like me hi seeds, milk, dry fruit, Ladoo with eatable gum, poppy seeds, garden creast seeds and shatavari powder in milk
- fresh cooked homemade food should be given to lactating mother
- avoid spicy ,preserved ,packed and processed foods
- avoid soft drinks and fruit juices
- add more homemade ghee

Check your progress

1. What type of foods should be included in the diet of a lactating mother?
2. Discuss the important points to consider while planning a diet for a lactating mother.

Summary

Mother's nutrition during pregnancy is very crucial for the proper growth of the foetus which is growing in mother's womb. Most of the pregnant women never eat proper food which lacks in quantity and quality of food the mother eats which in turn affects the development and growth oh

the baby after delivery. The effects of malnutrition on pregnant mother is seen as anaemia., vitamin, protein and iodine deficiency which in turn affects the growth of the foetus, stunted growth and reduction in body weight. Therefore it is necessary to plan nutritious diet by including all the foods rich in carbohydrates, proteins, fats, vitamins and minerals .After the birth of the baby, the diet of a lactating mother is important as the baby completely depends on mother's milk which in turn depends on good nutrition of the lactating mother.

UNIT-3: CARE AND DIET DURING INFANCY AND CHILDHOOD

3.0 INTRODUCTION

Malnutrition is very common in India during infancy period. Poor diet with respect to quality and quantity of food is the major cause of low body weight, childhood death. Mother's milk prevents the baby from infections. With the good diet, external factors like environmental hygiene and personal hygiene are also important factors in maintaining good health.

3.1 OBJECTIVES

- understands the factors responsible for good health
- understands effect of different pollutants on body
- develops importance of importance of play
- understands importance of breast milk
- knows planning of supplementary foods for baby
- understands good eating habits and meal planning

3.2 Factors influencing good health

According to WHO health is not only the absence of diseases but it is a state of complete wellbeing of physical ,mental, social and emotional health. Balanced diet is necessary for good health but different factors also influences good health. These factors are as follows

- cleanliness -includes taking bath daily, wearing clean clothes, keeping all the body parts clean like skin, eyes, ears, hair and other parts of the body.
- hygiene- includes personal hygiene and environmental hygiene like keeping the environment clean .The unhygienic environment is responsible for the spreading of infectious diseases.
- Ventilation -Fresh and clean air is the basic need of survival .For this well ventilated and lighted home keeps the diseases away.
- Sunlight - the good ventilated and lighted house kills the disease producing germs and also provide vitamin D

- Open spaces - open space inside and outside the house is necessary for free movement of the child which in turn helps the child to move and play freely.
- Climate- extreme climatic conditions affect the health of the child.
- Clothing- neat, clean and proper fitting clothes makes the child comfortable in his /her day to day activities .
- Personal hygiene -includes taking care and cleanliness of the body.
- Regular habits and routines- in order to maintain good health development of good regular habits like personal cleanliness ,eating habits, playing, sleeping etc are very important .

Check your progress

Q1) Define health

Q2) Mention factors that influences good health

3.3 Air, water and noise pollution -importance of potable water, non adulteration in foods.

Air pollution- is a mixture of solid particles and gases in the air. Car emissions, chemicals from factories also increases air pollution which is very poisonous. The air pollution affects the health and causes various types of diseases like cough, cold, affects nervous system and heart. It is preferable to have well lighted and ventilated house.

Water pollution -includes contamination of drinking water with

- industrial waste
- Sewage and waste
- Chemical fertilizer and pesticides
- Factory waste.

All these pollutants are toxic and causes diarrhea, nausea, vomiting etc.

- Noise pollution -occurs due to harsh sound produced due to human or animal activities. It affects Health like hypertension, increases stress levels, hearing loss and sleep disturbances.

1. Check your progress

2. Mention different types of pollutions

Adulteration in foods- Most of the foods are getting adulterated with inferior quality materials. Adulteration is a process of mixing unhygienic, waste products in the food due to which the quality of the food deteriorates. The adulterated foods are dangerous and harmful to health. The commonly adulterated foods are as follows

- Spices
- Flours
- Oils
- Ghee
- Honey
- Cereals
- Pulses
- Dry fruits
- Processed foods
- Milk and milk powders
- It is always preferable to use homemade powders

3.4 Balance between indoor and outdoor play and sleep

Play is the basic need of the child, basically the child's nature is playful and the child not only enjoys the activities through play but also keeps the child healthy. Through play the child develops physically, mentally, socially, emotionally and aesthetically.

Types of play -

Indoor play

Outdoor play

Indoor play - includes playing inside the closed space like home or classroom play. It includes indoor activities. Example of indoor play includes playing with toys, puzzles, building blocks, chess etc. It also includes quiet play. The child can play individually or in group.

Outdoor play- includes playing outside the home or classroom .It is an active individual or group play for example running, kicking ball, cricket ,hockey etc. It adds happiness, enjoyment and for wholistic development of the child.

Balance between indoor and outdoor play- outdoor and indoor plays are the integral part of wholistic development of the child. The child should play outdoor play during morning and evening time after sufficient rest as the outdoor play needs more energy and muscle strength .

Indoor play follows after strenuous activity like after outdoor play in which energy requirement is more. Here the child can relax and play individually.

Sleep-Children should sleep for at least 8-10 hours daily. This could include a short nap in the afternoon if possible .Good sleep is essential for the child as it rests the body, freshens it and keep it ready for next day. A tired body cannot cope up with the daily activities and the child gets irritable and lethargic. He shows a lack of concentration and poor performance in the school. The habit of getting up early and sleeping early is essential .

Check your progress

1. Mention various types of play
2. Discuss the importance of sleep

3.5 Importance of breast milk and colostrum

The nursing mother must continue to eat sufficient amount of balanced diet .Wholesome food provides a good supply of Breast milk to the baby and to ensure the proper health of the infant.

Milk secretion begins when the baby is born and the mother continues to supply nutrients to baby through breast milk. Nursing mothers have to eat well and eat the proper kind of foods so that the breast milk meet the nutritional needs of the baby.

The mother can eat the same kind of food as that during pregnancy period but she needs more for she not only has to feed her baby but has to maintain her own health.

Importance of breast milk – Breast milk is the best food for the baby as the new born cannot eat solid food till 6 months ,the baby depends completely on mother's milk.

- breast milk provides all the essential nutrients
- it helps the to grow and develop fully
- it improves baby's immunity
- it prevents the baby to fight against diseases
- it develops bones strong
- it makes the child to sleep properly
- it gives the feeling of love and support through sucking

Importance of Colostrum

Soon after the baby is born , the breasts secrete a thick, yellow wish fluid which differs from milk. This early secretion is called Colostrums .The nursing mother must understand that there is nothing unclean about colostrums which is meant for a baby and it is very nutritious .The mother must therefore feed it to her baby.

Benefits of colostrums

- helps baby to build up strong immune system and fights infections
- creates strong coating onside baby's stomach that prevents infections
- helps for digestion
- it contains proteins and vitamin A

Check your progress

1. Discuss the importance of breast milk
2. What is colostrums ?

3.6 Harmful traditional practices of not giving colostrum and breast milk during the first two days after birth

Mothers with lower education generally believed that the colostrum should not be fed to the babies after birth and think it is dirty and not healthy for a baby. This belief is also associated with cultural beliefs, socioeconomic status, education, urbanisation , modernisation and local feeding practices. Some have belief that colostrum affects digestion and causes diarrhoea .

Check your progress

What are the traditional beliefs associated to feeding colostrum to the baby?

3.7 What are galactogogues - traditional regional foods

Galactogogues, are the traditional foods which contains a substance that increases milk production in lactating mother. They are used to increase milk production and solve the problem of low milk supply.

Here are some foods that are considered to be galactogogues :

- Whole grains, especially oatmeal.
- Dark green leafy vegetables .
- Fennel.
- Garlic
- Chickpeas.
- Nuts and seeds especially almonds.
- Ginger
- Papaya
- Methi seeds
- Garden crest seeds
- Eatable gum
- Shatavari churn (Ayurvedic herb)

Check your progress

1. What are galactogogues ? Give examples

3.8 Breastmilk substitutes, formula preparation ,correct proportion of water, cleanliness and sterilization

Mother's milk is the best food for the baby as it contains all the nutrients for proper growth and development .The mother must feed her baby at least for 1 year. It also gives emotional satisfaction for the baby and happiness to mother while feeding her baby. All the women wants to feed their babies but sometimes due to failure to produce milk, mother has to feed her baby milk from external sources. Some of the breast milk substitutes are

Cow's milk

Buffalo's milk

Formula

When cow's or buffalo's milk is to be given to the baby during first one week, two-parts of milk should be diluted to 1part of clean boiled water. The quantity of water should be reduced to 3parts milk and 1 part water gradually as the baby grows.

Formula preparation -Infant formula or baby milk is used to feed milk through bottles or cup under 1 year of age. When breast milk is not sufficient formula is used to feed the baby .Formulas are available in the powder form.

How much formula and how often- Upto the age of 6 months of age most babies will drink 150ml of formula per kg of body weight each day. Each babies hunger is different and accordingly they require different amount of formula.

Formula based on cow's milk is suitable for babies.

How to prepare a formula

- Fill the vessel with 1 litre of water and boil it and let it cool until lukewarm
- Wash hands properly with soap and water.
- Now take sterilized bottle and according to the instructions given on the formula take the amount of formula in the bottle and dilute with required amount of water and mix thoroughly.
- Cover the bottle with nipple and shake the bottle.
- Feed the formula to baby.

Cleanliness and sterilization

A baby's immune system is not yet fully developed and they develop infections quickly. It is essential to sterilise all equipment until the baby is 12 months old. First clean after every feed after baby finishes her feed. Wash bottles, nipple in hot soapy water. Then using bottle brush wash bottle from inside and dry it.

By sterilising bottles any harmful germs are getting killed. After each feed bottle should be sterilised.

Sterilization of bottle

Boiling- boil bottles in a vessel filled with water for 5 min

After cooling down remove it and store it for further use or keep in same vessel by covering the vessel with lid.

Check your progress

1. Discuss various substitutes used for milk
2. How can we take care of milk bottles?

3.9 Supplementary foods - Planning diet according to region – weaning, liquid, semi solid and solid.

Infants in India depend on mother's milk till 1 year but as the baby grows mother milk will not be sufficient and it cannot provide all the nutrients in sufficient quantity. In order to maintain optimum growth of the baby supplementing food should be introduced.

Supplementation is a process of introducing food in the diet of a baby in addition to mother's milk. In India it is observed that whatever food adults consume are given to the baby which only satisfies hunger but never provide all the essential nutrients to the baby.

Planning diet of the baby depends on the following factors

- **Region-** planning diet should be based on the region ,for ex. south Indian diet is mainly rice based diet.
- **Climate-**foods grown in a particular climatic conditions should be introduced in baby's diet.

What is weaning?

Weaning is a period of introducing supplementary foods to increase the energy and nutrient intake of infants. During this period breast feed is continued and maintained at least of 1 year of infant's age. Great care should be taken in selecting and introducing supplementary foods so that in the course of few months, the frequency of breast feeding can be reduced and the child starts eating solid foods completely.

- **How to wean the baby-** weaning should start from 6 months age. It should start by omitting one breast feed and feeding supplementary food in place of that feed. Gradually more frequently the baby is given other types of supplementary foods and reduced the breast milk.

Guidelines for weaning Supplementary foods.

4-6 months - rice with dal and ghee, Khichadi, ragi with milk, mashed boiled potato, mashed fruits (start with 1 feed /day and gradually increase till 3feeds at the age of 6 months)

6-9 months-Ripe fruits, boiled egg yolk, same like above, cooked green leafy vegetables (4-5 times/day) 9-12 days- All fruits, all cooked vegetables, idli, dosa, upma, rice-dal, sambar, chapati, whole egg (4-5 times/day)

Supplementary Feeding

Food supplements from 6-1year- it is recommended to organize feed in 3 stages

1. Liquid Supplements.
2. Semi solid- sieved or mashed before feeding
3. Solid supplements-Chopped

1. Liquid supplements - Liquid supplements are given with breast milk as it is difficult for the baby to bite food in the absence of teeth. Example of liquid supplements are tomato juice, orange juice, cooked, strained green leafy vegetables juices.

2. Semi solid supplements- These include mashed foods which can be started from 7 months of age. During this time the baby is getting breast milk, fruit and vegetable juices and semi solid foods. Example of these foods are mashed potato, sweet potato, mashed cooked carrots, boiled egg yoke, cooked rice, dal, Khichadi

3. Solid supplements- When the baby starts biting through teeth, complete solid foods should be added in child's diet. Cut vegetables, fruit pieces, chapati, whole bread, idli, Upma, dosa are the solid foods.

Hints on introducing supplements in child's diet

- Only one food should be introduced at a time. The infant should be allowed to get used to one food before introducing another.
- If the infant dislikes any food, that food can be stopped for some time. The baby should never be forced to eat.
- Foods that give allergic reaction like rashes, fever, vomiting should be stopped immediately.
- Infants should not be given too spicy or sweet foods.
- All the utensils or containers used for feeding should be kept clean.

Check your progress

- 1). Define the term weaning ?s
- 2) What are the three types of supplementary foods?

3.9.1 Increased requirement of nutrition with increase in age

Man needs a wide range of nutrients to lead a healthy and active life and these are derived from the diet he eats daily. The components of his diets must be chosen properly to provide all the nutrients he needs in proper amounts and proper proportion. The amount of each nutrient that is required by man depends on his age, sex and type of activity he performs. Adults need nutrients for maintaining constant body weight and good health. Infants and young children who are growing rapidly require nutrients not only for growth but also for maintenance of good health.

Infants require some nutrients like proteins 2-3 times more than adults. Similarly pregnant and lactating mother's needs additional nutrients to meet the extra demand for growth of the fetus and for breast milk production. These extra nutrients are required for growth baby inside and outside the uterus.

The requirement of nutrition with increase in age depend on the following factors

- Age-as the age increases nutrition requirement also increases except in old age the food intake reduces.
- Sex- male members require more nutrition than female.

- Activity-more the work done more the requirement of food like laborers require more food due to heavy work than the people doing light work.
- State of development -during pregnancy and lactation the need increase

Check your progress

Which factors are responsible for increase in nutrition ?

3.9.2 Inculcating good diet habits

Children should develop the habit of eating healthy wholesome food and balanced diet. A diet containing the combination of cereals like rice, wheat,ragi,jowar,bajra and oats, pulses like deals and sprouts, all types of vegetables and seasonal fruits, milk and milk products and animal products is essential for children. Unhealthy eating habits leads to nutritional deficiency diseases. Often parents include foods that children like jam, chocolate ,sugar ,soft drinks and junk food like chips in diet which are very unhealthy .

Eating the right food in right quantity in right time and right place require lots of patience and discipline The following points should be consider to develop good eating habits.

- develop the habit of eating by own hands
- discourage dropping of food
- discourage waste age of food
- encourage the child to home cooked food
- include variety, novelty and beauty in diet
- restrict junk ,fried foods and soft drinks.
- never give child only one type of food like rice and dal
- snacks should never take the place of regular meal
- develop the habit of washing hands and mouth before and after eating food and brushing teeth twice morning and bedtime.

Check your progress

- 1) Which points should be considered in order to develop good eating habits
- 2) Which foods should be avoided in child's diet.

3.9.2 Different ways of increasing nutritional quality

Childhood period is the fastest period of growth and development. Women and children are valuable asset of society" However they are prone to malnutrition and diseases leading to ill health. Balanced diet contains all the essential nutrients those are required for growth, development and maintenance of good health. But most of the nutrients are getting destroyed due to wrong ways of handling and cooking methods.

Points to remember to increase the nutritional quality

- Include variety of foods in each meal.
- Promote small and frequent meal like breakfast, lunch, snacks and dinner.
- Include nutritious snack in between meals.
- Prepare meals according to the likes and dislikes of the child.
- Provide soft food during illness.
- Foods served should be attractive.
- Never starve the child during illness .
- Avoid serving food that is too hot or too cold.
- Healthy cooking methods
- Repeated washing of rice to be avoided.
- Soak dal in water 15 minutes before cooking .
- Vegetables should be washed first and then cooked.
- While cooking the vegetable it is better to cover the vessel with lid.
- Repeated cooling and heating food should be avoided.

Check your progress

Q1) List out the ways of improving the quality of nutrition.

3.9.3 Increasing nutrition density of meals and snacks

Malnutrition is the number one cause of death of children in India and even the pregnant and lactating mothers are suffering from nutritional deficiency diseases. In India the main component of diet is rice, dal and curry which makes this diet inferior in many essential nutrients like protein, calcium, vitamins, iron etc.

Nutrient dense foods contain mainly all the essential nutrients to maintain good health and prevent deficiency diseases. Nutrient dense foods are rich in proteins, good fats, vitamins and minerals but low in sugar, salt and bad fats. The foods are enriched and fortified in order to improve the nutrient content. Following are the list of nutrition densed meals and snacks.

Nutrient dense meals

- Whole grains like unpolished rice, whole wheat bread and chapati, multi grain flour, millets chapati, Ragi kanji, oats
- Sprouts, different dals (in whole form) with green leafy vegetables
- Green leafy vegetable soup
- Salads
- Seasonal fruits
- Eat variety of vegetable curries
- Include nuts and seeds
- Include lemon in salads
- Nutrient dense snacks
- Nuts mixture
- Oilseeds like groundnut ,dry nuts chikki
- Murmura nuts mixture
- Vegetable and fruit chat
- Dhokla
- Bhel puri
- Soya bean chunks
- Whole bread sandwich
- Fruit salad
- Carrot halwa
- Egg amlet

Check your progress

1. What are nutrient dense foods?
2. Plan nutrient dense lunch for a child

3.9.4 Care of skin, eyes, teeth, ears, nose, throat, hands, nails and hair

Personal hygiene involves care and cleanliness of the human body. In order to keep the child healthy, the mother or family members should practice healthy habits. Various rhymes related to healthy habits should be taught to children like

- This is the way we brush our teeth
 - Here we go round the mulberry bush etc.
- 1) Care of skin- Daily bath with warm water and mild soap removes dust and dirt from the skin and opens pores on the skin. Massaging the skin with warm oil during winter season is beneficial. Keeping the skin clean prevents skin problems such as itching, rash etc.
 - 2) Care of teeth- Brushing teeth in the morning before eating and after dinner at bed time is a very healthy habit and keeps the mouth fresh and teeth healthy and strong. Use of soft brush and tooth paste recommended by the dentist should be used.
 - 3) Care of ears-The outer ear should be cleaned with soap and water while having a bath but not to pour water inside the inner ear. Wipe the ear with ear bud but do not use sharp objects to clean the ear and also not to put oil inside the ear.
 - 4) Care of nose-Clean nose regularly while giving bath to the child but avoid putting oil or water inside the nose.
 - 5) Care of Throat-throat that is neck should be washed during bath. During cold and cough restrict giving cold food to the child instead give warm water and hold milk to the child.
 - 6) Care of hands- Habits like washing hands with soap and water before and after meals should be developed in children. washing hands after going to rest room should be developed in children.
 - 7) Care of nails- Nails grow extremely fast and tend to collect dirt which in turn while eating food goes into the body resulting in diseases. Many children have the habit of biting nails. It is therefore necessary to trim the nails once a week.

- 8) Care of hair-Hair should be brushed and combed daily after applying the oil. Hair should be washed with baby shampoo and warm water at least weekly twice .Trimming hair and keeping it short prevent hair lice problem and maintains the hair in healthy condition.

Check your progress

List out the care of different parts of body.

Summary

Good health depends on cleanliness, hygiene, ventilation, sunlight, open spaces, climate, clothing, personal hygiene and regular habits. The different types of pollution such as air, water and sound pollution also affects the health of the child. The child should play outside and also spend some time on indoor activities. Immediately

The mother should feed first milk known as colostrum to the baby as it improves immunity. Galactogogues are the specific foods which should be introduced in mother's diet to increase the production of mother's milk. Supplementary foods should be introduced in baby's diet after six months as mother's milk will not be sufficient for child's growth and development. Proper feeding schedules should be planned and formula should be prepared carefully if mother's milk is insufficient for the baby. The quality of the child's diet should be improved by introducing nutrient dense foods.

UNIT-4: PREVENTION AND TREATMENT OF COMMON AILMENTS AND INFECTIOUS DISEASES IN CHILDREN

4.0 Introduction

Childhood is the period when a child is prone to several diseases. Some of the diseases that are transmitted from person to person are known as communicable diseases. Teachers in schools need to be aware of such diseases in order to be able to identify them and do the needful.

4.1 Objectives

- By the end of this unit the student will be able to
- Identify common childhood illnesses
- Know various viral diseases
- Know various bacterial diseases
- Understand the immunization schedule
- Understand administration of first aid during emergency
- Diseases are caused by micro organisms of two kinds (viruses and bacteria).

4.2 Immunization

Immunization is the process of giving vaccines to an individual with the objective of developing immunity to resistance to specific diseases.

All children need to be immunized irrespective of their health status. While administering vaccines to the children a standardized schedule needs to be followed in order to obtain maximum protection from diseases. A few points that need to be kept in mind while administering vaccines to children are:

Follow the schedule

Don't give any vaccine if the child is suffering from fever or any other infection.

Don't breast feed the child one hour before and one hour after giving the vaccine.

Vaccines should be stored at the required cold temperature (usually refrigerated). Vaccines stored at room temperature lose their potency and are not effective.

Vaccines beyond the expiry date should not be used as they do not guarantee protection from the infection. Therefore it is important to get children vaccinated at a reliable Doctor's clinic/Hospital.

	Dose	
10 Years	Tetanus Toxoid	Tetanus
16 Years	Tetanus Toxoid	Tetanus

4.3 Contagious/infectious diseases - whooping cough, measles, mumps, rubella, chicken pox, conjunctivitis, diphtheria.

Some diseases caused due to viruses are:

Measles

Measles are transmitted from one child to another through sneezing, coughing and infected clothes and toys. The disease starts with a bad cold, sneezing, coughing, watering of the eyes and a tendency to contact conjunctivitis. The child suffers a loss of appetite, fever, sore throat and headache. Rash appears on the 4th day of the eve which may rise to 104-105°F. Care should be taken to keep the temperature low as febrile convulsions can occur. Keep the patient comfortable. After 3-4 days of rash, the fever gradually subsides.

Common cold

The common cold affects the respiratory tract and may last about 3 days to 2 weeks, it is mainly spread through coughing, sneezing, oral or nasal secretions. It is highly infectious. Care should be taken to avoid complications such as pneumonia, middle ear infection and bronchitis by keeping the patient protected and warm.

German Measles

Rubella or German Measles is more common in children and adolescents. The disease is usually of a mild nature with fever, sore throat and catarrh. The rash appears on the second day of the fever and disappears on the third day. The rash first appears on the face and neck and later spreads to the other areas of the body. The fever and other signs subside and the child feels fine soon.

If a pregnant woman gets German measles during the first trimester of pregnancy, the baby may be born with multiple deformities affecting any part of the body. Therefore a pregnant woman has to take extra precautions to protect herself from this disease.

Whooping Cough

This disease is common in toddlers and dangerous in infants. It is highly infectious and is characterized by the whooping sound, while coughing.

The disease starts with a common cold and gradually becomes severe. The child has fever and a dry cough which occurs in spasms. The child gives a number of sharp short expiratory coughs followed by a deep inspiration which causes the characteristic whoop. Any type of disturbance can trigger the cough. Vomiting often occurs after the cough and therefore feeding becomes a problem. Small, easily digestible, bland soft and nourishing feeds should be given in between the spasms of cough. The whole disease may take around 3 weeks to subside. As a complication of the disease, middle ear infection may occur.

CHICKEN POX

This is a highly infectious and contagious disease that can spread through direct contact or through infected clothing, toys and other articles used by the infected child. The child initially has rash and fever. The rash gets filled with fluid which later turns to pus called a pustule. Gradually the crusts form and the scabs fall off in a few days. In about three weeks all the scabs fall. Care has to be taken to prevent the child from scratching as the condition causes a lot of itching. Scratching may lead to secondary infection and permanent scars.

Mumps

This is a highly infectious disease. The disease begins with pain and swelling of the parotid gland located under the jaws, accompanied by fever, sore throat and head ache. There is severe pain in the affected area and difficulty in swallowing. After almost a week the fever and swelling gradually

subside. In some cases this disease may affect the reproductive organs in older children, the testis in the male and the ovaries in the female, leading to sterility.

4.4 Gastro-intestinal ailments - diarrhea, dehydration, preparation of *ORS, vomiting, typhoid, worms, cholera, jaundice.

DIARRHOEA

This is a food and water-borne disease and is usually caused by contaminated milk, dirt, flies or careless and unhygienic handling of children's feeds. The disease is characterized by frequent stools that are watery. This may be accompanied by colic, vomiting and fever.

In the absence of ORS, a pinch of salt and 2 tsp of sugar dissolved in a glassful of boiled and cooled water can be fed to the child. Banana, fat free buttermilk/curds, starch water and mashed rice can be given. Milk should not be given. ORS formulated by WHO has the following ingredients :

Sodium Chloride - 3.5 gms.

Sodium Bicarbonate -2.5 gms.

Potassium Chloride -1.5 gms.

Glucose - 20gms.

4.5 Skin ailments - scabies, eczema

Scabies is an infectious skin disease in which a small red rash and severe itching occurs, it is highly contagious and it spreads to other children also. The treatment involves application of cream, taking medicines according to doctor's advice. Eczema, is a condition where the skin gets irritated, red, dry and itchy, it is caused by cosmetics, soap and detergents, dry and cold climate. The treatment involves keeping the skin moist with baby moisturizer and treatment as per doctor's advice.

4.6 Respiratory ailments - asthma, cold, cough, bronchitis.

Common cold

The common cold affects the respiratory tract and may last about 3 days to 2 weeks, it is mainly spread through coughing, sneezing, oral or nasal secretions. It is highly infectious. Care should be taken to avoid

complications such as pneumonia, middle ear infection and bronchitis by keeping the patient protected and warm.

4.7 Tuberculosis and its symptoms.

Tuberculosis is a infectious disease that occurs due to bacterial infection and affects the lungs. Malnutrition is also one of the cause of tuberculosis. The so read of the disease is due to the mode of air and infect the other person due to coughing. The symptoms include

- Cough
- Severe condition coughing up blood
- Chest pain while coughing
- Fatigue
- Highfever
- Night sweat
- Chills
- Loss of appetite
- Weight loss

Treatment: Include diet rich in proteins and carbohydrates, keep the child away from infected person and administer BCG vaccine.

4.8 Dental ailments

The most common ailments found in children are bad breath, tooth decay, guy disease, tooth sensitivity and mouth sores. Treatment involves maintaining oral health of the children be brushing teeth twice daily, use of soft brush and baby tooth paste and avoiding too much consumption of chocolates.

4.9 Administration of First aid — minor accidents, electric shocks, bums, nose bleeding, drowning, insect bite, dog bite, foreign body in ear, throat and nose, sun stroke and fracture.

The main responsibility of the school in emergency care is to give immediate and appropriate first aid to the injured, to inform the parents and to be certain that the sick or injured are kept under the care of the parents and doctor.

Emergency transport facilities should be there to transport the sick or injured to the hospital. First aid room equipped with first aid box is the prerequisite of each school. Let us try to give first aid during the following emergency situations.

Minor accidents-Children while playing many times meet with minor accidents like sudden fall, bleeding due to injury etc. Just do not get panic, teacher should wash hands with soap and water and then try to stop bleeding by lightly pressing over the area, wash it and apply disinfectant over the injury.

Electric shocks-These are caused due to contact with high voltage electric current. This may affect cardiovascular, respiratory system causing fits. The victim should be disconnected from the current by switching off the current immediately or by moving the child from source using wooden rod.

Burns- Burns are caused by dry heat like fire, contact with hot metal, electricity, chemicals or through boiling water, steam or oil. Immediately cold water should be poured on child, wrap the child in flame with blanket, apply burnol and rush the child to the hospital.

Nose bleeding-Bleeding through nose occurs due to hot weather. Ask the child to bend the head slightly forward and ask the child to breathe through mouth and pinch the nostrils firmly together. Apply cold compress to the nose and avoid blowing nose, consult the doctor.

Drowning -In drowning, water enters in the wind pipe and lungs. Turn the victim face down, head on one side and arms stretched. Children can be held upside down for a few minutes. Lift the abdomen to get the water out. Remove wet clothes and keep the child warm. Artificial respiration should be given to make the breathing normal.

Insect bite- Remove the sting, tick or hair if still in the skin. Wash the affected area with soap and water. Apply a cold compress or any swelling for 10 minutes and take the injured to the doctor.

Dog bite-Place a clean towel over the injury to stop any bleeding. Try to keep injured area elevated. Wash the bite area with soap and water, apply a sterile bandage to the wound and visit doctor.

Foreign body in ear,throat and nose-

Ear-If some foreign body is kept in ear, the object can be removed by the teacher, but if the object enters in internal ear, the child should be immediately taken to the doctor.

Throat -If you can see an object in the mouth, reach a finger in and sweep the object out. Be careful not to push the object deeper into airway. If it is struck inside beat at the back .

Nose-Children sometimes put objects inside nose and it gets struck inside the nose. Ask the child to close one nostril and blow air out of the nostril forcefully.

Sunstroke-Move the child to cool place and remove clothing , lie down, apply cool towel to the body and give plenty of fluids.

Fracture-Partial or complete breaking of the bone is called fracture. Care should be taken to give support to the fractured part to avoid movements and take the injured to the doctor.

Summary

Children in the preschool and school age are prone to several bacterial and viral diseases. Some diseases caused by viruses are whooping cough, measles, mumps, rubella, chicken pox. conjunctivitis, diphtheria .Some are caused by Gastrointestinal ailments, some by skin ailments, respiratory ailments and tuberculosis and also children suffer from dental ailments. The parents and teachers should be aware to know the signs, symptoms, prevention and treatment of these infectious diseases. The schedule for giving the different vaccines is known as Immunization schedule .Utmost care should be taken in administering the vaccine at the right age and according to the prescribed doses to the children.

UNIT-5: METHODS TO UNDERSTAND AND COMMUNICATE WITH COMMUNITY

5.0 INTRODUCTION

Preschool stage is very crucial and critical as growth and development is very fast during this stage. Parents and teacher's roles are very important for the holistic development of the child. Parents are the first teachers to the child as most of the habits are formed during preschool stage. Parents and community should work together along with teacher in educating and developing the child. The parents must know the basic understanding of child development. The teacher should involve the community in bringing up best practices of child development through PTAs.

5.1 OBJECTIVES

The unit will enable the student teacher to

- Develops skills necessary for observing and interacting with parents and teachers.
- Interact with parents.
- Understand different tools to gather information about child.
- Develops ways of communication
- Analyze different issues related to child development
- Develop different material

5.2 Preparation and use of tools such as interview schedules, checklists, questionnaires etc.

Community participation is essential component in preschool education as bringing up the child is the collaborative effort of teacher, parent and community. The community should participate in school program and the teacher must participate in community program. The teacher should know various tools to communicate with the community in order to understand the child in a better way. The following are the various tools of communication.

- **Interview Schedules** - Interview schedules are used by the teacher to get the information about the child. These are generally used during the admission period during which complete information about the child including name, age, sex, eating habits etc is gathered from parents. These contain structured questions commonly asked to all the parents.

Sample Interview schedule

- Name of the child
- Name of the father
- Name of the mother
- Sex: male/female
- Date of birth
- Place of birth
- Educational qualification of father
- Educational qualification of mother
- Occupation of father
- Occupation of mother
- Monthly income of the family

The above information should be registered in the school register.

2) Checklist - Checklist contains statements related to child's holistic development .It gives the overview about the child in all the areas of development.

Sample checklist to know the nutritional status of the child

Note: tick yes/no

- Name of the child
- Age
- Sex (male/female)
- Food habits (Veg/non-veg)
- No of meals taken (1/2/3)
- Eats rice, dal, chapati,curry (daily/weekly)
- Eats greens daily (y/no)

- Eats fruits (daily/weekly)
 - Eats sprout
1. Eats egg
 2. Drinks milk twice
 3. Eats chips
 4. Drink soft drinks
 5. Eats during fever
 6. Eats chocolate daily

Checklist gives the complete information about the child.

3)Questionnaire: Questionnaire is a tool that is used to get complete information about the child from the parents. They can be carried out orally by asking questions or through writing the answers. The objective of questionnaire is to gather information about child from parents.

Sample of questionnaire method about immunization programme

1. Name of the child
2. Age of the child
3. Sex
4. How the child was born

1. Any complications during delivery
2. Has the child being immunised against the diseases (yes/no)
 - a. Smallpox
 - b. chickenpox
 - c. measles
 - d. mumps
 - e. polio
 - f. BCG etc

Check your progress

What are the different tools of communication?

Plan an interview schedules about the eating habits of a child

5.3 Participants observation : This is a tool used by the participant in order to get first hand information in various areas like cultural, social, emotional, physical or behavioural characteristics of the individual .The teacher's role is not only to educate the child but also to develop the child holistically. Participants observation is like observing the child in all the areas of development from time to time. Through this observation the participant understands that whether the child's development is normal or he is having some problem in any developmental area.

Sample of participant observation

1. Health habits (yes/no)
 2. Takes bath regularly
 3. Washes hands before and after eating
 4. Washes hands after going to rest room
 5. Wears clean clothes
 6. Cuts nails
- 2) Socio-emotional behaviour
- 1) Sucks thumb
 - 2) Bites nails
 - 3) Fights with other children
 - 4) Participate in play
 - 5) Gets angry

Check your progress

Give example of participant observation during lunch time and write your observation about eating food.

5.4 Focus Group discussion: A focus group discussion involves gathering people from similar backgrounds like parents, teachers or administrators together to discuss a specific topic of interest. It is a form of qualitative study where questions are asked about their perception ,beliefs, opinion or ideas.

Focus group discussion should be used when we need to understand an issue or a problem at a deeper level which we can not get solution

through interview ,questionnaire or by observation method. This method is helpful to understand about the existing program, knowledge or problem. Here the participants can share their views, information or opinion with the experts.

For example: During parent teacher meeting a focus group discussion is arranged for the parents and teachers where during focus group discussion a specific topic of interest is discussed. Here an expert gives lecture about a specific topic and the session is kept open to parents to ask their doubts and questions to the expert.

1. A lecture by Nutritionist on Nutritional requirements of pre school children is arranged in focus group discussion and after the lecture ,the parents ask their doubts about various types of foods, recipes and how to develop good eating habits in children.

1. A lecture by doctor is arranged for taking care of children during illnesses and parents ask questions based on their doubts.

2. A child counselor's lecture is arranged on developing good child rearing practices and parents participate through focus group discussion .

3. An awareness lecture is arranged by the school on Locally available Child care program by local bodies where parents actively participate through focus group discussion.

4. Discussion on development of child centred program in the pre school curriculum and the parents are asked to give their suggestions through focus group discussion.

Check your progress

Discuss any topic of your choice through focus discussion.

5.5 Analysis of emerging issues

Early childhood stage is most critical and vulnerable stage in the period of growth and development as most of the brain development takes place during this stage and also various habits are established during this stage. There is an increasing need for the early childhood

education as both the parents are working, nuclear family system and more awareness to rear the child systematically .It is necessary for the teacher to understand the latest modern trends and issues in early childhood education ,curriculum, approaches, methods, material, evaluation and the ways of improving the health status of children. Following are the emerging issues related to early childhood education.

1. About 43%of children aging 5 years are below the standard of normal development.
2. Malnutrition is the major cause of childhood mortality in India.
3. Unhygienic environmental and personal hygiene is the major cause of infectious diseases during early years.
4. Crowded classrooms makes it difficult for the teacher to adopt play way method in classroom.
5. Increased parental interference
6. Increased paper and filing work
7. Low pay
8. Lack of recognition
9. Lack of resources
10. Lack of trained teachers
11. Child centred approach suitable for holistic development of the child
12. Play way method for permanent learning
13. Continuous developmentally appropriate evaluation
14. Parental participation for effective childhood education
15. Addiction of cell phones since early years

Check your progress

List out various latest emerging issues you are observing in the society related to early childhood stage.

5.6 Communication with parents about child development and learning

Parents and teacher should work together to develop the child in a scientific and systematic way. Parental involvement and participation is necessary to fill the gap between parents and teachers. Parents should take

active part in the over all educational program .The following are the different ways of communication of teachers with parents about child development and learning.

1. PTA-Parent Teacher Association-This is the best method of direct face to face contact of parents with teacher's .Here the discussion is taking place about planning , program ,progress and problems related to the child. The members involved in PTA are parents, teachers , principal and children. It should be conducted monthly once.

Planning: Teacher involves parents in planning curricular and co curricular activities based on needs of the children.

Program: Teacher discusses about the type of program for ex. implementing play way method during early years.

Progress: Teacher discusses about the child's progress in all the development.

Problems: Parents and teacher problematic issues about the child.

1. Participation of parents in health check ups- Parents are invited to participate in medical check up of their children by expert doctors in various fields and they also participate later in curative stage.
2. Participation of parents in school programs - like school exhibitions,, excursion,picnic ,celebration of different days.
3. Inviting parents to witness learning material prepared by children
4. Celebration of parents day.

Check your progress :

Plan a parent teacher meeting and discuss various issues related to health and educational program with them.

5.7 Making materials for communication -use of metaphors, couplets, visuals

Powerful and effective communication is the key to success in building a bridge between parents and teachers. The formal and rude communication restricts the further building of the link between parents and teachers and in between the child suffers. The communication can be made enjoyable through following ways.

1) Use of metaphors - A metaphor is a word or phrase that is used to describe a person or object. They are figures of speech.

Example of metaphors describing child

- i. Your child smiles as sunshines
- ii. Your child dances like peacock
- iii. Your child runs like super fast express
- iv. Your child's skin is as smooth as cotton
- v. your child is a chatter box etc

Communication with metaphors adds beauty and variety and develops positive communication among parents and teacher.

2) Couplets-Couplets are the rhyming words used during communication. These stresses repetition of the idea which the teacher wants to convey. These are also a tool of effective and interesting communication.

Example of couplets

The lake is shivering due to wind.

Chubby chicks

3. **Visuals-** Oral communication is a passive means of communication. Audio visual aids are very effective means of communication and they create interest .Visuals are of different types. The examples of visuals are

- | |
|-----------|
| Pictures |
| Photos |
| Posters |
| Charts |
| Brochures |
| Booklet |
| Magazines |
| Pictures |
| Photos |
| Posters |
| Charts |
| Brochures |
| Booklet |
| Magazines |

Now a days short educational films on various topics are available which are very informative and can be used during PTA.

Check your progress :

Give example of metaphors

How can you use couplets during parental communication, Give example.

Summary

Community participation is a very important process in development and education of the child. There are different tools such as interview schedules, checklists, questionnaire useful for community participation. The methods such as participant observation and focus group discussion are helpful in parent teacher participation. During community participation focus should be given on the major emerging issues and the expectations of the community from the school. Different types of communication material like metaphors, couplets and visuals helps to improve communication between parents and teachers.

UNIT-6: UNDERSTANDING A VILLAGE/OR COMMUNITY, PARENTS, PTA AND THEIR CONCERNS

6.0 INTRODUCTION

The role of teacher and parent is very important in the holistic development of child. This responsibility should be shared by both of them. For this, good communication is necessary between parents and teachers. Also the parents should involve them in school program. The teacher should be aware of the community from which the children come and also conduct parent teacher meetings to make the parents aware about various activities of the school.

6.1 Objectives :

- The student teacher develops skill necessary for observing and interacting with parents and community .
- knows how to communicate with parents.
- works with parents and community
- understands the structure of different local communities

6.2 Household survey of an area ,caste,religion,gender etc. profiles, status of children 3-8 in the community.

In the past the society was simple and life was not complicated. The family provided the child with all the experiences that he needed for leading his life effectively. The child was made aware of his duties and responsibilities, his relationship with other individuals and society. Gradually, society became larger and got complex with the development of civilization and knowledge explosion made it difficult for the parents to educate children at home, so the development of school took place.

For the holistic development of the child ,parent -teacher cooperation and their participation in school and community is an essential component of the educational programme. Although improving school community relation is a two way process, the teacher particularly the head of the school should have complete awareness about the community comprising of the area from where children come to school, caste, religion they possess, gender etc. The teacher can get complete information from the latest census data of the place.

The following is the household schedule based on year 2011

1. Name of person
2. Relationship to head
3. Sex
4. Date of birth and age
5. Current Marital status
6. Age at marriage
7. Religion
8. Caste
9. Disability
10. Mother tongue
11. Other language known
12. Literacy status
13. Status of attendance
14. Educational status
15. Worked any time during last year
16. Economic status
17. occupation
18. Nature of trade ,industry or service
19. Class of workers
20. Non economic activity
21. Travel to work place
22. Seeking or available for work
23. Place where he or she is born
24. Migration details
25. Reason for migration
26. Duration of stay in work place
27. Fertility details
28. No. Of children alive

Census data makes the teacher aware about the status of the community.

Profile status of children 3-8 years in the community

After admitting the child in the school, it is necessary for the teacher to collect the complete information about the child including family history, health status and other developmental areas of the child. Following is the behavioral profile of children 3-8 years.

1. Name of the child
2. Age
3. Sex
4. Registration no.
5. Details about birth of the child
6. Immunization details
7. Record of illness
8. Habits
 - a. Toilet habits
 - b. Sleeping habits
 - c. Eating habits
 - d. Health habits

9. Socio-emotional behaviour

- a. Sucks thumb
- b. Bites nails
- c. Gets frightened easily
- d. Gets angry
- e. speech defects
- f. fear about strangers
- g. Feels shy
- h. Plays with other children
- i. Information about the family
- j. Positive behaviour pattern
- k. Facilities at home
- l. Does the child has any interest

The school should enter the profile details in the school register .

Check your progress

1. Develop the profile of 3-8 years child
2. Which are the important items included in the household survey of the community?

6.3 Making community profiles

A community Profile is a detailed report about your community. The report describes the population, economy, health and housing conditions of the selected area. The purpose of developing community profile is to collect data for understanding health and health related problems of the community.

By developing the community profile, the teacher develops understanding about

- The community in which the students belong
- Develops understanding about the overall status of the community
- Knows about the problems of the community
- Knows about skilled personnel belonging to the community

Development of community profile: the following steps are important to consider before making community profile

- select the community for preparing profile
- list out the items required to prepare profile
- collect information according to the items
- analyse the overall status of the community from the collected data.

Example of community profile

1. Name of the community (place)
2. Population
3. Demographic details
 - No of male
 - No of female
 - No of aged
 - No of children (age wise)
4. Political party
5. Housing (types of houses)

6. Economy (Employed and unemployed)
7. Education
 - No of primary schools
 - No of secondary schools
 - No of high schools
8. Crime rate
9. Shopping facilities
10. Religious places
11. Hospitals and primary health centres
12. Transport
13. Health status
14. Sanitation
15. Agriculture

Check your progress

- 1 Explain the importance of preparing community profile
- 2 Prepare a profile of neighboring community.

6.4 Interacting with parents and understanding their ideas and aspirations about their children and upbringing

Teacher and parents should work together for the effective early childhood education program. The main focus of parents and teachers should be centred on the holistic development of the child. The following are some techniques the teacher can adopt for interacting and communicating with parents.

1. Be friendly and show interest in parents and other family members.
2. Make home visits once in a month and discuss their problems.
3. Encourage parents to attend parent teacher meetings.
4. Listen to parents to know about their needs.
5. Help parents to work on an issue of their choice.
6. Find ways to collect funds for parent welfare.
7. Let everyone to speak in a group.
8. Maintain a suggestion book.
9. Plan child welfare program with the help of parents.
10. Involve parents in celebration of different days in and outside school.

Methods adopted to improve communication with parents.

The effective communication is the key factor to reduce the gap between parents and teachers and create a happy, cordial atmosphere in the process of child development. The following methods are helpful for creating positive communication.

1. Group discussion - for example a topic on how to develop healthy eating habits can be discussed.
2. Lecture method-A nutritionist is invited to talk on Nutritional requirements of preschool children and parents clarify their doubts.
3. Audio visual aids-with the help of film , TV, pictures teacher explains important issues like good touch /bad touch ,how to protect children from cell phone addiction etc.
4. Demonstration - Teacher demonstrates nutritious recipes to parents.
5. Discussing progress of the child through progress report.
6. Parent conference -Here the parents and teacher share experiences, problems, issues and doubts about child.

Check your progress

- 1 Plan a method for communicating with parents
- 2 Discuss the importance of parent - teacher involvement.

Summary

For the effective development and education of the child the role of parents and teachers is very crucial. The child is a part of the community, therefore the teacher should be aware about the demographic picture of the community including household survey of an area, caste, religion, gender and planning profile of the child aging 3-8 years and also develop the profile of the community in which the child is belonging. The teacher must know about how to organize parent teacher meeting in order to make parents aware about the programme, progress and problems related to pre primary education.

Suggested Practical Activities:

- Conducting awareness Programmes to Parents and Community on early childhood concepts (child development, nutrition, early stimulation, inclusion, learning-language, emergent literacy, numeracy, cognition, socio emotional etc.).
- Educating the parents and community about the provisions of early childhood policy and RTE and role envisaged of parents in ICOS and Primary school.
- Mentoring parents to provide atmosphere for age appropriate stimulus at home and in community viz. story telling conversation, sensory motor activities etc. Parents' role also in tracking nutrition, growth and development. Making parents aware of harms of introducing formal and rote learning at this stage.
- Preparing status reports for children using Developmental Milestones Checklists.
- Communication of assessment of children to parents in comprehensible terms.
- Conducting Health awareness programme to parents and community members.
- Designing research tools to interview parents and local community members.
- Preparing documentary films/posters based on community interaction.
- Classroom presentations of field work.
- Project work on diverse aspects of interaction with parents and communities.
- Any other work suggested by the Teacher Educator.

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