

HOME SCIENCE

TEXT BOOK FOR H.S. SECOND YEAR



ASSAM HIGHER SECONDARY EDUCATION COUNCIL

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Foreword

With a motto to impart quality education to the students of the Higher Secondary stage and to cater to the need of the hour, Assam Higher Secondary Education Council has been revising its curriculum and syllabi from time to time. It has introduced a revised curricula with effect from 2010-2011 which has its base on NCF-2005. In the context of globalization of the economy, emergence of Information Technologies and application of new technologies in production processes, the National Council of Education Research and Training, New Delhi has proposed an new National Curriculum Framework 2005 (NCF-2005) for grades I-XII. This framework, which addresses the emerging developmental issues and other social concerns, provides a basis for the State to design their curricula, syllabi, teaching learning materials etc. In its endeavour to keep the uniformity with the national level, Assam Higher Secondary Education Council after due deliberation decided to develop its curricula, syllabi, teaching learning materials etc. In its endeavour to keep the uniformity with national level, Assam Higher Secondary Education Council after due deliberation decided to develop its curricula and syllabi on the basis of NCF-2005. Accordingly, textbooks have been prepared to materialize the objective of the curricula and the syllabi.

The preparation of this book was a collective effort of a group of people. Assam Higher Secondary Education Council appreciates the hard work done by the textbook development committee responsible for this book. AHSEC welcomes comments and suggestions which will enable us to undertake further revision and refinement. Appreciate feedback from the teachers and the students.

Valuable suggestion and feedback from the teachers and students community is always appreciated.

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CHAPTER-I

UNIT	KNOW LITTLE CHILDREN (0-3 years)
I	

CONCEPT OF PRE-NATAL PERIOD

1.1 INTRODUCTION :

In first year course, you studied about adolescence period, i.e. about yourself. In this chapter, you will study about small children (0-3 years of age). How a child looks like soon after birth? He is small in size, delicate and sleep most of the time. Have you noticed? During this stage he is dependent on others for all of his work. It is because children needs to grow and develop. When will a child become independent? When he acquires different skills, can communicate and understand the difference between right and wrong, then he becomes independent.

Every child grow and develop slowly and gradually. Even when the baby is in his mother's womb, the growth and development continues, for which a complete baby is formed from an embryo after 280 days. Thus, it is seen that growth and development process continues from the time of conception till

adolescence period. In this lesson, we will discuss about the following -

- Concept of Pre-natal period.
- Stages of Pre-natal period.
- Characteristics of babyhood.

1.2 CONCEPT OF PRE-NATAL PERIOD :

Pre-natal period means the entire period of conception till the birth of a child. A child is born after completing 9 months 10 days in mother's womb. This period may not be same with all women.

You have already learnt about reproductive organs of both male and female in first year course. Due to physical relations between a man and a woman, the woman becomes pregnant by bio-chemical process. In case of woman, within 12-14 days after menstruation, one reproductive cell (ovum) comes out from the ovary and moves towards the uterus. When a sperm unites with ovum,

fertilization occurs and the woman becomes pregnant. If fertilization does not occur, the ovum may die within three days.

1.3 STAGES OF PRE-NATAL DEVELOPMENT

The entire pre-natal period is divided into three different stages. They are -

1. Period of ovum or germinal period.
2. Period of embryo.
3. Period of foetus.

1. Period of ovum or germinal Period :

This period starts from conception to the end of second week. During this period, the fertilized egg floats freely and receive nourishment from the yolk to maintain life. But within 10 days, it gets implanted in the uterine wall and divided into two parts as inner and outer part. From the outer part, umbilical cord, placenta and amniotic fluid develop and the inner part takes the shape of a human being. The ovum starts receiving its nourishment through mother, thus ovum becomes a parasite.

2. Period of Embryo :

From the second week of conception, till the end of second month is known as the period of embryo. The

embryo from pin head develops to an individual of 3.5 cm in length. External and internal features start developing and functioning. By the end of 8th week, heart beat can be felt and the embryo receives its nourishment from mother through the umbilical cord and placenta. By the end of this period, the embryo measures $1\frac{1}{2}$ - 2 inches in length and weighs about 35 gms. Emotional shock, accident, sudden fall and improper diet of mother during this stage may lead to miscarriage.

3. Period of foetus :

This stage starts from the end of second month and ends at child birth. All external and internal features continue to grow and develop and resembles human being by 5th month. During 3rd month of pregnancy, ears are formed, fingers and nails appear and nose fully develop. Heart beat can be felt and the foetus begins to move at 4th month. By 5th month, fine hair appears on the head and the foetus become 12 inches long. Now mother can feel the movements of the child. During 5th and 6th months, the foetus can open its eyes, trunk lengthens, bones are formed and heart function starts. The mother's abdomen goes on enlarging. Some type of fluid comes out from the breast and it is known as

“Colostrum”. At this stage, the weight of the foetus is about 2 kgs.

During 8th and 9th month, the colour of the skin of the foetus becomes red, soft ears develop. The foetal movements are felt and the mother's abdomen no longer enlarges and subsequently, the foetal movements are less often and less vigorous. At the end of the 9th month, the fully developed foetus occupies an inverted position in the uterus for delivery. The foetus is now 10-20 inches long and weighs about 3 kgs. Thus, a baby is born after 280 days or 9 months 10 days from conception.

1.4 CHARACTERISTICS OF BABYHOOD :

Generally after one year, some specific changes in various aspects are seen among infants. During infancy, the child is totally dependent on others. As age advances, they become independent. Thus, along with physical and mental development, the infant gains control physically. At this age, the child is eager to know about his environment and thus the socialization process begins slowly. At the end of babyhood, the child starts using simple sentences combining three or four words. Such characteristics are seen among children of babyhood.

Elizabeth B. Hurloek described the characteristics of babyhood as follows -

These are explained briefly.

1. Babyhood is the true foundation age. Because at this time, the true foundation of their behaviour pattern, different attitudes and patterns of emotional expressions are established.

2. Babyhood is an age of rapid growth and change. At this stage, the physical and psychological growth becomes very rapid. This brings about a change in their appearance and capacities. Because, soon after birth, the upper position along with the head of the baby is relatively big as compared to the lower portion of the body. Changes in body proportions are seen along with growth in height and weight. The growth is very rapid at this age. Physical growth is accompanied by parallel growth and development of other aspects.

3. Babyhood is an age of decreasing dependency : As age advances, babies learn to control their body. They can sit, stand, walk and can climb stairs without help from others. Babies are able to communicate or can speak to others for their needs. Thus they become independent.

4. Babyhood is the age of increased individuality : Babyhood is known as the age of increased individuality. Babies grow and develop according to their interests and abilities.

Individuality appears in their appearance and in patterns of behaviour. As individuality increases, the necessity for identifying the baby as an individual is also increases. At this period, individual differences are seen among babies.

5. Babyhood is the beginning of socialization : Young babies become egocentric but very soon, they want to become a part of the social group. When babies are left alone, they try to protest.

6. Babyhood is the beginning of sex role typing : Soon after birth, boys are treated as boys and girls as girls. Therefore, boys are dressed up with blue colour and girls with pink colour to express their sex-role type.

7. Babyhood is an appealing age : Even though babies are disproportionate with their head, trunk and body portions, yet they are appealing with their big heads, protruding abdomen, small hands

and feet. When babies are helpless and dependent, adults find them more appealing.

8. Babyhood is the beginning of Creativity : Babies of this age are not able to control their environment and due to the lack of muscle co-ordination, they are unable to do any creative work. Thus, whatever they are doing lays the foundations for later creativity.

9. Babyhood is a hazardous age : There are hazards at every age of human life. Hurlock described babyhood as the most hazardous age. These hazards may be of two types- Physical and psychological. Among physical hazards, accidents, illness can create problems. Because these hazards may lead to physical disabilities or to death. If good behaviour patterns, attitudes, interests are not established during babyhood, this will result in psychological hazards.

SUMMARY

- Children become independent, when they acquire different skills, can distinguish right and wrong and can communicate properly.
- Growth and development continue even when the child is in mother's womb.
- The period from conception till child birth is known as pre-natal development.
- There are three stages of pre-natal development-period of ovum, period of embryo and period of foetus.
- There are some specific characteristics of babyhood.

QUESTIONS**A. Very short answer questions.**

- (i) What is Pre-natal development?
- (ii) What are the stages of pre-natal development?
- (iii) What is known as the period of embryo?
- (iv) What is fertilization?
- (v) Define Colostrum.

B. Short answer questions.

- (i) What do you understand by Pre-natal development?
- (ii) What are the different stages of Pre-natal development?
- (iii) Write about the development during the period of ovum.
- (iv) Name any four characteristics of babyhood.

C. Long answer questions.

- (i) Define Pre-natal Period. What are the different stages of this period? Explain.
- (ii) Explain briefly about the period of foetus.
- (iii) Explain any two characteristics of babyhood.



CHAPTER-II

SOME SPECIFIC CHARACTERISTICS OF CHILDHOOD

2.1 INTRODUCTION :

In the previous chapter, you have studied about the growth and development of a child in mother's womb. In first year course, you have learnt about what is growth and development, its principles and different stages. In this lesson, growth and development of children in various aspects have been described. If you observe a child closely, you will notice various stages of growth and development.

After reading this chapter, you will be able to understand the following -

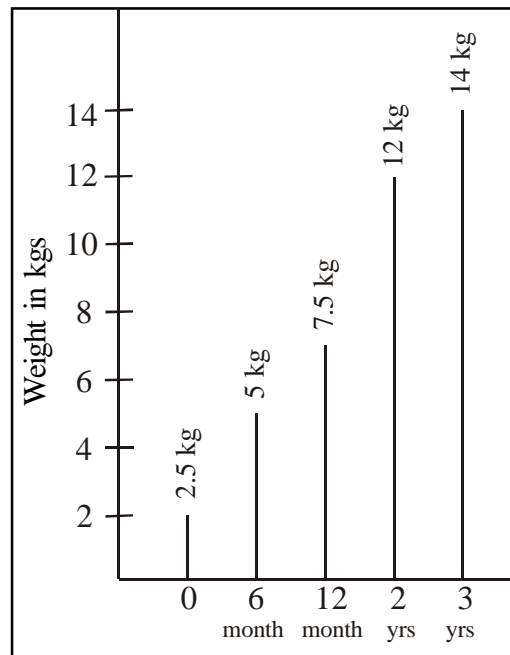
- Physical development of a Child from birth to three years, changes in height and weight, body proportions, motor development etc.
- Social and emotional development.
- Cognitive development and language development upto three years.

2.2. PHYSICAL DEVELOPMENT

Physical development means changes in height and weight along with changes in size and shape of the child.

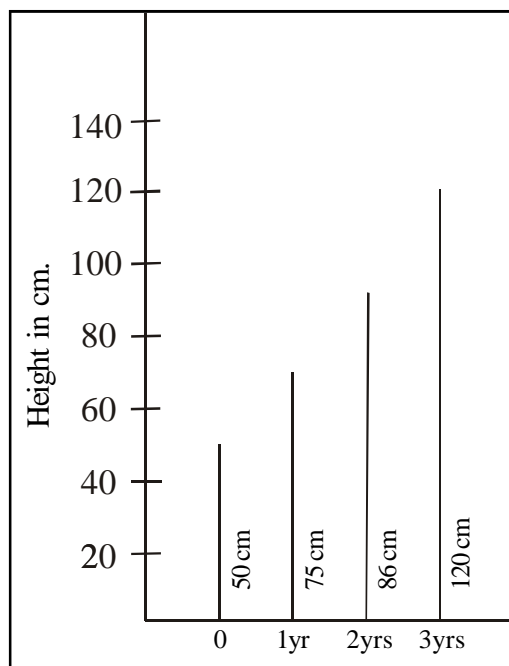
Weight of the child : Do you know the weight of a new born infant at birth? The average weight of an Indian child at

birth is 2.5 kgs. This initial weight doubles i.e. to about 5 kgs. by the time the child is 6 months old. With one year, the birth weight increases three times more than the initial weight. The child weighs about 12 kgs and 14 kgs at two and three years respectively. Soon after that, the rate of increment in weight becomes slow. The following figure shows the changes of weight of a child from birth to three years.



Age

Height of the child : The height of a newborn infant at birth is 50 cm. After birth to two years, height increase rapidly. At 4 months, the baby measures 58 cms to 61 cms, at 8 months. 66 cm to 71 cm and an one year old baby is 20-25 cm more than his height at birth, i.e. at 1 year the baby measures 81-86 cm and at 3 years, the height of a child is about 100-120 cm. After that, there is a slow gain in height. Generally, the rate of height increment is more in boys than girls. The following figure shows the changes of height of a child from birth to 3 years of age.



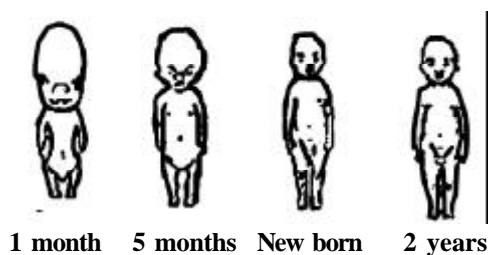
Age

Body size : Body size of a new born infant is controlled by two factors. They are heredity and environment. For proper body size, a growth hormone, secreted by pituitary gland is needed. For the normal physical growth, this hormone must be produced in right amounts at right time. If too little is produced, the rate of growth becomes slow. Excess Production will result in over growth. Because of this, Some children are thin and some are fat. The production of this growth hormone not only depends on pituitary gland alone, but also upon the thyroid gland and reproductive primary organs. Oestrogen in females and androgen in males stimulates the deposition of calcium in bones, which in turn helps the bone to become strong and hard.

Body size also depends on the condition of pre-natal period and post-natal environment. Malnutrition, excessive smoking, maternal stress, unhygienic living conditions etc. also affects the body size of the infant and children.

Body Proportions: The body proportion of a new born infant is different from an adolescent boy / girl or from an adult. The size of the head of a new born infant is relatively larger than the arms, legs and bones. At birth, the head is about 20% of the total body length. The lower portion of the head is thin and small, arms and legs are also thin, short and small. The nose is small

and flat, eyes are comparatively bigger in size. Have you ever seen a new born baby? If so, you will notice that-how body size and proportion changes from birth to two years of a child and proceeds toward normal size and shape. From birth to 15 months, the head size grow faster and later it slows down. The following figure shows body proportions of a child from two months (foetal) to two years.



1 month 5 months New born 2 years
Fig- 1

**Body Proportion of Children from
1 month (foetal) to two years.**

Along with the changes in body proportion, bone formation in a child begins during pre-natal period. During this period and after child birth, bones become smooth, but gradually, as age advances, bones become harder. There is also growth of muscle tissues. The tissues of a new born baby is soft and smooth. With advancement of age, the tissues becomes hard, strong and firm.

The growth of teeth is one of the most important aspect of physical growth and development. During pre-natal period, the teeth begins to form in the jaw and after 6 months of birth, the first two

lower teeth appears. After some days, another two teeth appears at the middle portion of the upper jaw. By the time the child is one year, 4-6 teeth appear. At two to three years, this number increases to 16-20. These teeth are known as 'temporary teeth' or 'milk teeth'. As the child is 5-6 years old, temporary teeth are replaced by new teeth, which are known as 'permanent teeth'. The primary teeth consists of 32-36 teeth.

The development of brain and nerve tissues in various parts of the body takes place parallelly with physical growth and development. Brain is an important part of nervous system and its growth and development is very rapid from birth to four years. The sense organs also develop rapidly during first two years of age. At birth smell and taste buds develops. During this period, their soft skin becomes very sensitive to senses like touch, feel etc..

2.3. MOTOR DEVELOPMENT

Motor development means, developing control over bodily movements in co-ordination with nerve centres, nerve and muscles. In other words, motor development is the child's ability to use muscles, bones and nerves to perform different skills. The motor development changes are seen in every 3-4 weeks. These changes are as follows-

BIRTH TO THREE MONTHS (0-3) MONTHS)

Motor development begins when the

baby is in mother's womb. During this period, the rate of development is slow. When the foetus is 2 months old, physical movement takes place and from 3 months onwards, these movement increases. From 6 to 8 months, foetal movements are almost similar to that of a new born infant. At this stage, the pregnant mother can feel certain actions of the foetus like shaking, kicking etc.

Soon after birth, the infant becomes helpless. After one week, he can move his hands and feet. The child starts holding his head from the age of one month and can turn his head while lying on bed. He is also able to hold his neck. At two months, the child can raise his head and chest while lying on the abdomen. At 3 months, the child tries to reach out to the object held near him.

Due to inadequate focussing of vision, he cannot hold the object. At birth, the neck of an infant is hardly visible. The neck is visible from 3 months onwards. The children at this age can respond to smile of other person. As age advances, the colour of the eyes changes. The child can raise his hands and feet at this age.

**FOUR TO SIX MONTHS
(4-6 MONTHS)**

Children at 4 months gain control over different tissues in neck, chest and waist region. Therefore they are able to sit for sometime with the help of pillow, cushion etc. At 5 months, they have complete control over head and can grasp small objects like rattle, toys etc. At this age, they cannot use their fingers, instead they use the entire hand.

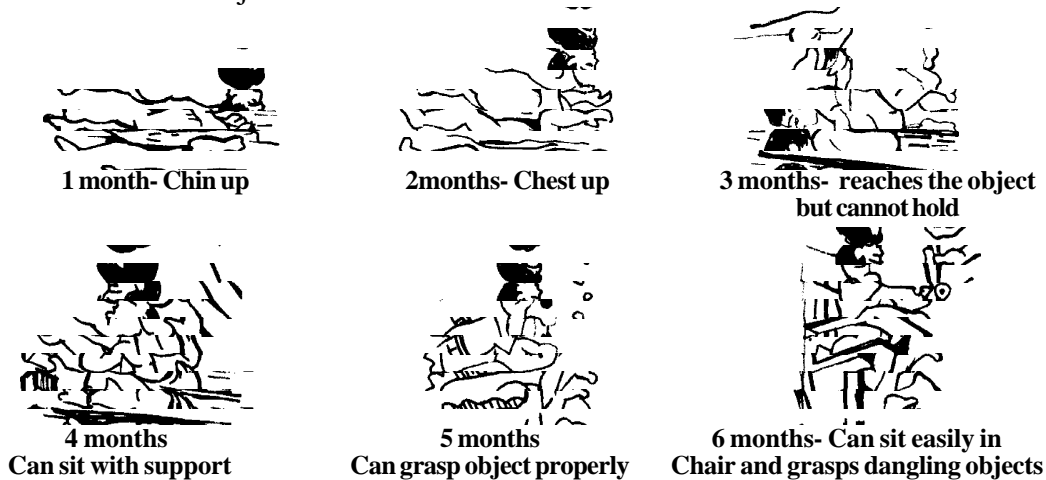


Figure- 2

Motor development of children from birth to 2 years

Six months old children can grasp mobile or hanging objects. They can even sit independently in a chair. They learn to focus on the colourful balloons or any objects hanging over their cots. They can hold bottle or cup for drinking water.

SEVEN TO NINE MONTHS (7 to 9 months)

At 7 months, children can sit independently without any help. They are

months old child tries to stand with the help of some objects or by holding chair, tables etc. At this age, he can walk easily with the help of a 'walker'.

At 9 months, the child is capable of holding any object with their fingers. They can even make use of specific fingers to hold small objects. They can eat food like gram, biscuits, puffed rice, peas, carrots etc. with their hands. They can now sip or drink water or milk from a glass or cup.



7 months
Can sit alone



8 months
Crawls on abdomen



9 months
Can stand by holding furniture

Figure- 3

Motor development of Children from 7-9 months

capable of shifting from lying position to sitting and back again to lying. At 8 months, the child starts crawling on his abdomen. The child learns to put his weight on hands and use legs to provide the push needed to move forward. Nine

TEN TO TWELVE MONTHS : (10-12 MONTHS)

At 10 months, the child is able to crawl better on his hands and knees. A 11 months old child learns to stand and can take one to two steps by holding the



10 months
Crawls on hand
and Knees



10 months
Can walk if both
hands are held



11 months
Stand alone



12 months
walks when only
one hand is held.

Figure- 4

Motor development of children from 10-12 months

hands of parents, siblings or other people.

**ONE TO TWO YEARS
(1-2 years)**

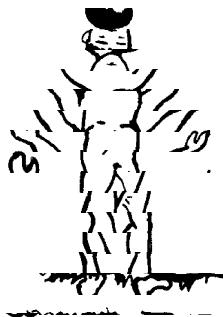
After one year, the child is able to sit and stand independently. At this period, the child can move here and there, but cannot walk on stairs. At first he tries to crawl up the steps. When the child is 14 to 15 months old, he tries to walk in coordination with the hand and feet movements and becomes independent. He tries to go up the stairs by holding the railings. At 16-18 months, the child goes up the stairs in standing position. When the child is 2 years old, he can climb stairs in a standing position without any hesitation. Two years old child can even walk forward, backward and can stand on one leg for short duration. Some children can ride tricycles at the

age of two years with the help of adults.

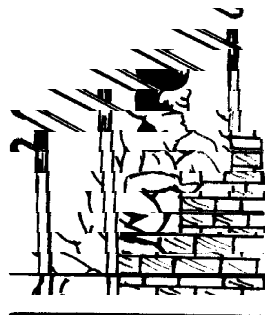
**TWO TO THREE YEARS
(2-3 years)**

Most of the children at this age shows improvement in motor development due to physical and muscular development. Two years old child can run and play well. Generally small boys love to play football and cricket and girls like to jump, run and skip. The children can jump up with both the feet. They acquires the skills of grasping any objects with their hands. A three years old child can balance on toes to reach any object kept at a height. Have you reached out anything kept at a height by your parents?

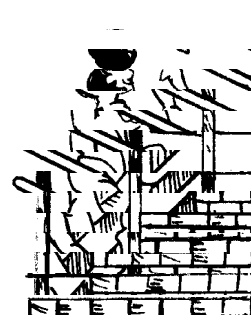
At the age of 2-3 years, the child is able to put on his clothes, can zip up his pant. He can eat at a table, learns to control bowel movements and can go to the bathroom alone. Therefore, children



13 months
walks alone



18 months
Can go up and down
the stairs slowly.



2 years
Can climb stairs in a
standing position

Figure- 5

Motor development of Children from 1.5 yrs to 2 years

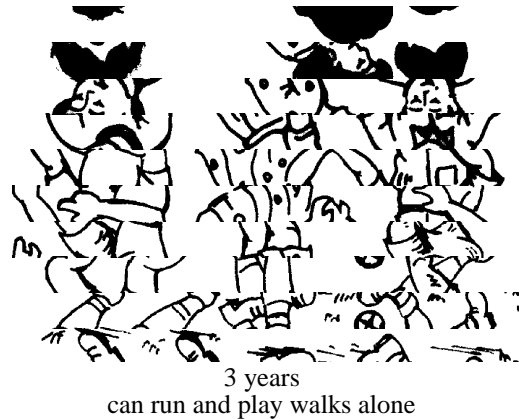


Figure-6
Motor development of Children from 2-3 years

at this age should be encouraged to develop good habits and to play independently.

2.4. IMPORTANT ASPECTS IN LEARNING MOTOR SKILLS.

Motor development in child requires learning of certain skills. Parents should try to provide an appropriate environment along with the required facilities to understand these skills by the children. Following are some of the aspects needed to learn motor skills.

1. Readiness to learn: To learn any skill, the child should be ready for it and must be able to master it physically. For example when a child is ready to stand or walk, his leg muscles should be developed properly to support his feet.

2. Skills should be learnt one at a time : Motor skills must be learnt one

at a time. Even though the same body part is used, each skill is different from the other. For example holding a spoon differs from holding a pencil, a ball or a play item (rattle, toy etc.). Therefore these skills should be learnt individually.

3. Opportunities to learn : The child should be given opportunity to master different skills of motor development. Now-a-days, many parents do not provide the much needed opportunities to learn some skills like crawling, walking etc. They feel that their child will get hurt and do not allow to play for fear of any accident. If the child is left alone, he can master these skills very easily. In this case, help from others is essential.

4. Opportunities to Practice: The children should be given opportunities to practice the skill. Practice make it easy

to acquire any skill. For example when a child starts walking, he sways and staggers. When he is allowed to practice, he will be able to walk properly after someday.

5. Motivation : Motivation is essential for learning motor skills. A child can derive satisfaction and independence by learning these motor skills. Therefore, they must be encouraged to master various skills.

6. Role Models: Children learn different skills by imitating others. Do you have small children in your family ? If so, you will see that children like to imitate other younger children. You will understand better with this example - a walking child starts crawling on seeing a small baby doing so, Hence children must be provided with good role model to imitate. Moreover, they need guidance to imitate models, through which they can correct errors.

2.5. FACTORS AFFECTING IN MASTERING SKILLS :

- a. Growth retardation.
- b. Poor health, low strength
- c. Low mental ability and physically handicap
- d. Lack of opportunity
- e. Lack of motivation
- f. Fear of being different
- g. Inadequate guidance.

2.6. SOME IMPORTANT SKILLS OF EARLY CHILDHOOD

Self help skills: These skills are such that children can do some work by themselves. They are

Self feeding : A eight month old child can hold his bottle when it is placed in his mouth. At 9-10 months he can put the bottle in his month. At 1 year, he learns to hold a cup with both hands and drink. Children at 2 years can eat by themselves. They try to use spoons to eat. Three year old child learns to sit and eat food in a dining table.

2. Self bathing : Small children love to play with water. A two year old child can wash the front of the body. As he grows up, he can bathe properly. From 3 years onwards, children learn to brush their teeth.

3. Self dressing: By the end of first year, most children tries to pull off their shoes and socks. Two year old children can put on T-Shirt and pants with elastic at the waist. As age advances, they can put on shirt with buttons. Children between 2-3 years of age start immitating their parents, for which they use to wear their father's dress and use their mothers bindi, kajal and nail polish.

4. Self toileting: Two to 2½ years old child can go alone to the toilet for bowel movement, but cannot clean the

toilet. They need help from others to clean the toilet.

PLAY SKILLS

a) Hand skills : During the first year of life, play skills are not developed fully. From second year onwards, the child is able to open a box and unscrew lid from bottle. They can draw on paper with the help of pencil or crayons. After 3 years, the child can draw straight, vertical and horizontal line. They even learn to build house with the help of blocks. Two years old children cannot throw a ball properly. With the advancement of age, they can throw a ball properly by using their two hands. Two to three years old child are capable of helping mothers by shelling peas, putting waste in dustbins, arrangement of their toys in the cupboards etc.

b. Leg skills: Children about 2-3 years of age can walk forward, backward and sideways. A 3 year old child can ride a tricycle. They can hop first on one leg and then on both the legs. Three year child can dance well to musical sounds.

2.7. SOCIAL DEVELOPMENT

Social development is the ability of a child to behave in a manner acceptable to the society, in which he lives. In other words social development is the ability of an individual to develop and maintain good relationship with other people and

his social circumstances.

A new born infant shows no interest to his environment. He cries, when hungry and when wet. Once these physiological needs are satisfied, he sleeps. Gradually with age, he can recognize his mother and shows interest in people around, who takes care of him.

BIRTH TO THREE MONTHS (0-3 months)

It has been mentioned earlier that social development is nil at birth. Gradually they show interest in people around. At 3 months, they start responding by smiling and cries when no one is with them. At this stage, they can respond to different sounds.

FOUR TO SIX MONTHS (4-6 months) :

At the age of 4-5 months, the child can react differently to angry and friendly voices. During this period, the child becomes more social. He can recognize people around him and respond by gurgling, cooing and babbling. They start recognizing parents, siblings and respond by smiling, but shows expression of fear in the presence of strangers. At 6 months, the child becomes aggressive and pulls the hair of the person who is holding him or grabs the persons's nose or eye glasses.

SEVEN TO NINE MONTHS**(7-9 months)**

At this age, the child loves his mother very much and the bond between the mother and child becomes strong. This motivates him to establish friendly relationship with others. The child can differentiate between love and scolding during this period.

TEN TO EIGHTEEN MONTHS**(10-18 months)**

By ten or twelve months, the child feels secure with his parents and other family members and avoid strangers. He smiles and waves his arms towards familiar people and show fear of strangers by crying. He becomes angry if someone takes the things belonging to his parents. He becomes antisocial at this period and donot want to share his toys, play items with others or with playmates. Children at this age indulge in individual play and spend less time with other children. They like to use their parents's shoes, shirt, mothers bindi, lipstick etc.

ONE AND HALF YEARS TO THREE YEARS**(1½ -3 years)**

The child at the age develops a strong relationship with his mother and wants her undivided attention. Some problem may arise, if the second child is born in

the family. Gradually the child shows his interest to the newborn and gets involved in taking care of the little one.

From two year onwards, children want to co-operate with other children in play. They show resistant behaviour and tries to share play items/toys, with play mates. Parents should praise their children when they show good behaviour. Children learn to socialise by observing people in their environment and gradually establish social relationship and become social. As children grow, parents must be consistent in their behaviour towards their children. Parents should not scold their children. Parental pressure to too many do's and don'ts towards their children will have negative effect. Children may be afraid to do anything on their own and become socially dependent on others. Instead, parents should encourage their children to learn good social behaviour.

2.8. SOCIALIZATION

Socialization is a process, through which the child learns to eat, speak and play. In other words socialization means behaving well in a group. Social development leads to social behaviour. Socialization begins from infancy, specially around the third month, when the baby can distinguish between people and objects in his environment and when he responds differently to them. During this

time the muscles of eye becomes strong and sufficiently coordinated. This enable him to look at people and objects. Hearing is also sufficiently developed to enable him to recognise sounds. The child smiles in response to a smile, turns his head when he hears human voices. Children express joy, pleasure, by smiling, kicking, waving hands, when he sees his parent, and other familiar persons. Thus socialization process among children begins. The family, schools etc. have an important role in socialization process of the child.

2.9. RECOGNITION OF PEOPLE AROUND :

It has been mentioned earlier that at 3 months, the child can distinguish between familiar person and strangers. He can recognise his mother very well. The child reacts to strangers by crying, hiding his head or clinging to the person who is holding him. At 5-6 months, he smiles in response to a smile of familiar person. With the advancement of age, the child progress socially and tries to adjust himself with the social environment.

2.10. EMOTIONAL DEVELOPMENT:

Emotional development means the ability to control emotions and express them in socially accepted ways. Emotions are important in the development of the child. Generally, emotion is a disturbed

state of the body. When our feelings become intense and excited, they become emotions. Emotions, normally seen among small children are - Love, affection joy, anger, fear etc. Emotions of children change abruptly. They are of two types- Constructive emotion and destructive emotion. Love, affection, joy, pleasure etc., are constructive emotions and fear, anger, depression, jealousy, strums etc. are destructive emotions. Do you express these two types of emotions. Let us see the emotion of children from birth to three years.

BIRTH TO THREE MONTHS (0-3 months)

Children at this age feel angry and distressed when they are hungry, get hurt or when wet and starts crying. They feel delighted when they loved and are called in soft tones. This feeling is expressed by smiling. At this age, children express these two types of emotion. Loud voice, harsh and sudden noise can cause the feeling of anger in child.

FOUR TO SIX MONTHS (4-6 months)

When little children are hungry and wet, they start crying loudly and shows anger. They also want to draw attention from others by showing anger. Children start showing anger when they donot find their parents or other familiar persons around them.

**SEVEN TO NINE MONTHS
(7-9 months)**

During this period, there is development of bonds between parents, siblings and grandparents. They show love and affection to non living things such as toy, teddy or a doll or with other play items, which the children like very much. They express their emotions (Love, affection) by hugging, cuddling, to the persons especially to mother.

**TEN TO EIGHTEEN MONTHS
(10-18 months)**

Fears arise at this age, when the child is in a new situation or in a new environment. Any loud sound, strangers, new objects, animals etc. arouses fear among children. In the absence of mother, if the child sees strangers, animals etc., he gets scared and starts crying, which cannot be controlled. They hide their faces behind any object or their mother, for fear of strangers.

**ONE AND HALF YEARS TO
THREE YEARS (1½ yrs - 3 yrs)**

When the second child is born in a family and mother attends to the newborn infant, children of this age becomes jealous. Children become aggressive and shows their jealousy by bed wetting, thumb sucking, biting, hitting their siblings, mother and other people. Children often break things and become destructive to attract attention.

2.11. EXPRESSION OF EMOTIONS:

Expression of emotions are important to understand the response of a person to another person. Emotion can be expressed in many ways by speaking, physical expressions and facial expressions. All children express their emotions in this way. Emotional behaviour varies among children. A child may hide behind his mother for fear of strangers, some others may start howling. Children's emotions are short lived. The child may hit his mother or siblings, when he is angry. After sometime, he hugs them to show love. Children becomes emotional to minor situations and this can be seen from facial expressions. For example they smile, clap when happy and becomes sad when hurt or scolded by their parents. Children also express their emotions so overtly that it is easy to know whether a child is happy, afraid or angry. As children grow, they learn to control their emotions. This is because of strict discipline of the parent or social pressure.

2.12. COGNITIVE DEVELOPMENT

Cognitive development is the ability of the child to think and find solutions to problems. It also refers to the process of learning and understanding. Cognitive development also connected with different functions of the brain. If we observe, then we will see that a 1 to 1½ year old child

loves to play with things like toy car, doll etc. At 2 years, children play with ball, blocks, 3 years children draw pictures, sing nursery rhymes. All these are examples of cognitive development. Along with age, experiences improves which leads to change in cognition among children.

2.13 CHARACTERISTICS OF COGNITIVE DEVELOPMENT

Cognitive behaviour of children is different in different ages. These are discussed below–

BIRTH TO THREE MONTHS (0-3 MONTHS)

The cognitive development from birth to 3 months is very limited. Children of this age spend most of their time by lying on bed and tries to understand about different thing around. They satisfy hunger by sucking their thumbs, keeping their foot in the mouth or by sucking mother's milk. The child cries and the mother feeds the baby. Gradually, the child starts correlating crying by being fed. Thus the child moves his lips when hungry. Two months old child becomes happy by thumb sucking or keeping his foot in the mouth.

FOUR TO SIX MONTHS (4-6 months)

At this age, the child starts sucking any object which is held by him. As age advances i.e. at 6 months, he starts

playing with play items. In due course, the child learns that the play items that he holds, cannot give milk.

SEVEN TO TWELVE MONTHS (7-12 months)

Cognitive development has some effect on changing the behaviour of children. Children of this age tries to understand and adapt certain behaviour from their own experience. For example if a child touches a hot cup of tea or a hot iron and hurt himself, next time, when he sees a cup or an iron, he will stay away from it. Why he does this? He associates the burning feeling with the cup or iron and keeps away from it.

ONE YEAR TO THREE YEARS (1-3 years)

At this age, children understand the existence of any object even if they donot see them. For example if a toy is shown to a 6 months old or 1 year old child, he will be delighted. If the toy is removed from his sight, after sometime, he will forget about the existence of it. In case of a 2 year old child, he will start searching for it and are often able to take out the toy from the hiding place. Children of this age understand that the toy cannot vanish and still exist. The ability of not forgetting the existence of the toy is called 'object permanence'

At 2 years, children learn about

various symbols. Moreover, children of this age can express their feelings, imaginations through language. Have you ever seen children wearing parents dress and role playing? The child tries to immitate the father or mother. They attribute human values to the non-living objects. Have you seen children asking their mother to tie a bandage on the broken part of their toys? At this age, if a child falls down on the floor and get hurt, he asks his mother to hit the floor. Thus, gradually children are able to conserve their experiences mentally and impress the use of sensory organs.

2.14. DIFFERENT STAGES OF COGNITIVE DEVELOPMENT :

Cognitive development is the development of cognition of every child towards different objects of the world. The mental abilities of a child expands from new experiences obtained from the environment and from the relationship with different people. Famous psychologists Jean Piaget conducted various research on cognitive development and developed a theory on it. According to this theory, Cognitive development has four stages. They are-

- 1. Sensory motor stage :** From birth to 2 years
- 2. Pre-operational stage :** From 2 years to 7 years.

3. Concrete operational stage:-
From 7 to 11 years

4. Formal operational stage: From 11 to 15 years.

2.15. LANGUAGE DEVELOPMENT

Language is the medium to communicate with each other. We are able to express ourselves through languages. We can express our feelings verbally or by our actions. Can a new born infant talk? No, is n't? The little one cannot speak from birth to a few months. Gradually, the child can only produce some sounds, start making short and simple words. Thus the language development begins in small children. Now the question arise- What is language development? It means the ability to communicate through the use of meaningful words and sentences.

It has been mentioned earlier that infants cannot speak soon after birth. Their language develop slowly with age. Characteristics of language development of a child at different stages are discussed below-

2.16. CHARACTERISTICS OF LANGUAGE DEVELOPMENT :

Birth to three months (0-3 months)

The child becomes helpless at this stage. They tries to satisfy their various needs though crying. There are several types of cries to express different feelings

like hunger, fear, pain and wetness. Parents can distinguish these cries and as such satisfy their needs. By the time they are 3 months old, they learn to produce coo, ooo sounds. Children make gurgling sounds when they are well fed, happy or when they are with their mother.

FOUR TO SIX MONTHS (4-6 months)

At this age, the child starts producing a –a sound. Gradually the child starts producing various sounds like ma, pa, ba ta, etc.

SEVEN TO NINE MONTHS (7-9 months)

As the age advances, the child can produce and pronounce double flat sounds of the above mentioned words like mama, dada, baba, papa, tata etc. through practice. They learn to say some words which has no meaning. Gradually the child can produce some words which have meaning and learns to associate meaning with any object, and then it becomes a label for the object. For example children of this age will show a ball or a toy car and will say ‘ball’ or ‘car’. It means that the child wants to say- “Give me the ball” or “give me the car”

TEN TO TWELVE MONTHS (10-12 months)

Children of this age now start

speaking in simple and short sentences like babi doll actually means baby’s doll and ‘Papa office’ means papa is in his office etc. These are known as telegraphic speech. Thus children learn to use complex sentences by using one or two words. The language develops well with repeated use of simple words. Children tries to imitate elders while using different words. So it is desirable that parents should not use the baby language while talking to their infants and small children. If parents speak clearly, children will learn the correct use of words.

ONE TO THREE YEARS (1-3 years)

The children now are able to speak three four word sentence. For example - I will have food, ‘I want a doll’ etc. At 18-20 months child can speak about 50 words. At 2 years, children can use 300 words and at 2½ to 3 years, they can speak about 1000 words. Children of this age have learnt new words and uses them repeatedly. Now they are ready to go to preschool and like to recite nursery rhyme or any other song. A three year old child learns to speak more than one language. Because they use different languages like English, Hindi, etc. while talking with their peers at pre school or learn them from television.

SUMMARY

- Physical motor, social, emotional, cognitive and language development are the different aspects of development of child.
- Changes in height and weight brings about changes in body shape and composition.
- Motor development is the ability to use bones, nerves of the child.
- Changes in Motor development takes place in every 3-4 weeks.
- Some factors affecting in mastering motor skills.
- Social development strengthens the bond of love between child and the parents and siblings.
- Socialization means behaving well in a group.
- The emotions of infancy and early childhood stages are– crying, anger, jealousy, love, affection etc.
- Children can express their emotions in different ways.
- Cognitive development is the development of cognition along with the ability to solve problem.
- Cognitive development has four stages.
- Children learn to speak gradually. At 3 years they can speak about 1000 words.

QUESTIONS

A. Very short answer questions

1. What do you understand by physical development of child ?
2. What is the average weight and height of a child at birth ?
3. What are the two factors which controls the body size of new born child?

4. Name two aspect of motor development.
5. At what age a child is able to sit and stand without help ?
6. Define cognitive development
7. What is socialization ?
8. Name two emotions of a one year old child.

B. Short answer questions

1. Write in brief about the changes in weight of a child from birth to three years.
2. Explain any two important skills of childhood.
3. At what age does a child can crawl and can hold a toy or a small object properly ?
4. How a nine months old child express his fear to an unfamiliar object or sound ?
5. How a seven months old child express his love and affection.
6. How cognitive development affects in behaviour changes of children between 7-12 months.
7. Write about the physical development of a child from four to six months old children.
8. Explain about the language development of one year old child.

C. Long answer questions:

1. Discuss briefly about physical development of a one year old child.
2. Explain any two motor skills of small children.
3. What are the different play skill? Explain
4. Define social development. At what age do the children become possessive of belongings? Discuss briefly about socialization.
5. What is emotional development? What are the types of emotions? How children express their emotions?
6. What is known as cognitive Development? Mention the cognitive characteristics of two to three year old child.
7. How does the language develops in children from seven months to twelve months of age? Explain.



CHAPTER-III

PROTECTION FROM PREVENTABLE DISEASES

3.1. INTRODUCTION :

In developing countries like India, most children are suffering from various diseases. Many of them die due to weakness. The main reason being poverty and also ignorance of parents, the health of children is not protected. As a result, children frequently suffer from a number of diseases. There are ways and means to protect and promote the health of these children. These will be discussed in this chapter. In the first year course, you studied about health and its different aspects. In this chapter, you will be able to know the following-

- Definition of health and disease
- Various children diseases, its type and mode of spreading.
- Concept of immunity and immunization and its types
- Prevention and control of communicable diseases
- Advantages of breast feeding
- Immunization schedule
- Symptoms of various childhood diseases.

3.2. HEALTH AND DISEASE :

Health and disease are both sides of the same coin. In other words, it is like day and night. If a child is free from disease, he is said to be healthy.

Freedom from diseases promotes good health, long life, fruitful productive years and economic prosperity of an individual and the nation.

Disease is a state of discomfort or uneasiness, in which the normal functioning of the affected person is disturbed. In other words disease is the experience of failure of an organism in its effort to respond adaptively to environmental challenges.

3.3. DIFFERENT CHILDHOOD DISEASES

There are certain disease of childhood, which occur frequently among them. Do you know or have you heard about these? These diseases are - Diarrhoea, Measles, Cholera, D.P.T. Tuberculosis etc. We will discuss about them in detail, at the end of this lesson.

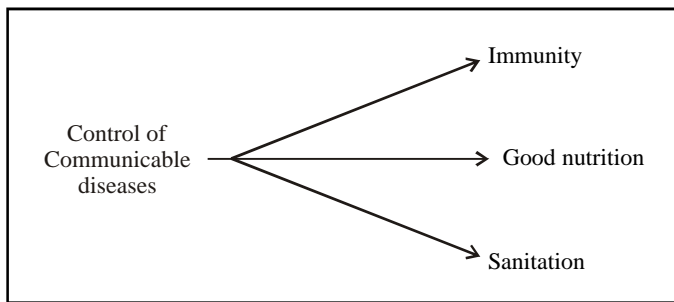
3.4. TYPES OF DISEASES :

Diseases are of two types- Communicable and non-communicable disease. Communicable diseases spreads from one person to another. Examples of communicable disease are Influenza, T.B. Whooping cough, Measles, Cholera etc. Non communicable disease does not spread from one person to another. Communicable disease spreads through three different medium. They are

1. Through contact with the affected person.
2. Through air, water, food and insect bites (mosquitos)
3. Through different agents, pathogens, such as, bacteria, virus, worms etc.

3.5. PREVENTION AND CONTROL OF COMMUNICABLE DISEASES:

Communicable disease can be prevented and controlled by three factors. Example : Immunity, good nutrition and sanitation.



In the first year, you have already studied about the importance of good nutrition and its relation to good health. You have gained some knowledge regarding the importance of personal hygiene to prevent different disease. Now, we will discuss about immunity and immunization

3.6. CONCEPT OF IMMUNITY AND IMMUNIZATION

Have you noticed small children suffering from influenza, diarrhoea,

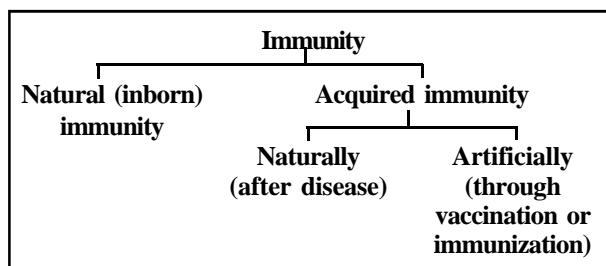
measles etc. Did you suffer from these disease too? These diseases are caused by different bacteria, virus etc. We can prevent these by some ways and means and these ways are known as Immunity. Can you define immunity and immunization?

Immunity is the ability of a person to prevent or resist disease and death. On the other hand, immunization is a process of developing antibodies in an individual by artificially introducing controlled number of germs into the body.

Do you know what are antibody? Antibodies are the chemical substances found in the blood, which act against germs.

3.7. TYPES OF IMMUNITY:

There are two types of immunity. They are– Natural and Acquired immunity.



Natural immunity is present at birth. Some antibodies gets transferred from mother to infant during breast-feeding.

Acquired immunity means- when a child is suffering from disease, antibodies are developed by the body to prevent the action of germs of the disease. When the body can acquire immunity, it is known as acquired immunity. One can acquire immunity by two ways. One, after suffering from any disease, the body can produce its own antibodies to fight against the germ. In the second case of artificial immunity the weakend or dead germs are introduced into the body. The substances introduced into the body through a needle can prepare antibodies to prevent the disease. This is known as 'Vaccination'. Have you heard about this.

Small children are protected from various diseases through vaccination or immunization. Can you name some of these disease? They are- T.B. D.P.T. Whooping cough, Polio, measles, tetanus etc.. We will discuss about the signs and symptoms of these disease in detail. Now, let us see how natural immunity can be developed through breast feeding.

3.8. BREAST FEEDING:

Breast feeding is initiated to a new born infant after 30 minutes of birth. The child receives good nutrition from the mother's milk, for which proper growth and development takes place in children. The initial milk (soon after child birth) is thick and yellow in colour. This type of milk is known as 'colostrum'. Colostrum contains vitamin- A, high quality protein

and antibodies. It should be fed to the new born infant to provide natural immunity. The child should be breast fed exclusively for first six months. Breast milk contains all the essential nutrients and the child may suffer from diarrhoea or any other stomach ailments, if complementary food or any other solid food is given to them at this age.

Infants should be given Complementary foods such as rice powder kheer, tinned foods, khichiri, boiled vegetables, suji etc, along with breast milk after 6 months of age. Breast-feeding can be continued upto the age of two years. Thus, breast-feeding has some advantages for both mother and the child. They are discussed below-

3.9. ADVANTAGES OF BREAST-FEEDING:

A. For Children :

1. Breast feeding provides natural immunity.
2. Breast milk is nature's gift to each and every child.
3. Breast feeding stimulates five senses of the child.
4. Breast-fed child is more intelligent.
5. Breast-feeding prevents some disease like - diarrhoea, pneumonia etc.
6. Breast-feeding reduces the mortality rate among children.

B. For Mother :

1. Early initiation of breast-feeding lowers the mother's risk for excess post partum

bleeding. It also reduces the occurrence of anaemia or prevents iron deficiency.

2. Breast-feeding helps a mother to shed extra weight gained during pregnancy.

3. Breast-feeding strengthens the bond of love between mother and the child.

4. Breast-feeding boosts mother's immune system.

5. Exclusive breast-feeding delays next pregnancy and reduces the insulin needs of diabetic mothers.

6. Breast-feeding can protect a mother from breast and ovarian cancer and osteoporosis.

3.10. IMMUNIZATION CHART.

You have already studied about immunization and its types. Soon after birth each child is artificially immunized i.e. vaccination is given to prevent various diseases. These vaccines should be given to the child at different age and time. Under the universal immunization scheme of the Government, children are being given these vaccines at free of cost through Primary Health Centres. The immunization schedule has been given below-

3.11. IMMUNIZATION CHART FOR SMALL CHILDREN.

Name of the child :

Age :

Date of birth :

Sex :

Name of doctor :

Telephone no. :

Father's name :

Mother's name :

Home address :

Telephone no. :

Address of the clinic :

AGE :	NAME OF THE VACCINES
At birth or within 48 hrs.	Polio dose and B.C.G
0-1 month	Hepatitis-B (1st dose)
1½ month	D.P.T. Polio
2½ month	D.P.T. Polio, Hepatitis- B (2nd dose)
3½ month	D.P.T. Polio, Hepatitis- B (3rd dose)
9-12 month	Measles with Vitamin A solution
15-18 months	MMR
16-24 months	DPT, Polio (Booster dose)
At 2 years	Typhoid
At 5 years	Polio, DT (Booster dose)

You too have been given vaccine for these diseases and must have a health card. Because, these vaccines are very essential for each child. Let us know about these vaccines-

1. B.C.G. (Bacillus Calmette Guerin): It provides protection against tuberculosis. It is given at birth and the reaction may occur within 3-4 weeks.

2. D.P.T. (Diphtheria, Pertussis, Tetanus) : It is a triple vaccine providing immunity against diphtheria, pertussis or whooping cough and tetanus. The first dose is injected at 6 weeks of age and the subsequent two doses are given at an interval of 4 weeks. The child may have mild fever after injecting this vaccine.

3. Polio- It is an oral vaccine providing immunity against Polio disease. The first dose is given at birth, second and third doses are given at an interval of 4-8 weeks each. Have you heard about pulse Polio? The Government of India has undertaken this programme to eradicate polio.

4. Hepatitis-B- This vaccine provides protection against jaundice. Jaundice occurs from a virus. The virus is transmitted through contaminated needles and blood transfusion. New born infant gets it from his carrier mother. This vaccine should be given to the baby at birth or one month after birth to protect the child from jaundice. Second dose at 2 months and third at 3½ months.

5. Measles: On the 9th month of

the child, this vaccine is given to protect from measles. Some children may have fever after injecting measles vaccine.

6. M.M.R. (Measles, Mumps and Rubella) : This vaccine provides immunity against three disease. It is given at the age of 15-18 months.

7. Typhoid: It is a vaccine providing immunity against typhoid. Typhoid vaccine provides limited protection only. Therefore second dose can be repeated at an interval of 1-1½ months.

3.12. SYMPTOMS OF CHILDHOOD DISEASE

During childhood, along with fever, cold and cough, children suffer from other diseases also. The symptoms of these disease are discussed below.

1. Tuberculosis : The causative agent of this disease is tubercular bacillus bacteria. It spreads through air. Tuberculosis occurs among children from birth to all age group. The incubation period of this bacteria is from 4-6 weeks and it occurs during any season of the year. The symptoms of tuberculosis are weakness, loss of weight, loss of appetite, rapid pulse rate, fever, bad breath, persistent cough etc. When a child is suffering from tuberculosis, he should be isolated from other children. Nutritious foods should be given and the child should be kept in a clean room. Cough and sputum should be disposed off safely.

2.D.P.T. : It is a combination of three disease and the symptoms of these diseases vary. They are discussed separately.

a. Diphtheria : It spreads through air and direct contact with an infected child. The causative agent is corynebacterium diptherial bacillus bacteria. It occur among children from birth to five years of age. The incubation period is usually 2-5 days and occurs mostly during winter season i.e. in the month of November and December. The symptoms are high fever, sore throat with pain, white film on tonsils constricting the respiratory tract, difficulty in swallowing, paralysis of muscles of palate, eyes, abdomen, arms and legs. Early diagnosis and proper treatment is important. Do not allow other children to use the infected toys and feeding utensils of the sick child.

b. Pertussis : This disease spread through air. The causative agent of pertussis is Bacillus Pertussis. The occurrence of the disease is late winter and spring season. The incubating period is 1-2 weeks. General symptoms are severe cough, vomiting, difficulty in breathing, weakness etc. Children suffering from pertussis should be kept warm and given treatment as prescribed by the doctor.

C. Tetanus : It occurs in contact with rusted metal parts or dirty soil. The causative agent is Tetanus bacillus. bacteria, It occurs among children of all

age groups. The incubation period is from 4 days to 2 weeks. Symptom are headache, fever, restlessness, difficulty in chewing and swallowing, back bends in the shape of bow, locking of joins etc. Tetanus may occur at any season. Persons suffering from tetanus should be provided immediate treatment. and should be admitted in hospital under doctor's supervision.

3. Polio : Polio may spread through contaminated food and water. The causative agent is a virus. Polio affects young children. Incidence of polio is higher during hot weather and the incubation period is 10-12 days. The symptoms are fever, headache, drowsiness, vomiting, diarrhoea, pain in hands and feet, weakness etc. Fever and vomiting should be controlled for children suffering from polio. Once vomiting stops, sufficient fluid should be given to drink. The child should take sufficient rest and should follow doctor's instructions.

4. Measles : The causative agent of measles is a virus. Spitting of infected nose and throat secretins everywhere or by contact with soiled articles used by infected person, measles may spread. It occurs among children from few months to eight years. The virus can affect the body within 10-12 days. Incidence of measles is more from January to April. The symptoms are cough and cold, fever, small rash appears first on face and neck and later on the whole body,

sore eyes, very sensitive to light etc. The affected child should be isolated from others. Application of cold water, ice can reduce itching and inflammation of the body. Dim light should be used and the child should not be allowed to go out.

5. Cholera: It is caused by the consumption of infected food and water. The causative agent is bacillus bacteria and incubation period is 1-5 days. The disease is characterised by loose watery motions like rice water, vomiting, excessive thirst, low urine volume etc. It may occur at any season of the year, especially during any festivals, pujas, mela etc., where there is a crowd, cholera may break-out. The child should

be given plenty of fluids to drink. A doctor should be consulted immediately and if needed, saline should be given.

6. Diarrhoea : It occurs due to certain, bacteria or virus. Due to poor environmental sanitation. Consumption of stale food and foods prepared in an unhygienic condition, diarrhoea may cause. The symptoms are stomach ache, frequent watery stool, weakness, excessive thirst, fever, vomiting etc. In diarrhoea, loss of water from the body results in dehydration. Therefore, persons suffering from diarrhoea should be given enough water to drink. O.R.S. (Oral rehydration solution) or salt and sugar solution can be given.

SUMMARY

- Disease is a state of discomfort of the body, where the normal functioning of the affected person is disturbed
- Diseases are of 2 types-communicable and non communicable disease.
- Communicable diseases spreads through 3 different medium.
- Immunity is the ability of person to prevent disease and death.
- Through immunization germs are introduced artificially in the body to develop antibodies.
- Immunization are of 2 types - Natural and Acquired.
- Children acquires immunity through breast feeding.
- Breast-feeding helps both the mother and the baby.
- Through immunization different vaccines are given to the child at different age.
- Various childhood diseases are Tuberculosis, D.P.T., Polio, measles, cholera, diarrhoea etc. The symptoms are different for each of these disease.

QUESTIONS**A. Very short answer questions.**

1. Define disease.
2. What are the different diseases of childhood?
3. What is immunization?
4. Name two disease spread through air.
5. At what age B.C.G and D.P.T. is given to a child?
6. What is colostrum?
7. What do you mean by acquired immunization?
8. What disease can be prevented by MMR injection?
9. Name the disease spread by contaminated food.
10. Write two symptom of cholera disease.

B. Short answer questions

1. What is called communicable disease? How they spread? Name two communicable disease.
2. What is immunity? What are its types?
3. Write any four advantages of breast feeding .
4. Write two symptoms of measles. How will you take care of a child suffering from measles?
5. When and why B.C.G and D.P.T. injections are given to a child ?
6. Write the differences between natural and acquired immunity.
7. What are the reasons and symptoms of polio disease?

C. Long answer questions

1. What do you understand by disease? What are its types? How communicable disease spreads ? Explain.
2. Define immunity and immunization. Write short note on immunity.
3. Prepare an immunization chart for a child from birth to three years.
4. Explain the causes and symptoms of D.P.T.
5. Why a child should breast-fed soon after birth? explain.
6. What is tuberculosis? Write its causes, symptoms and care.



CHAPTER- IV

SPECIAL NEEDS OF DISADVANTAGED AND DISABLED CHILDREN.

4.1. INTRODUCTION :

In the second lesson, you have studied about different aspects of development, like physical, social, emotional development. You have learnt that the pattern of growth and development is different. There are some children in our society, whose needs are different from their age mates. These children are unable to solve various social and emotional problems. This has marked effect on the child's social and personality development. Such child needs special attention to make them grow to the full potential. In this chapter, we will discuss about such children and their needs. After reading this chapter you will be able to know the following-

- Concept of disadvantaged children.
- Definition of disability and handicap
- Causes of disability
- Different types of disability
- Causes of blindness and the needs and characteristic of blind children.
- Characteristics and needs of a child with affected limits.
- Causes of social disadvantaged among children.

4.2. CONCEPT OF DISABLED AND HANDICAP CHILDREN

A healthy child is free from disease with normal growth and development and are able to prepare themselves for future life. Any deviation from the above puts a child at disadvantage, Changes in growth and development is not similar with every child and they can be best understood by different terms, such as impairment, disability and handicap.

Impairment refers to a diseased or a defective tissue. According to WHO- "Impairment is any loss or abnormality of psychological, physiological or of anatomical structure". With the improvement of science and technology. these impairment can be corrected or can be reduced. You will understand better with this example. If a child cannot hear properly or is deaf, he can use hearing aid and thus, the impairment can be corrected. Spectacles can be used to correct eye problem.

Disability is also a type of impairment which interferes with the functions that a child should perform in his special environment. Famous psychologist Baker defines the disabled child as "one who deviates from what is supposed to be an

average in physical, mental, emotional and social characteristics to such an extent that the child needs special services to help develop to the maximum capacity”

Handicappedness is a condition, when the society considers the child as disadvantaged due to his disability. For example, if a child cannot hear properly with one ear, due to an accident, it may not hamper in his studies or in listening to others. But, if in school, his friends and others do not interact with him normally because of his hearing impairment, it makes him believe that he is at disadvantage. Thus it becomes a cause for his handicappedness.

4.3. CAUSES OF DISABILITY, IMPAIRMENT AMONG CHILDREN

There are various causes of disability among children. They are

- a. Unfavorable pre-natal environment
- b. Heredity
- c. Injury during child birth
- d. Accident during childhood leads to orthopaedic problem
- e. Mental and emotional problem during early childhood result in stammering and speech defects.
- f. Ear infections or injury may lead to hearing defects.
- g. Surgical removal of any part of the body due to disease or accident, which requires amputation.

h. Feeling of neglect in the family or society result in behavioural problem. Such children are unable to follow the social norms and becomes disadvantaged.

4.4. TYPES OF DISABILITY, HANDICAPS

Handicaps results in physical, neurological and social maladjustment. It leads to defects in the body. They are discussed below :-

A. PHYSICAL DEFECTS :

1. Eyes : Blind and partially sighted
2. Ears : Deafness.
3. Missing limb, weak limb.
4. Physical abnormalities such as hunch back, cleft palate, birth marks in the body, more finger than required. Webbed fingers etc.
5. Defective speech : Some children stammer while talking. It may affect a child's personality.
6. Chronical defects : The defects exists year after year e.g. congenital heart disease, rheumatism etc.

B. NEUROLOGICAL DEFECTS

These defects are caused by the disorders of the central nervous system. e.g. cerebral palsy, epilepsy, schizophrenia etc. In cerebral palsy, the brain and other body organs cannot function normally. Epilepsy results in loss of consciousness and muscle control.

C. SOCIAL MALADJUSTMENT DEFECTS

The children who do not conform to the social norms of the society, cannot adjust properly in the society. Socially disadvantaged child is also known as deprived child. Because they are deprived of love, affection, social security, proper guidance etc. These children may indulge in antisocial activities leading to juvenile delinquency, drug addictions etc.

4.5. BLINDNESS

Soon after birth, the newborn infant opens his eyes and looks around. As children grow, they try to obtain information about the world in which they live. Therefore vision is an important and proper tool. Impairment of vision may lead to partial or total blindness. Partial or total blind child cannot perform his normal tasks and remain physically dependant on others.

Causes of blindness : Blindness may occur due to many reasons. They are -

1. Congenital blindness : Some children are blind from the moment he is born. Genetic impairment results in malformation of eyes during pre-natal period, which result in blindness. Such children learn about the environment through the senses of touch or by hearing.

2. Acquired blindness : In this case,

the child is not born blind. The child may lose eye sight due to accident, playing with sharp object may cause eye injury and lead to impairment of vision

3. Nutritional blindness : During pregnancy, if the diet of the mother is deficient in vit A, it will affect the vision of the child. Moreover, prolonged deficiency of vit-A in the diet of children result in various diseases of the eye. You have studied about these in the first year course. Untreated and long term deficiency may lead to complete blindness, Nutritional blindness is preventable, if the regular diet contains foods rich in vit - A regularly.

4. Delayed treatment : In case of children, any problem in the eye must be treated immediately. Delay in treatment may result in blindness. Many parents delay in providing medical treatment to their children due to poverty, ignorance, superstition etc.

Characteristics of blindness and partially blindness :

- A blind or partially blind child is very cautious in his movements but is clumsy and feel awkward.
- Their eyes may be red, swollen, watery, itching and sensitive to light.
- Partially blind child may have symptoms like headache, vomiting, blurred vision etc.
- The child becomes irritable, self

contered and pre occupied because of poor vision.

- Blind child gets fewer opportunity to get along with social groups. Hence they find it difficult to adjust properly.
- Blind child is always dependent on others for doing any work. This makes them rebellious and at times frustration occurs, which lead to inferiority complex among them.

SPECIAL NEEDS OF BLIND CHILD

It has been mentioned earlier that blind children are always dependent. Hence it is essential to render all possible help to them, by which they become independent and economically viable. Every member of the society should give special attention to fulfill their physical and emotional needs. The needs of blind children are discussed below:

Physical needs : Parents of a blind child should play an important role in fulfilling his physical needs. Parents should train a blind child to do his daily routine work like going to the toilet, bathing, dressing and feeding.

- They should be trained properly to move around the house without hurting themselves.
- Blind or partially blind children must be made familiar with their bodies and the environment where they live in, so that, they feel comfortable with them.

- Parents must be alert all the time, so that the child is protected from any disease and should take them regularly to the doctor.

- Parents, siblings and others should always be ready to help a blind child and should behave well with them.

Emotional needs : The world of a blind child is very limited. A blind child's social world is his or her parents. Hence, parents should love them and try to solve their routine problems.

- Like a normal child, a blind child too needs love and care. Each and every family member should love and care for them.

Need for independence : Blind children should be helped to become independent. They should be trained to do their routine work like- use of toilet, bathing, dressing, combing hair, tying of shoe laces etc. independently. They must be appreciated for doing these activities. This will encourage the child and will help him to take up any major job with confidence.

Educational needs : It is important to provide education to a blind child at proper age. A special tool is used to provide education to a blind child. It is known as 'BRAILLE. Letters, numbers and words can be read and write with braille. Special educators are needed to teach blind children with the help of the

braille system. Books meant for blind or partially blind children should have letters with big print. Recorded tapes can be used to impart education to the blind. Special attention must be given while imparting education to blind child. Numbers and letters used in braille systems are shown below

4.6. DEAFNESS :

Soon after birth, children respond to loud sound, animal voice by closing or blinking their eyes. As they grow, they recognise their parent’s voices and starts cooing and make gurgling sounds. Gradually, they learn to identify many sounds. Children born with hearing impairment cannot learn properly. As a result communication problem occur.

Hearing impaired persons are known as Deaf.

The children who born with hearing impairment are unable to learn the language and becomes mute and silent. On the other hand, the children who are deaf later in life cannot communicate properly with other people.

Causes of deafness : Deafness occurs due to the following factors:-

1. Conductive deafness : Generally, any sound conducted to the ear through air. When there is any blockage in the passage of the ear, it may result in hearing impairment. These blockage may be due to deposition of wax in the ear, any foreign body in the pathway and any infection or swelling of the outer ear etc. These conditions may lead to deafness.

1	2	3	4	5	6	7	8	9	0
a	b	c	d	e	f	g	h	i	j
k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z				

Fig - 7
Number and letter used in braille system

These can be corrected by providing medical treatment.

2. Sensory neural deafness: Deafness occurs due to the damage of the ear drum Cochlea, auditory nerve and the associated brain cells. The damage may be congenital or acquired.

a. Congenital deafness : Genetic disorder and premature birth causes congenital deafness. A pregnant mother having German measles during first trimester of pregnancy may give birth to a deaf child. Moreover, during pregnancy, an attack of jaundice, in which the mother's blood is incompatible with the foetus may result in congenital deafness.

b. Acquired deafness : This type of deafness occur due to some viral infections e.g., measles, influenza, mumps, meningitis during early childhood. These viral infections may result in sensory neural deafness.

3. Mixed Hearing loss: Sometimes hearing impairment may occur due to a combination of conductive and sensory neural defects.

Hearing impairment can be prevented by using a hearing aid or a machine.

Characteristic of deaf child

- A deaf child may be dumb.
- May be incapable of speaking properly.
- Difficulty in learning language.
- Deaf children are less intelligent.
- Due to lack of coordination

between vision and hearing, they become suspicious, which results in lesser number of friends.

- Deafness leads to frustration and inferiority complex among children.
- Deaf children cannot communicate and adjust in the society.
- Sometimes deaf children are indifferent and stubborn

Special needs of a deaf child : Like a blind child, deaf child also have certain special needs. They are -

1. Physical needs : Physical comfort should be provided to deaf children to improve their listening skills. Parents should teach their child to differentiate various sounds. For e.g. the difference between crying, laughing, singing etc. They can help the child to locate the source of a sound. Parents must help the child to recognise the speech sound.

2. Emotional needs : Deaf children are always suspicious. Moreover they get emotionally uptight. Hence they should be loved so that, they feel emotionally secured. Deaf children should be encouraged for better learning.

3. Educational needs : Deaf children should be provided with proper education at proper age. Some special methods are used to teach deaf children, they are –

a. Oral method or lip reading : In this method, children can identify the sound by watching the movement of lips. The

educator of this method should be well trained. This is a very slow method of teaching, hence requires a lot of patience of the children.

b. Sign language : The educator teaches the children by some gestures, cues and with the help of fingers. You must have watched deaf children teaching by this method on television. Different sign languages are shown below-

4.7. CHILDREN WITH MISSING LIMBS

When a child is unable to perform various activities by proper use of bones, muscles and joints, he is known as child with missing limbs. In some accidents, children may lose their organs. **Causes:** There are many reasons for missing limbs. They are -

a. Congenital deformity: This type

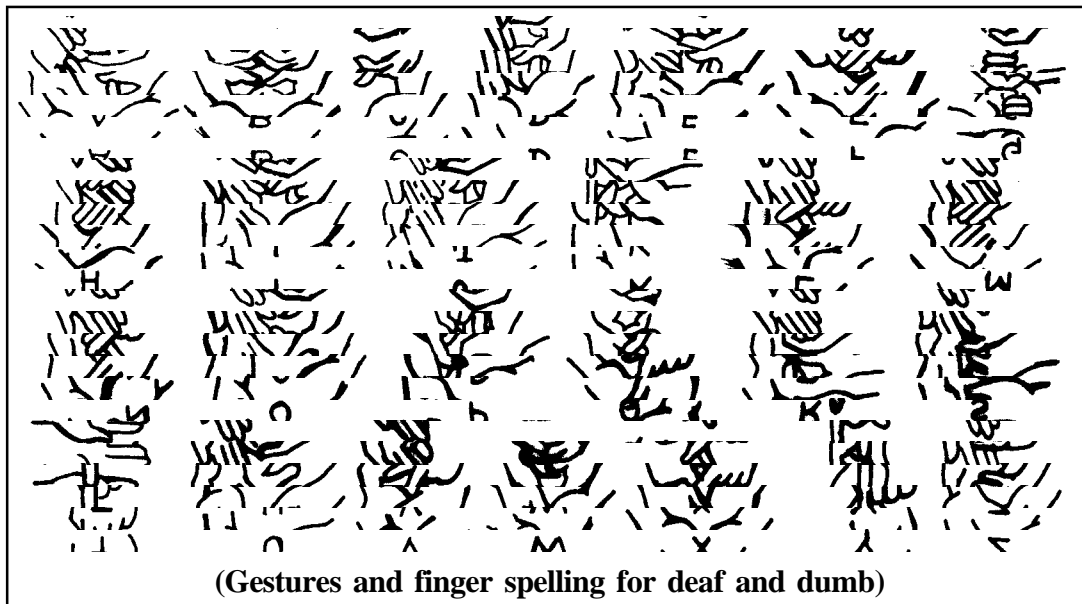


Fig - 8
Different sign languages

Deaf children should be allowed to be come independent, which will help them to become self reliant. Now-a-days different types of hearing aids are available which can amplify the sounds.

of deformity may occur due to some specific problems. During pregnancy, if the pregnant mother is suffering from viral infections and diseases like measles, mumps, jaundice, etc., the baby inside

the mother's womb is affected and may have physical deformity. Drug abuse during pregnancy may result in deformation of bones and other body organs.

2. Acquired Deformity: This may occur at any age. Children suffering from polio and bone tuberculosis may acquire deformity in the body. Spinal injury or accidents which require limb amputation may lead to bone deformities.

CHARACTERISTICS OF CHILDREN WITH MISSING LIMBS

Children with missing limbs cannot develop properly and are different from normal children. Their physical defects leads to inferiority complex among them. They want to isolate themselves from others, which reflects in social behaviour. Children finds it difficult to fulfill their hopes and aspirations. As a result, they go through psychological trauma. Depression, anxiety, aggression, escapism are seen among these children.

SPECIAL NEEDS OF CHILDREN WITH MISSING LIMBS

Like blind and deaf children, these children also have some special needs. They are –

Physical needs : Children should be helped to do their daily work. Parents too, should help the child to do things on

their own. Science and technological advancement has led to the discovery of artificial limb. Artificial limbs can help children to overcome their physical deformity. Have you seen children with artificial limbs? Now a days, physiotherapy treatment is of great help to remove physical deformity.

Emotional needs : Children with affected limb finds difficulty to mingle with other children. They donot take part in group play and are often left out of such group activities. This affect the child and may feel frustrated, dejected and neglected. The child may feel socially dejected and have low self esteem which give rise to wrong self image, Love, care and sympathy from parents and other people in the society are the basic needs for these children. Encouragement from parents to participate in social work is most essential. This will help the child to become independent and self reliant.

Educational Needs : Children should be allowed to study, draw and play like other children. Children with minor deformity should be allowed to draw, paint, knit, and dance, A child with missing limb may use wheel chair for movement. Have you seen a child with missing hands working with feet or mouth? Hence they must be provided with required facilities, environment etc., so that they can lead a normal life with other children.

4.8. CAUSES OF SOCIAL DISADVANTAGE AMONG CHILDREN

Socially disadvantaged children cannot mix up freely or donot get a place in the society. The reason is – they donot behave like normal children of their age. They indulge in some antisocial activities like stealing, pick pocketing, gambling, alcohol and drug abuse. Thus they become criminals in the society. Such children shows abnormal sexual behaviour. The causes for showing these behaviour are–

1. Broken Homes : Families where there is constant quarrel between the parents, children from such families donot get love and co-operation needed by them. Such children cannot adjust in the society.

2. Poverty and ignorance : Children from very poor families donot get proper amount of food and are deprived of clothes as compared to their age mates. This may lead to social maladjustment. Ignorant parents cannot guide their children. These children indulge in thefts to fulfill their needs. Later on, they engage themselves in antisocial activities.

3. Lack of formal education : Poor parents donot send their children to school for not having enough money. These children remain in the street for most of the time of the day. Sometimes, they get involved in gang fights and

antisocial activities.

4. Lack of Good role models : During childhood, they have very sensitive mind and they learn things by imitating adults in their environment. Living with dishonest persons may lead to lack of moral values and negative values in life. These children cannot differentiate between right or wrong and becomes corrupt in later life. In the home front, if parents fails to teach positive aspects of life, children are incapable of showing good behaviour or cannot adjust in the society.

5. Lack of supervision during formative years : The period of development of a child is one of the most important period. Parents who fail to shape their children may create many problems. In poor families, both the parents stays outside the home for their livelihood. Hence they cannot look after their children. In the case of rich families, parents leave the upbringing of their children to other people / maids. During these formative years, parents should play an important role in upbringing their children for formation of good habits in them. This will affect in all round development of children.

NEEDS OF SOCIALLY DISADVANTAGED CHILDREN

Disabled or disadvantaged children have similar right to live, grow and develop and to perform social activities

like other children. To shape up a disabled child requires love, affection, help and training. They need help to solve their problems. Needs of disadvantaged children are -

1. Social and emotional needs:

Lack of parental love is one of the causes of social disadvantage. Hence parents should love and give support to such children. Adults and peers should teach them about human values and help them to become self reliant. Being a member of the society, socially disadvantaged children should be allowed to take part in social activities. This will enable them to adjust properly in the society.

2. Educational Needs : It is

essential to provide education to socially disadvantaged children. Lack of formal education may result in indisciplined life style and they become habituated to antisocial activities. Socially disadvantaged children need special attention for behavioural modification and for social rehabilitation. Presently, Government and other voluntary organizations have come forward to provide these children with the basic needs of life. These agencies provide counselling and psychological guidance imparted by specially trained personnel and by psychologists. This will help to change the social behaviour of these children. It requires constant monitoring to bring these children to the right track.

SUMMARY

- There is difference between disabled, impairment and handicap.
- There are various causes of impairment/disability e.g. physical, neurological defects and social maladjustment.
- Blindness can be caused by various factors. They are– congenital, acquired, nutritional blindness, and delayed remedial treatment
- Braille methods are used to teach a blind child.
- Hearing impairment often causes speech and communication problem. Lip learning and sign languages are used to teach these children.
- The causes of missing limbs are congenital defects and acquired deformity.
- Children engaged in antisocial activities, when they cannot adjust in the society.

QUESTIONS**A. Very short answer questions**

1. According to WHO what is impairment ?
2. What is handicap?
3. What are the two causes of missing limbs ?
4. What are the two causes of physical disability ?
5. What do you mean by braille method?
6. What is sign language ?
7. List any two characteristics of a deaf child.
8. What do you mean by a child with missing or affected limbs ?

B. Short answer questions

1. What are the characteristics of a blind child?
2. Differentiate between handicap and disability,
3. What are the different types of physical handicap/disability ?
4. What are the different neurological disorders of children ?
5. List any two causes responsible for social disadvantage among children

C. Long answer questions

1. Explain about the physical and emotional needs of a blind child.
2. What are the causes of deafness? How will you teach these children?
3. What are the emotional and educational needs of children with missing limb?
4. What are the causes of social maladjustment among children ?
5. What are the characteristics of a deaf child ?



CHAPTER-V

SUBSTITUTE CHILD CARE

5.1 INTRODUCTION :

Generally, parents are responsible for rearing their children. It requires a lot of time, energy, money, special attention and commitment. Parents play an important role in such cases. As the child grows up, it is also the responsibility of grand parents and other family members to bring up the children. Sometimes, they need help from other hired sources. Now-a-days, due to limited existence of joint families, urbanisation and desire to be independent, the responsibility of bringing up children fall only on parents. If both the parents are working, they have to leave their children under care and supervision of other people. In this lesson, we will discuss about the substitute child care.

After reading this chapter, you will learn the following-

- Concept of substitute child care.
- Different types of substitute child care.
- About creches.
- Integrated child Development services (ICDS) and its objections.
- Functions of Integrated Child Development services (ICDS)

5.2. SUBSTITUTE CHILD CARE

We all know that every child has

certain needs which can be fulfilled by parents in the family. Due to economic factors or some other reason, most of the housewives these days take up jobs. As a result, the small children have to be taken care of by other members such as elder members of the family, relatives, grand parents etc. They take care of the children as mother substitute.

Thus, we can define substitute child care as- “ It is a type of care rendered to the child, through which, the basic needs of children can be fulfilled in absence of the mother”. In the absence of the mother, the child can be taken care of by other members of the family or can be left at a creche, day care centre etc.

Before discussing about different substitute child care, it is necessary to understand, the needs of small children. These are discussed below-

5.3. NEEDS OF SMALL CHILDREN

Every parent and other family member wants to love their children and expect them to live a happy and cheerful life. They are committed to fulfill all the needs of the small children. Different needs of children are-

- Every child wants love affection and care from their parents, grand

parents, siblings and other family members. They expect physical, mental and social security.

- One of the most important needs of children is a well protected home.
- Food for proper growth and development and clothes for protection against heat, cold etc.
- Toilet habit and training should be taught at a very early age. This will help to develop good health habits among children.
- Sound sleep is necessary during this period. It will promote growth and development.
- Development of good behaviour is needed for socialization. Children learn social behaviour from the family, specially from parents, siblings and from school and from the social environment, where the child lives in.
- Protection from various diseases requires proper medical care. Each child need to be immunized at the proper time, against different diseases.
- The children must be provided education at proper age. Parents can take a leading role in this case.

5.4 KINDS OF SUBSTITUTE CHILD CARE

Substitute child care can be provided by any one of the following. The are –

- a) Grand parents / Siblings
- b) Relatives / neighbours
- c) Other people / hired help
- d) Creche / day care centre.
- e) Pre-school/nursery school etc.

Now let us discuss each of these child care facilities–

A) Grand parents/siblings care :

This type of substitute child care is seen among low and middle income families. In such families, both the parents go out to work and infants and children are left under the care of grand parents. In case of nuclear families, small children are looked after by slightly older children. Sometimes, it is seen that 6 or 7 years old children look after small children. In this case, these children are not safe with 6-7 years old children. Because older children are not mature enough to care for smaller children and infants. Therefore it is necessary to find an alternative and safe child care.

B) Relatives/neighbours: Relatives, neighbours play an important role in the upbringing of small children. In joint family, apart from grand parents, there are uncles, aunts and other relatives living together. In the absence of the parents, these family members can look after the children. Sometimes, neighbours can provide substitute child care. Parents can provide suitable compensation for the neighbour's help in terms of money or any other help.

C) Other People/Hired help : In urban areas, cities, this type of substitute child care is seen in almost every household. Generally women provides this type of help and they are known as 'Ayah'. While hiring these people for child care, one should be careful regarding their reliability and experience of looking after the small children. They should be interviewed properly and police verification should be done, if needed.

D) Creche/Day care centre : Now-a-days, creche provides great relief to the working parents as substitute child care centre. Do you know what a creche is?

'Creche is a safe place, where small children are left by their working parents for proper care'.

Creche is a day care centre. Parents leave their children in the creche during working hours and take them home after the working hours are over. These centres take care of children upto 3 years. In some creches, school going children are taken care of, after school and they stay there till the working hours of their parents are over. In the creche, children are left under the expert care of qualified and responsible adults. Hence the mothers can carry on with their job without taking any tension, anxiety etc.

Every child has some specific needs. These are feeding right amount of food, facilities for rest and sleep, keeping the child clean, availability of play material to

play with, clean and safe environment etc. Each creche should have the facilities to satisfy these needs.

5.5. FACILITIES PROVIDED BY AN IDEAL CRECHE :

Creche is one of the home substitute for children. Therefore, a creche should fulfill all the above mentioned needs of small children. Creches should also have the facility of providing primary health check up for small children. Let us know about the facilities that should be provided by an ideal creche–

1. Feeding the children : It has been mentioned earlier that children from 1 year to 3 years or more are kept in a creche. Very small children can not take food by themselves. In such cases, they are fed by the staff of the creche. While feeding the children, proper hygiene should be maintained. Older children are made to wash their hands before and after every meal. They should be allowed to sit and eat along with their friends. Thus they will learn table manners properly. One of the most important aspect is that- children must be fed at appropriate time and food should be served at appropriate temperature.

2. Providing facilities for rest and sleep : Creches should have proper bed for rest and sleep of small children. The creche should provide individual cribs for small babies and floor mats for older children to sleep on and take rest.

3. Keeping the child clean : Most parents do not provide proper toilet training to their children. Hence, special care should be taken to keep these children clean and dry. They should be taken to the toilet at particular interval of time. They should even learn to keep the toilet clean and wash their hands and feet with soap and water.

4. Availability of play material : Children love to play and spend most of the time playing. Their socialization process begins through play. Some useful play material helps the child in proper motor development and they can explore their environment. Hence, the creches should have some play area with play materials, walkers, tri-cycles, slides, ladders etc.

5. Clean and Safe environment : The surroundings and environment of a creche should be clean and safe. This will ensure the safety of little children against various diseases and accidents.

6. The staff of the creches should have proper training in child care. It will help in giving the best care to children. The ratio between caregiver and children is another important aspect in a creche. Because, every child must receive the required care and attention.

7. Facilities for medical and first aid : These facilities should be available in each creche. Wherever needed, nurse, mid-wife should be appointed.

Availability of first aid kit and monthly health check up by a doctor are other requirements of a creche.

MOBILE CRECHES

These type of creches was started about two decades ago in slum areas of Mumbai, Pune and Delhi to care for the children of construction workers and labourers. As the dwellers in these areas spent a large part of their day in work and cannot take care of their small children.

In India, more than 55 million infants and children spend most of their waking hours alone. During this period, their parents are busy in Paddy fields, in mines or on construction sites. Mobile creches move along with the worker's working places, Hence, mobile creches are needed for providing child care support of labourer.

E. Pre-schools/Nursery Schools

Pre-schools/nursery schools too, can provide substitute child care. Generally, in urban areas, children between the age of 3-5 years go to these schools and they can fulfill the basic needs of children. These schools also help in physical and mental development. These schools initiates the learning process through play way method. Do you remember, how you learnt to play and dance to nursery rhymes? Apart form this, children learn to draw, colour, paint, make things like house with the help of blocks, identify

different shapes, colour and sizes etc.

In rural areas, Balwadi school provides education to small children. These schools (balwadi & nursery) helps in social and language development of children. Teachers in both Balwadis and nursery schools regularly check the hair, nails, teeth and clothing of children to make the children aware about personal hygiene. Children also learn some habits of health and hygiene i.e. to wash hands before and after eating, to wash hands and feet with soap after using the toilet etc.

5.6 INTEGRATED CHILD DEVELOPMENT SCHEME (ICDS)

This scheme was launched in India, in the year 1975. This scheme under the Social Welfare Department, provides a package of services for the welfare of children, adolescent girls and for the mothers. Initially ICDS covered a small population, but to-day this scheme has expanded considerably.

5.7. Objectives of ICDS

The main objectives are-

1. Improvement of health and nutritional status of children between 0-6 years of age.
2. Laying foundations for physical, psychological and social development of children.
3. Reduction in the incidence of malnutrition, morbidity, mortality and school drop out rates

4. Effective co-ordination of the policy and implementation among different departments.

5. Enhancing capabilities of mothers to look after normal health and nutritional needs of the children.

The target group and the people who are benefitted from various services of this scheme are-

- a) Children from 0-6 years of age
- b) Adolescent girls between 11-18 years.
- c) Women between 15-45 years of age.
- d) All pregnant and lactating women.

5.8. SERVICES RENDERED BY ICDS

The services under this scheme are-

- i) Supplementary nutrition.
- ii) Immunization
- iii) Health check up and referral services
- iv) Health and Nutrition Education
- v) Non-formal education.

5.9. Functions of ICDS.

This scheme provides different services to almost about 40% of deprived children. ICDS facilities are provided to both the urban and rural population through 'Anganwadi' centres. Double quantity of supplementary nutrition are given to children who have 50-60% lowered nutritional status. These nutritional supplements are provided

through, anganwadi centres. Children are provided with cheap but nourishing carbohydrate and protein foods through centre based feeding and sometimes by take home ration. Have you heard about this scheme?

ICDS also provides immunization to the children between 0-6 years of age. All children are immunized within the first year against six killer diseases of early childhood. You have studied about these in the earlier chapter. Can you list them?

One of the most important functions of ICDS is to provide health checkup and referral services to children, adolescent girls, pregnant and lactating mothers. These services are provided in the Government hospitals, Primary health centres, municipal dispensaries and sub-centres in the village at free of cost. Prenatal and postnatal facilities are provided to mother and new born babies. The rural and tribal population are also

provided with these medical facilities on regular basis.

Through Health and nutrition education, mothers in the productive years of life are made aware about the importance of spacing. The relationship between maternal health and healthy child is also highlighted. Mothers with poor health status do not gain weight during pregnancy. Those mothers give birth to babies with low birth weight. Such children show lower rate of growth and development.

ICDS helps to achieve the objectives of women and child health, nutrition and child development. Efforts are being made to impart knowledge regarding food, health and nutrition through informal education, nutrition education etc. Radio and televisions are used to impart education, hence a large section of population living in urban as well as rural areas are benefitted from these services.

SUMMARY

- Substitute child care means fulfilling child's needs by others in the absence of parents.
- The needs of children are- food, shelter, clothing, sleep, physical and social security, medical care and education at proper age.
- Substitute child care are of different types. They are- grand parents, siblings, relatives, neighbours, creche etc.
- Hired help for child care should be reliable and safe.
- Creches provide alternative care to children upto 3 years of age.

- Now-a- days, mobile creches move with the workers to render. Substitute child care near the work sites.
- Nursery schools, Balwadi schools look after children above three years of age.
- ICDS was launched in the year 1975 and this scheme renders various services for the welfare of children, adolescent girls and women.

QUESTIONS

A. Very short answer questions

- i) What is substitute care?
- ii) Name any two kinds of substitute child care
- iii) List any two needs of children.
- iv) Define creche.
- v) Why play materials are needed by children in a creche?
- vi) What is the advantage of grandparents looking after a child in the absence of parents?

B. Short answer questions.

- i) What is substitute child care? Explain any one type of substitute care.
- ii) List four facilities a good creche should have.
- iii) List four points that you will keep in mind while selecting a creche for a two year old child.
- iv) What is mobile creche? State four advantages of mobile creche.
- v) What are the different services provided by ICDS.
- vi) Explain any four functions of nursery school.

C. Long answer questions :

- i) Explain in detail about the needs of infant and children.
- ii) What is creche? Explain about the facilities that are essential in a good creche.
- iii) What do you mean by ICDS? What is its target group? What are the objectives of ICDS?
- iv) Give an account of different substitute child care.



CHAPTER-VI

UNIT	NUTRITION FOR SELF AND FAMILY
II	

PLANNING MEALS FOR FAMILY

INTRODUCTION :

It is essential to have proper nutrition for good health for self and family. The food that we eat directly influences our nutrition of the body. Food and nutrition both are supplementary to each other. Therefore, as you have studied earlier it has become essentially important to study and acquire knowledge about nutrition for the better health of our family members. In this chapter certain subjects will be discussed in detail which have relation to our health. You will know the following while studying this chapter :-

- Meaning and importance of meal planning.
- Principles and factors affecting meal planning.
- Planning meals for the family.
- Planning meals for some special and diseased conditions.

6.1 Planning Meals for the family

All the members of our family must get balanced food to lead a healthy life.

In the same family, there may be members from various age, sex and activity. Some members might be teenaged, pregnant or lactating mothers, elderly and ailing persons. Moreover it is also seen that there is variation in food habits in different families and also among different members of a family. Meal planning for each member of a family will be fruitful, when all these aspects are considered, while planning a day's menu for the family.

6.1 (a) Meaning and Importance of Meal Planning : Meal planning is an advance plan to provide the required amount of nutrition to the members of a family. This is a process of prior decision about what to eat in different meals of a day. This process is a combination of arts and science together. This is an art on the part of the housewife to prepare tasty and attractive food by applying her own imagination and creativity in cooking foods. On the otherhand, cooking of food by selecting the right kind of food

items in a scientific way without losing the nutrients is science. For preparing a plan of balanced diet one must have the knowledge of sources of nutrients, requirements of nutrition of different individuals, seasonal availability of food items, food habits and financial capacity of the family. Briefly, meal planning is the mental preparedness or process of planning what kind of food would eat on a particular day. Hence meal planning is - A well calculated plan, prepared in advance to provide daily meals in required amount. The nutrient requirement of each member of the family, their age, sex, profession and income of the family should always kept in mind while planning meals for a family.

It is not an easy task to provide balanced diet to each and every member of a family by considering their health and other requirements. The members of a family do not have same age, sex, physical activity, taste etc. Besides these, financial capacity, time, price and availability of food items also play a role. It is a difficult task to prepare food for different meals of a day by selecting food items from various food groups. The body has to derive the required nutrients from the food we eat in a day. Therefore, we must ensure that our meals should include the foods which contain all the necessary nutrients required for our body.

Moreover combination of food items, methods of preparation and ways of presentation etc. should be appealing and enjoyable. While planning meals, the taste and food habits of family members of different age group, variety in meals, selection of seasonal foods, adequate nutrition and the food budget of the family should be considered. Therefore, for providing food by considering all these factors, it is necessary to have a proper meal planning. It is also very essential to have adequate knowledge, practice and skill to prepare a day's menu from morning till night. The menu for a week with limited budget should be prepared by selecting necessary food items and by adopting appropriate cooking methods.

The characteristics for planning an ideal menu are -

(1) Appropriate foods from different food groups containing nutrients required for our growth, nutrition, repairing and effective regulation of our body.

(2) Proper and scientifically correct cooking methods without loss of nutrients and acceptable to the family should be selected.

(3) Foods of each meal of the menu should be nutritious and balanced. One third of the daily required nutrients should be included in each meal of lunch and dinner and the remaining one third should be included in the breakfast and other snacks.

(4) Meals should be served timely and attractively. One can set example of economy of preparing and providing tasty and nutritious foods to the family members even by using left over foods of previous meals.

6.1 (b) Principles of Meal Planning :

It is necessary to have an ideal meal planning to keep the family members healthy and strong. Meal planning saves our time, labour and fuel. While planning meals many aspects are to be taken into consideration. Therefore some principles should be followed for a balanced, correct and scientific meal planning.

(1) There are members of various age groups in a family and the requirement of nutrients for them also varies. Moreover there may be difference in tastes, likings and non-likings of individual members. Similarly, there may be pregnant or lactating mother, patients having restrictions to some nutrients in a family. Therefore a well planned menu will be able to build a healthy family by fulfilling the nutrient and food requirement of each member of the family.

(2) While planning meals it should be seen that there is appropriate utility of time, labour, fuel and money. The meal planner should keep in mind about the selection of proper method of cooking, use of labour saving equipments and time

table etc.. The meal planning should have a relation with the financial status of the family. The food budget of a family may be restricted by using some locally available seasonal food items and low cost vegetables, fruits and combination of pulses and cereals to replace some costly foods like fish, meat, egg, butter etc.

(3) It is to be seen that there is no wastage of food and nutrients. Rather, nutritive value of some foods can be enhanced by using special methods like sprouting and fermentation. The leftover foods instead of wasting, may be recooked with fresh new taste and flavour. Moreover bulk purchase of food items saves money, time and energy.

(4) It should be kept in mind that foods must be nutritionally balanced for each member of the family. For this foods must be selected judiciously from various food groups for each meal of the day and should see that at least one food item from each food group is included in the menu.

(5) Meals should be planned by giving due importance to one's likes and dislikes, vegetarian or non-vegetarian and traditions and customs. Monotonous food preparation reduces appetite and develops dislikeness for food. Meals become more appealing if various food items are cooked and served with

attractive colour, flavour and texture.

(6) Advance planning is necessary for the sick members, pregnant or lactating mother in a family. Moreover proper importance should be given to a member having restriction on particular nutrient or food item while planning meals.

6.2 Factors Affecting Meal Planning

: Usually food requirement of any two members in a family is not similar. There may be difference in food requirements for each member to fulfil their physical, social and mental requirements. Moreover the factors like financial status, climate etc. have influence on meal planning. These factors are briefly discussed here.

(1) Size and Pattern of Family : The number of members and the pattern of a family play direct role in meal planning. Because the total number of family members decide the amount of food items required by them. The meal planning also depends on various types of members in a family like—infants, teenagers, pregnant, aged or ailing persons etc. Because in such situation, requirement of food and pattern of food preparation might vary.

(2) Age : Food requirement varies according to age. Meals in a family should be planned keeping the age of the members in mind. An infant or baby will

take only milk or semi-liquid food, while the teenagers would need some tasty and energy giving food. Similarly, aged members might have problems in chewing or digestion of food or some other physical complications. Therefore it should be ascertained that each member gets his food requirement based on his age.

(3) Sex : We all know that males have comparatively more weight, height, physical structure and activity and hence require more food. They need food of higher calorie. On the otherhand, teenaged girls and women need more calcium, iron, folic acid and some vitamins alongwith calorie. Therefore one should have a clear idea of sexwise requirement of food while planning meals.

(4) Occupation : Physical activity of a person differs according to one's occupation. Every member of a family does not have similar physical activity. Persons engaged in routine type of works have light exercise. But farmers, players, labourers and workers do heavy exercise and need high calorie food in higher amount.

(5) Religious, Social and Cultural Customs, Tastes and Food Habits : Families have various food habits based on their religions, social and cultural traditions. In the name of religious beliefs the Hindus avoid eating beef, Muslims

avoid pork, the Jains avoid non-vegetarian food. Similarly, onions and garlicks are not used in some societies. The widows in some communities have restrictions in some foods. In this way, different customs and some variation in food habits are seen in different families and societies. Therefore, all these aspects should be considered while planning meals for a family. Food habits of all the members of a family are not similar, so importance should be given to the taste, likes and dislikes of each member.

(6) Economic Status : The economic status of a family has direct influence on the food. The use of costly food items like fish, meat, cheese, butter, dry fruits etc. are limited in a middle class family with limited income. But the variety and nutrition of meals can be maintained through various cheaper but nutritive foods. The members of the family must get their required nutrients through food. Therefore meals should be planned keeping in view the present market price of required food items. Knowledge of food and nutrition helps in planning balanced meals. Some cheaper and easily available nutritious foods like green vegetables, seasonal fruits, pulses, soyabean etc are rich in nutrients. So after knowing these points, low income families can also plan tasty nutritious and balanced diet.

(7) Weather, Season, Climate and Availability of Food Items : The seasonal foods should be included in the menu while planning meals. Now-a-days preserved food items of various seasons are available throughout the year. But in different seasons these are abundantly available as fresh, nutritious and at cheaper rate. The climate plays an important role in planning meals. Food habits of people differ depending on the climate of a place. Because of excessive heat during summer, appetite for food decreases. Hence some food items like cold drinks, juice, ice-cream, salads, curd and sour preparation should be included in the menu. Similarly during winter high calorie foods are required. So preparations like meat, egg, chop, cutlet, paratha, hot curry etc should be included. Therefore seasonal and easily available nutritious food items should be included in the menu.

6.3. Planning Meals For the Family : Planning meals for a family is a difficult task. Food requirement of different members of a family varies and some factors like individual preference, food habit, weather, financial capability etc are also to be looked into. In planning meals it should be kept in mind that each and every member of the family who may be a child or elder, male or female, boy or girl, healthy or ailing must be provided

with balanced food. Our body can have the required nutrients in required amount like protein, carbohydrate, fats, vitamins, minerals etc from balanced food only. Therefore, the characteristics of a good menu prepared for a family by keeping the aforesaid points in mind are - Suitable combination of foods, attractive food and full of colour, flavour and taste, besides being adequately nutritious and satisfying.

The number of meals the family members eat in a day should be considered while planning meals. The gap between meals, tiffins and meals of school going children, office goers, meals for members staying at home etc are to be kept in mind. Planning of menu on weekly basis will save time and energy and helps in selecting food items.

(a) Meal Planning for Children : Food plays important role in future physical and mental health of children. Lack of adequate knowledge about food and diet is the main cause of malnutrition in children as revealed from the research and survey conducted in various parts of the world. Good nutrition is needed in every stage of human life. However, the amount of nutrients vary with different stages of life. This amount is highest during childhood when growth and development becomes very rapid. A child gains his height and weight every year.

Therefore the additional nutrients required for this continuous growth must be provided through foods.

The childhood can be divided into several stages. The type and requirement of food also vary depending on these stages. During the period of first six months after birth, babies donot need any extra food, if they get sufficient amount of mother's milk. Mothers's milk provides all the required nutrients in abundance for body building and nutrition of the babies. But after six months solid food should be given in addition to mother's milk. Fruit-juice like orange, sweet lime etc, vegetable soup, well cooked dals, boiled and mashed potato, carrot etc. with little salt can be given to the babies. Cereal based foods like cooked rice powder, suji porridge etc is very useful for babies. Commercially prepared tinned foods also may be given. Solid food should be started from the mid day meal and should be extended slowly to other meal times of the day. Babies like the foods when prepared with different tasty items which also prevent them from the deficiency diseases. Meals for the babies may also be planned from the foods prepared for the other family members.

The foods of pre-school children should be sufficiently nutritious because

during this period, growth of the child takes place at a very rapid rate. The strength to fight against various infectious diseases is also required. There should be additional amount of Vitamin A, Vitamin C, calcium, calorie and protein in the diets of the children of this age group. They should be given at least 2-3 glasses of milk daily. The requirement of protein and calcium is met if pulses, meat, fish and at least four eggs per week is taken. Hot and spicy food should not be given upto 6 years of age.

The diet of school going children should provide sufficient amount of calorie, protein, calcium and vitamin A to them. As all of you know that school children need high calorie diet because they do lot of activities like playing, running, jumping etc. The requirement for the speedy growth of this age can be provided by two-third of energy and equal amount of protein required for an adult person. Milk, green leafy vegetables, yellow vegetables, citrus fruits should be incorporated in the menu. A school going child can eat the meals prepared for other members of the family. However such foods should be simple, tasty, attractive and nutritionally balanced. The breakfast should be heavy. The tiffin taken to school should be nutritious. The dinner should be enriched with nutrients

which might be deficient in the day's meals.

Few important points should always be kept in mind while planning meals for the adolescents. During this period there is significant changes in their physical, mental and emotional status. There is a spurt in growth and development. Enormous working efficiency and many other individual characteristics become noticeable in them. Adolescents are physically more active than adults and have a greater metabolic rate. So they feel hungry all the time. Comparatively adolescents need more food than the adults. Therefore they should get these increasing requirements of energy and nutrients through their foods. Body-building foods like fish, meat, milk, egg, fruits and vegetables including the energy giving foods should be given in plenty. Ghee, butter, cheese, roti, bread, pea, beans, cashewnut, etc, should also be given in sufficient amount. Light tiffins should be given to them in between three major meals of the day. In this age, adolescents are found to be attracted towards junk food or fast food. But these foods are usually fats, carbohydrate and sugar based and provide calories only. Interest for home made food is lost and slowly they start suffering from deficiency diseases. Therefore while

planning meals for the adolescents, it should be seen that it is prepared keeping their tastes and likings in mind. Meals should be prepared with nutritious foods of their likings and served attractively.

Some ideal menu for children of different age group is shown below.

Table - 1
A day's sample Menu for a pre-school Child

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Roti	2 (small)
	Boiled Egg	1
Tiffin	Bread Toast	4
	Banana	1
Lunch	Rice	1 bowl (medium)
	Dal	1 katori
	Fish Curry	1 katori
	Salad	1 plate (small)
	Curd	1 katori
Tea-Time	Milk	1 glass
	Suji Halwa	1 plate
Dinner	Khichri with vegetable (Beans, Carrots, Potatoes etc)	1 plate
	Fruit Custard	1 katori
	Bed-Time	Milk
	or	or
	Apple	1

Table - 2
A day's sample Menu for School-Going Child

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Bread-Toast	4 slices
	Boiled Poached Egg	1
	Banana	1
Tiffin (School)	Roti or Parathas	2
	Mixed vegetable (Potatoes, Peas, Cauliflower)	-1 katori
	Pickle	
Lunch	Rice	2 bowls (medium)
	Dal	1 bowl
	Fish Curry	1 katori
	Salads	1 plate
	Curd	1 katori
Tea-Time	Milk	1 glass
	Spinach Pokoras	1 Plate
Dinner	Roti or Chapaties	2
	Rajmah Curry	1 bowl
	Beans & Potato vegetables	1 katori
	Custard or Raita	1 katori
Bed-Time	Milk	1 cup

Table - 3
A day's sample Menu for an Adolescent

Meal	Foodstuff	Amount
Breakfast	Milk	1 glass
	Stuffed Parathas	2
	Boiled Egg	1
Tiffin (school or college)	Sandwiss	4 slices
	Banana	1

Lunch	Chapaties	4
	Rajmah Curry	1 bowl
	Salads	1 plate
	Curd or Raita	1 katori
	Fruit (Mango, Orange, Sweet-time)	1
Tea-time	Milk	1 glass
	Suji Upma	1 plate
Dinner	Rice	1 plate
	Arhar Dal	1 bowl
	Meat or Fish Curry	1 bowl
	Mixed Vegetable (Potato, Carrot , Beans)	1 plate
	Kheer	1 katori
Bed-Time	Apple	1

(b) Meal Planning for Expecting Mother :

The pregnancy period is a physically and mentally stressful period of a woman. A woman will be successful in delivering a healthy baby and breast feeding if she gets right kind of nutrition in required amount during this period. It is important to know about the requirement of nutrients for such women before planning meals for them. The demand of almost all important nutrients like carbohydrate, protein, fats, vitamins, minerals increases

during pregnancy for the health, growth and development of both mother and the baby. If these additional requirements are not met through food, the woman may suffer from deficiency diseases like anaemia, goitre, scurvy etc. Moreover, there may be abortion, premature or stillbirth and bleeding. Therefore, keeping these important points in mind one must know the actual requirement of food for a pregnant woman. The daily requirement of food for a pregnant woman is given below-

Table - 4
Recommended Amounts of Balanced Diet during Pregnancy

Foodstuff	Amount
Cereals	475 gms
Pulses	55 gms

Leafy vegetables	100 gms
Other vegetables	40 gms
Roots and tubers	50 gms
Fruits	60 gms
Milk and Milk Products	250 gms
Fish, Meat and Egg	30 gms
Oils and Fats	40 gms
Sugar and Jaggery	40 gms

Now, let us briefly discuss about the recommended daily allowances of nutrients for a pregnant woman -

Calorie : There is a direct relation of maternal weight gain with calorie intake during pregnancy. Chances of premature birth increase if there is failure to gain weight during first six months of pregnancy. Approximately 62,500 kilocalorie is required during pregnancy to an Indian woman of 45 kg body weight. During pregnancy some amount of energy is stored in the body as fat for the subsequent period. Hence, during this period an additional 300 calorie per day should be provided through food. This increased amount of calorie will fulfil the energy requirements for the developing foetus, placenta and cells including increased Basal Metabolic Rate.

Protein : Requirement of protein is more in second half of pregnancy. Because in later part of pregnancy development of foetus is very fast and formation of breast milk takes place. Protein helps in growth

and nourishment of the foetus and mother. Therefore, 15 gms of additional protein should be given to an expecting mother.

Minerals : There is an increased necessity of minerals during pregnancy. More particularly calcium, phosphorus and iron are needed additionally. Calcium and phosphorus helps in formation of teeth and bones and keep them healthy. At birth 25-30 gms of calcium is stored in the body of a baby. It is generally stored during the last 2 months of pregnancy. So, towards later part of pregnancy an increment of 0.5 to 1.0 gm of calcium should be made. The amount of phosphorus also should be similar to that of calcium. This amount can be obtained easily from calcium and protein rich diets.

Iron is highly needed during pregnancy. Anaemia is a major cause of death of pregnant mother and foetus in our country. 35-40 gms of iron should be given daily through diet to prevent anaemia and for the well-being of the

foetus. A pregnant woman already suffering from anaemia should take therapeutic dose of iron tablets in consultation with doctor in addition to iron rich food. Iodine is required in sufficient amount to prevent goitre in mother and child. Deficiency of iodine may lead to weak, sick and mentally retarded baby. So, iodized salts should be used.

Vitamins : Requirement of all the vitamins is more during pregnancy. Vitamins are required for growth, development and wellbeing of the body besides maintaining the resistance capacity. Vitamin A and D keep the skin healthy, make the teeth and bones strong in babies and keeps mother's uterus healthy. A pregnant woman should get 400 I.U. vitamin D daily. The water soluble and fat soluble vitamins can be obtained by eating balanced diet daily.

A pregnant woman should eat all the nutrients in recommended amount in her diet. As such there is no restriction on diet during pregnancy. However, some important points should be realised and followed for the wellbeing of the baby and herself. Heavy meals at a time should be avoided and instead small meals in frequent intervals are advisable. Liquid diets like fruit juice, vegetable soup, milk etc should be taken in sufficient amount in the intervals of major

meals. Problems like constipation can be avoided by taking green vegetables like spinach, amaranthus, drumstick etc. and other fibrous fruits and vegetables. Sufficient amount of water also should be taken. Fried, spicy, frozen food and too much of salt and sugar should be avoided. Jaggery may be preferred in place of sugar because jaggery contains more iron which helps in the formation of haemoglobin.

A woman should gain 12.5 kg of body weight during the pregnancy period. If this weight gain is not achieved through proper diet there is possibility of delivering weak and underdeveloped baby. But to again, this weight fatty foods like meat, egg, butter, cream, ice-cream etc. should not be taken in excess amount. All the foods should be taken in right amount and more amount of fresh fruits and vegetables should be taken. Sprouted pulses will provide more amount of Vitamin C. Parboiled rice should be preferred which contain more amount of Vitamin B. It is advisable to use mixed pulses. At least 2 glasses of milk and some milk products should be taken daily. Various preparations of meat, fish, egg etc. should be provided regularly according to their taste and choice. Above all, the amount of food should be suitably increased and served in a healthy and pleasant atmosphere.

Table - 5
A Day's Sample Menu for A Pregnant Woman

Meal	Foodstuff	Amount
Early Morning (6 a.m.)	Tea	1 cup
Breakfast (8-9 a.m.)	Milk	1 glass
	Boiled Egg	1
	Roti	3
Mid-Morning (10-11 a.m.)	Fruit Juice	1 glass
	Banana or Guava	1
Lunch (12-1 p.m.)	Rice	2 bowls
	Fish Curry	1 katori
	Salads	1 plate
	Curd	1 katori
Tea-Time (3-4 p.m.)	Tea	1 cup
	Suji Halwa	1 katori
Evening Tea (6-7 p.m.)	Coffee	1 cup
	Cakes or Biscuits	2
Dinner (9 p.m.)	Rice	1 bowl
	Chapaties	2
	Dals	1 katori
	Mixed Vegetable	1 plate
	Fruit (Apple)	1
Bed-Time (10 p.m.)	Milk	1 glass

(c) Meal Planning For Lactating Mother—

The health of newborn baby and the mother mainly depend on the diet of the mother. For the first 6 months the

baby is completely dependent on mother's milk. Mother milk provides nutrition as well as immunizes the baby against diseases. Mother getting nutritious diet only can provide enough milk for the

baby. The nutritional requirements of a lactating mother is higher than that a pregnant mother. The quantity and quality of milk depends on the diet of the mother.

There is individual variation in milk producing capacity. During first couple of weeks a lactating mother produces on an average $\frac{1}{2}$ liter of milk. Subsequently, this amount increases to 1 liter upto fifth month of lactation. To maintain the desired milk producing capacity, the mother should get nutritious and balanced diet. Meal should be planned to provide balanced diet regularly by incorporating various food ingredients in proper amount.

Calorie : A lactating mother needs additional 400-550 calories in her daily meal to produce additional energy. An additional 550 and 400 calories are required in first 6 months and from 6-12 months of lactation respectively. This additional calorie is utilized for secretion of milk as well as for synthesis of the nutrients of milk. This extra calorie can be supplied by cereals, pulses, milk and milk products, fruit juices, soups and vegetables. High calorie food like ghee, butter, ground nuts, kismis etc. should not be taken in excess. All the common foods should be taken in judicious combination.

Protein : More amount of high quality protein should be given to the lactating mother. Due importance should be given on intake of proteinous diet since pregnancy. Fish, meat, egg, milk and milk products, soyabean, pulses, beans, dry fruits etc. should be taken in sufficient amount. A lactating mother needs additional 18-25 gms. protein in her daily meal.

Minerals : Minerals in the daily diet of lactating mother is highly important. Calcium and phosphorus help in the formation of strong teeth and bones in children. Breast milk contains high amount of calcium, hence the diet of the mother should contain sufficient amount of calcium. One gram of calcium per day is recommended for a lactating mother. Diet containing adequate amount of protein and calcium easily provides the required amount of phosphorus. The daily diet of lactating mother should contain 30mg of iron. To get these minerals adequately sufficient amount of fish, meat, milk, fruits and vegetables should be taken.

Vitamins : The diet of lactating mother should contain all the vitamins, as vitamin deficiency affects the secretion of milk. As a result the child may suffer from serious health hazards. The recommended daily allowances of various vitamins for

a lactating mother are as follows–

- Vitamin –A 3000 I.U
- Thiamine 1.70 mg.
- Riboflavin 2.50 mg.
- Folic Acid 150 ug (microgram)
- Vitamin –C 80 mg.

All these essential vitamins can be derived by lactating mother from the daily diet containing the following food stuff like green and yellow vegetables and fruits like papaya, carrot, drumstick, cabbage, sprouted grams, ‘dhenki’ made rice, parboiled rice, milk, egg, nuts etc.

The food stuff mentioned above

should be included in right amount while planning diet for lactating mothers. A balanced diet only will ensure good health of the mother and child. Vitamin deficiency in the maternal diet will affect milk quality and milk output. The diet of a lactating mother is more important than that of a pregnant woman. There is no doubt that a mother getting right amount of nutritious diet will produce sufficient milk without affecting her health. A mixed diet of various food stuff is advisable at this stage. Highly spicy, very hot or frozen food should be avoided. Plenty of water and liquid diet should be taken.

Table-6

A Day’s Recommended Amount of Balanced Diet for lactating mother.

Food stuff	Amount
Cereals	500 gms
Pulses	70 gms
Green leafy vegetable	150 gms
Other vegetable	75 gms
Roots and tubers	75 gms
Milk and milk products	300 gms
Meat, Fish, Egg	30 gms
Fruits	60 gms
Oils and Fats	50 gms
Sugar and Jaggery	50 gms

Table-7
A Day's Sample Menu for a Lactating –Mother.

Meal	Foodstuff	Amount
Early Morning (6 a.m)	Tea	1 Cup
Breakfast (8-9 am)	Roti	2
	Egg	1
	Milk	1 glass
	Banana	1
Mid-Morning (10-11 a.m)	vegetable soup	1 bowl
	Apple	1
Lunch (12-1.30 p.m)	Rice	3 bowls
	Dal	1 katori
	Fish curry	1 katori
	Vegetable salads	1 plate
	Curd	1 katori
Tea -time (4pm)	Tea or Coffee	1 cup
	Suji Halwa	1 plate
Evening (6 pm)	Fruit Juice	1 glass
	Cake or Biscuit	2
Dinner (9-9.30 pm.)	Rice	2 bowls
	Chapati	2
	Rajmah or soyabean Curry	1 katori
	Mixed vegetable (potatoes, peas, beans, cauliflower)	1 plate
	Custard	1 katori
Bed-time (10-10.30 p.m)	Milk	1 cup

(d) Members Suffering from fever and diarrhoea–

When we suffer from any disease our diet needs to be modified. The diet depends on the type of disease one suffers. The diet of a patient may improve or deteriorate the condition. Therefore, our normal diet is modified during diseases. It should be kept in mind that diet helps the patient to improve his condition. Moreover the diet should be balanced, nutritious and easily digestible.

(i) Diet in Fever : The normal temperature of our body is 98.4° F. Elevation of body temperature above normal is called fever. You might have an experience of fever sometime. Fever is a commonly seen condition in our family members but if due and timely importance is not given it might lead to serious situation. There may be many causes of fever. It is a common symptom in diseases like common cold, malaria, typhoid, encephalitis, dengue etc. In most febrile conditions the metabolic rate is increased. The glycogen store is decreased. The catabolism of protein is increased resulting in increase of nitrogenous waste product. It exerts burden on the kidneys. There is loss of sodium, Potassium and body fluid. Loss of appetite, nausea and vomiting etc. are some associated symptoms of fever.

The diet in fever should be planned on the basis of nature, severity

and duration of fever. During high fever calorie requirement is increased. In such condition high carbohydrate drinks and cereal gruels made of barley, sago, rice etc. can be given frequently in small amount. Glucose, honey, sugar cane etc. may be used to meet the carbohydrate requirement. In prolonged fever about 100 gm of protein is required daily. The protein requirement can be met by supplementing fruit juice, high protein liquid diet such as soups of meat and fish etc. High fatty foods and fried food may interfere with digestion. Although fats can provide more calorie, intake of fatty foods should be reduced in fever.

Diet in fever should contain mineral salt specially sodium chloride. By increasing the amount of salty juices and soups this demand can be met. In febrile condition body fluid and mineral salts are decreased. Therefore, milk, coconut water, fruit juices, vegetable soups etc. should be given in sufficient amount. In fever requirement of vitamin –A, vitamin –C and vitamin B-complex is increased. So care should be taken to provide diet rich in vitamins.

Patients with fever should get sufficient amount of liquid diet. At least 3 to 5 litres of liquid diet is required daily. The normal diet is required to be modified. It is desirable to give liquid and semiliquid food in such condition. Soft and easily digestible food should be given so that it is absorbed rapidly. Small

quantity of food may be given at an interval of 2-3 hours. This will provide adequate nutrition without giving much stress to the digestive system. Hot and spicy food should be avoided. Diet in

fever should be planned with liquid food like tea, coffee, fruit, juice, glucose water, rice gruel, dal soup, vegetable soup etc. Instead of four meal pattern, small and frequent feeding is recommended.

Table-8
A day's sample Menu for a Fever patient

Meal	Foodstuff	Amount
Early-Morning (6 a.m)	Tea	1 cup
	Biscuits (salted)	2 slices
Breakfast (8-9 a.m)	Roti or Bread Toast	2
	Egg	1
	Milk	1 cup
Mid-Morning (10a.m)	Juice of orange or sweet time	1 glass
	Banana	1
Mid-time (11.30-12 p.m)	Milk with cornflakes	1 glass
Lunch (1 p.m)	Double boiled mashed rice	1 bowl
	mashed moong dal	½ katori
	Fish curry	1/2 katori
	Mashed potato and carrot	1 katori
Tea -time (3.30-4 p.m)	Tea	1 cup
	Suji Halwa	1 plate
Evening time (6 p.m)	Fruit-juice with glucose	1 glass
	cheese sandwich	1 pair
Dinner (9 p.m)	Khichri	1 plate
	soup (Vegetable)	1 cup
	plain custard	1 katori
Bed-time	complan	1 cup

(i) Diet in Diarrhoea

Family Members of all ages may suffer from diarrhoea. You might have sometimes suffered from diarrhoea or seen other members suffering from this ailment. The symptoms of diarrhoea are passing of loose or watery stool frequently, sometimes accompanied by fever and vomiting and gradually becoming weak. There are many causes of diarrhoeas such as consumption of contaminated and food, unhygienic environment, indigestion, malnourishment, food poisoning, drug or allergic conditions.

Diet in diarrhoea should be planned depending on severity of the condition. In acute conditions, complete rest should be given to the digestive system and no food is allowed if vomiting persists. Glucose should be given through saline. Low fibrous diet is recommended to a diarrhoea patient. Calorie intake should be controlled depending on the condition. Easily assimilable protein rich foods like curd, skimmed milk preparation, egg, chicken soup etc. may be provided. Fats are totally restricted as fats may aggravate the condition. Fried, hot and spicy food, pappad, pickle, salad dry fruits and sweets should not be given

until complete recovery.

Easily digestible, liquid and soft food should be given to diarrhoea patients. To compensate the loss of vitamins particularly water soluble vitamins and minerals, liquid diet like fruit juice, coconut water, rice gruels, barley and sago without milk may be given. Strained fruit juices are helpful. Green vegetables, over ripped fruits and soups can be given. Honey and jaggery are fibrous foods, hence should be avoided. Due importance should be given in supplementing sodium and potassium salts and maintaining the balance of body fluid. Small amount of food at frequent interval is advisable. Easily chewable and digestible, non-fibrous, soft and liquid diet should be given at an interval of at least 2 hours. Curd can be given in place of milk. Eight percent of child mortality in our country is mainly because of superstitious believes, illiteracy and lack of knowledge. Many people believe that this disease can be cured by avoiding food and water. But diet in diarrhoea may rather be planned by incorporating selected food items, fruits, such as apple, pomegranate, lemon, orange, sweet lime juice, soft boiled egg, well cooked vegetable soup, glucose water, dal soup, khichri, sago, custard, biscuits etc. which will help in speedy recovery as well as in maintaining health.

Causes of Diarrhoea :

Diarrhoea may be caused by many factors—

- a) Contaminated food and water
- b) Unhygienic environments
- c) Malnourishment, indigestion
- d) Food poisoning and some allergy
- e) Worm infestation
- f) Infection in intestine by microorganisms like bacteria, virus etc.

one or more of the above stated reasons can cause diarrhoea.

Symptoms of Diarrhoea :

The main symptoms of diarrhea are—

- a) Passing of loose or watery stool frequently
- b) stool may have foul smell
- c) Vomiting and fever may be associated
- d) Weakness
- e) Loss of body fluid leads to dryness of throat, mouth, tongue etc.
- f) Convulsion may occur

You might have experienced the above stated symptoms of diarrhoea in yourself or in the members of your family.

Prevention of Diarrhoea:

We should follow some measures in general to prevent diarrhoea.

- a) It is essential for all of us to follow the general rules of health and hygiene.
- b) Environment of our residence and its surroundings should be kept clean.
- c) Food should be prepared and served cleanly.
- d) Eatables, water etc., should be kept covered.
- d) Drinking water should be pure and clean.
- f) Rotten and stale food should be avoided.
- g) Fruits and vegetables brought from market should be washed with clean water before use.
- h) Play materials and clothings of children should be properly cleaned before use.

By following the above precautions and becoming conscious, we may prevent diarrhoea.

Table-9
Sample Menu for patients from Diarrhoea

Meal	Foodstuff	Amount
Early-Morning (6 a.m.)	Tea	1 cup
breakfast (8 a.m.)	Chapati with jam	2
	Barley with skimmed milk	1 cup
Mid-Morning (10 am.)	Fruit Juice (orange, sweet lime or pomegranate)	1 glass
Lunch (12 noon)	Khichri (soft and liquid)	1 plate
	Boiled vegetable (mashed curd)	1 serving 1 katori
Mid-Noon (2 p.m.)	Plain custard (skimmed milk)	1 cup
Tea -Time (4 p.m.)	Tea	1 cup
	Biscuit (salted)	2
Evening time (6 p.m.)	Strained vegetable soup	1 cup
Dinner (8 p.m.)	Bread toast or soft chapati or rice gruel	2
	Boiled potato and peas (mashed)	1 serving
	Apple	1/2
	Tomato soup	1 Cup
Bed-time (9-30 p.m.)	Skimmed milk	1 cup

(e) Role and Preparation of O.R.S:

We suffer from vomiting, diarrhoea and fever because of some infections in our body. These are the symptoms generally seen in diseases like cholera, dysentery, jaundice, gastroenteritis etc. caused by contaminated and stale food, poor hygiene and sanitation etc. When vomiting and diarrhoea occur frequently the body begins to lose a lot of body fluid and there is imbalance of minerals, and electrolytes. Hence the body starts to 'dry up' which is called 'Dehydration'. To prevent the condition of dehydration, the patients are immediately given to drink O.R.S. (Oral Rehydration Solution) as an emergency measure. It is a solution of salts and sugars. Therefore, to prevent dehydration in patients suffering from vomiting and diarrhoea O.R.S is given as a simple and emergency treatment. This treatment is being practised throughout the world. This treatment is more important in under developed and developing countries. Because millions of children under five years die each year as a result of diarrhoea in these countries. However using O.R.S., many such children could be saved.

The seriousness of dehydration and that it is one of the main causes of death has yet to be realized by common people in our country mainly because of ignorance and illiteracy. As a result it still continues to be the principal cause of

death in children. Realizing the significance, the 'World Health Organization' (WHO) has developed a mixture of liquid preparation. By using this solution of salts and sugars, the loss of body fluid and the balance of electrolytes could be maintained and thereby could save many lives. Therefore, for prevention and treatment of dehydration resulting out of diarrhoea in persons of all ages, the 'WHO' and 'UNICEF' have recommended a formulation of glucose-based ORS i.e. Oral Rehydration Solution. The formula for ORS recommended by WHO and UNICEF contains:

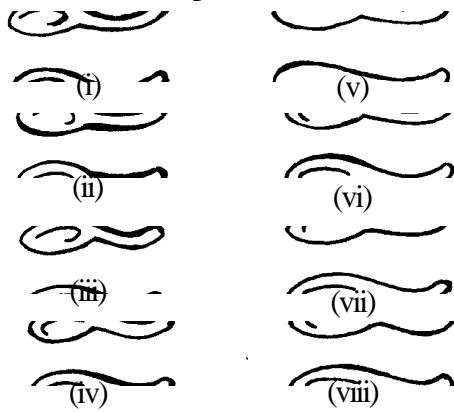
- 3.5 gm sodium chloride
- 2.9 gm trisodium citrate dehydrate (or 2.5 gm sodium bicarbonate)
- 1.5 gm potassium chloride
- 4.20 gm glucose (anhydrous)

Solution of this mixture dissolved in one liter of clean water should be given to patients to prevent them from dehydration. ORS cannot treat diarrhea but it compensates loss of body fluid and electrolytes in our body, thus reduces risks of danger. Dehydration if not treated or managed timely might become the cause of death.

Packets of O.R.S are available in health centers, pharmacy, shops and markets in almost all the countries of the world. This solution be prepared in pure

and clean water and given to patients as per the instructions given on the packets. This solution should be prepared only in water. It should not be dissolved in milk, soup, fruit juices or any other liquid otherwise it may deteriorate the condition of the patient. O.R.S should be continued as far as possible and it should be given after each time of loose motion.

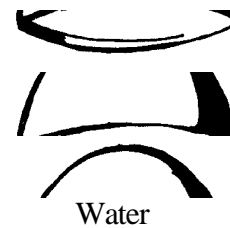
If ORS packets are not available,



Eight teaspoons of Sugar

dehydration can be prevented by using a home-made solution which can be prepared by some ingredients easily available at our households, which is as follows:-

- (i) 1 litre of clean water.
- (ii) one level teaspoon of salt.
- (iii) Eight level teaspoons of sugar
- (iv) Stir the mixture till the salts and sugars dissolve.



Water



One teaspoon of salt

SUMMARY

- It is very essential to have meal planning so that each member of the family gets balanced diet.
- Meal planning for a family is a carefully calculated planning of daily meals keeping in mind the requirements of each and every member of the family.
- Proper importance should be given to certain principles, characteristics and factors while planning meals.
- Meals should also be planned for the diseased and members having special conditions.
- ORS plays an important role in saving many lives by preventing from dehydration.

QUESTIONS**1. Answer very briefly:**

- (a) Name three important factors to be considered in meal planning.
- (b) How many main meals are there in a menu?
- (c) What amount of additional protein is required for a pregnant woman?
- (d) Name few commonly seen fever.
- (e) Write the full form of abbreviation O.R.S

(2) Answer in short :

- (a) What do you mean by Meal-Planning?
- (b) What type of meal should be given to the children of pre-school age?
- (c) What type of foods should be avoided by the lactating mothers?
- (d) What is dehydration?
- (e) What is the formula for making O.R.S?

3. Answer in details:

- a) Explain the main principles followed in meal-planning of a family.
- b) Explain about the diets for the adolescents.
- c) What type of meals a pregnant woman should have?
- d) Explain about the diet for patients suffering from fever.
- e) Write about the role of ORS in lowering the child mortality rate in our country.



CHAPTER - VII

WAYS TO ENSURE GOOD HEALTH FOR THE FAMILY

Introduction :

Good health of the family members is the basis of peace in a family. How do you feel when you or any member of your family suffers from any disease ? Certainly feel very bad. Therefore, it is very important to know the ways to ensure good health for the family. Good health means maintaining a healthy balance of physical, mental, emotional and social status of a person. A disease free and painless healthy body can only make us capable of achieving the goals in our lives. To ensure good health for the family we should regularly follow certain healthy, safe and scientific rules and regulations. We should know about the qualities and hygiene of the foods that we eat. We should always be alert and cautious about contaminated and adulterated food. Few important points will be discussed here which are useful for ensuring good health.

In this chapter you will be able to know the following:-

- Qualities and functions of water and importance of water on health.
- Various domestic methods of purification of water.
- Food adulteration - its definition and meaning.

- Commonly found adulterants and their ill effects.

7.1 (a) Water for Health :

Water is one of the most essential items for maintenance of life. Life is impossible without water. About 60-70% of our body weight is water. Almost all the processes of our body run smoothly with the help of water. Therefore, these activities are affected when the amount of water decreases in our body. Blood is one of the most important compositions of human body. Water helps in keeping the blood in liquid state. Moreover, water helps in various activities of our body. Therefore, next to oxygen, water is the life for us. Requirement of water varies with climate and season. During summer we need to drink more water. Pregnant, lactating mother and children should be given enough water to drink. We all should drink 8 to 9 glasses of water daily. One third of this amount should be in the form of tea, coffee, milk, fruits, fruit-juices, vegetables, dal, curry etc. Therefore, drinking of clean, pure and uncontaminated water is one of the ways to ensure good health.

b) Functions and Qualities of Water :

One of the essential components of

human nutrition is water. Water helps in maintenance of various processes of our body. Water softens the food we eat and helps in transporting through digestive canal and its digestion and absorption. It controls various chemical reactions that take place within the cells. Moreover water helps in excretion of undesired materials like sweat, urine, stools, etc. from our body. Water is a good solvent and is the media for transportation of chemical elements. Ninety percent of blood consist of water and it transports various nutrients to the cells, besides excreting the eliminated elements through the kidneys, lungs and skin. Urine contains 97% water and many unwanted materials are removed from the body through this media. Water acts as a lubricant and prevents friction. It regulates body temperature by sweating through the skin and through respiration. The medicinal quality of mineral rich water helps in relief of many problems of stomach, kidney, arthritis etc. Thus, we have seen that water helps in accomplishment of certain important works of the body and keeps our body healthy.

Water is a chemical compound. The colourless, transparent, clean liquid formed in combination of two parts of Hydrogen and one part of Oxygen is water. In normal atmospheric state, water evaporates by boiling at 100°C and

frozens at 0°C . We get water from various sources like rain, lake, river, wells, ponds, streams, tube-well etc. The quality of water varies depending on its source. Although rain water is pure and clean, while coming down to earth it gets contaminated by various gaseous particles, dusts, microorganisms etc. Therefore we can get quality water from rain if carefully collected and stored.

Water from lakes and rivers are soft and tasty. But many contaminants are found dissolved in this water. This water is contaminated from the surrounding wastes and soils. Wells and tanks are artificially prepared by men but its water should be consumed by keeping it free from contamination. Water of underground streams and tubewell is pumped from deep of earth and hence it is clean and free from microorganism. Water from deep tubewell is pure and therefore is best for drinking if properly stored.

Many inorganic compounds mainly iron, calcium, magnesium, manganese etc. are found dissolved in the water of river, well and streams. This type of water is called **Hard** water. Water free from mineral salts is called **Soft** water. Rain water is generally soft water.

b) Household Methods of Purification of Drinking Water :

Our drinking water should be pure and clean because, impure or contaminated water can cause many

waterborne diseases. Water containing organic matter and pathogenic organisms affect our health. Typhoid, cholera, dysentery, jaundice etc. are caused by drinking of contaminated water. The wastes coming out from various factories, industries, hospitals, laboratories mix with

be variation in taste. This method is usually applied in ship and laboratories. However it is difficult to purify large volume of water in this method.

2) Boiling :

This is a very simple method of water purification. The water should be first

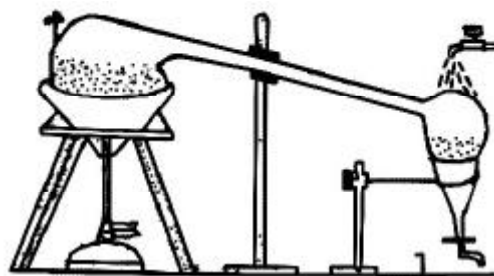


Fig-1

water and is threatening our health. Therefore safety of drinking water is now a days a matter of great concern. Therefore it is very important for all of us to know the household and easy methods of purification of drinking water. Impure and contaminated water can be purified by the following methods which are discussed below-

Physical Method :

We need some implements for the physical method of purifications of water. There are two types of physical methods.

1) Distillation- In this method the water is boiled and the vapour is transformed to water by cooling. Here, water is chemically pure but there may

be variation in taste. This method is usually applied in ship and laboratories. However it is difficult to purify large volume of water in this method.

Chemical Method :

Some easily available chemicals like alum, lime etc. may be used to purify contaminated water. If we put some alum or lime in water and keep for some time, we will see that some sediments settle at the bottom of the container. In this process of sedimentation the contaminants and micro-organisms are separated from the water. The supernatant clean water

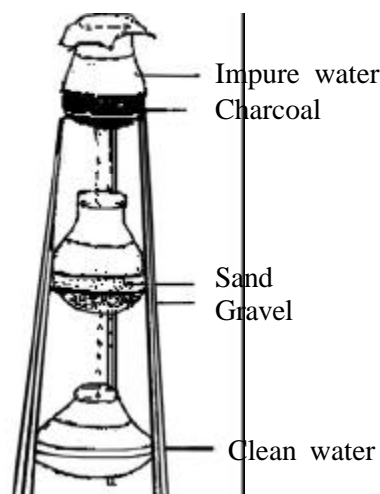
should be separated or filtered and used for drinking. Alum should be used at the rate of 60-240 mg per 4.5 litre water.

Potassium Permanganate may be used in wells. The amount will depend on the level of contamination in the water. A rate of 28 gm of potassium permanganate in one bucket of water is generally recommended and it should be poured slowly by the side of the well. If the colour of the water of the well remains pink for 4-5 hours, it indicates cleaning of water.

Water can be purified by using copper sulphate also. But this can remove algae and some vegetative bacteria only. The more harmful bacteria are not destroyed. Lime, an easily available chemical should be used at the rate of 6 kg per 15 square metre sized well. Free Iodine also can be used in the ratio of 1 part in 2000 parts of water. The water becomes free from micro-organism within 10 minutes time. Another commonly used chemical is chlorine which is used as bleaching powder. 30 gms of bleaching powder should be added to 100 gallons of water. The amount can be increased depending on the degree of contamination of water. This method of purification of water is harmless, low-cost, reliable and can be easily practised.

Mechanical Method: The method where some implements are used in the process of purification of water is called

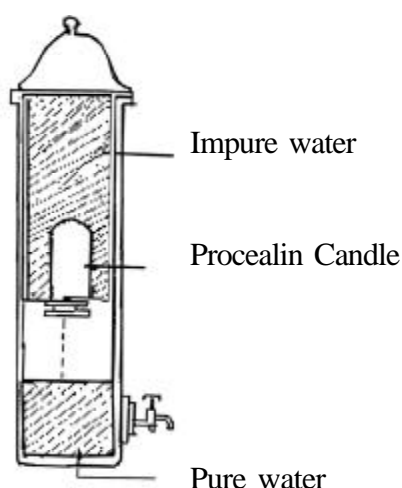
Mechanical Method. The method which is in use since olden days is “ Earthen Pot Method”. Here 3 to 4 earthen pots are placed one upon another on a stand. Charcoal is placed on the first pot at the top. In the second and third pot sand and stones are kept respectively. When we put water on the first pot charcoal retains some micro- organisms and pollutes and the rest of them are retained by the sand and stones in the second and third pot respectively. The water collected by this method should be boiled before use because some micro-organisms may remain in this water. The charcoal, sand and stones should be frequently changed and the earthen pot also should be periodically replaced.



Earthen Pot Method

Fig-2

The best and safest way of mechanical method of purifying water is “Berkefeld Filter”. Now this filter is very commonly used. One or more porcelain candles are fitted inside a container. When water is poured in the container it passes out through the porous porcelain candles and is collected in a separate container placed below. In this process water is filtered out from the contaminants and we can get pure water. Although this filter is costlier we can get the required pure water for the family.



Berkefeld Filter

Fig-3

Now a days with the advancement of science, some multinational companies have manufactured many water filtration devices for domestic use. Appliances like “Aqua Guard” can be used to get pure

drinking water at our home.

7.2 (a) FOOD ADULTERATION :

For good health not only nutritious food is required but the food must be safe and of good quality. As a result of consuming polluted and adulterated food some complications may develop in our body and we may suffer from various diseases. In our country adulteration of food and sale of below standard food to the customers is a common practice. Customers of our country are not conscious as compared to those of western countries. There is provision in the law to punish the adulterator. It is seen that almost all the food items such as milk, cereals, legumes, spices, oil, ghee, liquid foods etc. are adulterated. Adulteration may be intentional or accidental. This adulteration may be done at any stage from production to sale. The foods are adulterated in such a way by maintaining their colour, texture, size and shape etc. that customers generally fail to detect them at first sight. In this way adulterator easily cheat the customers and harm their health. Therefore, we all must know about adulteration and should fight to stop this evil practice.

DEFINITION AND MEANING :

Food adulteration is a process where dishonest businessmen earn extra profits by mixing low quality food or other

materials with good quality foods. Generally food adulteration means supply of low quality food or addition of inferior materials which may lower the basic qualities of foods. For example sale of old rotten or decayed food materials, adding of water in milk, adding of stones, sand, soil etc. with rice, pulses etc. **Briefly food adulteration may be defined as an unlawful act of intentional adding of cheap, low quality materials in food stuff or extracting the important constituents or adding harmful materials in it by which the properties, nature and qualities of foodstuff are badly affected.**

In general, intentional food adulteration is done by adulterator to increase his margin of profit. They sale unfit and inferior quality food and add sand, stone, soil etc. to increase the weight of the commodities. Some add harmful colours in foodstuff to attract customers. Sometimes the important constituents of food items are extracted which lowers the quality of such food. For example fats of milk are extracted intentionally which lowers nutritional quality of milk. This type of intentional adulterator is done to illegally increase the margin of profit by the adulterants. However, incidental or accidental adulteration may also occur due to ignorance, carelessness or lack of adequate facilities.

This way foods adulterated by different ways cause harm our health badly. To prevent this misdeed and to punish the adulterator a “Food Adulteration Prevention Act” was enacted in 1954. According to this “Prevention of Food Adulteration” act a seller will sell only pure foodstuff to the customers or else will be punishable as per law. The P.F.A. act has set certain subjects to proof food adulteration. The following actions will proof adulteration in foods. As per PFA act if adulteration is proved, the adulterator is convicted. The Foodstuffs are considered to be adulterated if -

1. The food a customer wants to purchase is not of adequate properties, nature and qualities.
2. Any material harmful to health is found in foods or in the processing produce injurious ingredients.
3. The customers are cheated by adding cheaper or inferior substance.
4. Any constituent is partly or wholly extracted and thus the quality is lowered.
5. If it is prepared, packed or kept in unhygienic condition.
6. It is infested by insects and become unfit for consumption.
7. It is obtained from diseased animals.
8. If contain poisonous or any substance that is injurious to health.
9. The containers are made of such

materials that is poisonous or injurious to health.

10. If contains unpermitted colours or the permitted colour in an excess amount.

11. If contains prohibited preservatives or permitted preservatives in excess amount

12. There is variation in prescribed properties nature and qualities.

Foods can be adulterated by any one or more of the above mentioned methods. The adulterator can be punished if we are little careful and alert while purchasing foodstuffs.

7.2. (b) Common Adulterants of different Foodstuff :

In our day to day used foodstuff we usually find some common adulterants which are mixed in such a way that it is difficult to identify them. These adulterants such as stone, sand, soil, glass particles, chalk powder, particles of wood, brick, artificial colours, metanil yellow etc. are injurious to our health. If these are not removed before we eat they may affect on our health in many ways. In the table below the list of various adulterants is discussed.

TABLE NO. -10
Commonly used Food Adulterants.

Food Item	Common Adulterant
1. Cereal Rice, wheat, rice-flakes, atta, maida, suji.	Stone, sand, mud, grain-powder, inferior quality or infested grains, powder, chalk powder, earth filth.
2. Pulses Lentil, arhar, chana dal, urad dal,	Stone, mud, coated with artificial colour, gram, moong, peas etc. kesari dal, powder.
3. Edible oil and fats. Mustard, til, ground-nut, oil vanaspati butter and pure ghee,	Sunflower Argimone oil, mineral inedible oil, mixing inferior quality oil Starch, animal fat, artificial oil non-permitted colour, Animal fat, other low quality fat.
4. Milk and Milk products Milk Powdered Milk Cream, ice-cream	Water, removing cream and adding sugar adding skimmed milk Starch, dextrin. Mixing low cost inferior quality fat, non-permitted artificial colour, artificial sweetners.

<p>5. Sweets and Drinks Honey Sweets Soft drinks Tea Coffee</p>	<p>Artificial colour, sugar syrup Artificial sweetners, metanil yellow , Aluminium foil in place of silver foil. Artificial colour, artificial sweetners. Used tea leaves, dried and coloured for re-use, mixing inferior, quality tea, leaves and hasks of some other grains. Used coffee powder, coloured and dried chicory seeds, tamarind seeds are powdered and mixed.</p>
<p>6. Turmeric and spices Turmeric Jeera and Dhania Chilli powder Black Pepper Mustard Cinnamon</p>	<p>Mixing metanil yellow and lead chromate colour. Maida, rice and dal powder coloured yellow and mixed. Mud, sand, paddy husk saw dust coloured and mixed. Saw-dust, brick powder, artificial colour Dried papaya seeds Agremone seeds, seeds of leafy vegetables Dried skin of other tree.</p>
<p>7. Jam-Jelly, Squash quality metal</p>	<p>Non-permitted colour and preservatives use of inferior other foods.</p>

7.3. SIMPLE TEST FOR DETECTION OF THE ADULTERANTS :

It has become very difficult for the common people to detect the adulterants. With the help of the following tests we can detect the adulterants easily-

(1) PHYSICAL TEST :

a. Rice, dal, pulses, spices are usually

adulterated by adding stone, sand, soil, paddy husk in them. These adulterants can be removed by straining and winnowing.

b. Iron dust is mixed with suji, tea etc. This adulterant may be detected with the help of magnet.

c. Milk adulterated with water can be detected by using "Lactometer". The specific gravity of milk is 1.030 to 1.034,

while it will be lower in case of diluted milk.

d. Mustard seeds are adulterated by adding argemone seeds. While the mustard seed is smooth and round, the argemone seed is rough and uneven.

e. Adulteration in some spices can be detected by smelling. Old, rotten foods can be detected by smelling.

f. Black pepper looks like papaya seeds. Taking advantage of this, adulterators cheat the customers by adding dry papaya seeds with black pepper. This can be detected by a simple test. Put some black pepper in a glass of water. You will see that black pepper will sink in water while the papaya seeds float.

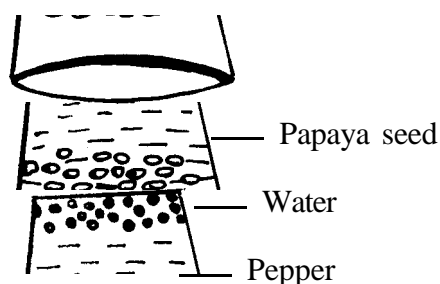


Fig-4

(2) CHEMICAL TEST:

a. Aarahar dal, but or gram dal etc. are adulterated by kesari dal. To detect this, take some dal in a glass, add 5 ml of normal hydrochloric acid and keep the glass in luke warm water for 15 minutes. If the colour turns pink, presence of kesari dal is confirmed.

b. Milk is adulterated by adding starch. To detect this add few drops of iodine to a small quantity of milk. If the colour turns black or blue, it proves presence of starch.

c. Vanaspati ghee is adulterated by some cheaper edible oils. Put little soda in some vanaspati ghee and shake. If froth appears on the top, it proves presence of cheap oil.

d. Mustard oil is adulterated by argemone oil. Add little nitric acid to a sample of oil in a container and heat for 2 to 3 minutes. If the colour of oil turns red, it proves presence of argemone oil.

e. Tea leaf is adulterated by drying and colouring old or exhausted tea leaves. To detect this, put some tea leaves on a moistened blotting paper and rub. If the colour spreads on the blotting paper it proves presence of artificial colour. Similarly coffee powder is adulterated by powdered leaves and seeds of other plants. Put some coffee powder in a glass of water. Genuine coffee powder will float and others will sink.

f. Turmeric and chilli powder are adulterated by using artificial colour, metanil yellow. To prove this, add one spoonful of turmeric or chili powder in a glass of water. You will see that the artificial colour if any will dissolve in water. To Prove the presence of yellow metanil, mix 5 ml of alcohol in some

turmeric powder, then add few drops of hydrochloric acid and shake. If metanil yellow is present, the colour of the mixture will become dark pink.

ILL EFFECTS OF SOME OF THE ADULTERANTS PRESENT IN THE FOOD :

You have already learnt about some of the adulterants used in the foodstuff. Some of these adulterants are very harmful to our health. As a result of the ill effects of the adulterants we may suffer from various diseases, blindness, deformities and even death also. Let us now discuss about few of the adulterants.

(i) Kesari dal- Generally kesari pulses are used as adulterants in many ways. Whole kesari pulses are often mixed with some other whole pulses like black masur and black Bengal gram etc. Kesari dal is mixed with Arhar dal, Channa dal etc. Kesari dal powder is mixed with besan also. Pulses are staple food for the common people of states like Madhya Pradesh, Bihar and Uttar Pradesh. Kesari dal can be easily cultivated in large amount at a cheaper cost. Therefore it is largely used as adulterant. If it is regularly consumed for a long period it may result in crippling. People of 5 to 45 years of age suffer from a particular type of disease where the knee joints, joints at lower limbs and the legs become painful and slowly leads to paralysis. The patients gradually

become crippled with bending of knees and legs. This disease is called "Lathyrism". At a progressive stage of this disease people become totally paralysed. Therefore, the PFA has banned the use of kesari dal.

(ii) Poisonous artificial colours:- Various colours are used to make the food more attractive and appetising. Mostly some foods like ice creams, sweets, biscuits, cakes, pastries, jelly, custard powder are sold by making them attractive by using such colours. While doing this the adulterator use some non permitted harmful artificial colours, as a result such foods become poisonous to our health. Some commonly used artificial colours are lead chromate, metanil yellow, Rhodamine B etc. Out of these water soluble metanil yellow is widely used. It is used in dals, turmeric powder, chilli powder, sweets etc. to make them bright and attractive. These poisonous colours damage kidney and liver, increase risks of diseases of bones, skin, eyes, lungs and blood including cancer. These colours also affect the unborn baby in mother's womb and damage brain.

(iii) Argemone seeds- Argemone seeds are mixed with mustard seeds and its oil with mustard and groundnut oil. This seed and its oil is already proved to be very poisonous. If this poisonous food is consumed regularly even for three months,

various diseases occur. People suffer from dropsy where fluid is deposited in the tissues of the body. Swelling of hands, legs, face and there is fever, diarrhoea, blindness, cancer, heart disease etc., which may lead to death.

Now, from this discussion we have

learnt that the adulterants have many ill effects on our health. Therefore, we should always be alert and careful while purchasing our foodstuff. It is very important to purchase fresh and pure foodstuff having labels of “Agmark”, ‘ISI’ etc.

HEALTH HAZARDS OF FOOD ADULTERATION :

As a result of taking adulterated food, there are many ill effects on our body. These are -

1. Results in various stomach disorders. Sometimes stones and other such hard particles mixed with foods may even break teeth also

2. Due to long use of adulterated pulses knee joints, limbs, legs, ankle joints become painful and bent and develop paralysis of lower limbs.

3. Foodstuff adulterated with poisonous artificial colour damages

kidneys, liver, spleen and increases risk of cancer.

4. Some chemical adulterants affect the brain of foetuses in the mother’s womb. As a result there is possibility of mental retardation in the baby.

5. As a result of consuming poisonous oils, one may suffer from dropsy where water is accumulated in the tissues of the body. It affects vision and may lead to blindness.

After knowing these health hazards we should be careful and alert. Always prefer to buy pure and Agmark or ISI marked foods.

SUMMARY

- To ensure good health to the family, certain health rules should be followed.
- Water plays an important role on our health.
- We should know the functions of water, its qualities and various methods of purification of water.
- Some businessman adulterate our foods with inferior quality, cheaper foods and even mix some harmful and poisonous substances. These adulterated foods affect our health in many ways.
- Adulterated food can be detected with the help of some simple tests.

QUESTIONS**1. Write very briefly:**

- (a) What do you mean by good health?
- (b) On an average how much water should we drink daily?
- (c) What are the different methods of purification of water?
- (d) What is P.F.A.?
- (e) Name three adulterants.

2. Write short notes on:

- (a) Food adulteration
- (b) Berkefeld filter
- (c) Functions of water
- (d) Kesari dal

3. Write answer:

- (a) Explain the functions and qualities of water.
- (b) What do you mean by purification of water. Explain one of the methods of purification of water.
- (c) How can we establish adulteration of food? Explain.
- (d) Write in brief about different tests of detection of adulterants.
- (e) Write briefly about the ill effects of the adulterants on our healths.



CHAPTER-VIII

UNIT	Family/Finance /Management of Family
III	Finance and Consumer education

FAMILY INCOME

INTRODUCTION :

In the previous chapter, you have studied about 'food'. Most of the food we have, purchased from the market and to purchase them 'money' is required. You all know it. Lets give an example, your next door neighbour is Mr. Deepak Barua who is an employee of central government and earned Rs. 30,000 per month as a salary. He lives in official quarter and earned Rs. 5000/ month as a rent from his own house which is in another town. His wife Mrs. Barua looks after her house, as well as work as a music teacher in music school and earned Rs. 3000 per month. Could you assess Mr. Barua's family income? What are its components? Why people often feel the need of supplementing their income? What are the ways of supplementing family income?

After reading this chapter you will be able to :

- Define family income.
- Identify the components of family income.

- Enumerate the various sources of family income.
- Understand the needs of supplementing family income.
- Discuss the sources of supplementing family income.

8.1 FAMILY INCOME :

In ordinary sense the word 'income' means whatever is coming in terms of money or cash for a particular period of time to the family. But money may be a part of total family income. Thus, family income is not confined to money income. So, family income can only, but include goods, services purchased and also the satisfaction gained by consumption. It can be defined in different ways.

According to Gross and Crandall "Family income is that stream of money, goods, services and satisfaction that occur under the control of family, to be used by them and to satisfy needs and desires and to discharge obligation".

In an another definition, Nickle and Dorsey defined family income as the

–‘flow of money, goods and services and satisfaction obtained in any period of time’.

Refer to those examples given above Barua’s family income include his salary, money from rented house, accommodation that is paid for by his employer, his wife also contributes income by using her knowledge and skills in running her household chores etc. So, all these are included into family income and these enables the members to fulfil their needs and desire which is required to discharge their responsibilities.

From this we can define -

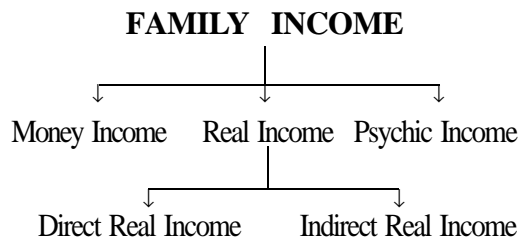
Family income is the flow of money, goods and services to the family over a period of time.

8.2. COMPONENTS OF FAMILY INCOME :

Now we know that family income which comprises of these components like - Money Income, Real Income and Psychic Income.

a) MONEY INCOME : It is an income acquired in the form of money over a period of time. Money income is defined as the purchasing power or the flow of money available over a given period of time. Family members earned money income by putting their efforts. It can be obtained in different ways like pay of salary, wages, bonus, rent, pension,

interest, profit, gifts, royalties etc. Money income is obtained weekly, monthly, annually etc. It gives purchasing power to an individual which can be used to fulfil desire, needs etc.



b) REAL INCOME : It refers to the stream of goods and services used by the family members over a period of time. Real income is defined as the flow of commodities and services to a family in a period of time. It includes all the goods, services, comforts which can be obtained by using money income and it also includes community services like parks, markets, schools, hospitals, college etc.

Real income is of two types -

(a) Direct real income.

(b) Indirect real income.

Direct real income includes those goods and services which are available to the family, without using money. For example an employee gets free accommodation along with his salary, a person receives or gets conveyance, telephone allowance, uniform, free education for children etc.

Indirect Real Income : It includes

goods and services which are obtained by spending money income or by using human resources of family members like knowledge, skill, interest etc. For example a family can earn income by producing vegetables in the kitchen garden, by stitching and laundering their own dress and other clothing materials at home etc.

Besides these one can made use of facilities offered by government like health services, free education, park, public library.

c) **PSYHIC INCOME** : It refers in the term of satisfaction one receive or derive by using money and real income. Usually people use their money and real income to fulfil their needs and desire and by fulfilling them they derive satisfaction. These satisfaction is termed as psychic income. It varies from individual to individual and it is difficult to estimate the level of satisfaction one gets by spending money and real income. For example, if one of your uncles has the goal of possessing a beautiful house and he had worked hard and earned money which helped him to possess his house. The possession of his own house gives him satisfaction which is known as psychic income.

8.3. SOURCES OF INCOME :

Income of family can be earned in different ways like wage, salary/pay,

bonus, pension, interest, profit, gift, rent, royalties etc.

a) **WAGES** : A wage may be defined as the sum of money paid under the contract by an employer to an employee for service that he rendered. Wages are generally paid in cash, but sometimes it is paid in the form of goods and services. For example cereals like rice, wheat given to the workers for work.

b) **SALARY** : It is given to the individual who perform mental work more than physical work. It depends on mental capacity, knowledge, education, experiences, work efficiency and performance of the employee. Salary includes basic pay, dearness allowance, house rent, medical allowance etc. Some other allowances are also included depending on nature of the job.

c) **INTEREST** : It is regarded as the payment for the use of capital, given to the owner of the capital. It may not be a fixed one and changes time to time. Interest may be source of income for a family.

d) **RENT** : Rent means the payment paid to the owner for the use of house, equipment, vehicle, land etc. It is not fixed but varies from one to another depending on different factors like in case of house, it depends on location of the house, facilities provided and floor area of the house, etc. Rent recieved by the

owner may be considered as a source of income for the family.

e) PROFIT : It is referred as a reward for the work of productive activity or a work of entrepreneurial abilities. Profit may vary at times depending on the fluctuation of work.

f) PENSION AND GRATUITY : It is given by the employer to the employee after getting retirement from the work place. It is given on monthly basis and the amount depends on the salary drawn at the time of retirement.

Gratuity is the fixed amount given to the employee at the time of retirement. It is given to those employees who have completed 33 years of service and the amount is sixteen and half months of the basic pay and grade pay of which the employee draws at the time of retirement. It is given for both Central and State Government employees.

g) BONUS : Most of industry, business house, institute and even government employees who are drawing salary below a certain slab are entitled to get bonus. It depends on the profit earned by the institution, business house etc. It is given once in a year preferably in the festive season.

h) GIFT : Usually it is not a regular one but if a gift is inherited from father or forefathers to their children or grandchildren which brings regular income to the

family then it can be considered as a source of income.

i) ROYALTY : Some individuals like writers, poets, lyricists etc. earn income by publishing their work. Publishers used to give royalty to the writer, poet based on the sales of the books. So, royalty can be considered as a source of income for them.

Now you know about the different sources of income for a family. Can you make a list of sources of income of your family?

8.4. SUPPLEMENTARY FAMILY INCOME - NEEDS AND WAYS :

Generally, if you ask a question on available income to any individual like - Are you satisfied with your income? Can you fulfil all needs and desires of your family with the available income? Most people will answer in negative ways. Why does it happen? Because at present where the price index is rising everyday, at the same time the demands are also increasing. So, one has to really work hard to meet the situation and for this purpose additional income has to be earned by the family members. This additional income is termed as supplementary income to the family.

8.4. (i) NEEDS FOR SUPPLEMENTARY FAMILY INCOME :

There are certain factors which govern the needs to supplement the family

income. These are -

(a) To fulfil the basic needs or necessities of life.

(b) To achieve family goals.

(c) To raise standard of living.

(d) To ensure savings for future security.

(e) Inflation

(a) To fulfil basic needs of life : Money is required to fulfil basic necessities of life as well as other comfort of life. But it is not possible to meet these expenses with the limited income. So one has to be engaged in some work to earn additional income for the family.

(b) To achieve family goals : Each and every family sets certain goals for their family. These goals may be short term like purchasing durables like washing machine, freeze and long term like purchasing a house or flat or possessing a house etc. But it is not possible to achieve these with the available income. So, one has to earn additional income for this purpose. For example - Suppose your parents have set a goal to send all the children for higher education. In order to achieve this goal your parents may engage or work or take steps to earn additional income.

(c) To raise standard of living : Everyone wants to have necessities and

enjoy comforts and luxuries to the maximum. It is a human nature. One can judge the level of standard of living by knowing to what extent the family is able to meet the needs and to provide comfort to the members. And also want to shift towards higher standard of living. So, it requires a lot of money which is possible through supplementing family income.

(d) To ensure savings for secure future: Every individual likes to ensure a secure future for the family, Because nobody knows about the future, anything may happen at any moment. These unexpected happenings account for large expenditure jeopardising the future. In such times one needs extra amount which may not be possible with previous savings. So, one has to depend on additional income or supplementary income. Therefore, supplementary income is essential to save for future.

(e) Inflation : It is one of the factors which motivate the family to earn supplementary income. The term 'inflation' is very common as, majority of the population use this word. It is a situation which arises out of population explosion. Thus it create wide differences between demand for the commodity and supply of commodity, which leads to rise of the prices of commodities. As a result,

available income of the family may not keep pace with the increase in prices. So the need of supplementation of income is felt by the family members.

Besides these, it is also essential to meet the financial responsibilities of expanding stages of family life cycle. Family life cycle consists of three stages like - Beginning, expanding and contracting stage. Out of these three, expanding stage cover long period of life and require quite good amount of money to meet varieties of demand. Thus, supplementary income is of great help for the family.

8.4 (i) WAYS OF SUPPLEMENTING FAMILY INCOME :

Income of a family can be supplemented through various ways. They are -

(a) Adopting income generating activities : In order to earn additional income, any member of the family can effectively utilize his or her talent. For example - In your family, your mother may know the technique of weaving or stitching garment, if she utilizes her leisure time to do these, then she can take order from customer or sale her product which will give her good income. This income increases the total income of your family.

(b) Part-time Job : Income of a family can be supplemented by any member of

the family by doing part-time job. Today it is very common to majority of households. In part-time job one must work for some fixed hours and is paid for. For example - your friend Bina's mother works in a music school for two hours in the evening and earn extra amount for her family. In some household, educated member take tuition in their free time and earn income for their families. Many students take up summer job during long vacation to earn money to add to family income.

(c) Increase in Real income : All of you know about real income. Do you remember? It has been discussed in beginning of this chapter. The co-ordinated participation of all the family members in doing the household chores, can bring about significant increase in family's real income. For example - if some of the food product like 'Jam', 'Jelly', 'Squash', 'Pickle', ground spices prepared in home, stitched day to day wear and night dress in home, repairing appliances, maintain kitchen garden etc. can reduce the expenses of the family which ultimately results in increasing family's real income.

(d) Judicious Investment of Savings : It is one of the methods of supplementing family Income. In this method, families savings are invested in a proper manner that ensures a good

income to the family. But investor should have proper knowledge of investment as well as market situation etc. You might have noticed or heard about working of self-help group of your locality or village or town. Today, self help groups are doing very good business. One of the family members can be a member of this group and earn income for the family.

(e) Judicious use of available material resource : One can earn an income by judicious use of available material resources of the family. If a family possesses more material resource than needed that can be used to earn income. For example - if the house is too big for

a family then one of the part of the house can be given on rent or mothers can open 'creche' or 'day care centre' or any member can use for teaching students etc. If there is any open space around the house one can make use of the land by planting fruits and vegetables. In this way one can use available resource to earn income for the family. If you observe in your house hold, you will also find some means of earning additional income to your family.

Therefore, by adopting above mentioned means, family income can be supplemented and can improve economic condition of the family.

SUMMARY

- Income means 'the money or goods or services available to use by the family for a particular time.
- Family income is the sum of total of money income, real income and psychic income.
- Different sources of money income are wage, salary, rent, interest, profit, bonus, royalty etc.
- Supplementation of income refers to the addition of money income to the family income.
- It is important to supplement family income to achieve goods, cope with inflation, to maintain standard of living and to ensure secured future.
- Different ways of generating additional income are - adopting income generating activities, make use of available material resource, judicious investment, taking up of part time job etc.

QUESTIONS**Very short answer question :**

- (1) Define income.
- (2) Name two types of income.
- (3) Give two examples of real income.
- (4) Write two sources of money income.
- (5) Mention any two importance of supplementing family income.
- (6) Give two ways of supplementing come.
- (7) Name the types of real income

Short Answer Question -

- (a) What is family income?
- (b) What are the different types of income?
- (c) What are the differences between money and real income.
- (d) What are the different types of real income? Give example of each.
- (e) Define Psychic income? Give example of it.
- (f) What do you mean by supplementing family income?
- (g) Write about the importance of supplementing family income.

Long Answer Question :

- (a) Define income. How will you classify them. Give example of each of them.
- (b) List out the sources of family income.
- (c) Mention the factors that govern the need to supplement family income.
- (d) Write about different ways of supplementing family income.



CHAPTER - IX

MANAGEMENT OF FAMILY INCOME

9.1. Introduction : In the Previous chapter, you have studied about family income, its sources so, you know about income, its type and the role it plays in the family. You also receive 'Pocket Money ' from your parents either daily or weekly or monthly basis to meet certain expenses like conveyance, tiffin, your necessities or to buy gift for your friend. You use them according to your wish and manage them according to your plan. In the same way 'Income' is used to fulfil needs and desire as well as to achieve goal of the family. You may have the knowledge about the management of income of family.

After reading this chapter you will be able to know.

- (a) Family financial plan for expenditure or budget planning.
- (b) Importance and objectives of planning budget.
- (c) Steps in planning budget.
- (d) Account keeping and its importance.

(a) FAMILY FINANCIAL PLAN OR FAMILY BUDGET

Budget is a plan to use or spend income in a proper way. In the dictionary, meaning of budget is - a financial plan of

income and expenditure or a plan to use income. When it is done to a family then it is known as family budget. It is also known as financial device to use income. Budget is also termed as economic barometer or financial guide to use income available over a fixed period of time. You will be able to understand about 'budget' with this example - your friends 'Leena' and 'Reena' stays at hostel and receives same amount to meet monthly expenses from their parents. You have noticed that Leena always meet her expenses smoothly, whereas Reena finds it difficult to run and always borrows money from her friend. Why it has happened ? If you observe them minutely you will come to know that Leena always make proper plan before spending her money and also follow the plan while spending.

On the other hand, Reena never makes plan to use money, as soon as she received she starts to pay her dues, spend unnecessarily. As a result she finds it difficult to meet the expenses in later part of the month.

Now you understand what budget is. Budget can be defined as tentative estimate of income and expenditure over a fixed period of time.

In case of family budget it is tentative estimate of family's income and expenditure over a period of time.

Budgeting is the first step in the management of money. The main principle of planning budget is to keep expenditure within its income or means.

9.1 (2) OBJECTIVE AND IMPORTANCE OF PLANNING BUDGET

(i) Objective of planning budget - The objectives of planning family budget are as follows -

- (a) To decide how family income is to be spent.
- (b) To keep expenditure within its means or income.
- (c) To cut down unnecessary expenditure.
- (d) To meet the needs and desire of all family members.
- (e) To achieve long term and short term goals of the family. For example - Possessing a house or flat of their own may be a goal of a particular family. To fulfil this goal, that particular family has to plan their expenditure from the beginning. Or A family has set goal of possessing a house or flat of its own in a particular town/city. In that case, family has to make proper plan to use their income from the beginning and act accordingly to fulfil their goal.

(f) To make proper savings plan for future use.

(ii) Importance of Planning budget: Budget planning helps a family in different ways. They are -

(a) It enables to make estimate on different items properly and also helps in spending money against different items.

It helps to make proper estimation of money income against different items as well as made possible to spend money wisely.

(b) It encourages to form saving habits among the people because while planning, a part of income can be kept under the head of savings. So, saving is possible with the help of budget.

(c) It facilitates distribution of income among different items of expenditure.

(d) It also helps in paying tax bill and installment of loan of the family at right time.

(e) Budget always encourages conscious decision making which help in reflecting long term goals in the budget. It forces one to decide what he wants most out of life.

(f) Budgeting helps person to live within his income.

(g) It understanding helps in developing good among the family members. And helps to identify wasteful expenditure and to cut down these expenditures.

9.1 (3) STEPS IN PLANNING BUDGET

There are different steps in planning budget. One has to follow them while planning budget for a family.

(i) Determine the duration of the budget - Usually household or family budget is prepared for a month but sometime it is made for a week or fortnight. So, the first step in making budget plan is to determine the duration of the budget that is the definite period of time.

(ii) Estimate the proposed income of the family- The second step in planning budget is to estimate the total expected income from all sources of the family for the period of which budget is made.

(iii) Making a list of various requirements- A list of goods and services of all kinds needed by the family members for that particular period should be made for making a budget.

(iv) Make estimate of proposed expenditure - This is the fourth step in budget planning in which an estimate is made for the proposed expenditure on various requirements of the family.

(v) Bring Balance Between Income and Expenditure - The next step of budget planning is to bring balance in between proposed income and expenditure of the family. If the proposed total expenditure is more than the

proposed total income, then family has to make certain arrangements to meet requirements of the family.

(vi) Check the plan - The last step in planning budget is to check the plan, whether it has covered all the items or not, if something is left, it should be included or if some items are unnecessary, then strike out those items from the plan.

These are the different steps in planning budget. Can you plan a budget for your family? Now you can help your parents in planning family budget.

A sample of budget of a family is given below.

Let us see in Barua's family, both husband and wife are service holder, staying at own house and one part of the house is given for rent, have two college going children, one is staying at hostel and the other is a student of local college stays with them. She goes to college by bus but both husband and wife go to office by scooter. All the three members have their own mobile phone. Barua's mother also stays with them, so the total family member of Barua's family are five (5).

Income of the family.

Barua's Salary - Rs. 25,000/ month.

Wife's Salary - Rs. 16,000/ month.

House rent - Rs. 3,000/ month

Total - Rs. 44,000/ month

Expenditure plan for a month	
Food	- Rs. 15,000/-
Maintenance of House	- Rs. 1,000/-
Clothing	- Rs. 800/-
Education	- Rs.10,000/-
Transportation	- Rs. 2500/-
Health	- Rs. 500/-
Recreation	- Rs. 1500/-
Savings	- Rs. 4500/-
Miscellaneous	- Rs. 8,200/-
(Gas, Electricity, gift, newspaper, servant)	

Total - Rs. 44,000

(Expense of different heads are approximate one)

9.2 (i) HOUSEHOLD ACCOUNTS

It is an important aid in money management practices of household.

* It means keeping of record of expenditure on different items of household for a particular period.

Household account can be defined as the written statement of income and expenditure of a household for a specific period.

Usually most of the people do not have the habit of writing or keeping record of expenditure. Some people may plan the budget but do not like to keep record of expenditure.

Do you keep record of your expenses that you receive as pocket money. If you keep, in which form (that is in written or mental) you keep your record. If you ask same question to your friend, you may get the answer 'no' or if they do not

keep it in written form. You will find very few have the habit of keeping record of expenditure in written form. If you enquire about the reason, you will come to know that they consider it as unnecessary, waste of time etc. But keeping record of expenditure is of great help in money management practices of household.

9.2. (ii) IMPORTANCE OF KEEPING HOUSEHOLD ACCOUNTS

Maintenances of household account helps a family in various ways. They are-

(a) It makes easy to spend money income on different items of expenditure of the household as record keeps one informed about the expenditure under different head.

(b) It gives clear picture of the prices of various items and thus help in planning budget for the future.

(c) It helps in comparing like expenditure incurred in one month with that of the other month. As a result check can be made if the expenditure are of the current month exceeds than to the previous month.

(d) Record keeping helps in judicious spending of money income on different head of expenditure of a family.

(e) It also helps in checking wasteful expenditure. Thus one find it easy to maintain balance between income and expenditure.

(f) By maintaining record one gains an

insight into money availability and expenditure requirements of the family. Thus it will help in making saving plan.

(g) It also helps in avoiding disputes regarding payments. Like, you have taken some money from your friend and returned it on time, your friend may forget about it and asked you again, then if you keep record of payment, you can show her immediately and clear her doubt easily. Otherwise, you have to pay again, either or misunderstanding or dispute may occur.

9.2 (iii) PROCEDURE FOR USING HOUSEHOLD ACCOUNT OR WAYS OF KEEPING HOUSEHOLD ACCOUNT.

There are two ways of keeping household accounts. They are -

- (i) Daily Accounting
- (ii) Writing Cash book

(i) Daily Accounting - In this procedure expenditure on different heads is written daily in a copy of note book or register. Here the date is put on one side of page, details of all items purchased i.e., item, rate, quantity etc. total expenditure incurred is written on the other side of the page. At the end of the day, total expenditure is calculated, then accounts can be made. Some articles which are purchased weekly, fortnightly or monthly basis, accounts can be written on separate paper of the register and in case if,

payment is made for some services on monthly, weekly basis that should be kept on separate paper. At the end of the month, total expenditure is calculated which include daily expenditure as well as other expenditures.

A sample of daily expenditure is given below.

List of daily expenses of a family.

Date: 1.10.10	Sl. No.	Items	Quantity	Amount
	1.	Egg	½ dozen	Rs. 30.00
	2.	Bread	1	Rs. 10.00
	3.	Banana	6 nos.	Rs. 20.00
	4.	Vegetable (three varieties)	1 kg	Rs. 70.00
	5.	Bus fare		Rs. 20.00
	6.
	
Total - Rs. 150.00				

Account of certain items which are purchased daily can be maintained separately like milk, bread etc. It is essential to keep the record of milk, bread as payment on this is made at the end of the month. In this account the quantity and rate at which it is purchased is entered into the record.

A sample of accounts of milk is given below-

Account of Milk

Month-October		Year-2010	
Date	Quantity of Milk	Rate	Amount
1.10.10	1 lit	Rs. 30/-	Rs. 30/-
2.10.10	1 lit	Rs. 30/-	Rs. 30/-
3.10.10	3 lit	Rs. 30/-	Rs. 90/-

4.10.10	1 lit	Rs. 30/-	Rs. 30/-
5.10.10	1 ½ lit	Rs. 30/-	Rs. 45/-
.....
.....

A sample of monthly expenses also given below.

Month-October		Year-2010		
Sl. No.	Item	Quantity	Rate	Amount (in rupee)
1.	Rice	20 kg	Rs. 40/kg	Rs. 800.00
2.	Dal	5 kg	Rs. 80/-	Rs. 400.00
		(three varieties)		
3.	Oil	4 lit	Rs. 90	Rs. 360.00
4.	Sugar	4 kg	Rs. 40	Rs. 160.00
5.	Tea leaves	½	Rs. 150/kg	Rs. 75.00
6.	Salt	1 kg	Rs. 10/-	Rs. 10.00
7.	Detergent	2 kg		
8.	Toilet Soap	4 pieces	Rs. 20/-	Rs. 80.00

(ii) CASH BOOK

Record of expenditure of a household can be kept on cash book. One can use register book or cash book available in the market for this purpose. Each page of the book has two sides, the left side is for credit side and right side is for debit side.

In credit side, details of income from all sources like rent received, salary profit from business etc and also withdrawal from bank are written. If a person return the loan amount that too is included into income. Here, money received and its sources is written date wise.

On the other side, that is debit side, amount spent on different item including

electricity bill, paper bill, phone bill, salary of domestic help, deposit in the bank, loan amount etc are written.

At the end, total amount of money received and total amount of money spent is calculated and total income and expenditure for the month of the household can be found out. If some money is saved it is added to credit side. The total of credit and debit side should be same.

Writing a cash book is useful to a home maker as it gives, information about how much money has been received, its sources as well as the amount spent on different items etc for a particular time. By going through this cash book, one can come to know the excess expenditure on certain items and some essential items that had not been purchased etc. Thus necessary steps can be taken in case there is excessive expenditure under one head, some can be cancelled and other essential items may be purchased. It also helps in bringing balance between income and expenditure. Another important advantage of keeping cash book is– it helps to make future ‘saving plan’ of the household.

Thus record of household expenditure can be kept by those two ways or procedure. If you go through these samples, you will come to know how income of a family is spent on different heads. You also try to keep your pocket money’s expenditure by following those two ways.

A Sample Cash book

Credit Side			Debit Side		
Date	Source	Amount	Date	Item of Expense	Amount
1.10.10	(Previous Month balance)	Rs. 1000.00	1.10.	Petrol	Rs. 500.00
			2.10.	Food item	Rs. 5000.00
			3.10.	Rent	Rs. 3500.00
3.10.10	Salary	Rs. 25000.00	5.10	Fees	Rs. 3000.00
25.10.10	(Withdrawn from bank)	Rs. 2000.00	8.10	Eatables	Rs. 2800.00
	Rs. 28000/-		9.10	Salary	Rs. 700.00
			10.10	Paper bill	Rs. 250.00
			11.10	Loan	Rs. 1500.00
			15.10	Expense on	Rs. 1750.00
				Other ---	Rs. 500.00
			16.10	Food item (fish, veg.)	Rs. 3000.00
				other	
			26.10	L.I.C. Premium	Rs. 2000.00
			27.10	Other expense	Rs. 500.00
			31.10	Cash in	<u>Rs. 1200.00</u>
				-----	Rs. 28,000.00

SUMMARY

- Budget is a financial plan to use income.
- Principles of planning is to keep expenditure within its income and bring balance in between income and expenditure.
- Budget plays an important role in money payment practice of household.
- There are five stages of planning budget.

- A household record is a written statement of income and expenditure for a specific period.
- There are two ways of keeping household accounts in a systematic manner - Daily accounting, writing cash book.
- Maintaining household account helps to know about the expenditure on different items as well as the cut down wasteful expenditure.
- Household account facilitates to make future saving plan as well as to achieve family goals.

QUESTIONS

A. Very Short Answer Questions

- Define Budget.
- Name one objectives of planning budget.
- Write two items of family budget.
- Name two types of budget.
- What is household account?
- Name two process of keeping accounts.
- Mention the principles of planning budget.

B. Short answer question.

- Write any two objectives of planning budget.
- What are the importance of planning budget
- Write any two advantages of keeping household account.
- Write any one process of keeping record.

C. Long answer question.

- Define budget. Mention the steps of planning budget.
- Write about the importance of planning budget.
- What are the objectives of planning budget .
- Mention about different types of budget with example.
- Plan a budget for a family of four members (two adult and two school going childrens) having monthly income of Rs. 30,000/-.
- What is account keeping? why it is important?
- What are the different process of account keeping?



CHAPTER-X

SAVINGS AND INVESTMENT

10. INTRODUCTION

From the previous chapter you have come to know about 'Income' and also about Income Management. Most of you have receive pocket money from your guardian and when you use them, you may keep aside certain amount from the total amount, why? Reason may be either to use for difficult days or to purchase some personal items on to give gift to your friend etc. Is not it? In the same way, when family's income is used, certain portions are kept aside for future use and this is termed as 'saving'. After going through this chapter you will be able to know the following.

- Meaning of saving.
- Needs of saving
- Concept of Investment

10. (i) MEANING OF SAVINGS :

The term 'saving' means 'keeping aside a part of income for future use'. Usually people use income to meet daily needs and set aside certain portion from the income to meet future needs. The portion which is kept for future use is called savings.

It also means 'refraining from spending for present consumption needs to meet future needs. has defined 'saving'

as abstinence from present consumption for the purpose of future consumption'. It is the difference between income and expenditure, which can be expressed in the following way.

$$\text{Saving} = \text{Income} - \text{Expenditure.}$$

Lets give an example- Suppose your family's monthly income is Rs. 25,000/- and expenditure is Rs. 22,700/- and remaining Rs. 2,300 keep aside for future use then the monthly savings of your family is Rs. 2300/-. This amount may vary from month to month.

From all these, we can define 'saving' as- the amount kept aside from present income to meet emergency, needs and demand of the family.

Now, let us see how it helps a family in different time and situation.

10.(ii) IMPORTANCE OF SAVINGS:

Saving plays an important role in enhancement of financial position of family. It helps the family in the following way.

i) Saving provides economic security to the family :

The feeling of security help the family for all round development as well as to lead a comfortable life. Moreover we never know what will happen in the next

moment or about our future. In emergency, saving helps the family to meet the emergency situation.

Sometimes, certain situation arises due to loss of employment, loss of business or closure of business etc., when income of the family drop suddenly, in such circumstances saving is of great help. In absence of saving, one can take loan to meet the situation, it may lead to economic crisis. Here is an example, suppose your friend Rani's father has lost his job because of closure of the firm where he works. As a result, it brings financial crisis to her family, if her father has savings, then there won't be any problem to meet the situation.

It is a well known fact that a person can work up to a certain age and after that he retires. At this retirement stage a person gets about half (50%) of his pay as pension. He may find it difficult to meet or to fulfil the needs. In this situation saving helps a lot. Thus, savings provides security during old age.

ii) For fulfilling needs of the family : Each and every family has certain needs in order to meet these needs, a good amount of money is required which is possible, only through savings. For example, if one of the needs of your family is to provide higher education to all the children of your family, which requires lot of money and that can be possible through savings.

iii) Maintenance of Standard of Living :

Families have their own standard to live and they like to maintain a good standard, which is possible through possession of certain assets. Acquisition of these assets requires a lot of money which can be achieved through saving.

iv) Enhancement of economic condition of family : Saving plays a great role in improvement of economic condition of the family. It can be done with regular saving and proper investment of saving account. Your friend Rita's father is a state government employee, who has limited income. Rita's mother has the habit of saving and she saved certain amount regularly after meeting the family's expenses. She put that savings amount under certain scheme at a regular interval which increases capital and earn interest.

v) Cut down unnecessary expenditure:

If we have the habit of saving we never go for unnecessary item and spend huge amount on it. On the other hand, if we do not have that habit, we may buy unnecessarily or spend haphazardly. Thus, with the help of saving we can prevent it.

vi) Others : Saving always help in repayment of old debt of the family and fulfilling long and short term goals.

vii) Contribution for National Development : Individual savings helps in development of the nation, as these savings are invested in developmental plan of the nation. Nation also used saving for its defence.

of 7% per annum she will get Rs 10,700/- after one year.

Money can be invested in number of ways, in financial institutions like Bank, post office, Insurance corporation etc. You have heard about these institutions



10.3 (i) INVESTMENT :

It is the process of using savings with the expectation of the security of principal and to receive return from it. This 'return' is the 'income' from the savings and it can be in the form of profit, dividend, interest, rent etc.

Investment can be defined as 'the process of utilising savings to earn income'. This earning may be regular or receive at one time. Let us see one example- your mother has Rs. 10,000/-, if she keeps it with her it will not bring any income, but if she invests, she may earn profit, like if she invest at the rate

and some of you have the experience of transaction or operation of these institutions. All these institutions have lots of schemes and these schemes keeps changing from time to time. Investor should have proper knowledge about these schemes before investing their capital.

Besides financial institutions, investment can be done with some other ways like by buying shares, stock, bond, gold, farm, real estate, movable properties, etc. Out of all these if you invest in real estate and buying gold, you may get profit. The prices of gold use to

change too frequently (Last year 10 gm of gold price was Rs. 16,000, but it has increased to 20,000 to Rs. 21,000 per 10 gm.) So, those who have interest in investing in gold, they can earn good amount of income.

10.(iii) DIFFERENCE BETWEEN SAVING AND INVESTMENT :

Saving and investment, both the terms are used together, they are complementary but have certain differences. They are–

SAVINGS	INVESTMENT
<ol style="list-style-type: none"> 1. Saving means keeping aside a part of income for future use which give security to the individual who does it. 2. Income that earn from saving is less but regular. 3. Institutions must do savings. 	<ol style="list-style-type: none"> 1. Investment means utilising savings to earn income i.e., productive purpose. 2. It has risk, as well as it is uncertain. 3. Income capital can be grown or increased or sped with the help of proper investment. 4. In can be done in numerous way like buying share, stock, bond, real estate, gold etc.

10.4. INSTITUTIONS FOR SAVINGS AND INVESTMENT

Saving and investment can be done with the help of the following institution; These are–

10.4 (i) Bank : Bank is an organized financial institution, where a person can deposit his savings and withdraw, as and when he requires it. Bank pays interest to the depositor against deposited amount. Interest may be paid either quarterly, half yearly or annually. Depositing money in the bank have certain advantages. They are –

- i) It gives the feeling of security to the depositor as there is no possibility

of theft of the money kept in the bank.

- ii) It pays interest to the depositor on money deposited.
- iii) As the depositor earn income from his deposit, he tries to refrain from unnecessary expenditure and form the habit of saving.
- iv) There is no risk of carrying money as, one can withdraw money from the bank at the time of need.
- v) Depositor can avail different facilities like locker to keep valuables etc. offered by the bank.

10.4 (i)A. METHODS OF DEPOSITING MONEY IN THE BANK :

There are different methods of depositing money in the bank-

Current account.

Saving account

Fixed deposit account

Recurring deposit account.

Most of you have heard about these and some of you have kept your savings under these account. People who have not visited or have no account in the bank, should know how to open an account in the bank. In order to open an account in the bank, the first task is to fill up certain forms with documents like photograph, identity card, proof of residence, and identification by an account holder along with certain amount of money. In addition to these, a card of specimen signature has to be submitted. After opening an account, the account holder will receive account number, passbook, cheque book, depositor slip etc. from the bank.

a) Saving Account : Any individual can open this account with minimum amount of Rs. 5000/-. This account can be single or joint. The depositor has the freedom of depositing any amount at any time during the working hours. But the number of withdrawal is limited and it can be done either through cheque or through withdrawal slip. The rate of interest paid against this account is low.

b) Current Account : It is a type of account in which the account holder is

provided with the facility to deposit and withdraw the money as and when desired. No interest is paid to the account holder against his current account deposit, Depositor should have some amount of money in his account.

c) Fixed Deposit Account : In this account, money is deposited for a fixed period of time. This period varies from 45 days to 5 years and the rate of interest is more than the saving account. On opening a fixed deposit, the depositor receives a certificate from the bank containing details of the amount deposited, the duration of the deposit, the date of maturity and the rate of interest. If the depositor wants to withdraw money before the maturity date of the fixed period, he will not get the full amount of interest. And he may also avail loan upto 75% on the deposited amount. The account is also known as term account or term deposit.

d) Recurring Deposit : In this scheme, depositor can deposit a fixed amount regularly (every month) for a period of minimum 12 months upto 120 months. The investment period is agreed initially and the depositor gets the capital money along with the interest at the end of the term. This scheme is suitable to those having regular income and it is meant to inculcate regular saving habits among people.

Beside these, there are some other

accounts available in the bank.

In order to operate an account in the bank, certain tools are required like deposit slip, withdraw slip, cheque etc. Depositor slip is required to deposit money in the bank. Withdrawal slip is needed to withdraw money from the bank.

10.4 (i) B) Cheque : It is an instrument through which account holder transact money in the bank. In order to receive a cheque, bank account holder should have balance amount of Rs. 1000 in his account. A cheque is an unconditional written order of the account holder by which he can order the bank to pay the amount mentioned on the cheque, to the person whose name is written on the cheque or to his nominee or bearer of the cheque.

Cheques are of three types like-

- i) Bearer cheque.
- ii) Order cheque.
- iii) Crossed cheque.

i) Bearer cheque : It is a type of cheque in which, name of the person or 'bearer' is written and payment is made to any person bearing the cheque. If the person whose name is written on the cheque is not able to withdraw money from the bank, he can send any one to do so. But the disadvantage of this cheque is that any person can withdraw money from the bank ; In case of its loss or theft, the bank should be informed immediately to stop the payment against

the cheque. This type of cheque is unsafe Hence should be handled carefully.

(ii) Order cheque : In this type of cheque, the word 'order' is written before making the payment. The payment is made to the same person whose name is written on the cheque or the person who has been nominated, at the back of the cheque. The bank verifies the signature of the person before making the payment and there will be change even if the cheque is lost.

(iii) Crossed Cheque : In this cheque, two parallel lines are drawn on the top left corner of the cheque. This cheque is quite safe, as it cannot be encashed, can only be deposited in the account of the drawer or his nominee.

Crossed cheque are of two types:

- a) Simple crossed cheque.
- b) Special crossed cheque.

a) Simple crossed cheque : In this type of cheque, two parallel lines are drawn at top left side of the cheque and 'Co' is written in between the two lines. Such cheque can be deposited in any bank.

b) Special crossed cheque : This type of cheque are more secure and safe and are of three types.

i) In the first type, 'payee A/c' or 'Not Negotiable' is written in between the parallel lines. This cheque can be deposited only in the account of the drawer.

ii) In the second type of cheque, the

name of the bank is written in between the parallel lines, so the cheque can be deposited in the bank, specified in the cheque.

iii) In the third category cheque, A/c payee or Not Negotiable are written in between the parallel lines along with the name of the bank. The drawer, can only deposit the cheque in his account and in the specified bank written on the cheque. This cheque cannot be deposited in any other account or any other bank of the depositor. So such cheques are the safest of all other cheque.

Besides these there are some other types of cheque. They are– Blank cheque, stale cheque, open cheque, postdated cheque etc. You must have heard about dishonoured cheque. What is it? Why has it happened? Cheque which cannot be encashed in the bank is called dishonoured cheque. This may be due to some reasons. These reasons are–

- i) If the cheque is postdated.
- ii) If there is insufficient amount of fund in the account of the person issuing the cheque.
- iii) If there are differences in amount that is written, (both in words and figures) in the cheque.
- iv) If there is any over writing, cutting without alteration by the issuing person or authority.
- v) If the signatures of the person, issuing the cheque differs from his specimen signature.

Therefore, one must be careful enough while issuing and writing cheque.

Besides cheque, one can withdraw money from bank through. A.T.M. (Automatic Teller Machine) facilities of the bank. You might have seen A.T.M of different banks in different areas like Market place, Patrol Depot, Shopping complex, near street, institution etc. Do you have the experience of withdrawing money through A.T.M.

Today, one need not carry money for shopping, travelling, visiting religious place, educational tour etc. Because if you have money in the bank, you can avail this facility and it is open for twenty four hours. But it requires A.T.M. card and Pin number. Depositor has some advantages of using ATM. Like at the time of emergency you can withdraw the required amount immediately. There is no risk of carrying money and can withdraw money at any time of the day. Card holder can also come to know about the status of the account.

10.4 (ii) Post Office : Post offices also work as a saving and investment institution for the public of our country. It helps to in calculate the habit of saving among the people. Post offices are situated in nook and corner of the country. It is suited to all individuals living even in distant, remote and hilly areas. Any one can open an account in the post office with minimum deposit and depositor get pass book at the time of

opening the account in which details of transactions are recorded. Depositor can withdraw money from post office using a prescribed form which has to be submitted with the pass book. At the time of withdrawing money, officials of the post office verify the signature of the person with specimen signatures. If the signature differs from specimen signature, the payment is not made, until and unless any other account holder signs or witness under the jurisdiction of main post office in that area and also deposit money in main post office even if the account is in a sub-post-office. In case of withdrawing money, it can be done from the post office or sub-post office where the account was opened.

The different schemes of post office are- Post office cumulative Fine Deposit scheme. Five year Post office Recurring Deposit Accounts. National saving certificate, Kisan Vikash Patra, Post office Monthly Income scheme etc.

10.4 (iii) Life Insurance : Government of India has created life Insurance co-operation of India for public to make compulsory savings. It provides financial security to the policy holder, even if he dies, the surviving family get the benefits from insurance company. In this type of saving, a contract has been made by an individual to save certain amount money from his income for a fixed period in a compulsory manner. The contract is

termed as policy and the amount is termed as 'premium' which is paid in regular intervals for a specific number of year. After its expiry date, the policy holder gets back his money along with bonus earned on it.

Insurance co-operation has number of scheme.

10.5. Basis for Selection of Methods of Investment :

You have gained knowledge of various methods of savings and investment. Now the question is how and where we can invest money to ensure profit and safety. Some schemes ensure good profit, risk factor is higher, in some investment and the procedure is complicated. Because of this, one must know the details of these investment and take suggestions from the person having proper knowledge and experiences in this field. There are some principle one should follow before investing, savings or making selection of investment scheme. They are-

a) Safety in Principal : The main aim of investing money is to earn profit or income for this principal amount should be secured. So, in ascertaining safety of investment, one must determine the nature of enterprise, investigate its history, profit trend in the past as well as future prospect etc. It is better to invest in a number of schemes rather than in one, and in government bond or securities ensured maximum safty though profit may be less than private company.

b) Income yield or Rate of Return : One should give due consideration to those which can ensure adequate return. The return should be certain and regular. Usually the return on investment is in proportion to the risk factors i.e. higher yield may carry greater risk.

c) Ease of Management : It is also an important factor that should be considered before investing money. Some schemes are simple, easy to manage but some other needs long time, procedure is also not very simple. So, the investor has to consider this point and select suitable one for him.

d) Liquidity : It refers to the possibility of selling investment and getting money back at the time of requirement. Principle of liquidity is very important for

the investor, because his need for money is uncertain. Money invested in bank under saving account can be withdrawn without any difficulty. One can purchase shares of reputed companies, as selling these shares are easy. So, investment should be made in such a way that it is easily available at a particular time like, N.S.C, P.P.F etc.

Besides these, one should consider other factors like tax relief, bonus etc. Such schemes should be considered which are exempted from income tax. For example investing in National saving certificate, life insurance policy etc. are beneficial as these are exempted from income tax.

So, it is wise to consider all these factors before investing money.

Summary

- Saving means setting aside a part of money for future use.
- Saving helps in fulfilling needs, achieving goals of the family.
- Investment means keeping of savings to earn income or yield return.
- Bank, Post office, Insurance co-operation are institutions for savings and investment.
- Investment can be made by purchasing company's share, land, gold and silver etc.

EXERCISE

1. Very short answer question.

- a) Define savings and investment.
- b) Name two saving institutions.
- c) Mention two principles of investment.

- d) List out the types of cheque.
- e) Name three accounts of bank.
- f) What is A.T.M.?
- g) Name few schemes of investment in post office.

2. Short answer questions.

- a) Write in brief about importance of savings.
- b) What are the different schemes of insurance company?
- c) What are the reason of dishonoured cheque?
- d) Write differences of the following.
 - i) Savings and Investment.
 - ii) Order cheque and Bearer Cheque.
 - iii) Fixed deposit account and saving account.
 - iv) General Provident Fund and contributory Provident Fund.
- e) What are the process of opening a bank account?
- f) How will you withdraw money from bank?
- g) What is life insurance policy?
- h) Define units.
- i) Mention two advantages of buying life insurance policy.

3. Long answer questions.

- a) What are the importance of saving?
- b) What is investment? How it is different from savings?
- c) What are the different types of account in a bank? Mention the procedure of opening an account in a bank.
- d) What is cheque? What are the different types of cheque? Write in brief about crossed cheque.
- e) Write short notes on-
 - i) Life insurance
 - ii) Provident Fund
 - iii) Units.
 - iv) Post office.
 - v) Crossed cheque.
- f) Write about the basis for selection of method of investment.



Chapter - XI

CONSUMER PROTECTION AND EDUCATION

11. (i) INTRODUCTION

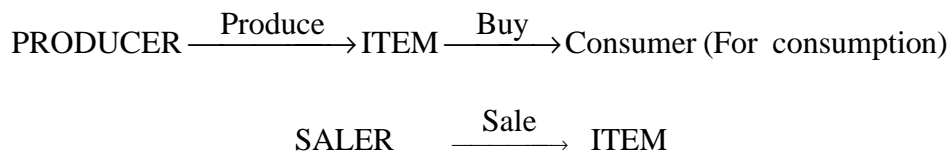
Everyday we use variety of items. In urban areas, most of these items are available in the market but in rural areas few items are produced at home for use and they sell some of them in the market. So those who purchase item from market for their use are called consumer, and who produce items are known as producer, who sell items in the market is called saler.

Consumer always purchase items and

product for higher prices. So consumer faces a lot of problem in the market. How can one overcome these problems?

After reading this chapter you will be able to –

- Define the concept of consumer
- Problems of consumer
- Rights of a consumer
- Responsibilities of consumers
- Consumer Education
- Consumer Protection Act
- Consumer Aid.



avails services for satisfying work and to lead a comfortable life. Can you list out some items which are essential for consumption?

Today, market is flooded with different brands of the same product or items. For example- different brands of biscuits are available in the market. How does one decide the brand of biscuit to buy? Sometimes prices of same commodity is different at different places. Why is it so? Some time people get inferior quality

11.(ii) MEANING AND CONCEPT OF CONSUMER : A consumer is a person or individual who purchases, uses or consumes items, services and products to satisfy wants. All people irrespective of age, sex, occupation are consumer. They consume and uses goods and services for satisfying their wants. Therefore consumer includes children, adults and elderly people in one way or other. They can demand for a commodity and services. Producer produces items

and services on the basis of demand of the consumer.

Consumer can be defined as a person who purchase, consume and use goods and service to satisfy his wants.

We are consumers. For example your needs likes dress, pen, pencil, notebook. books which you purchase from the market and go to school by bus by using the services of transport operation, so you are consumer. Like you, other people and the producer are also consumer. Because they demand or buy certain materials for their production purpose. In that case producer are consumer for those articles. Do, you understand the term consumer?

11.(ii) PROBLEMS OF CONSUMER

A consumer faces number of problems in the market ranging from variation in prices to malpractices followed by the shopkeepers. So it is important for every consumer to be aware of such problems and can be equipped with the necessary knowledge to safeguard oneself from being cheated.

Problems faced by the consumer are:

- i. Variation in prices
- ii. Non-availability of items
- iii. Adulteration
- iv. Defective weights and Measures.
- v. Misleading Advertisement
- vi. Misleading and Incomplete label.

vii. Quality of product

viii. Deceptine Packaging

ix. Malpractice adopted by the seller.

Variation In prices - Consumer used to face the problem of variation in prices of same commodity in different shop or places. In some cases, shopkeepers change the original prices which is printed on the price tags in order to increase the price by adding local taxes. In such situation, consumer is at a loss to know whether he is paying the right price or not.

Scarcity or non-availability of items:-

Sometimes common food stuffs are not available in the market. Even if it is available, it will cost more. Usually such scarcity are man-made or artificial, created by the supplier or shopkeeper to earn more profit. When these people come to know that there is possibility of price rise of a commodity, they withdraw the commodity from the market and continue to supply the commodity to the market as soon as the price is increased.

Some situation like flood, (which is very common in our state) the shopkeeper hoards stocks of essential items and sells them at higher price.

Adulteration : It is a common problem, faced by the consumer everyday. Today, consumer does not get pure commodities like ghee, milk, spices etc. even if he in prepared to pay higher prices. Such

items are sold in the market with a guarantee of purity but we found to be adulterated when used. Adulteration of yellow powder in turmeric powder, starch in milk and cereals, used tea leaves are generally sold in the market. Consumer does not have any knowledge to judge the purity of eatable. Therefore, he is compelled to buy adulterated items in ignorance. Apart from food items the problems of adulteration in these for other consumable goods.

Defective weight and measures:

In addition to adulteration, there is another problem faced by the consumer is defective weight or incorrect measurement of items. Have you ever checked the weights and measures used by the shopkeeper ?

If so, you will find the weights may have hollow space or may be dented, as a result consumer will get less than the actual amount. It is very common among the vegetable vendor using stones instead of proper weight. In case of weighing balance they may not use properly. A magnet may be stuck at the bottom of the pan or iron rings put on the string to make one side of the balance heavier than the other. But the weights used by the shopkeeper should have stamp of the department weights and measures. There is standard liquid measuring cups or jars bearing the stamp from the department of weights and measures. But shopkeeper

never use them, very often they use measuring Jugs that have a false or raise bottom to cheat their customer. Are you aware of these malpractices followed by sellers ?

Misleading Advertisement : Today, you will find that some product is produced by number of manufacturers. So the manufacturers take the help of advertisement to sell their products. Usually advertisement give details of quality of product, content of the product and method of use etc. Most of the manufacturers give an exaggerated account of his product to lure the consumer to buy these product. But after the product is purchased, the consumer realises that it does not match with what has been claimed in the advertisement. Such kind of advertisements are misleading which cheated the consumer badly.

Misleading and incomplete label : Labels are used on product to give information about the product, so that consumer can decide to select an item after going through the information written on the label. The label also help a consumer to take decisions on purchasing a particular product after comparing the quality and the prices of the items. Often manufacturer gives incomplete information on the label or imitate a popular brand of product in such a manner that consumer finds it

difficult to differentiate between the genuine and the imitation product. It is done to cheat the consumer.

Quality of the Product- It is another problem faced by the consumer in the market. Today lots of goods are available in the market, but all of them are not standardized and consumer are also not sure of the quality of the product for which they are spending their money. It is also not possible to judge the quality of all the product at household level. Consumers are often misled by the dealers. Only a few reliable dealers are willing to take responsibilities for the quality of the product. For example selling furniture made up of inferior quality wood and after polishing or covering with colourful fabric and then claiming as superior quality and selling at higher price etc.

Deceptive packaging : Nowadays large number of packaged items are available in the market. It is a very common sight as shops and market are loaded with packaged items. Packaging of product is done to protect them from any kind of damage, breakage, contamination, pilferage etc. But seller use it as a tool to attract consumer to increase their sale. The sale misguides the consumers by making the volume or size of the package appear much bigger than the inside contents. Have you seen package of chips, popcorn etc. ?

MALPRACTICES ADOPTED BY THE MANUFACTURERS.

Manufacturers or sellers adopted numerous way to lure consumer in selling their product. They implement misleading schemes like “free gift” or ‘heavy discounts’ etc. to attract consumer easily. They initially inflated or raised the prices of the commodity and then a discount of 20% to 50% is offered. But in reality, there is no change in prices. Sometimes the producers imitates the colour, shape and name of popular brand available in the market to cheat consumer.

For example: Manufacturer of an article say ‘A’ has tried to cheat by using the bottle of same colour, size, brand name as used by Manufacture “B”. Because the product ‘B’ is a popular brand.

11.3. RIGHTS OF CONSUMERS

In order to protect consumer to avoid such kind of cheating which is mentioned above, consumer should know their rights. They are :-

i. Rights to safety - This is the first right, that every, consumer should have. which helps to safeguard against items, products, processes and services which are hazardous to health. They can demand or ban the sale of goods injurious to health like - harmful food products, medicines and electric appliances without safety devices. Rights to be in force - consumer has a right to

demand or collect informations about the quality, prices, purity, expiry, weights etc. of any product. These informations will help the consumer to safeguard the interest of them while choosing an items or product.

ii) Right to choose :

Today, same article, produced by different producer or manufacturer and alternatives are also available in the market. Consumer has the right to choose the products of various producers and purchase one which is suitable for him.

iii) Right to be heard:- This gives the consumers the right to bring notice of the seller or manufacturer about any deficit found in goods purchased by him. In case they do not pay any attention to the consumers complaint, consumer can approach the concerned authorities. But, if the manufacturers pay proper attention to the consumers, then it will help them to improve the quality of their product.

iv) Right to redressal : It indicates the right to fair settlement and compensation for faulty goods and services.

v) Rights to consumer education :

Consumer has the right to acquire knowledge and informations about the product which will help them in proper selection of goods and services.

11.4. Responsibilities of Consumer

Consumer has certain responsibilities to hear and he should be aware of these

duties, so that he can make his purchase judiciously. These duties are:-

a. Seeking appropriate informations :

It is consumer's responsibility to seek information about a product before purchasing it. He must read and gain information from literature given by manufactures or retailer or other sources. With the help of their informations, he can evaluate the product and take his decision.

b. Checking weight and measures before making purchasers :

Usually, seller often cheat the consumer by using unfair weights and measures. Consumer should ensure that he is purchasing a product with right weights and measures. He should check the weight and balance and remain vigilant, when the seller is measuring or weighing the product.

c) Reading the label carefully- When a consumer purchase packaged food, it is his duty to read the label of the product. Label should contain or have complete informations about the product. If it is incomplete, or informations are exaggerated then he should bring notice to the seller or producer.

d) Beware of false and attractive advertisement. Producer or seller use attractive advertisement to increase their sell and earn profit. Usually these products are not much attractive or not upto that quality as shown in the advertisement by sellers. So it is the duty

of the consumer not to mislead by the advertisement and go through them properly before making the purchase.

e) Aware of misleading scheme :

Today, every producer or seller use certain technique or introduce new scheme to increase their sales like, one soap free if you buy particular brand of toothpaste, free one mug if you buy one packet of milk powder of certain brand etc. Often a consumer is lured by such schemes and buy the product even when it is not necessary, but for getting one item free. The fact is that, the seller increases the price of the product to get the actual price which is included in the scheme. So it is the duty of the consumers to avoid these scheme.

f) Procuring bill, cash receipt warranty etc.

Usually, common donot ask for a bill on cash receipt at the time of purchase. Thus avoid the payment of sales tax. Later on, if the product comes out to be defective, he becomes helpless. So it is the duty of the consumer to collect bill, cash receipt and warranty card etc. at the time of purchase. It will help the consumer to go to consumer court for the redressal of his grievances.

g) Purchasing standardised product :

At the age of globalization, market is flooded with varieties of product. Some of them are standardised and some are not. But consumer should always buy

standardised product specially while buying the durable and electronic goods. Thus it is the duty of the consumer to see the standardised marks like 'ISI, F.P.O. AGMARK' on packaged items.

h) Reporting malpractices, seek redressal in case of dissatisfaction.

It is the responsibility of the consumer for reporting malpractice and voicing complaints against the seller and manufacturers. It is the duty to demand compensation for the loss he suffered on the purchase of faulty goods or services.

i) Knowledge of consumer rights:

It is known that the seller is trying to cheat the consumer to earn maximum profits. So the duty of the consumer is to be aware of his rights and if he is cheated by a seller or manufacturer while making purchase of goods, then he should not remain silent spectator, but also must lodge a complaint.

10.5. Consumer Education :

Now you know the problems faced by consumer in the market. If he is not careful enough in buying a particular item, he gets cheated easily. So consumer education is important. It helps the consumer in many ways in protecting himself from the malpractices of the seller and in making judicious purchases.

10.5. (a) The advantage of consumer education are :

a. This education helps a consumer in

making proper purchase by developing the ability to decide and select items intelligently.

b. Consumer education familiarises the consumer with problems which he faces while making purchases. This education help the consumer to inculcate the logical view point.

c. It provides the consumer full informations of marketing a particular commodity, from where to buy good quality product at reasonable prices, the shop providing additional facilities etc.

d. It helps consumer to make appropriate decision in purchasing as well as availing facilities or services and not to mislead by seller or advertisement.

e. Consumer education familiarises the consumer with the various standardisation marks and their marketing like ISI, F.P.O. Silk mark, wool Mark etc.

f. Another important help of consumer education is that– it familiarises the consumer about the various acts enacted by the government from time to time.

So in these days, consumer education help the consumer in getting maximum satisfaction by proper utilization of money and lead a comfortable life with better standard of living.

10.5 (b) Consumer Protection Act:

Now lets see what steps has been taken by government to protect consumer from exploitation. Indian Government has

formulated various Acts and laws to protect the consumer and established consumer court at every district. These acts are :-

Prevention of food Adulteration Act, Grading and Marketing Act 1937, Weights and Measure Act- 1939, Drugs and cosmetic Act, Consumer Protection Act 1986 etc.

Lets see what iconsumer Protection Act 1986 is–

Consumer Protection Act 1986 : This act is passed in 1986 by Government of India which is based on the principle of ‘Self Help’. This indicates– consumers should help themselves to get protected against exploitative and unfair practices. This act gives rights to the consumer to place complains to concerned authority, if they face problem after purchasing, using commodity and services. Consumer can seek redressal and also claim compensation for any loss or injury suffered on account of the negligence of the seller.

The salient features of this Act are:-

a. Application of the Act- This Act is applied for both ‘goods’ and services. Goods, which is brought from manufactures or sellers and services are those, for which payments are made like. transport, telephones, electricity etc.

b. Redressal Machinery : Under

this Act, a Judicial system has been setup to provide relief to the consumer. This machinery consist of consumer forum, setup at various levels. Like in district level, at state level (it is called as state commission), in national level, which is known as National forum. Consumer can lodge his complain in these forum.

In case of District court, it is headed by district session judge and assisted by two members. At state level, it is headed by a judge of High court and assisted by two more members and at national level, it is headed by a Judge of supreme court and assisted by four members. District court can dealt upto 20 lakhs corporation value.

State commission may dealt upto Rs. 1 crore and National commission has jurisdiction for entertaining cases of high value and appeals coming up against orders of state commission. Supreme court is the final deciding authority.

Have you heard about such news of compensation? Or have you gone through such news in newspaper? If you face such problem, you can also approach to these forum or court.

Expeditious Disposal :

This act has provision to settle all grievances within 90 days from the date of notice received by the opposite party. This is applicable to those which do not require any laboratory analysis or tests.

But in case of laboratory testing, this is extended to five months. This is done to prevent consumer from long waiting for justice.

Advisory Bodies : Redressal Advisory bodies also known as consumer protection council and central consumer protection council has been set up at state and national level. This council helps and advise consumer to exercise their rights.

No court fee- court fee is not required if complaints are lodge under consumer protection act. So poor consumer can seek redressal without any additional expenditure .

Redressal Procedure :

It is true that even if consumer's complaint is genuine or useless, he files the complaint in proper shape, address and submit to appropriate authority, along with documents yet he cannot expect justice. So it is important to keep certain points in mind.

On the basis of the Consumer Protection Act 1986. –

A consumer, consumer organization, state, central government can lodged a complain. In case of more than one, a joint complaint, can also be lodged.

Secondly the level of court where a complaint is to be lodged is determined by the amount of compensation

Thirdly, complaint can be lodged personally or through post.

Fourthly the dependent should be informed about the complaint by registered post lodging the complaint.

Fifthly, the complainant, should ensure that the complaint is genuine before filling. Incumbent like bill, cash receipt, guarantee card should be filled and attached along with the complain to prove its validity.

Lastly, the complaint form should be filled up with all details of complaint, loss and compensation demand.

National Award for consumer protection

In order to motivate youth to participate in different consumer

protection programme, Government of India has introduced national award for consumer protection. Any youth belonging to the age group of 15 to 35 years, engaged in such consumer protection related activities is able to receive this award. This award is given annually and carry a prize amount of Rs. 10000/-, 15000/- and 20000/- along with a letter of commendation.

World consumer Right day :

Consumer Right Day is also observed on 15th march every year throughout the world. It is celebrated to make consumer aware of their rights. At first, it was celebrated in 1962 by American President with four rights. Later the number of right has increased to eight.

SUMMARY	
<ul style="list-style-type: none"> ● A consumer is one who buy goods, services to satisfy wants. ● Consumer faces a number of problems while maleing purchases. ● Consumer have nights like Right to safety, to be informed to choose, to be heard, to consumer educations, to redessal. etc. ● Apart from rights, there are certain duties of consumers he should be aware of his duties, make purchases judiciously and should not misure his nights. ● Consumer education helps the consumer in many ways in protecting himself from the malpractices of the seller as well as help in making judicious purchases. ● Consumer protection Act was passed to salegurd consumers of all over the contry. ● Consumer aids are anything that help and guide the consumer in selecting a product. 	

EXERCISE**1. Very short answer question.**

- a) Who is a consumer?
- b) Mention any two problems face by consumer.
- c) State two rightys of consumer
- d) Name two consumer aids.
- e) Nametwo food items which bear ISI mark.
- f) Write full name of F.P.O.

2. Short answer questions.

- a) Define consumer. State any two common problem face by the consumer.
- b) Mention any three duties of consumer.
- c) What are the uses of consumer dducation.
- d) What do you understand by ISI? Name two product carrying ISI mark.
- e) What do you understand by standardisation marks. Discuss its inportance.
- f) What is the effect of advertisement on consumer's buying?

3. Long answer questions.

- a) Who is consumer ? What are the problems consumer faces in the market?
- b) What are the rights and responsibilities of consumer?
- c) What is consumer education? How it helps consumer in making purchase of items?
- d) What is lebel? Give an account of the requisite of an ideal label.
- e) What is consumer protection Act? Discuss the salient feature of consumer protection Act 1986



CHAPTER-XII

UNIT	CLOTHING AND ITS RELATION TO PERSONALITY
IV	

12. Introduction

Clothes or dress is an integral part of an individual and his personality. It reflect the personality of the wearer and affect his physical, mental, social and emotional abilities. Clothing levels, beauty and enhance the appearance of an individual as well as provide comfort to him. Don't you want to wear such dress which can level beauty to you and fell comfort ?

'A thing of beauty is joy forever,' is known to all said by the great poet 'Keats'. Yes it is, all human being appreciate beautiful things, like to wear beautiful dress which contributes self confidence, self acceptance, self respect etc. So, in this chapter we will discuss all these and you will be able to know the following.

- a. Importance of clothing.
- b. Understand the various element of art.
- c. Principles of design.
- d. Understand the importance of element of art and principles of design for beauty and functionalism in clothing.

12.1. IMPORTANCE OF CLOTHING : Clothing plays an important role in the life of all individuals. Apart from making dress, clothes are used for variety of purposes in home. For example like table linen- table cover, chair back, mats, napkins, household linen- towel, duster, curtain, bed linen like bed sheets, bed cover, pillow cover etc. All these are used in every household, so, clothing is one of the most, important aspect

Clothing performs following functions.

- i. Gives personal protection.
- ii. Provide comfort.
- iii. Enhance beauty of an individual
- iv. Mental satisfaction
- v. Social status or identification of man
- vi. Self expression
- vii. Creative
- viii. Variety in life.

i. Personal Protection : The basic requirement of clothing is to provide personal protection. It protect us from rain, sun, wind and cold winters. And also provide protection against harmful

and poisonous insects and plants.

ii. Comfort : Clothing provide comfort to an individual which make him feel the sense of well being. When a person wear comfortable dress, he feels secure and finds easy to adjust himself with others. So one should always wear such clothing which provides comfort and promote physical wellbeing.

iii. Add beauty : Dresses of an individual always add beauty to him, if the dress is properly designed, well stitched and according to the height, size, goes with skin complexion of the wearer. Physical appearance is an important aspect of ones personality. Proper use of clothes can highlight the attractive body features and subdue undesirable ones. Hence proper dressing enhance the natural beauty of a person.

iv. Mental satisfaction : Clothing also give mental satisfaction to individual and it has deep influence on human behaviour. When an individual adolescent feels happy, able to draw attention of the other or adjust well with them. On the other hand, if he is not dressed up well or according to the latest fashion he develop inferior feeling which will prevent him to adjust with his friend. Later, this inferiority complex transform itself into problem behaviour.

Proper clothing inculcates a feeling of self-confidence, self control which are

essential for all-around personality development.

v. Social status or identification of man : Social status of an individual is revealed through clothing worn by him. It helps to recognise who he/she is. For example : One can easily identify person like nurse, doctors, advocates, soldiers as they have distinctives uniform which define their social role. Dressing also reflects the nationality, culture of the wearer.

vi. Self expression : One can express one's self through clothing like leather jacket express toughness, need for protection against harsh weather.

Satin material dress express mild behaviour needed for occasion, for beauty and femininity.

It also indicate acceptance or rebellion against a person or group. Adolescent sometimes select clothing that they know, is not approved by others specially the elders of the family to express rebellion nature. On the other hand, some adolescent sometimes wear such dress which he knows that- it will approve by all elderly person of his family to express his feelings. Have you ever done this ?

vii. Creativity : Clothing construction and dressdesigning are itself a creative ort. Here, elements of art, principle of design, artistic abilities are used, which

can be channelised to create fashion and design. Have you ever tried to draw design or designed your own dress ? Latest fashioned dress can be created by utilising creative abilities. Hence clothing give scope to individual to become creative person.

viii. Variety in life : Clothing also add variety to life by wiping out boredom or monotony from our life. Because, one cannot wear same colour, same designed, same type of dress material for a long period. He has to change his dress from time to time, occasion to occasion, work to work etc. As a result he has to change his dress and need varied dresses. Hence we can say that clothing provides variety and warm feeling to our life.

12.2. ELEMENTS OF ARTS :

Now we can see that how a beautiful designed dress material adds variety to our life and enhance our beauty. In order to draw a design one must know the basic elements of it. These basic element are used in such a manner, that can help to create a beautiful design and enhance the beauty of the dress.

There are four basic elements of art- They are line, form, colours, texture.

a) Line : Lines are the first element in drawing a design. It plays an important role in designing and making a dress. With the help of line, a dress can be

made beautiful, because a number of natural lines are formed at seam line, shoulder line, breast line, arm hole line, neck line, collar, cuff line etc. when different pieces of clothes are joined or stitched together in of dress. One of the feature of line is that- it provides movement by creating desirable eye movement or subdued. So, proper use of line gives an illusion of length or height but horizontal lines gives the illusion of breadth. Hence short and fat or obese person appears to be tall or thin by the use of vertical lines and a tall person appears to be short by use of horizontal lines. In this way other lines like diagonal, curved line can be sued to give different illusion.

b) Shape: Shape is formed by combination of different lines. In stitching a dress, shape of neck yoke, collar, pocket etc. are formed by joining different lines. These should be used in such a manner, that can subdue defects of the body figure and supplement the personality by highlighting the attractive body feature.

Neckline : It helps in highlighting the special features of the face, neck and also subduing the defects of the face, neck and shoulder. Different shapes of neckline gives different look to face and neck. 'V' shape neckline gives a slandering look to face, the square shape neck, line gives broaden look to the face

and shoulder, the round shape 'neck line' gives an illusion of roundness.

c) Texture : It is an element of cut. It means surface quality of an object or material. It may be smooth or coarse, hard or soft, thick or fine, dull or glossy etc. which can be felt by touching them. Do you have the same feelings when you touch woollen and silk material. You might have noticed that silk has a smooth surface whereas wool possesses a coarse surface. These differences in surface quality of the cloth are due to fibre, weave, finishes given to the cloth. There are three types of surfaces on clothes like.

- a. Coarse and thick cloth
- b. Medium and soft cloth
- c. Fine, smooth and glossy cloth

These differences in texture of the cloth have varied effects. Glossy texture reflects light and gives an illusion of increased size. On the other hand, dull texture absorbs light and reduces the size etc.

Usually fine, soft and medium textured clothing materials are used in dress and in extreme cold climate, thick and coarse clothes are used and medium textured materials are used to make school uniforms, towels and business clothing etc.

d) Colour : It is an important element of art used in dress which attracts easily. Colours reflect the interest, personality of the person and help in enhancing the personality. Right choice of colours in the

dress gives a feeling of self-confidence.

CHARACTERISTIC OF COLOURS

According to colour theorists, there are three characteristics of colours

- a. Hue
- b. Value
- c. Intensity

a) Hue- It means the name of the colours like blue, red etc.

b) Value- It means lightness and darkness of any colour.

It can be done by using colours either white or black to the main colour. When white is added to a prime colour to make it light, it is called 'tint', whereas, when black is used, then it is called 'shades'.

c) Intensity- Brightness and dullness in colour is known as intensity. Bright colour has more intensity than dull colours. Intensity of a colour can be made adding supplementary colours.

Types of colours- You have studied about Primary, Secondary and Intermediate colour and its different scheme in the previous lesson. Do you remember these? A review on these colours will be of immense help to you.

Colours are classified on the basis of composition and effect:-

a. Classification on the basis of composition.

Colours are classified into three

category on the basis of its compositions-

- i) Primary colours
- ii) Secondary colours
- iii) Intermediate colours.

i) Primary Colours: Red, yellow, blue are primary colours. All other colours are derived from primary colours.

ii) Secondary Colours: These colours are obtained by mixing two primary colours in right or equal amount like green is obtained from blue and yellow colours. There are three secondary

- a. Warm Colour
- b. Cool Colour

a. Warm colour : Bright colours which gives an effect of warmth are termed as warm colour. These colours have inspiring and cheerful effect and can stimulate a person. Warm colour has a dominance of red, yellow or orange and give illusion of nearness and vastness.

b. Cool colour : These colours are opposite to warm colours as they give a feeling of coolness, lend peace to a

PRIMARY COLOUR	SECONDARY COLOUR	INTERMEDIATE COLOUR
Red	Red } orange Yellow }	Red [orange Purple
Yellow	Blue } Green Yellow }	Black [Blue Blue Purple
Blue	Red } Purple Blue }	Yellow [Yellow Green Yellow purple

colours– Orange, Green and Purple.

iii) Intermediate Colours : These are derived from primary and secondary colours. When one primary colours mixed with adjacent colour then intermediate colour is formed. There are six intermediate colours.

Classification of colours on the basis of Effect : Colours are also classified into two groups on the basis of its effect.

person and are also gloomy. Cool colours have dominance of blue, green or purple and give illusion of firmness and smallness

These two qualities of colours are helpful for dress designing in many ways.

Colour scheme : It is a scheme where different shades or different colours of the colour wheels are used together. Here, colours are used in a planned manner to

make an object attractive. There are different types of colour scheme -

- a. Monochromatic colour scheme
- b. Analogous colour scheme
- c. Complementary colour scheme
- d. Double complementary colour scheme.
- e. Split colour scheme
- f. Triad colour scheme

a. Monochromatic colour scheme : In this scheme only one colour is selected and used with its different values and intensities . For example if red is selected as main colour, then pink, light pink maroon are used in this scheme.

b. Analogous colour scheme : It is formed with the neighbouring colour of the colour wheel to create desired chaining effect. e.g. red, red purple and red orange form an analogous colour scheme. This scheme may have three to five colours.

c. Complementary colour scheme : In this scheme, colours which are opposite to each other on the colour wheel are used. This scheme is lively and vibrant in which one warm and one cool colours used together like red and green, blue and Orange etc. for e.g. green is the background colour of a material or saree with red borders or print on the material or saree.

d. Double complementary colour scheme: In this scheme two secondary colours are used with two opposite

primary colours. But one must be careful enough in selecting intensities of all the four colours. All the four colours should not be of same intensities or values and there should be one colour which dominant the scheme.

e. Split complementary colour scheme: In this scheme one colour is used with two colours on either side of its complementary colour.

For example:- Red with blue green and yellow green, yellow with red purple and blue purple etc.

f. Triad colour scheme : In this scheme, three colours are used which is equidistant to each other on the colour wheel. For example, green, orange, purple, yellow green, blue purple and red orange.

There are the different colour scheme used in dress material and the success of using colour scheme on dress depends on the suitability of the wearer, proper combination of intensities and value of different colours etc.

12.3. Factors affecting choice of colours in clothing

Now, you have learnt about different colours, their intensities, values and the colour scheme. With the knowledge of colour scheme, you will be able to select proper colour for your dress. In addition to these, there are certain factors which you should consider while selecting colourful, attractive dress for you.

These factors are - Season and time, age and sex, size and shape of the body, colour of the skin, occasion, fashion and personality of the wearer.

a. Season and time - It is one of the important factor that has great influence on colour of the dress. Generally in summer, light and cool colours and in winter dark and warm colour are preferred. Because cool colours like blue, green, pink and light yellow gives a feeling of coolness, whereas warm colours like red, orange, red purple gives a feeling of warmth. Depending on season, the colour should be selected to get good effect. Likewise dark, warm, bright colours are suitable for late evening, at night which add beauty to the wearer.

b. Age and Sex - Age and sex are also important factor in choosing colour for dress. For e.g. bright colours are suitable for children and adolescent whereas sober, light colours are for elderly people as these colours have calm and peaceful effect. Today, though all the colours are used by both boys and girls. Yet certain colour suit more to both the sexes.

c. Size and shape of the body - Colours always affect the size and shape of the body. Warm colours give the illusion of increasing size whereas cool colours give the illusion of reducing size.

Therefore one has to consider this point while choosing colour of the dress. for e.g. for a thin, slender person, it is better to select dark, bright, warm colour dress which give healthy look and for obese, large, bulky figured person, light, cool colours are suitable.

d. Colour of the skin- Colour of skin is important in the choice of the colour of a dress. Dark colour looks better on white complexion whereas cool and sober colour for fair complexion. So to get good result or effect one should choose colour for dress according to his or her complexion. Like blue, pink, light purple for fair complexioned people whereas yellow, brown suits more to white complexioned person.

e. Occasion- The colour of the dress should always goes well with the occasion. E.g. Dark, vibrant colours are suitable for parties, marriage, for different festivals to express cheerful, joy, happiness. But in case of serious and sad occasions light, cool colours like blue, white, light green are suitable.

On special occasion and in certain profession, some particular colours are used. For example black and white are used in morning, by doctors, nurse, advocates and Policeman uses distinctive coloured uniform. Formal social occasions demand the use of light, dull medium colour in dressing

Fashion- It is another important factor influence on selection or choosing colour of dress. Colours of the dress keep on changing with the change in fashion. Young man, woman specially adolescent always prefer such colours which are in fashion at the time of selection. They like to go with the fashion trend and feel happy to wear colourful and fashionable dress.

Personality - Colour of the dress always reflect the personality of the wearer and it is the index of individual's interest. While selecting dress, one should keep in mind that colour should be such, which can enhance the personality of the wearer. Some people like bright colours and some other like dull, sober colours. Colour express varied moods, such as red, yellow, light orange indicate cheerfulness, enthusiasm and stimulating. So the person who prefer these colours they used to be of such personalities.

12.4. Types of Designs : All these elements of arts are blended in such a manner that can create a beautiful design. Designs are of two types:-

- a. Structural design
- b. Decorative design

a. Structural designs :- This design is formed by joining or stitching together different pieces like collar, yoke, pleats, cuff etc.

b. Decorative Design : It is surface

enrichment that are added after the basic structure of the dress is made. It is done either by putting fancy button, embroidery with coloured thread, patch work or frill etc.

12.5. Principles of design : In order to draw design, elements of arts are used on the basis of certain principles. These principles are also use to make an attractive, beautiful dress. Therefore, the knowledge of basic principle of art is essential. These principles are -

- a. Balance
- b. Proportion
- c. Harmony
- d. Emphasis
- e. Rhythm

a. Balance : It refers to pose, equilibrium, steadiness, security and it can be achieved by grouping lines, shapes, colours in such a way that the attraction on both sides of the centre is equal. Balance may be achieved in two ways:-

i. Formal balance : It is also known as symmetrical as the structure, decorations, accessories are identical on both sides from the centre of the dress. It can be done easily but sometimes it leads to monotony to the dress.

ii. Informal balance : When the structure, decoration and accessories are different on both sides from the centre of the dress, then it is called informal

balance. In this balance attraction of the dress on both sides are created by using different accessories. Pleats, dark colour button, embroidery etc. are used to create balance. For e.g.- a small amount of bright colour placed near the centre balances a similar amount of dull colour placed away from the center.

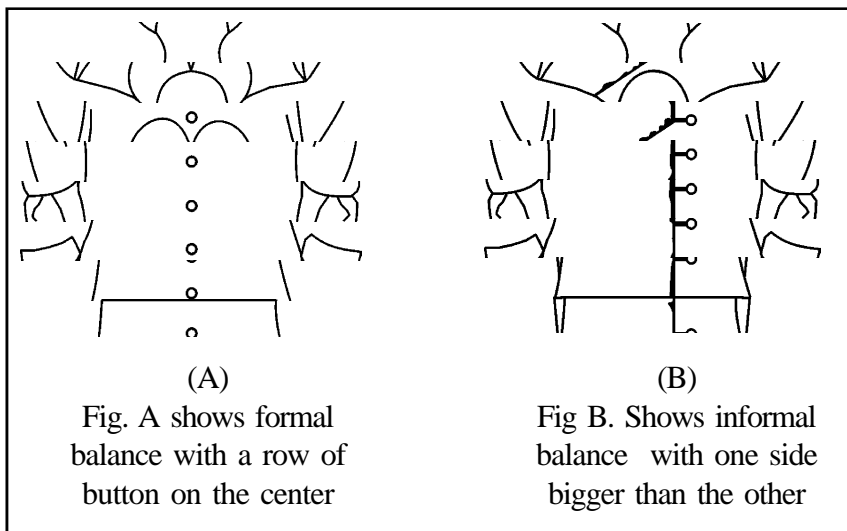
proportion.

Harmony : It means a relationship of different proportion of a dress and it can be achieved through judicious use of colour, line, shape and texture to give a feeling of oneness. The lines in the garment construction and all accessories must be consistent. They should relate to

each other. For example there should be unity in texture, like silk blouse goes with a silk sarees, a crisp summer salwar suit can harmonise with silver jewellery.

Emphasis : It is the principle which is used by designer

used to create interest in a design by attracting more attention to one part than the other parts. This portion is the center of interest of the dress and are called as a point of emphasis. This can be laid by buttons, belt, lace, patch work etc. of contrast colour on base colour of the dress. Point of emphasis used to be around the neck, or on the waist line of a dress. Emphasis always enhances the grace of the wearer.



Proportion :- It is the relationship in a design of one part to other and all the parts to the whole. According to this principle, different parts of the dress should be in proper proportion like your, collar, button, pockets etc. should be in proportion to the size of the dress. E.g.: small pockets and buttons would look more appropriate on a small frock. In case of colour of the dress, if different colours are used, it should be in right

Rhythm- It is an important principle of art, which is created by repeated use of that element-line. Rhythm refers to a feeling of movement. If there is rhythm in a design, the eye would move easily from one part to the other. Rhythm can be achieved through repetition, radiation, gradation etc. Repetition of lines, colours, shape, etc. on a dress in helps uninterrupted eye movement.

Rhythm can also be created by the uses of radiated lines. These lines are

created by gathers and can be seen around circular yoke, arm and skirt.

It can also be created by gradual change in colours, lines, shapes etc. For example:- In case of colour, gradual change from pink to red to maroon in a dress produce rhythm.

So all these principles of design can help in proper selection of dress which can give satisfaction of possessing beautiful dress.

SUMMARY

- One of the basic needs of human being is clothing, as it performs various functions like providing physical protections, social functions, mental satisfaction etc. Clothing has relation with the personality of an individual.
- The beauty of a dress always depends on application of elements of art like-line, form, colour and texture.
- Age, sex, season, time, shape of the body are always influence in choosing colours of the dress.
- Principles of design like balance, proportion, harmony, rhythm, emphasis are always considered while selecting a garment.

QUESTIONS**A. Very short Answer Questions:-**

- i. Name two primary colours.
- ii. Write two names of secondary colours.
- iii. Mention any two factors affecting colour choice in cloth
- iv. Name any two colour schemes.
- v. Two principles of design
- vi. Two types of balance
- vii. Two ways of creating rhythm.

B. Short Answer Questions

- i. Write any two functions of clothing.
- ii. What are the elements of arts? Write any one of them
- iii. What is intermediate colours? Give one example of it?
- iv. What is colour scheme? Write any of them?
- v. What is balance? How will you classify them?
- vi. Define Rhythm? How will you achieve rhythm in a dress ?
- vii. What is harmony? How will you achieve harmony is a dress?

C. LONG ANSWER QUESTION:-

- i. What are the functions of clothing?
- ii. Mention the elements of art. Discuss their importance on cloth?
- iii. What are the factors you must consider while choosing colour of dress?
- iv. What is texture? Name the different type of textures of cloth. What type of textured material you are going to select for extreme cold climate?
- v. What are the principles of design in construction of clothing? How will you emphasis particular portion of a dress?
- vi. What are the points you will keep in mind while selecting dress for a tall, thin girl.?



CHAPTER - XIII

FACTORS INFLUENCE ON SELECTION OF CLOTHING

13. Introduction :

The personality and taste of an individual can be judged from his dress. In the previous chapter, you have read about elements of art and its application on cloth on the basis of principle of design. Suppose your friend has lots of clothes but she finds it difficult to select cloth while going somewhere. Although she has lots of clothes yet they may not be appropriate with time and occasions or not goes well with her complexion. Therefore, one should have knowledge about selection of cloth.

In this chapter, all these points are covered, and you will be able to know the following after going through the chapter.

Factors to be considered while selecting clothes :-

- a. Personality
- b. Age and Season
- c. Occupation
- d. Figure, occasion and Fashion.

13.1. Personality : One must be careful enough while selecting clothes for himself, so that he can get desired cloth

by spending his money. The taste, value, culture of an individual is expanded through the clothes he wears.

For example People who are introvert prefers light and sober colours where as extroverts like bright, and warm clothes, Proper dress always helps an individual in building his self-confidence which is essential for proper development of personality.

13.2. Age : Age is another important factor one has to consider while selecting clothing for a person.

For example- infant's clothes, should be loose and comfortable as the infant sleeps most of the time. Their cloth should be soft and absorbable (preferably cotton) and should not irritate the soft skin of the infant. Moreover it should be easily washable, strong and dries quickly. In case of toddlers, as they are in growing stage, they need clothes which are strong, durable as well as easily washable. These clothing should not be too loose or large in size which may cause inconvenience in playing and too tight clothing are not suitable for growth. In case of pre-school children, their

dresses should be easy to put on or take off with little or no help from others. This experience of put on and take off dress make the child independent and self confident. While in elementary stage, children spend most of their time by playing in group, so durable clothing must be provided which will withstand the strain of vigorous use. They prefer such dress which is accepted by their groups.

For these reason, clothing should be selected on the basis of the age of the wearer.

13.3. Season: We all know that the climate changes from one season to another in a year. So one needs different clothing for different season as clothes protect us from heat, cold and help us in maintaining body temperature in adverse circumstances. Knowledge of selecting the clothes according to the climate is essential.

For example cool, soft and light coloured, preferably cotton, linen are suitable for summer season, whereas bright, warm, thick cloth like woollen, silk are suitable for winter season. Synthetic material such as nylon are non absorbent, easily washable, dries up quickly and wrinkle free and are suitable for rainy season.

13.4. Occupation- Another important factor is occupation. Clothing varies from

profession to profession.

For example the dress of a physical instructor should be loose and comfortable so that he may find it easy to do his job. Whereas a farmer need strong durable clothes and a sports person need dress made up of durable absorbent material. The dress of industrial worker, army men, police personnel, mine worker's should be made up of strong, thick, durable materials.

13.5. Physical structure/Figure : Each and every person has unique figure. One may be tall or short, fat or lean and thin etc. While selecting cloth, it should go well with the figure of the wearer. Whatever the body shape is proper selection of clothes can make one look different. The flaws of figure can be camouflaged and salient features can be highlighted by judicious use of colours and lines.

For example - A short person who intended to look tall and thin should wear plain, single colour with vertical lines and designs. Similarly, those who wish to look shorter and fat should wear horizontal design and with two or more colored dress. E.g.- if the salwar is of light colour, the kurta should be of dark colour with horizontal lines. Frills, pipings may be used in the dress to look fat. For a tall, fat lady, clothes with diagonal

lines are suitable and she should not wear very light or loose clothes. So dress or clothing should be selected according to the figure of an individual.

13.6. OCCASION :

Selection of clothes should be done according to the occasion. If it is not done in accordance with the occasion and place, it would look odd. It is better to select simple, durable material for day to day wear and in case of marriage, parties, celebrations novel fabrics with new style, brocade, silk material with bright colours can be chosen. In mourning or death, simple clothes of black, white or dull colours are used and for playing flexible, comfortable, easily washable and sweat absorbing clothes

should be selected.

13.7. Fashion

Fashion means current popular style specially in dress people like to wear them as they keep pace with time. It may be in colour, design, shape of a dress and keep changing from time to time. Most of the people like to possess fashionable clothing. One but one should have knowledge about latest innovation in clothing, should, consider the price care and maintenance required etc. Now-a-days, every one wants to wear clothing with prevailing fashion.

Hence it is seen that selection of clothes depends on a number of factors. Right choices of clothes always enhance the beauty and comfort of an individual.

SUMMARY

- Selection of clothing always done on the basis of the personality of the wearer.
- Age is another important factor one needs to consider while selecting clothing for individual.
- Season always determine the type of fabric use for dress to deal with the climatic condition.
- The clothing should be purchased keeping in mind the purpose for which it is being used.
- The design, colour of the clothing should go well with the body structure or figure of an individual.
- Fashionable clothing are attractive but may not suit to everyone.

QUESTIONS :**i. Very short answer question :-**

1. Name the colour of a material suitable for winter season?
2. List out the colour suitable for sunny day?
3. What type of design is suitable for tall lean and thin person.
4. State two qualities that make cotton clothes suitable for summer?
5. Mention any two qualities of infant clothing?

ii. SHORT ANSWER QUESTIONS:

1. What are the points you are going to consider while selecting clothing for infants?
2. Write four points you will keep in mind while selecting dress for three years old child.
3. What type of material would you select for a player?
4. Why wool and silk materials are selected for winter use?

iii. LONG ANSWER QUESTIONS

1. What are the factors one has to consider while selecting clothes for an adolescent girl?
2. What points would you keep in mind while selecting clothes for children of different age group?
3. Why different designed and coloured materials are selected for different occasions?
4. Make a list of factors affecting in selection of clothes explain any two.



CHAPTER - XIV

PURCHASE OF FABRICS

14. Introduction : Today, due to advancement of science and technology, new development in fibre science, fabric construction, dyeing and finishing have taken place. As a result, market is flooded with varieties of fabrics like material of synthetic fibres, blends of man made and natural fibres, also varieties of dyes both natural and chemical dyes and use of different methods of finishing on material are available which have brought a revolution in this field.

Therefore basic knowledge of all these are essential to choose the fabric. You have read about different types of fabric or fibre, yarn making, weaving, finishing of fabric etc. in the class XI.

In this chapter you will study the following and will be able to know. –

- Factors to be considered while selecting and purchasing material.
- Factors influence on determining the quality of cloth.
- From where to purchase.

14.1. Factors : Factors to be considered while making purchase of fabric.

There are many factors, one has to consider while purchasing cloth for a family. Do you know what are the

factors your parents consider while purchasing clothes for your family? These factors are :-

a) Purpose :

It is the first point one should consider while buying clothes. The clothes may be used for dress or for bed linen, table linen, furnishing of room etc. If it is used for making dress then it must be seen whether it is used for day to day or occasional purpose. Because all type of clothes are not suitable for all occasions.

For example:- Heavy silk material, satin clothes are not suitable for daily wear as daily wear clothes require daily washing, heavy silk, satin material can't be washed daily. Similarly sheer material are not desirable for the clothes of children of playful age. Strong material, durable, easily washable material are suitable for daily wear. Material for table linen, household linen like curtain, cushion, bed linen should be of strong, firm, durable material. Hence one should consider this point while buying cloth.

b) Price :

The price of the cloth is another factor, which must be considered at the

time of purchase. The price of cloths depends on the quality requirement of the material. Thus, before purchasing clothes certain factors should be taken into account such as the length of material, for which it is being used, quality, care and maintenance cost etc.

Plan on the basis of requirement, so that your needs can be fulfilled at reasonable price.

c) Season :

It is another important factor one should consider while making purchase of clothes. Because the needs of various clothing material varies from season to season. e.g.: Cotton, linen materials are suitable for summer season as they are good conductor of heat and absorb sweat, gives the feeling of cool to the wearer. Khadi clothes are most convenient in this season because these are cool and good absorber of sweat. Whereas in winter season, silk, wool, flannel materials are suitable to keep the body warm. Because these fibres are bad conductor of heat and can prevent loss of body heat so, they help to maintain body temperature. Similarly, in rainy season, synthetic materials are suitable as these material absorbs very less amount of water and dries quickly.

d) Quantity :

Usually we buy either less or more cloth than the required length because of

lack of proper estimation. This surplus clothes is of no use and if the cloth is less it serve no purpose. Therefore the exact measurement of cloth should be ensured to avoid wastage. There are certain points one has to consider while deciding the quantity of cloth required for garment as such :-

a. Width of the cloth : Usually cloth with more width may be expensive but can be used in making dress turn out to be cheaper than the one with lesser width.

b. Shrinkage of the material should also be kept in mind.

c. Cloth should be purchased in accordance with the design.

Cloth with large print should be stitched in such a way that the outfit can give a balanced look. In such cases some cloth is wasted in cutting.

14.3. FACTORS DETERMINE THE QUALITY OF THE FABRIC

It is an important aspect one should consider while purchasing cloth. Quality can be defined as the excellence related to the nature, kind and character of the fabric. It is governed by appearance, durability, construction of fabric, good finish, easy washability etc. As a consumer, we all, must know the specific qualities of various clothes which will help us to purchase good quality material with the available fund.

a) Appearance :

It refers to the outward look of the fabric and we pay attention to this along with colour and texture of the material while purchasing clothes. Usually we touch, smell and look at the material to determine the quality. Clothes should be beautiful and attractive. Effect and blending of colours should be proper in the cloth, which can make the material attractive. Fibre, yarn, weave and finishes also effect the appearance of the material. If the material has appealing effect, it can attract buyer easily and he will try to purchase that piece irrespective of quality and price. Hence, appearance of the cloth is an important factor in selection. You should consider this point while making purchase of your dress. But manufacturer always take advantage of this and sometimes mislead the consumer in this regard.

b) Durability :

Everyone desires to purchase durable clothes. Durability means long term serviceability. It always depends on quality of the fibre, weave, colour fastness, application of colours etc. In case of fibre, it should have more twist and weave should be thick and closely knit, which make the material durable. Durable cloth have resistance to wear and tear, cleaning and washing etc. If the material is durable it can be used for a long time.

c) Construction of fabric :

Quality of material also depends on construction of fabric. It may weave or knit construct, if the material is closely knitted, firmly weaved, then the quality will be good and will make the material durable.

d) Finish :

Finishing is given on material for varied reason such as to make attractive, durable, etc. Do you remember this, which you have studied in the previous year? Sometimes finishes are not long lasting as a result, the cloth become shapeless and sometimes dyestuff are not long lasting and if strong chemical dyes are used, it may make hole on the material. So one must check the label and fastness of the colour. Sometimes finishes are selected according to the use like- crease, resistant, waterproof, water-repellent, fire-proof, mercerised etc. Hence one should consider these points while making purchase of cloth. It is wise to check the following before purchasing fabrics :-

- a) Weave should be firm and uniform.
- b) Finishes should be done properly.
- c) Dye colours should be even and look fresh.
- d) Make sure no powder dust rub on the printed fabric. Starch is often used to hide the poor quality of fabric.
- e) Fabric should shed wrinkles after

crushing.

e) Easy washability :

Fabric tend to get dirty because of its use and often may get stained. Chemicals, detergent, and Soaps are used for their washing and to remove stain from them. Cloth may get spoiled if strong chemicals are used frequently. Hence such clothes should be purchased which is easily washable, not affected by chemical and washing. It is better to select such cloth which retain their look even after washing. In case of certain material like silk, woollen cloths and cloths with brocade work required special precaution while washing. Because, heat, alkalies, etc. have adverse effect on these cloths. So these materials should be dry cleaned. Therefore it is important to keep in mind about washing and ironing of cloth while making purchase of it.

Reliable shop :

One should consider the place from where cloth is to be purchased, along with above mentioned factors. It requires

proper planning, collecting information related to price, quality, place etc. before making decision from where to buy. Buy cloths from those stores only which offer satisfying services to the customer. Preferably buy from only reputed and reliable shops.

There are different types of stores like wholesale and retail stores, departmental stores, small shop, discount stores, stores with brand names etc. You must have heard about 'Big Bazar' or have visited the shop. These shops collect materials from different companies or industry and sell at their place. In some shops, at the end of the season, seasonal discount is offered and in festive season, discounts is also offered by them. One can avail such opportunities to buy their required materials. You might have seen some stores with brand names like Raymonds, Vimal, Mayur suiting, Bombay Dyeing etc. in your town, city. These store sell good quality material at fixed price. So customer can purchase with confidence from these shops.

SUMMARY

- The cloth should be purchased keeping in mind the purpose of buying for which it is being used, season, price etc.
- Quality of material is determined by factors like appearance, durability, finish and easy to maintain.
- Purchase should be made from reliable shop, stores with brand names.

QUESTIONS**Very short answer question :**

1. Name two factors influence on selection of cloth?
2. List the factors determining the quality of cloth?
3. Name two easy method of washing cloth.
4. Name two method of finishing cloth.

Short answer question-

- a) Why all types of cloths are not suitable for all seasons.
- b) What do you mean by durability of clothes?
- c) How far is it desirable to purchase cloths from departmental stores?

Long answer questions :

- a) What are the points you should consider while purchasing cloths?
- b) List out the factors that determine the quality of cloths?
- c) How will you help your friend in purchasing fabric for her family?



CHAPTER XV

SELECTION OF READYMADE GARMENTS

15. Introduction:

The garments we wear reflect our personality. A well dressed person can easily impress others. When you visit your friend's house wearing a beautiful pair of garments, obviously everyone will ask you about your garments. Do you know one day when Jumi visited her friend Gita's house, wearing a beautiful dress she was appreciated by everyone present there. She was also puzzled by various queries like where from she had purchased her dress, what was the price and how she looked like and many other questions. Now, what do we understand from this? The garments which Jumi was wearing enhanced her beauty and personality and reflected her taste, thus attracting others. Therefore, we should consider many aspects while selecting our garments.

Garments are made in many ways. Many people purchase clothes of their choice and make garments at home. For this one must have the knowledge of techniques of making garments. In the modern life-style of busy schedule many of us don't have time to spare although have the knowledge of making garments. Therefore, the demand for readymade

and tailored garments are gradually increasing. There are advantages and disadvantages in each method of making garments. We should consider many aspects while selecting any type of garments. We already had some ideas about the factors to be considered while selecting garments like personality, age, climate, body structure etc. in our previous lesson. The garments of one person reflects his character, taste, personality neatness etc. Therefore we should have an appropriate plan before selecting our garments. The economical status plays a role on the standard and price of the garments. Because on an average ten percent of the income should be spent on clothings. Therefore, you should also consider all these aspects and make a plan before you purchase garments for yourself and for your family members.

After reading this chapter you will be able to know the following points for selection of garments–

- Needs and methods of taking body measurements.
- Qualities of garments and good workmanship

- Various designs, seams, plackets, pleats, buttons etc. used in garments.

15.1 (i) Needs of taking Body Measurement :

When we go to market to buy our garments, first of all we examine their measurements. After examining the length of the garment, measurements of hand, chest, waist etc. we select the garment having accurate measurements that will suit our body. Therefore, before we go for stitching or purchasing readymade garments we should have adequate knowledge of taking body measurements. If we don't have the accurate measurements, selection of clothes become difficult, on the otherhand adequate knowledge of measurement makes the selection easier. When we stitch our garments at home or go to tailors shop, measurements must be taken as accurately as possible so that the garments are well fitted.

Points to be considered while taking body measurements

- a) We should stand straight while giving measurements and should always be taken by a second person so as to record accurate measurements.
- b) While taking measurements, loose clothings should be removed and should be in a body fitting foundation garments.
- c) The round measurements should

not be taken too tight or too loose.

d) The measurement of length of the garment should taken by keeping the measuring tape parallel to the spinal cord.

e) Body measurements should be taken according to the style of the garment. The style of garment are changing with the change of fashion. Therefore one should clearly ask from the person, the style of garment he or she is desiring to have.

f) The measurement should be started from the right place and also ended at the right point.

ii. Methods of taking Body measurement :

There are different methods of taking body measurements. One looks beautiful if the garment are well fitted to the curves of the body. The measurements of the curves, length, breadth etc. should be taken scientifically to make garments with accurate measurements. Some rules of taking body measurements are given below -

A. Round measurements -

i. Neck - The neck measurement is taken around the base of the neck

ii. Arm - The arm measurement is taken at the thickest part of the arm between shoulder and elbow with the arm bent.

iii. Bust- The measuring tape is passed through the armpits and place

the tape round the fullest part of the bust.

iv. Waist- The waist measurement is taken at the smallest part of the waist. The measuring tape should not be hold too tight or too loose.

v. Hip - Hip measurement is taken round the widest part of the hips, about seven inches below the waist.



Fig-1

B. Width:-

i. Back measurements - Measurements of width of back is taken across the shoulder blades at 4-5 inches below the neck.

ii. Shoulder measurements - Measurements of shoulder is taken from one armscye to another at the top of the shoulder

across the base of the neck.

iii. Front chest - It is measured from the point where the arm leaves the body across the chest to the other side.

C. Length:

Measurements of different lengths are taken as under-

i. From the highest point of shoulder, over the bust, to the waist.

ii. From the highest point of shoulder to the bust point.

iii. From the arm hole to the wrist.

iv. From the arm pit to the waist.

D. Sleeve measurements.

i. While taking sleeve measurements, the hands should be kept on waist, as shown in the figure. Measurements are taken from the lowest point of shoulder line to the elbow, wrist or to a point as may be desired.

ii. The elbow and the wrist should be measured around them

E. Leg measurements :-

i. The measurement is taken loosely around the ankle for pants, pyjamas, churidars etc.

ii. For correct measurement of pant, churidar etc. round measurement is taken

around the lower part of the leg near knee for the width of that part.

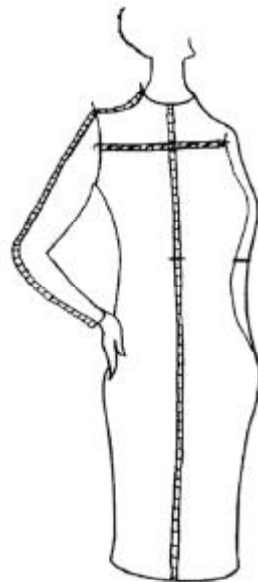


Fig-2

These methods of measurements play an important role in buying material for our garments from market. The amount of clothes to be purchased is

calculated from the measurements, fashion or style, length of the garments, looseness, folds, seam allowances etc. Therefore if the methods of taking measurements are not correct, everything might go wrong.

15.2. Quality of Garments and Good workmanship.

What are the points do you consider while purchasing your garments from the market? Clothes are of different types, characteristic and qualities. Therefore we should have proper knowledge about the characteristics of the fabric before buying them. The quality of clothes mainly depends on their fibres. Depending on the types of fibres, the colour, thickness, weaves, design etc. are determined. The fibres may be natural such as cotton, linen, wool, silk or artificial, as rayon, nylon, terelene etc. Clothes are made from fibres by using various methods, You have already learnt about the methods of weaving, knitting, felting, netting etc. The quality of garments depends to great extent on the methods of making clothes. We should consider some important points while judging the quality of clothes.

i) The garments should match with the personality and figure of the person. We should buy clothes looking into the age, climate, need, social function, festivals etc. The colour of garments should be

selected keeping the climate in consideration because colour influences the quality of clothes. The light colours such as white, pink, light blue, yellow etc. radiate sunrays and heat and give cool feelings. So during summer, garments of these colours give us comfort. On the other hand dark colours like black, red, orange, deep purple, blue etc. absorb heat and sunshine and give us warm feeling. So these colours are useful during winter.

ii) The general impression that only costly clothes are of higher standard is not always correct. We should be economical so far as garments are concerned. The standard of the cloth should be according to the use of clothes. Garments should be purchased at appropriate price after considering its standard, durability and required quality.

iii) While selecting garments, it should be kept in mind that they are attractive and should feel good to touch. The clothes should be soft, smooth, rough or thick according to the quality of fabric.

iv) While considering the quality of clothes it should also be kept in mind that the garments match the person. The colour of the clothes should be according to the complexion and figure of the person.

v) The durability of the garments depends on the fabric used for the purpose and its thread, fibre, weaving

methods etc. So while purchasing clothes we should see how strong and workable they are.

In clothing construction, the workmanship and sewing works should be good and without defect. So before buying garments all these aspects should be thoroughly examined. Workmanship means seams, fasteners, hemming, collar, lace, piping etc. All these workmanship should be strong and scientific to make the garments stronger and permanent. We should consider the following points for application of good workmanship in garments.

a) Fabric :

The basic item of garment making is fabric or cloth. This fabric should be suitable to the design, climate, age of the person and the occasion he would attend. Now a days various types of fabric are found in the market. To select right kind of fabric for the garments, one should know the properties and specific characters of various types of fabric.

b) Drape :

The garments which fit into our body and we feel comfortable after wearing the garment that is considered as drape. Some clothes are difficult to manage and are not comfortable on wearing. For example heavy garments made of tweed, velvet, corduroy etc. are not comfortable on wearing. On the otherhand garments made of voil, silk,

chiffon, crape etc. are soft and drapable.

c) Design :

The design of garments should always be of modern but should have sophistic sense. The design of the garment should make the person look beautiful. It should match with the personality, age, and body structure of the person. Sometimes an expensive garment also may not make the person attractive, if the design is not proper. On the contrary a low cost garment with a beautiful design can make a person more attractive.

d) Seams :

The process of joining different parts of garments is called seam. A piece of cloth is brought into a shape of garment with the help of seams. The garments can be made strong and attractive by using seams. Seams are of different types. Seams are selected according to the quality and use of the clothes. The beauty of the garments is enhanced if the seams are neat, straight and defectless. Different types of seams are -

i) Plain or Flat seam : Generally in all garments plain seam is used for blouse, frock, skirt, shirt, pant etc. To make plain seam, the right sides of two pieces of cloth should be placed together and stitching is done on the edges leaving a space of 1/2" to 3/4". Now the raw edges should be open flat on the wrong side. The edges may be cut in zigzag

shape by using pinking shears. Now a days a good finish may be given by using interlock machines.

ii) Run and fell seam : It is always done by hand and on the wrong side of the fabric. This seam is very smooth, flat and it almost fit tightly with the garment. Hence it is used for garments of infants, sportswear, underwear and nightwear.

While making this seam, one piece of fabric should be extended by $\frac{1}{2}$ inch than the other, then fold this extended part and fix it with hem stitch. This seam makes the garments stronger and also enhances beauty.

iii) French seam : This seam is generally used in light fabrics like voile, georgette and organdi. It is very smooth and strong, so it is mostly used in children's wear, blouses, frocks, pillow-cover etc. In french seams two pieces of fabrics

are taken together with right sides outside and stitching is done by leaving about $\frac{1}{8}$ inch. Then both the pieces are turned outside and stitching is done by completely covering the raw edges, leaving about $\frac{1}{4}$ inch on the side. This seam is very strong.

iv) Lapped seam : In some garments, the seam lines are visibly raised to make them attractive and this seam is called lapped seam. If this seam is used to make yoke in the garment, it adds beauty to the garment. Here one piece of the materials is folded and placed over the other piece and stitched. In this method of seam no seamline is visible on the right side.

e) Hemming:

Hem is one of the essential stitches done by hand. Have you noticed the hemming stitches on your dresses? This hem is used to secure and finish the

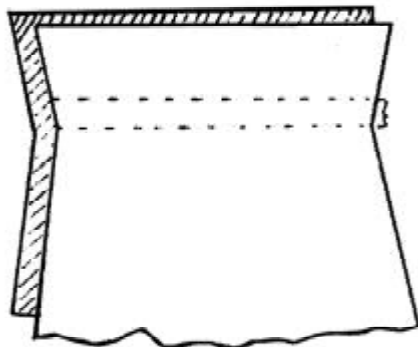


Fig-3
Seam

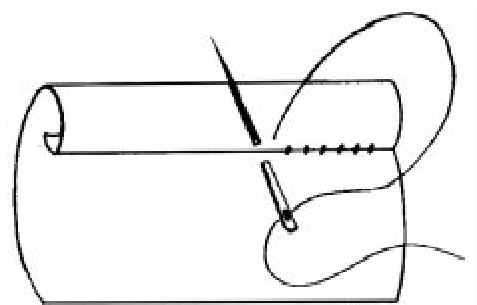


Fig-4
Hemming

edges of garments. Hem stitch prevents the threads from coming out of the raw edges of the garments. When hemming is done on the lower folds of the garments, it becomes heavier and as a result remain in place which adds beauty to the garment.

For making hem stitch, raw edge of the cloth is folded according to the requirement, and slanting stitch is done to fix it to the garment. The needle is inserted through the cloth near the fold and then taken out through the fold, catching only few yarns of the fabric. This way, the stitch is repeated through the edge of the hem. Because of the hemming stitches, the folds are permanently attached to the garment. Stitches should be evenly spaced and neatly done. It should not be prominently visible on the right side, otherwise the beauty of the garment will be lost.

f) Placket :

The opening of the garment like necklines, wrist, side seams, front seams are given finishing by providing various types of plackets. A placket makes it easier to wear a garment. The neatly made plackets help in proper fitting of the

garment, when the placket is closed. Plackets should be smooth and beautiful with no pucker. Plackets may be held closed with buttons, hooks, zippers etc. According to the requirement in the garments different types of plackets are used.

One piece placket is used for slit openings where there is no seamline. For this a piece of cloth having six centimeter width and little longer than double the slit length is cut. It is stitched continuously from one end to the other end, tapering towards the midpoint. This is **one piece placket**. Similarly garments having seamline, two piece placket is used. Here placket is attached at the seamline. The right side placket piece is about three centimeters wide and is stitched after it is turned back fully. The left side placket piece is about six centimeter wide and is stitched by folding back half of it. The placket is then held in position by

a double row of stitching at the lower edge. In this way **two piece placket** is made.

Blouses and kurtas have about 20 to 25 centimeters slit opening in the centre of the front side. Two pieces of plackets should be

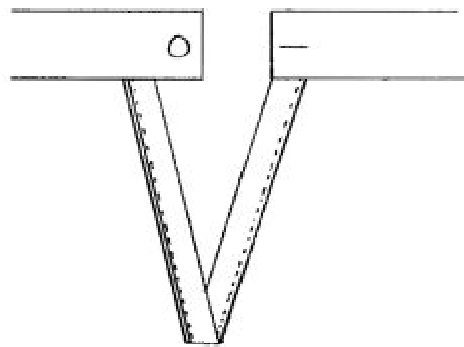


Fig-5
Plackets

made for these type of garments. The placket of lower side should be six centimeters wide and the upper one about eight to nine centimeters wide. The wider piece is attached on the right and the other piece on the left and then both these are folded into half and stitched. The lower edge of the placket is folded into 'V'-shape and the edges are stitched.

In this way different types of plackets are used to enhance the beauty of garments as well as make it comfortable

g) Pleats: Pleats are some of the folds present in our garment. If you look at your garments, you will notice that with the help of some small or big folds, garments are made more beautiful and fitted well in the body. The folds that provide controlled fullness to the fabric and shape it to the form of a garment, so that it fits well into the body and look attractive are called pleats.

Pleats may be single, as a cluster, or around an entire garment section. The amount of fabric required for making pleats is calculated according to the type of pleats, number of pleats, the length and width of pleats etc. Different pleat are made in several ways.

(i) Side or knife pleats: It is a commonly used pleat

in skirt, Frock, children's wear etc. Here, folds are faced in one direction and with equal distance between each pleat. They have one fold line and one placement line.

(ii) Box Pleats: In this pleat, both side of the fabrics are folded back and meet at the centre line of the pleat and stitched. Here, the folds in front side are bigger and in the back it faces each other.

(iii) Inverted pleats: This type of pleats are just reverse of the box pleat and same amount of fabric is required, Here, both the pleats on either side are folded to meet at a centre point. On the back side of the cloth the folds face away from each other.

h) Fasteners : If you look at your dresses you will see that there are some provisions of buttons, press-stud, hooks, loops etc. which keep your dress well fitted in your body. So the provisions which help to keep the garments well fitted in the body are called fasteners. Different types of fasteners are used for different kinds of garments.

(i) Press-stud : A commonly use fasteners in the garments is press-stud. It is widely used in the garments of children and women. This fastener is

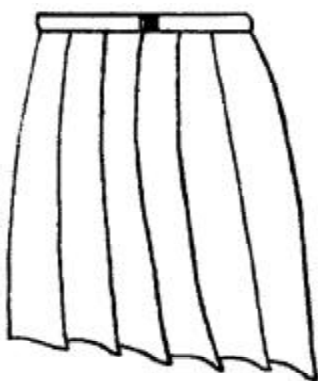


Fig-6
Pleats

pressed one against each other in the two sides of the garment to be fastened together. While sewing, one should be careful that the buttons are not visible outside.

(ii) Button : This is generally used in the garments of men and children. Buttons are used in fronts and cuffs of shirt, coats jackets, pants, sweaters, frocks etc. Buttons of various size and designs matching with garments are used. The button is stitched in lower part of the garment to be fastened and a hole suitable to the size of the button is made on the upper part. A hole 1/4 inch bigger than the button is made by cutting the cloth at the site and the edges are stitched by blanket stitch. For some decorative buttons, loops are made by threads.

iii) Hook : In some of our garments, some strong fasteners are used to keep the garment tight fitted to the body. This

type of fasteners which are used in the garments of men, women and children is called hook. According to the requirement, hooks of various sizes are used. Small hooks are used on the backs of frock and blouse of women. The hook is fixed on the inner side of the upper part and a hole is made on the lower part to fasten the hook. This is called hook and eye. In some cases a loop of thread is made to fasten the hook. Similarly in skirt, pant etc. more pressure is exerted on the waist. So bigger hooks with suitable bare bar is stitched. This type of fasteners are called hook and bar.

Thus, we have learnt that while selecting our garments we should give proper importance to the points that we have discussed. Then only we will be able to select good garments which will be comfortable, durable and will give, satisfaction.

SUMMARY

- Many factors should be considered while selecting garments.
- We should have proper knowledge of taking measurements before going to purchase garments.
- There are different methods of taking body measurements for garments.
- Several important factors should be considered while considering the quality of garments.
- The workmanship of garments should be strong and scientific.
- The fabric, drape, design, seam, placket, pleat and fastener must be proper to have good workmanship of garments.

QUESTIONS**1. Very Short Answer question :**

- a. What do the garments reflect ?
- b. What percent of the income should be spent on garments ?
- c. What is seam ?
- d. What is fastener ?

2. Short Answer question :

- a. What are the importance of selection of garments ?
- b. What do you mean by pleat ?
- c. What is the meaning of Drape ?

3. Long Answer question :

- a. Write about the points to be considered while taking body measurements ?
- b. Write about the seams used in garments
- c. What is placket? Write about different types of plackets.
- d. What are the points should we look into while considering the quality of garments ?



CHAPTER XVI

CARE OF CLOTHES

16. Introduction:

We know that if any of our useful material is maintained with cleanliness and with due care it lasts for a long period. We wear different types of garments on different occasions. Similarly we wear some particular types of garments according to seasons and climate. These garments remain unused in other seasons of the year. Besides these, there are some other fabrics like curtains, bed-sheets, table clothes in our house. If these garments and other fabrics are stored with proper care, these will last for a longer period in a good condition. Our clothes become dirty due to deposition of dusts, vapours and grease. These materials damage our garments. So our garments should be washed and cleaned regularly, iron and store them properly to maintain the beauty and brightness of the clothes for a longer period of time. How do you feel when you find some of your old garments still in good condition? Certainly feel great and become emotional. If you keep your garments clean and tidy you will be able to wear your favourite dresses for a long period. An expensive garment if not properly maintained will certainly not add beauty

to the person rather will lower the personality. Therefore, it is very important to take proper care of our clothes.

You have already learnt in details about the source, structure, property and variety of fabrics in your earlier lessons. This knowledge will help you in taking care of your garments, because care of fabric varies depending on its character. In this lesson you will learn about the following-

- Different principles and methods of washing clothes.
- Removal of different stains.
- About different cleaning agents like soap, detergent, water etc.
- Finishing of clothes.
- Importance of storage, principles and method.

16.1. General Principles and Methods of Washing :

For how long do you wear a pair of clothes without getting it dirty? During summer, either for a day or half day and during winter hardly for two or three days, is not it? After that the garments become dirty and if not washed, these become unfit to wear. Do you know how our garments got dirty? The mixture of

dusts of the environment, microorganisms, sweats of our body, greasy matters make our garments dirty. These dirt collected in our clothes cannot be removed easily. These clothes can be washed without damage, if proper principle and method of washing is followed according to the types of dirt. For different types of clothes appropriate method of washing and suitable type of soap, detergent etc. should be used.

We should follow certain principles while washing clothes. For this we should have adequate knowledge on the nature of clothes, soaps, various detergents, methods of stain removing, affect of water on clothes etc. We should be careful that the cloth is not damaged while washing. Some rules should be followed before washing the cloths The basic principles of washing are as follows–

a) Cloths should be examined carefully, before washing. If there is any broken seam or tear, it should be stitched before washing. Buttons should be checked and if found loose or missing should fixed or replaced.

b) Sometimes our garments are stained and they should be removed before washing. Otherwise these might permanently stain the clothes or may stain other clothes during washing.

c) Garments should be sorted out according to the type of clothes, because

different clothes like cotton, woolen, silk and artificial fibres are washed differently. Moreover white clothes should be separated from the coloured ones and very dirty clothes should be separated from the usual dirty ones.

d) Now the clothes should be soaked in suitable warmed water with suitable detergents. When clothes are soaked, it helps to loosen dirt and make the washing easier.

Now let us discuss and know about the dirt, so that it becomes easier to clean the clothes. Dirts are of two types.

i. Some dirt are loosely settled on the surface of the clothes and make the cloth dirty and dull. These dirt can be cleaned by shaking and brushing or washing with water.

ii. On the otherhand, dirt mixed with water or grease are fixed on the clothes. To remove the fixed dirt cleansing agents, solvents, absorbents and pressure are required. There are several methods of washing.

16.2 METHODS OF WASHING :

Before washing, the types and properties of clothes should be observed. Different type of clothes have different type of fabrics. We should choose suitable cleansing agents and method of washing to suit the type of clothes. Because a wrong method may damage the fabric Different methods of washing

are

- i. Friction method
- ii. Application of light Pressure
- iii. Suction method
- iv. Washing by machine

(i) Friction Method :

Thick and strong fabrics like bed sheet, curtains, carpets made of cotton or linen may be washed by this method. Friction can be applied by different ways.

a. Hand Friction - Small articles like shocks, handkerchiefs, gamosa, towel etc. can be washed by rubbing with hands after applying cleansing agents. Warm water may be used to get better result and for economic use of soap.

b. Friction with Brush- Some particular parts of our garments like collar of a shirt, bottom folds of pants, saree or mekhla collect more dirt. These much soiled parts can be washed by rubbing or scrubbing with a brush. In this method fabrics are soaked in warm water for sometime, then squeezed and spread on a hard surface and rub over with a brush after applying soap. In this way dirt is removed.

c. Friction by Rubbing Board - For washing of heavy, large-sized strong and much soiled articles this method may be applied. In this method the rubbing board is placed in slanting slope on a tub, half filled with hot water. The clothes to be washed are first soaked in cold water

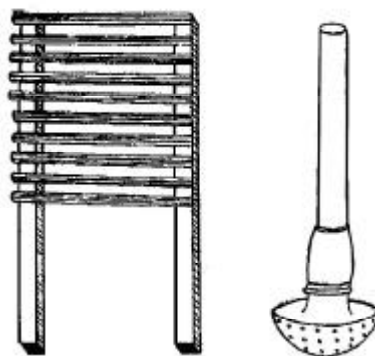


Fig-7

Rubbing Board

Suction washer

and squeezed and placed on the tub with hot water. After applying soap, the clothes are rubbed on the rubbing board. This way the dirt can be removed from the clothes very easily.

ii. Application of light pressure:

Generally smooth, light, soft clothes including lace, socks and garments of pat and wool are washed by this method. Clothes are soaked in warm water mixed with mild detergents. After some time, clothes are washed by applying light pressure by hand, knead and squeeze the article till it is cleaned. Mild brushing may be done to much soiled parts of the clothes. Fabrics are not damaged if washed in this method.

iii. Suction Method.

In this method large and heavy clothes like towels are washed by using suction washer. Clothes are soaked in a detergent solution for some time. Now

press it with the suction washer up and down in the solution. The pressure washes the article and thus dirt is removed. After the suction washer sucks, dirt comes out of clothes, they are rinsed properly. Heavily soiled, large clothes can be washed easily with less labour in this method. However this machine is not commonly used now a days.

iv. Washing by Machine

In the modern age, the washing machine is very popular as a labour saving device. In this machine, a large number of clothes of various types can be washed easily in less time. All types of clothes whether small or large, white or coloured, natural or artificial fabric can be washed in washing machine. Although hand operated machine is also available but electrically operated one is more



Fig-8
Washing Machine

commonly used. There are different types of washing machine having different facilities. The instructions of operation given with the machine should be thoroughly read before use. The machine is filled with water and detergent is added. Clothes are put inside and the machine is started. The machine through its agitation provide friction and light pressure to the clothes and clean them by removing the dirt. The washing machine has made the washing of clothes easier and effective.

Rinsing :

The process of removing the dirt, which are separated from the clothes during washing by using enough extra water is called rinsing. As a result of rinsing the traces of detergents are also removed along with the dirt. In the final rinsing blue, tinopal, lemon juice, vinegar etc. may be added according to the property of the fabric to brighten the colour.

Drying :

After rinsing, the extra water should be squeezed out and hang them up to dry. In case of garments the clothes are hung to dry depending on the shape of the seamline. Depending on the type of fabrics, clothes should be dried in sunlight. The coloured clothes should be dried on the reverse side and allowed to dry in a shady and open airy space.

Similarly silk and woollen clothes should be hanged on shady place avoiding direct sunlight. But following these measures discolouration of clothes can be avoided.

Collection:

Clothes should be collected before complete drying, having little dampness. At this stage, if the clothes are ironed and stored they remain tidy. The completely dried clothes should be folded along the lines of seams and kept for ironing. While folding, the clothes should be straighten to make them crease free. Silk and woollen clothes should be kept rolled after collection.

Dry Cleaning :

The clothes we generally used are of various qualities. Some of them might get damaged if washed in the common wet cleaning method. There may be shrinkage, discolouration and change of shape of the clothes. Such type of clothes are washed in a particular method, where clothes are cleaned by using solvent and absorbers instead of soap and water. This method was discovered by a French chemist named M. Juvelin. This method of washing clothes is known as "Dry Cleaning". Dry cleaning is also known as "French Cleaning".

Dry cleaning may be done by two methods

1. By using absorbent and
2. By using liquid solvent.

1. Use of Absorbents : Various absorbents used in dry cleaning are - French chalk powder, Fuller's earth, talcum powder, salt, wheat bran, bread crumbs, powder of mung dal etc. This absorbent powder is sprinkled over the clothes, rub them slowly over the cloth and leave them for some time. They absorb the grease from the soiled clothes, Then the clothes are brushed to remove the absorbents. Along with the absorbents the dirt is also removed. If the clothes are not properly cleaned, they may be washed in the solvents. By using the absorbents, the grease and stains can be removed from all types of clothes. Absorbents are generally used for cleaning white laces, white furs, shawls, hats, felt articles etc.

2. Use of liquid solvents :

In this method a particular liquid is used which penetrates into the fabrics and remove the oily dust particles. The fabric is not affected by the liquid solvent. Dirt is separated and deposited in the solvent, thus the cloth is cleaned. Different liquid solvents used depending on the types of clothes are petrol, benzene, carbon tetrachloride, turpentine, tri-chloro ethylene, liquid soap etc.

Now we have seen that dry cleaning is a high class method of washing clothes. In this method, clothes are cleaned without affecting the size, shape

and colour. Any heavy and thick cloth in addition to woolen, silk, velvet, furry cloth, blanket jacket etc. can be washed easily by this method.

16.3. Stain Removal :

Stain is a visible mark or spot left on clothes., You all might have experience of stain on your garments. Sometimes because of our carelessness or unknowingly our garments get stained and lower the beauty of the clothes. Stains from food, ink, medicine, rust, paint etc. causes lot of embarrassment. Therefore it is very important to know or identify different types of stains and the methods of removing them.

Stains should be removed as early as possible. When it is old, it may become permanent leaving an ugly look and also damages the clothes. Some stains are easily removed by ordinary method of washing. But some other stains need special treatment. Stains can be identified easily by their colour, smell, touch etc. Based on the source of stains, They may be classified as follows-

1. Animal stains - These are caused by blood, egg, milk, meat preparations etc. As these contain protein, heat should not applied on them, otherwise the stain will fix permanently.

2. Vegetable stains - Various fruits like pomogranate, amla, banana, berry, apple and vegetables like, raw-banana, banana flower, cause vegetable stain. Tea, coffee,

curry, henna, betal-nut and leaf are also stains of this kind. These stains are acidic and therefore, should be removed by using alkaline reagents.

3. Oil or grease stains - Oily or greasy stains are caused by ghee, butter, pickle, various oils, curry, paints, varnish etc. Grease solvent or absorbent may be used to remove such stains.

4. Mineral stains- Stains from rusts, ink, medicine, perfumes etc. are mineral stains. These stains are first treated with acid reagents to act on the metal and then by an alkaline solution to neutralize the acid as well as to remove the stain.

5. Paints or Dye stains - Wall paints, wool paints, shoe polish, nail polish, lipstick etc. are some examples of dye stains. These stains are either acidic or alkaline in nature. Therefore to remove these stains, some specific stain removal reagents are used.

Methods of stain Removal :

The following methods are used to remove stains from clothes.

a. Dip method - This method is used for much stained clothes. Stain removal solution is prepared and stained clothes are soaked in the solution for some time.

b. Steam method- Certain bleaching reagents are applied over the stained portion of the clothes and then steam is applied on the area. Generally this

method is applied on woollen and silk clothes.

c. Drop method - In this method the cleansing reagents are put drop by drop on the particular stain area, using a dropper or a glass rod.

d. Sponge Method- A piece of folded cloth or blotting paper is placed under the stained cloth. Another piece of cloth soaked in cleansing reagent is rubbed over the stained part in circular motion. Both the pieces of cloth should be changed whenever they seem dirty. In this way the stains are removed gradually.

In this way different methods are used for the removal of stains. Light chemical products should be used for the removal of stains. Using a strong reagent initially might damage the clothes. The clothes should be washed thoroughly after removal of stains to wash away the chemical reagents and dried properly in sunlight. Sun rays acts as natural bleaching agent. Thus you have learnt about removal of stains from the garments. In your practical classes you will learn in detail about the different reagents used to remove different types of stains.

16.4. Cleansing Agents :

Our garments and clothes, curtains, bed sheets, table clothes etc. get dirty after use and these are cleaned before we use them again. What do you do when your garments get dirty ? Either you

wash yourself or get them washed at your home. For this cleaning or washing, various cleansing agents are used which remove the dirt and dusts from the clothes. We commonly use washing soap and detergents as cleansing agents which clean our clothes by removing the dirt, dusts and oily substances with the help of water. Both of these are good cleansers.

Other than washing soap and detergent, some natural cleansing agents are also being used since olden days. These are ritha- nuts, sikakai, home-made alkalies, juices of papaya and gourds, etc. The advantage of using these natural products is that- they do not damage the cloth, rather make the clothes smooth and bright. Therefore some of these items are still being used in the production of various washing agents.

SOAPS AND DETERGENTS :

Soap is the prime cleansing agent out of the different such agents we use to wash our clothes. In addition to washing of clothes, soaps are also used for bathing, cleaning of utensils etc. Chemically, soaps are the alkali salts of higher fatty acids. It is soluble in water. Soap is prepared through a reaction of alkali with animal fats and vegetable oils by hydrolysis. Animal fats like tallow, olein and grease and vegetable oils like coconut, ground nut, til, olive oil etc. are

used. Fatty acids and glycerine are produced in the process of hydrolysis of fats by alkali. Soap is finally produced by neutralising the fatty acids by alkali.

Fats or Oil+Alkali \rightarrow Soap+Glycerol.

Generally soaps are produced by two methods

1. Boiled process
2. Cold process

In your practical classes, you will learn about preparation of soap. Soaps are classified into two groups

- a. Hard soap
- b. Soft soap

Hard Soaps - are prepared by a reaction of fats with caustic soda. Hard soaps don't easily dissolve in water and no lather is produced. Bath soaps, washing soaps, medicated soaps are usually hard soaps. More time and labour is required in the use of hard soap.

Soft soaps are prepared by a reaction of fats with caustic potash. This soap is easily soluble in water and more lather is produced. Shaving cream and liquid soaps are few examples of soft soap.

Soaps are also named according to their shape and quality. For example -

Bar soap - This is a long shape soap and have ridges. We may break it into smaller pieces according to our need.

Neutral soap- This soap is totally free

from alkali and so it is expensive.

Solution soap- This soap is prepared in a solution form. The clothes which cannot be cleaned by rubbing with washing soap can be cleaned by solution soap. It can also be used for cleaning other materials and furniture.

Soap flakes - This soap is light and flat and prepared in the shape of rice flakes. Usually contain less alkali and hence are suitable for washing silk and woolen clothes.

Soap powder - Soap powder contains 30 to 50 percent sodium carbonate and sometimes bleaching agents are also mixed. Regular use of soap powder may damage clothes.

Disinfectant soap - In the process of preparing this soap 3 to 5 percent carbolic acid is mixed. This soap is used in various skin diseases and itching problems.

Apart from these, there are different types of soap such as mild soap, soapless soap etc.

Properties of Good soap -

A good soap should have the following qualities.

1. It should be free from free alkali and resins, as they weaken and stain the clothes.
2. It should be easily soluble in water and give a good lather but it should

not melt down quickly.

3. A good soap should contain 30% of water. Soap containing less than this dries easily and soap containing more water leads to wastage in washing..

4. Soap should be of light colour as dark coloured soaps contain more impurities.

5. A good soap should not contain any such matter which might damage the colour and the fabric.

Detergents :

You all must be familiar with the word “detergent” as we can see a lot of advertisements of detergents in television, radio, newspaper, magazine etc. What are these detergents ? Detergents are the synthetic compounds which form lather with water and can clean any type of article. Their chemical structures are sodium salts of long chain alkyl sulphate, alkyl sulphonate or alkyl benzene-sulphonate. They are manufactured artificially from petroleum raw materials. Detergents are also good cleansers like soap. Detergents have some advantages. It does not react with the minerals present in water and removes the dirt from the clothes. Therefore, clothes washed with detergents look clean and bright. But the clothes may be damaged if the instruction of their use with right amount and right time are not followed.

According to their chemical quality,

detergents may be classified as follows-

1. Anaionic detergent- These detergents contain anaionic like sulphonate and sulphate. They are of low cost and are widely used in household works.

2. Cataionic detergent- These detergents contain amine and ammonium salts as cataionic bases. It is used in leather industry.

3. Non-ionic detergent- They are produced by combining water-repelling bases with ethylene oxide or propylene oxide. This type of detergent is commonly used in leather industry and as emulsion.

4. Dual property detergents- These detergents contain both the cataion and anaion bases and hence called dual-property detergents. It is used in the production of toothpaste shampoo, emulsion paints etc.

Merits of Detergents :

Detergents are found to have some advantages over the use of soaps, They are -

1. Detergents can be used in both hard and soft water. Moreover it gives similar results in both cold and hot water.

2. Detergents work faster than soaps. A small amount of detergents can easily remove dirt from the clothes.

3. “Optical bleach” is pre-mixed with detergents which make the clothes bright

and white and use of blue or bleaching agent is not required.

4. Detergent solutions are not alkaline, so it can be used to wash artificial and animal origin fabrics.

5. When clothes are washed with detergents, there is no residue and it leaves a nice, sweet smell on the clothes.

16.5. Water :

Water is used in various types of works like washing, bleaching, colouring, printing etc. associated with textile industry. The prime and suitable solvent used in cleaning of clothes is water. We get this water from various sources like-rain, river, well, tank, sea, stream etc. and these are not pure. Various gases, compounds, inorganic salts and other impurities are found mixed with these water and hence are not fit for use in the textile industry. Here we shall discuss about what type of water is required for textile industry.

According to the presence of solutes in water it is classified into two types. They are

- a. Hard water
- b. Soft water.

In some water we used, different minerals like calcium magnesium etc. are present and such type of water is called 'Hard' water. It does not form good lather with soap as the chemical salts present in hard water react with the soap, form salts which are insoluble in

water, resulting in non formation of lather, loss of soap and reduces the cleaning capacity. Usually water of river, stream, and well is hard water. Hard water is classified into two types.

- a. Temporary hard water
- b. Permanent hard water

Temporary hardness is due to the presence of bicarbonates of calcium, magnesium and iron. If such water is boiled, the bicarbonate slats are converted into carbonate and carbon dioxide and the water becomes soft. By adding lime water also, the hardness of water can be removed. In permanent hard water, chlorides and sulphates of calcium and magnesium are present. This hardness can be removed by using chemicals. The modern method of making soft water from permanent hard water is '**Permutit process**', Permutit is a mineral also known as zeolite. If permanent hard water is allowed to trickle down through zeolites kept in a container, the mineral salts presents in water are precipitated and thus make the water soft. As a household practice ammonia, caustic sods, borax etc. can be used to purify hard water.

Water which form good lather easily with soap is called 'Soft' water. Rain water is an example of soft water In textile industry use of soft water is must. Cleansing capacity of soft water is also more. On the other hand hard water has

less cleansing capacity, it reduces the brightness and may damage the cloth, besides there is excess requirement of soap. Therefore, soft water should always be used in textile industry. However, if hard water is to be used, it should be softened before use.

16.6. Finishing of clothes:

You have already learnt about cleansing of clothes, removal of stains etc. To make the clothes attractive and ready to use, some steps are taken after washing or drying the cloth. You might have observed that- the brightness of white clothes is reduced after washing and a yellowish colouration develops on the clothes. What do you do then? We use blue and bleaching agents in addition to some brightening agents. Similarly light cotton clothes become crumpled after washing and therefore starch is used to make clothes stiff and crisp. In order to smoothen out the creases and ruffles of washed and starched clothes, ironed and steam should be applied on them. These activities to give a satisfactory finishing touch. Therefore, the procedures which are used to make clothes bright, attractive, smooth and to give an attractive personality to the wearer comprises the finishing of clothes. Finishing helps to give new life to the fabric. Different methods of finishing of clothes are discussed below.

a) Blue - The brightness of white

clothes is reduced after few washings and the clothes look dirty. To give effect of brightness to these clothes a chemical substance called blue is used. It is commercially available in powder and liquid form. Usually blue is applied in cotton and linen clothes. There are two types of blue- soluble and insoluble in water. Some examples of water soluble blues are methylene blue, methyle violet and insoluble blues are ultra-marine blue, Prussian blue etc.

Optical brightener- Some compounds absorb ultra-violet rays and reflect them to visible area. These reflected rays increase the brightness of clothes. So these brightening agents are used to increase the brightness of clothes. Ranipal, Tinopal etc. are some of these brighteners.

b) Bleaching Agents- Some chemicals are used to remove colouring matter from fabrics, these are called bleaching agents. Bleaching agents are of two kinds-oxidizing bleaches, and reducing bleaches. The commonly used bleaching agents are sodium-hypochlorite, potassium permanganate, oxalic acid, hydrogen peroxide etc. Sunlight is one of the best bleaches. Although bleaching process removes the stains and brightens the clothes, excess use of it damages clothes.

c) Stiffening Agents- Some clothes crumple after washing. Some agents are

used to make such soft fabric stiff, crisp and shiny. This is called stiffening of clothes. It makes the clothes crispy, smooth, shiny and saves from dusts. Stiffening agents for different clothes vary depending on the quality of fabrics. Starch is used for cotton and linen fabrics, while gum and gelatin is used for silk. Starch is generally prepared from rice, maize, wheat, potato, arrowroot, tapioca etc. Artificially prepared chemical starch is also available in the market. Starch should be mixed in right proportion to get good result. The solution of starch should be evenly mixed and there should not be any lumps left.

d) Ironing - Some creases are formed in the clothes after washing. A particular appliance called iron is used to put pressure on the clothes and remove the crease and make them smooth. This process is called ironing. Ironing makes the clothes smooth and shining, giving them a new look. Before ironing, the clothes should be dampened to get good result of ironing. For ironing blanket or a thick cloth should be spread over a table. Ironing board is also available in the market. A good quality electrical iron with appropriate weight, preferably having temperature control mechanism should be purchased. Depending on the quality of the clothes, temperature is controlled while ironing. Moreover some other types of iron such as flat iron, charcoal iron,

etc. are also found, although their uses are decreasing gradually.

c) Pressing - Sometimes some deep crease are formed on the clothes. To remove such creases, repeated pressure is given over the crease by a hot iron. If a damp cloth is placed over the crease and pressure is given with a hot iron, the steam thus produced helps in removing the crease. Clothes like velvet and crape are ironed in this method.

f) Folding - The last step of finishing of cloth is folding. If the clothes are not properly folded, some undesired folds develop, decreasing the beauty of the clothes. Some clothes are required to keep on hangers. The clothes last long if they are stored after proper folding.

Thus various methods of finishing of clothes are applied depending on the types of clothes, they improve the strength and beauty of the clothes.

16.7. Storage of clothes- Importance, general rules and Methods.

We wear different types of garments in different seasons like light and cotton clothes in summer, while woolen, silk, cotswool, flannel clothes etc. are worn during winter. Moreover, we use various other warm clothes at home such as blankets, quilt, rug, cap, muffler, sweater, jackets, etc. besides wearing some special garments in social and religious functions and festivities. These type of

garments, which we don't use regularly need to be stored properly, otherwise those might be damaged by ants, mites and fungus etc. Therefore, if we can store the clothes carefully according to the types of fabrics, they will remain attractive, new and fit for use for a longer period.

a) Importance :

The main reasons of damage of clothes are - humidity or dampness, dusts, insects, sweats, various stains etc. Humidity varies with the change of climates. It also differ depending on place and location of house. Because of high humidity, clothes dampen, develop stain, colours fade resulting in attack of insects, fungus and the clothes get damaged. Clothes if kept in dampen state develop mildew, affected by turmites and develop bad odour. The clothes with starch and blue may develop bad odour in humid weather, get discoloured and are attacked by insects. Moreover clothes that soiled with dirt, sweat and grease and are stored by folding, they are attacked by insects and microorganisms. If we wear such garments, there will be itching and various skin diseases may occur. So we have learnt that- it is very important to store the clothes carefully and scientifically. Otherwise as a result of improper storage our valuable garments get damaged.

b) General rules :

We use deferent types of clothes. Moreover depending on their use like daily, weekly, monthly and seasonally they are of different types. So in order to keep our clothes in a neat and tidy manner, we should make a plan and follow some rules. Here, few general rules of storage of clothes are mentioned.

1. For proper storage of clothes, when they are not in use, we should keep them in almirahs, boxes, suitcases, wardrobes, cupboards etc.

2. It will be helpful if we prepare a list of our garments, their types and qualities, their special care, if any, to be taken.

3. Due importance should be given to all clothes, be it costly or of low cost.

4. If the clothes are to be stored for a longer period we should see that clothes are clean and blue, starch, bleaching agents are not used. Before storing the clothes, make sure that they are free from any tears and holes etc.

5. The room and the furniture used for storage of clothes should be clean, dry, spacious and well ventilated.

6. Clothes which are regularly used should be kept at an easily accessible place while those which are used occasionally should be kept in an inner place.

7. Similar types of clothes should be stored together so that it becomes easier to find them out.

c) Methods of storage of clothes :

Certain scientific methods should be followed for storage of clothes. These methods help to keep the clothes fresh and remain fit for use. Let us discuss about the methods of storage of clothes.

Garments should be cleaned and washed before storage. Dirty clothes should never be stored. The pockets of sweaters, jackets, suits etc. should be emptied and cleaned by brushing and dried in sunlight. Fungus grow on damp clothes and they damage the clothes.

A layer of paper or plastic should be spread on the inner side of box or almirahs meant for storage of clothes. Clothes should be arranged and kept on the top of such sheets of paper. It is also advisable to keep papers inside the folds of the clothes. In the place of humid climate, packs of certain gels are kept in the boxes used for storage of clothes which absorb the moisture and keep the area dry.

To prevent clothes from the attack of insects and termites, dry neem leaves, tobacco, black pepper, sandal wood powder, naphthalene, eucalyptus etc. packed in paper or clothes should be kept inside the storage space.

We should be careful in storage of

clothes so that no permanent folds and extra folds develop on them. Some garments like coat, shirt, pant, jacket, blouse should be kept on hanger, to avoid odd folds. If the hangers are made of metallic wire these should be wrapped with paper or plastic, otherwise rusts may damage the clothes.

Extra care should be taken in the storage of woollen clothes as the insects prefer to lay eggs in woollen clothes. The larvae hatched out from the eggs, eat the clothes and damage them. Therefore woollen clothes should be stored after these are cleaned, dried and properly ironed. Stored clothes should be taken out occasionally and exposed to sunlight. It is better, if naphthalene balls or other preservatives are kept in the clothes.

Special care should be taken in the storage of silk clothes. If silk clothes are folded and kept for a longer period, insects grow on the folds. Generally silver fish has high affinity for silk clothes. These clothes should be occasionally exposed to air and sunlight. Preservative should be kept with such clothes. If traces of detergents and starch are left on silk clothes, insects attack them and the colour of the clothes fade. Therefore a few drops of acetic acid or vinegar or lemon juice are mixed with the water for rinsing, they neutralise the alkali and

there will be no discolouration of the clothes. Then the clothes should be dried and ironed and kept on a paper or a muslin bag. If newspapers are kept in the folds of silk clothes, the ink of newspaper

prevents the growth of insects.

By following the above mentioned methods, we can store the clothes as fresh, attractive and fit for use for a longer period of time.

SUMMARY

- We all should take care of our garments.
- Principles and methods of washing differ according to the character of the fabrics. These principles should be followed while washing clothes.
- Different methods of washing are friction method, Application of light pressure suction method and washing by machine.
- Clothes which can not be washed with water can be washed by dry cleaning method. In this method solvent and absorbent are used.
- Different methods are applied to remove different stains from clothes.
- Different cleaning agents are used in washing clothes. Soaps and detergents are some of the agents. These also have many advantages and disadvantages.
- Water has an important in washing. Water is of two types - hard water and soft water.
- Few particular steps are taken at the last stage of washing to make the clothes bright and attractive. This is called finishing of clothes.
- Clothes remain attractive and fit for use for long period of time if they are properly stored.
- There are some rules and methods of storage of clothes and garments.

QUESTIONS**1. Very short Answer question :**

- a. What do you mean by dirt of clothes?
- b. What do you mean by washing of clothes?
- c. What is dry cleaning?
- d. What do you mean by stains of clothes?
- e. What is cleansing agent?

2. Short Answer question :

- a. How soaps are produced?
- b. What are the advantages of using detergents?
- c. What is finishing of clothes?
- d. What are the advantages of applying starch in clothes?
- e. What do you mean by hard water?

3. Long Answer question :

- a. What do you mean by storage of clothes ? Write about the importance of storage of clothes.
- b. What are the primary principles of washing?
- c. Write about the different methods of stain removal?
- d. Explain the properties of good soap.
- e. What are the measures to be taken while ironing the garments.



CHAPTER - XVII

UNIT	HOME SCIENCE EDUCATION
V	AND ITS APPLICATION

17. INTRODUCTION

You have already studied about Home-Science and its different branches. After studying all these, you must have some ideas about this subject. You must understand that Home-Science not only helps in leading a better family life but also presents itself as a potential source of numerous career opportunities, through which, every woman becomes independent and can lead a happy family life. After reading this chapter you will be able to know the following -

- Application of knowledge of Home-Science in everyday life.
- Use of the skills of Home-Science for increasing family income.
- Different jobs and vocations related to Home-Science.
- Inclusion of Home-Science as a subject in different schools, colleges, educational institutions and offering Home-Science as certificate and diploma courses etc.

17.1 KNOWLEDGE OF HOME SCIENCE AND ITS EFFECTS IN EVERYDAY LIFE :

Home-Science provides basic knowledge in different aspects. The student can acquire knowledge which is needed for her day to day life, such as food, clothing, shelter, house keeping, health and nutrition, child birth, use of family resources etc. to a great extent. It provides basic information required to make rational decision at home and outside. Home-Science education equips the student for caring for home, family and for pursuing a career. Today to become a competent house-wife, a wide range of skills are needed. Home Science enables one to acquire these skills, which are needed for our day-to-day life.

17.2 APPLICATION OF SKILLS LEARNT IN HOME-SCIENCE FOR SUPPLEMENTING FAMILY INCOME-NEEDS AND WAYS :

In today's world, only one earning member cannot satisfy the needs of his/her family. Due to the use of different scientific household gadgets, housewives of today gets enough leisure hours at home and the soaring prices of the essential commodities compel them to do

any job. You must have learnt about the importance of additional income in a family. Some of the ways of supplementing family income through skills learnt in Home-Science have been given below.

(a) Prepare and Sell of food items :

Home-Science education teaches various methods of food preparation. Moreover, it also teaches how to bake cake, biscuit, bread etc. through its baking courses. One can prepare these food items, can sell and earn money. We can even demonstrate the preparation of different food item, baking, food preservation to our neighbourhood and can earn money. In marriage or any other occasions, one can supply cooked food items and thus can increase their income.

(b) Child Care : This subject gives us enough knowledge about the needs and care of small children and by applying these knowledge in practical field, we can add to our family income. For example - after getting proper knowledge about 'Home Science and acquiring its skills, one can take care of the young children of the neighbourhood. One can even engaged themselves in creche, pre-school etc and earn money.

(c) Students of Home Science can increase their family income by the application of skills in certain areas like flower arrangement, Home decoration/interior decoration, floor decoration etc.

Now-a-days, it becomes very essential for everyone to decorate their houses with flowers, floors with rangoli, alpna during any festivals, marriages etc. All these requires special skills, which is taught in home-Science education. We can conduct special classes of these with a willing group of women neighbours and can supplement family income.

(d) The skills of stitching clothes, dying and printing can be used in supplementing family income. Apart from dresses, other household articles like - curtain, cushion cover, pillow cover, table cloth, mats etc. can be stitched at home, thereby reducing the expenditure on stitching these items for the family. These items can be sold and can supplement family income. Some items such as bed cover, table mats, dupattas, saree, mekhala chadar, cushion cover handkerchief, dress material etc. can be dyed and print at home and can be sold and thus helps to increase the family income. Likewise, knitted articles like woollen sweater, scarf etc. can be prepared and can be sold.

Thus it is seen that one can apply all these skills of home-science to create beautiful utility and decorative items to supplement family income.

17.3 SELF EMPLOYMENT THROUGH SKILLS LEARNT IN HOME SCIENCE :

'Home-Science' is an applied course

which enriches the student with varied knowledge to become self employed. As a result, their standard of living improved. If Home-Science education is considered to be a means of supplementing family income, then it will be an underestimation of the worth of the subject. Because the skill, knowledge etc. learnt here can make the student successful entrepreneur. That means after getting home-science education, a student can establish herself as self employed person in the society. For example - a home-science student can prepare different food items at home and can sell them. They can own a bakery, restaurant, hotel etc. With the help of food preservation technique, they can preserve fruits, prepare jam, jelly, fruit juices, pickles etc. at home and can sell them. Can you name a few small scale industries of Assam ? Have you heard about “Bhogali jalpan”, “Repose food product” etc.? There are many more such industries, which prepare and sell food items. The knowledge of child care can become a full time profession for an individual in creche, day care centre and in pre-school. One can become self employed by running a creche, day care centre and preparatory school. Interior designing, fashion designing are some other areas related to home-science which provides self employed opportunities to its students. Thus, after studying home-science, there

is a lot of potential for self employment ventures for the students.

17.4 HOME-SCIENCE RELATED CAREERS/VOCATIONS

In first year, you have studied about different jobs and vocations related to home-science. You too understand that home-science offers varied opportunities for career today. These careers vocations are exciting, relevant and much in demand of present day. Different vocations and careers related to home-science are given below.

1. Food preservation
2. Baking
3. Catering
4. Director or Dictician of Health club
Hospitals
5. Fashion designer
6. Hotel Management
7. House keeping
8. Interior Decoration
9. Textile Designer
10. Entrepreneur Development
11. Teaching, research, training
12. Mass Communication
13. Child Care
14. Journalism
15. Public Relation officer
16. Social Worker
17. Extension Programmer/Worker
18. Financial Planner
19. Nutrition Specialist in Nutritian
Rehabilitation Centre (NRC)
20. Health Sectors.
21. Administration.

17.5. HOME SCIENCE AS A SUBJECT IN DIFFERENT SCHOOLS, COLLEGES AND INSTITUTIONS.

'Home-Science' as a subject has been introduced in Assam along with India. In Assam, most of the Schools and Colleges have included this subject in their curriculum, especially in high and higher Secondary level, this subject has been introduced and tries to give an idea about different aspect of home-science. The students can learn properly, as this subject has practical class in both the level.

In College level also, home-science has been introduced as a subject. But there are some colleges offering degrees only in home-Science. In some College, this subject has included in both Arts and Science stream. In Assam, the College of Home-science under Assam Agricultural University located at Jorhat, offer Bachelor's and Master's degrees in home-science. Only a few colleges of Assam offer Major courses in home-science.

In India, almost all Universities offer Master's degree in home-science studies. Master's degrees are generally offered in areas like - Food and Nutrition, Human Development, Family Resource Management, Clothing and Textile, and Extension Education. Minimum qualification required to get admitted in

B.Sc and M.Sc courses are Class XII and graduation respectively. Thus, after getting M.Sc degree in home-science in any areas mentioned above, a student is eligible for serving as lecturer or assistant professor in any College or University. Along with that, all students are required to qualify 'National Eligibility Test' (NET) conducted by University Grants Commission (UGC). Recently, the Govt. of Assam has introduced home-science as a subject in the curriculum of Assam Public Service Commission.

17.6. INSTITUTES PROVIDING CERTIFICATE AND DIPLOMA COURSES

Different Government and non-governmental institute's offering Certificate and Diploma Courses related to home science. These institutes are - Institute of Hotel Management, Food Craft Institute, Institute of Fashion Designing, Textile Designing, CEC, NIFT etc. Now-a-days, some colleges also offering Diploma and Certificate courses on home science. These Courses are - Certificate in Food and Nutrition, Food Service management and Dietetics certificate and Diploma in Dietician Course, Diploma in Creche management, Certificate and Diploma in Textile Designing/ Fashion Designing/ baking and confectionery, child care etc. The duration of these courses may be for three month, six months, one year, two years etc.

Industrial Training Institute (ITI) : These institute provide vocational training to youth in subjects related to home-science. They become self-reliant and can start their own business, after getting the training. These Industrial Training Institutes are run by the Government or by state run agencies. Various Certificate and Diploma Courses offered by these institute are - tailoring, embroidery, dress designing, beautician Course, food preservation, baking, dyeing and printing, interior decoration, weaving etc. The government/states even pay the rural students to study such courses under the TRYSEM (Training of Rural Youth for Self Employment) Scheme.

Institutes Providing Distance Education : Those students who cannot pursue their studies on regular basis in different Courses (Certificate/degree/diploma) in home science on regular basis

due to some reasons, some institution offered such Course through distance education. Duration of these Courses may be from 1 year to 3 years. The rules and regulations for different courses are different. For example - for pursuing a certificate course in food and nutrition, the candidate must pass Class X. Whereas, for pursuing a degree course, one has to pass the higher secondary level. In Assam, National Open School (NOS), State Open School (SOS) have included home-Science subject upto Class XI. On the other hand, Indira Gandhi National Open University (IGNOU) is offering home science and other home-science related subject upto M.Sc level. IGNOU also provide diploma courses in home science. In Assam, another open university “Krishna Kanta Handique Open University” is also planning to start various certificate/diploma courses in home science.

SUMMARY

- Home-Science is a Subject, through which the girl Students acquire knowledge needed for their family life and can make them self employed.
- Skills learnt in home science can be used for supplementing family income.
- These skills are helpful for self employment.
- Home-Science offers different vocations and career opportunities.
- Various Schools, Colleges, Universities, ITI's, other institutions offer courses on home-science and certificate and diploma courses on other home science related courses.
- Some institutions provide degree, diploma courses related to home-science through distance education.

QUESTIONS

A. Very short answer questions :

1. What is the importance of home-science education ?
2. Name two ways of home-science Self employment avenue.
3. List any two home-science related Careers.

B. Short answer questions :

1. Name four skills learnt in Home Science which will help in self employment.
2. Name three opportunities in which knowledge of food and nutrition can be helpful in self employment.
3. What is the importance of studying home science? Explain.
4. Write about the vocations and careers of home science.
5. Name certain skills which will help in increasing family income.

C. Long answer questions “

1. “Home-Science provides various opportunities for self employment”. Explain with examples.
2. Explain about the institutes providing certificates/diplomas/ degrees for different areas related to home-science.



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