

UNIT II

HEALTH EDUCATION

2.1. Introduction

Any system of physical education without the support of health education cannot possibly accomplish the best results. The mutual coordination of physical education and health education is a matter of fundamental importance in any educational system.

2.1.1. Health Education - Meaning

Health education is concerned with promoting health as well as reducing behavior induced diseases. In other words, health education is concerned with establishing or inducing changes in personal and group attitudes and behavior that promote healthier living.

Health education is any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes.

2.1.2. Definitions of Health Education

“Health Education is concerned with the health related behavior of people”

- **Sophie**

“Health Education as the sum of experiences, which favorably influence habits, attitudes and knowledge, relating to the individual, community and social health”. - **Dr. Thomas Wood**

2.2. Aims of Health Education

1. **To provide information about health and its value as community asset** - Health education aims at acquainting the teachers with the rules of health and hygiene. Functioning of precautionary measures

to ward off diseases and to provide good disease free working conditions.

2. **To maintain norms of good health** -The authorities should provide hygienic environment in the form of adequate ventilation, proper temperature , good sanitation and all round cleanliness.
3. **To take precautionary and preventive measures against communicable diseases** – Its aim is to take adequate precautions against contamination and spread of diseases. Thus good sanitary arrangements are made. Precautionary and preventive measures, if they are properly adopted, can help in improving the health standards of society.
4. **To render assistance to the school going children an understanding of the nature and purpose of health services and facilities** - It aims at discovering physical and other abnormalities in the child promoting their reduction, if they are easily curable.
5. **To develop and promote mental and emotional health** – Mental and emotional health are also equally important along with physical health. While physical health makes a pupil physically fit, mental and emotional health enables him to maintain an even temper and a happy disposition.

2.2.1. Objectives of Health Education

- To enable the students to develop a scientific point of view of health with reference to traditional and modern concept of health.
- To enable the students to identify health problems and understand their own role onhealth and to medical agencies in meeting those problems.

- To enable the students to take interest in current events related to health.
- To enable the students to set an example of desirable health behavior.
- To enable the students to understand the causes of the pollution of air, water, soil, and food as well as their ways and means of prevention.
- To enable the students to gain sufficient knowledge of first aid.
- To help students to understand the importance of physical training sports, games, yogic exercises as well as their relationship with health education program.
- To help student understand how the present day rapid development of science and technology as increased the hazards of life and health problems and also how to face and prevent them.

2.3. Scope of health education:

Health education is a very vast term. It has a very wide scope. It is closely related to many other aspects, besides health. These aspects includes housing, economic security, agricultural and industrial prosperity. Normally ,health education includes:

- The balanced and nutritive diet and how it should be prepared.
- The need for fresh air, water, ventilation, light, physical exercise, recreation, rest, and sleep etc.
- The habit of cleanliness with regard to body, organs, dress and dwelling place.
- Knowledge of the structure of the various organs of the body.
- Knowledge of the functioning of various systems of the body.
- Knowledge of various common diseases their causes, symptoms, precautionary measures and cure.
- Sanitation of home, school, neighborhood, community, slums over- crowded cities, factory areas, markets, village etc.

2.4. Methods for imparting health education programme in schools

Programme of health education should not confine itself to personal hygiene of pupils only. It should include all aspects which may help in promoting health of the community as a whole.. A school programme is twofold.

- i. Prevention of the development of poor health
- ii. Preservation of good health.

The school health program is divided into three parts:

1. Health instruction
2. Health service
3. Health supervision.

2.4.1. HEALTH INSTRUCTION

The school has a major responsibility in the area of health instruction. It should instruct youth in such things as the structure and functioning of their bodies, the causes and methods of preventing certain diseases, the factors that contribute to and maintain good health, and the role of the community in the health programme if planned wisely and taught intelligently, will contribute to good health habits and attitudes on the part of the student. Health instruction should avoid too much stress on the field of diseases and medicine.

Aim:

The main aim of health instruction is to acquaint the pupils about the functioning of the various organs of the body, the rules of health and hygiene and methods for curing diseases.

Methods of imparting Health Instructions

1. Healthful Environment of the Institution

Environment is the most important of all educational media. Any scheme of health education must receive top priority to the improvement of physical

and human environment. Neat, clean attractive and well- maintained institutional building, class rooms, equipment and play fields, sympathetic and affectionate teachers contribute greatly to inculcate healthful living, health habits and conditions of work and health notions about work and life. As in the environment, so is the individual. Therefore health environment of the institution plays key role in achieving success.

2. Systematic Health Instructions:

Direct health instruction should be provided through subjects like hygiene, physiology, general science, physical education, home science, social studies etc. This will enable students to understand the structure and function of human body, realise the need for keeping physically fit, and take precautionary and remedial measures in case of illness and diseases.

3. Incidental Teaching:

At the school stage, the teacher can give health instruction in the class room situation when there is any incident of communicable disease in the school. In this way, such incidental teaching may benefit the individual or the entire class.

4. Lectures on health by experts:

The school authorities should make arrangement on certain occasions to request medical officer or physical instructor and other experts on health to visit the school and to deliver a lecture on various items of health and hygiene. However emphasis should be laid on the fact that talks should be supplemented by illustrative aids and material. At the end of the talk , the pupils must be given opportunities to ask any questions concerning the topic to get their doubts cleared.

5. Printed Material:

The school can accumulate printed material on health and hygiene such as short leaflets, pamphlets, posters and standard books.

6. Films and Film Strips:

The school can arrange documentary film from various sources which generally displayed the various diseases and how to prevent ourselves from these. They also stress the importance of personal habits like cleanliness. Similarly film strips accompanied by talks or commentary by experts can be displayed and may be retained on the screen as long as one wishes.

7. Educational field trips:

Actual field trips provide learning situation for the children and they can get first hand experience. Such trips include visit to red cross hospitals, Clinics, fairs exhibitions, yogic centre and water supply centers etc.

however each visit needs proper planning and advance class room discussion to motivate young children. At the end of visit if the teacher clarifies the doubts of the students it will be more beneficial for the children.

8. Health Scrap Book:

Students should be encouraged to maintain scrap books on health on the top of every page, one important health rule should be written or pasted. pictures illustrating important health rules, causes and prevention of various diseases, neat and healthy living functions of various organs in human body should be collected this book should contain the records concerned with the students.

2.4.2. HEALTH SERVICE

The health service programme includes different protective measures to maintain and improve health.

Aim:

Health service aim is locating ill health and provide medical care after proper medical checkup.

Agencies of school Health Service:

- School Medical Department, under the charge of a school Doctor

- School Health Educator
- School Dispensary
- Red cross unit of the school
- Sports Department under the charge of a qualified physical education instructor.

Programme of Health Services

1. Medical Inspection and Maintaining Records

- Proper arrangement in the school to get every student medically examined at the time of his admission to the institution and in subsequent years.
- Periodically arrange for health inspection of the pupils with regard to vision, hearing, dental health and personal hygiene.
- Maintain the records of medical inspection and health status of the children.
- If any dangerous disease is identified the school authorities should take proper steps and suggest the parents of ward to consult the experts in the hospital.

2. Duties of Teacher

- Observation by the teacher and experts to locate defects and disease if any especially of skin, eyes, ears, teeth etc. in the wards inform in the parents for speed recoveries.
- In addition , teacher should look at the child's posture, cleanliness, and hygienic conditions.

3. To Maintain Sound Health Condition

- Maintain proper sanitation conditions of the school.
- Highlight the importance of sanitation to children.
- Arrangement in the school for first and emergency treatment when the child receives injuries while playing or is suddenly ill.
- Record the history and defects of special cases.

4. School Clinic

- A school clinic or dispensary needs proper care and should be equipped with medicines for ordinary ailments, dispensary tables, chairs, charts, and models concerning health, bed for the sick of patients, scale for measuring height, covered dustbin, heater, and first aid boxes etc.

2.4.3. HEALTH SUPERVISION

In order to ensure good physical condition of the school campus, there should be healthy environment of the school and classroom.

Aim:

The aim of health supervision is to provide a healthy environment in the school and to maintain cleanliness and hygiene conditions in the school.

Steps to be taken by the school

- **Site and location:**

The school should be located in a quite and pleasant environment away from the noise and dust of the populated area. The school building should contain a number of rooms according to the standard of the school and pupils and teacher.

- **Class Rooms:**

The class room should be constructed pacca with proper light and ventilation. The window should be opened directly for free air circulation and must be as light as the ceiling of the room. The poor lighting in class room may be the cause for pupils diseases related to eyesight.

- **Furniture:**

Furniture plays an important part in the physical, moral and mental welfare of the scholars. The desks should be arranged parallel to one another but at right angles with the windows. The height of seats must vary from age to age. The height of the back of the seat has to be suitable to support the spinal cord.

- **Black Board:**

Arrangement of blackboard should be done in a proper way, it should be placed with a proper light and its surface should be dull.

- **Intervals:**

A prolonged posture at desks is bad and in order to promote health, lesson hours should be spilt by frequent short intervals for play. It makes the mind brisk and energetic during leisure hours.

- **School ground:**

The school ground must be level and plane. It must be turfed with flower –pots fine creepers and trees on all sides.

- **Walls:**

The walls must be decorated with pictures, maps, painting, leaders quote, poetic verses and other beautiful objects.

- **Drinking Water:**

At all times, there should not be any shortage in free flow of drinking water, which is extremely essential for

welfare of the wards. The storage tank should be cleaned and chlorinated periodically. It reduces spreading dangerous communicable diseases.

- **Medical Examination:**

This medical examination will check the spread of various diseases and will preserve the health of the students.

- **Conducted games:**

Arrangement of various games like indoor and outdoor and sports for students. For example, chess it will develop quick aptitude ability of students.

2.5. POSTURE

2.5.1. Meaning of Posture

A person's posture is the way how he keeps his sitting position , standing position, while studying, while writing and while doing some activities, so that it will be healthful to him.

A good standing posture is considered to be the posture in which the total weight of the body of the person is balanced equally by the two legs of him. The weight is along the vertical line passing through the person and in this particular posture all his organs will function without easily tired.

2.5.2. Characteristics of good posture

We can list the characteristics of good posture.

1. Sitting Position

In sitting position the good posture is sitting erect keeping our backbone straight. It is good to our health if we sit on the floor with legs

folded and if we sit on a chair we should keep our legs loosely hanging and we should keep our backbone straight.

2. Standing position

To keep a good standing posture we should ensure our legs to be straight and we should leave a gap between our legs. If we keep our feet slightly in a divergent angle our entire weight will be between our legs, and this will give a stability to our standing position. This is the characteristic of a good standing posture. The hands should be loosely hanging on either side of our body.

If we want to stand for a longer time, we keep our legs in a stand at ease position.

3. Lying Down Position

A good posture is lying on one side left or right keeping our hand loosely. If we need to lie our back we can keep our legs loosely so that it will be good to our health.

2.5.3. Importance of Good Posture

Students often neglects their good posture at schools while they do their classroom activities. A good and healthy posture has very effective in tolerating adverse effects of our working situations. The tolerance of the person is normal when our health is good and the tolerance against the adverse effects of working condition can be easily obtained in normal activities such as sitting, standing, running or working when we are healthy. If we are affected by injuries or diseases our postures will not be good.

2.6. Causes of Poor Posture

The following are the causes of poor posture.

1. Congenital :

Some children have congenital postural deformities. These deformities are present at the time of birth of the child, like club foot, dislocation of the hips, hyposis, etc. Other type of deformities are acquired due to so many reasons. They cause disfigurement of the body.

2. From diseases:

Various diseases are responsible for the bad posture of the child, like inflammation of the bones, rickets, tuberculosis, paralysis, etc. These diseases may cause knock knee, developing undue curvature of the spine.

3. From accident or injury:

Injury can also cause physical deformity like one leg tall, one short, deformity due to the contraction of scars of burns.

4. Improper diet:

Improper diet may also cause deformities like rickets, narrowing of the pelvis, the pigeon chest, etc

5. Weakness of senses:

Weak eye sight or hard of hearing or partial hearing also causes physical deformity. A child has to twist his body to adjust to the voice and to see things clearly.

6. Fatigue:

Due to fatigued body the child becomes lethargic and adopts wrong posture in sitting and standing.

7. Physical Weakness:

Physically weak children get tired very quickly. They cannot sit for long hours in the school. Under compulsion they have to sit even by adopting wrong postures.

8. Fashion:

Due to fashion many persons adopt a specific style of holding the body or put on very tight clothes or shoes, which hinder the activity of the body, even one cannot breath properly and twist his body to feel easy.

9. Delicacy and imitation:

It is very common amongst ladies to prove their delicacy, the walk and sit and move their body delicately, which spoils their figure. Children generally imitate their teachers or best liked persons, may be some hero or heroine. Without knowing the reason they also imitate and adopt their style, which disfigures them.

10. Heavy load:

Carrying heavy load on one shoulder or on the upper back results into round shoulders or one shoulder high and another low.

11. Unhygienic school condition:

Over crowd class rooms, insufficient air or bad lightning arrangement can also cause bad postures.

12. Improper furniture:

Size of the chair and table or sufficient furnisher also causes deformities.

13. Insufficient sleep:

Lack of sleep or sleeplessness also causes bad posture. It may develop drooped neck or curvature of the spine.

14. Wrong Exercise:

Unsupervised wrong exercises also cause bad posture.

15. Wrong Punishment:

Long standings, holding ears under the legs or raising arms upwards for a long time are responsible for bad posture.

2.7. Common Postural Deformities

1. Kyphosis or Round Upper Back

The children or persons with this deformity may have their backside bent backwards and walk droopingly. The causes for this deformity are weak muscles, sickness for a long period, non-nutrient food, living in a net - properly ventilated houses, living with a place more people density, abnormal growth, poor eye sight, sitting in uncomfortable chairs and furniture etc.

Physical Exercises for preventing Kyphosis.

- We can practice our children by making lie down on their back and keep their hands loosely on either side of the body with palms facing upwards. In this position we can ask them to bring their shoulders slowly to the normal level daily.
- We can keep the persons lie down prostrate so that their faces and chins slightly bent downwards. In this position, keeping the hands in the hip region we should ask them slowly rise and bring their hips, heads and neck.
- In the sitting position, we should ask the children to keep their neck and head straight and by keeping both of their hand behind their nap by holding with fingers a straight stick ask them to be in this position for a few minutes.

2. Hollow Buck or Lordosis

Due to Kyphosis, hollow buck or lordosis may appear. People with hollow buck defects have backside bent backwards and their body will be bulging so that they often walk with staggering steps. In some people due to chronic asthmatic condition the hip, spinal cord and the backside muscle may be weak and cause Lordosis.

The following physical exercises may be practiced for preventing hollow buck or lordosis.

Exercises

- Keeping the legs, so that there may be a comfortable gap between the legs, we should bend forward to catch the left knee by both hands for three times. Similarly, we should catch the right knee by both hands three times.
- In the sitting position, we should stretch our legs forward so that there is a comfortable gap between the legs. Then we should catch the ankles of our legs by our hands.
- In the sitting position, we should stretch our leg forward and bend forward to catch the leg fingers. We should be in this position for three minutes.

3. Scoliosis or Lateral Curvature of the Spine

The person with this deformity normally will have their backbones slightly bent towards the left side, their chest bone will be slightly upwards and at the same time their left backside will be slightly upwards. This deformity is due to the carrying of overload on one side of the back.

The following may be the reasons for scoliosis.

- Unhygienic school environment.
- Lack of facilities for sitting and writing at home and the improper lighting facilities.
- Defect in hearing.
- Improper standing posture.
- Genetic disorder.

We can do the following exercise for preventing Scoliosis.

Exercises

- We should lie prostrate and should bring our right hand upwards and the hand on the left of our body. Now, we should bring our right hand behind the head to press the left hand.
- We should lie prostrate and stretch our right hand upwards and left hand side wards. In this position we should press firmly the feet of the against the floor, we should stretch our hip forward, push the right hand upwards and push the left hand backwards and keep this position for three minutes. Then we should come to the normal rest position.
- We should stand keeping a wide gap between the legs, raising the left heel we should slightly move up our left side of the hip, and should bring the right hand above our head to touch the left shoulder and similarly should press the left rib the left hand.

4. Bow Legs

The children with this deformity have knees bent out wards like a bow. When they stand, their knees do not touch each other, but their feet are close together. If the children continue to suffer from this type of deformity after their year in age, they would be asked to practice walking with the special type of shoes for them, and there are surgeries for curing this deformity.

5. Knock knee

The children with knock knee have the following type of deformity.

- Both of their knees are close together when they stand.
- When they stand, their feet are parallel to each other.
- There are gaps between their ankles.
- When they walk or run their knees hit each other so that walking is a problem to them.

Causes

- Knock knee is caused by the deficiency in calcium, vitamin D and it leads to 'Rickets' disease.
- Chronic knock knee causes overweight, flat foot etc.

Treatment

- ✓ Cod liver oil reduces vitamin D deficiency.
- ✓ Horse riding practice is good to them.
- ✓ Walking exercises may be practiced with the supervision of a doctor.

6. Flat foot

Most of the people will have leg with an arc, but people with flat foot there will not be any arc like the foot of the other people. The footmuscles of people with flat foot are weak and so the foot is flat without any strength.

2.7. Preventive Measures:

Childhood is the best time to improve bad postures. Every attention should be paid on the postural aspect of the child's personality. The following measures should be adopted.

1. Providing knowledge of good posture:

As has already been stressed. It is one of the important functions of the school that it must provide knowledge of good posture to its pupils. The class room teacher must understand it and transmit it to the pupils. Individual instruction in correct posture may also be given to certain pupils with faulty posture habits, to achieve best results. Instructions before full-length mirror can be most effective because, in that case, the pupil can see as well as feel the correct position.

2. For congenital deformities the students should be directed to go to orthopedic hospitals only. Teacher himself should never try to correct such cases.

3. Practice of remedial or corrective exercises should be given to the students individually according to their physical needs.
4. Children should not be allowed to carry heavy loads of bags, drawer or almirahs can be provided in the school to keep books.
5. Every possible source of fatigue and strained attention must be investigated and corrected, e.g. deafness, eye strain, etc.
6. Remove the cause of
 - Faulty occupational practice
 - Faculty sitting accommodation
 - Faculty shoes or clothes
7. Continuously long sittings and long periods should be avoided. Short intervals of activity be introduced.
8. It is appreciable if the school has subject wise class rooms. It also helps in the change of posture and long sittings.
9. Front seats be provided to the students who suffer from weakness of senses like short sight or hard of hearing.
10. Teachers should not give wrong punishment or too much of punishment which is injurious of health.

2.9. FIRST AID

First aid is the immediate treatment given to the victim of the accident or sudden illness, before medical help is obtained.

2.9.1. The aims of first aid

1. To preserve life
2. To protect the casualty from further harm
3. To promote recovery

First Aid is based on scientific medicine and surgery. It is skilled assistance. But the Aider need not be a doctor. After the doctor takes charge

the First Aider's responsibility ends . He can then stand by, to help the doctor.

The First aider should observe carefully, think clearly and act quickly. He should be calm, cool and confident. He should not get excited. He should ask someone to call a doctor/inform hospital immediately by giving details about victim. While waiting for the doctor, he should give First Aid methodically.

2.9.2. Qualities of the First Aider

- Prompt and quick
- calm and controlled
- Wise and intelligent
- Resourceful
- Sweet tempered and sympathetic
- Skillful and Tactful
- Dexterous and Clever
- Faith and Perseverance

2.10. Principles of First Aid

The following principles are followed in giving the first aid.

- The first aid given to the patient quickly saves him.
- It controls the bleeding of the patient immediately enabling the patient for his further treatment.
- It is done for giving the patient an immediate free breathing in a well aerated situation.
- It is given so that the patient may breathe with the artificial respirator.
- It is given to the fire accident patient by removing their dresses and covering them with a blanket.
- It is done to give suitable aeration to the patients by loosening their dresses.

- It is done with the help of medicine, bandage cloth and bamboo sticks for the injured and for the fracture of the patient.
- It is done with the suitable transport system immediately to the nearest hospital.
- It is done if the first aider is not a qualified person by getting advice from the doctor.
- It is done to give rest for the patient before going to the further treatment.
- It is done to the poison case for removing the poison immediately.
- It is done by giving hot milk or tea for the patient who is conscious.
- It is done by the person who knows the human anatomy and physiology.
- It is done by the first aider who is not a doctor generally.

2.11. Need and importance of First Aid

First aid is called the medical aid given on the spot to the patient who is met an accident or any things dangerous to him, and it is done before the proper medical treatment by a doctor.

In school the teachers should know how to do first aid if a student suddenly falls unconscious. Sometimes, some students do not take breakfast at home and come to school. These students may fall unconscious and the teacher should know how to first aid them. The following first aid should be done to the students who fell unconscious.

- First they should be made to lie down on a bed.
- Second, the tight dress and belt should be loosened.
- Allow good aeration to the student.
- If he is cool with sweating we should cover him with blanket.
- We should not give anything through the mouth if he is unconscious.

- We should first sprinkle water on his face and make him regain his consciousness, then we should give him water or milk to him. After taking rest he may be sent to his home.
 - If the student does not regain his consciousness we should immediately call the ambulance and admit him in the hospital for treatment after informing his parents.
- If the student does not come to his consciousness the teacher should check whether he is breathing , and his heart beat normal etc.
- If the teacher cannot be feel the students pulse, he can touch at the neck region for pulse.
- If there is no breathing and if he temperature of the student is less he should try to give artificial respiration if he is CPR trained.
- If the student is unconscious and if his pulse is down we should immediately give CPR respiration so that his brain is active.

To give CPR, we can learn through ABC of CPR. The following are the ABC of CPR.

A – Airway

Before giving artificial respiration we should check whether the air passage of the person is open or not. We should open the mouth of the unconscious person and lightly pull the tongue, his throat will open for air passage. If there is any block due to phlegm or because of his tongue, we should remove this block before giving CPR to him.

B – Breathing

This breathing help should be done by sitting on the backside of head of the unconscious person. First, the first aider should take his big breath and blow it through the mouth of the unconscious person, keeping his mouth close to the mouth of that person. If the blowing the air through the mouth is proper, immediately the person's chest moves up and down and his breathing will be normal. The breathing first aid should be done

15 times for a minute. This method is called the 'Mouth to Mouth Breathing'. (MMB)

C – Blood Circulation

We should check the blood circulation of the unconscious person by keeping our finger below the lower jaw in the neck region to feel the pulse. If the heart functions there will be pulse and the blood circulation is normal. If there is no pulse, we should make the heart function by giving 'External Cardiac Compression (ECC).

The first aider should come to the left side of the unconscious person and sit near to the person and place his palms one above the other and compress his chest on the left side fastly. He should do this first aid for 60 times a minute fastly to activate the heart of that person. Most importantly the first aider should do MMB and ECC continuously for making him regain his consciousness or until he is admitted to the hospital for treatment. These first aids can be done by two first aiders, one for MMB and the other for ECC. If there is only one person for giving the first aid, then, first he should give MMB for 5times followed by ECC for 20 times. If the ECC is successful it will be shown in his pulse of the person. If MMB and ECC are done continuously the unconscious person may feel the joy of making the person coming to life. Though ECC and MBB should be done by the expert, everybody should try to know it for giving first aid to others. It will save a person for the further treatment.

2.12. First Aid for Different Cases

First aid is immediately needed for the following cases.

1. Scratches

The first aid for scratches is the washing by water and applying disinfectant on the scratches.

2. Bleeding

- First, the place where the bleeding occurs should be held high.
- Second, the place on the bleeding point should be tightly pressed and closed with a white cloth.
- If the blood clots and stops we should put another cloth on the white cloth and bandage it.
- If the cut is deep we should immediately take him to the hospital.

3. Bone Fracture

- If there is a bone fracture we should not try so set it right.
- We should keep the fractured part without movement and remove the dress.
- We should give ice massage if there is a swelling in that place.
- We should tightly bind the fractured part with a slim and light bamboo sticks.
- If there is injury and bleeding it can be washed closed with a cloth for stopping the bleeding.
- We should not give anything to drink, since the doctor may give anesthesia to him.

4. Snake Bites

Immediately we should tightly bind with a rope above the place where he has been with bitten by a snake, and we should make use of a knife to make the blood drain out from the place of bite. We should also pour cold water on the bitten place. Then we should immediately take him to the hospital.

Scorpion Sting and Insect Bite

First, we should remove the sting from the bitten place and give cold massage at that place.

5. Sprain

- First, we should press the part and gently massage it.
- Second, we should apply pain relieving balm on the sprained place.
- Third, we should give cold massage on that place.

6. Cut Injuries

If anybody cut his finger with knife or blade, first we should stop the bleeding and clean the cut by any disinfectant. Then, after cleaning the cut we should apply boric acid and sulphonamide powder put a bandage with a bandage cloth.