UNIT 2 HEALTH

Structure

2.1 INTRODUCTION

Health is considered an important aspect of development. It is one of the primary social needs which every nation has to ensure to its citizen in order to meet its development goal. Healthy individual can make a healthy nation. They are more productive than unhealthy individuals. Therefore, investment in health can be regarded as an investment in human capital, which ultimately promotes development.

After reading this unit, you will be able to

- establish the relationship between health and development
- define health and describe various components of health
- analyze various indicators of health
- explain measurement and the consequences of malnutrition
- list various problems of the health care system.

2.2 HEALTH: CONCEPT AND RELATIONSHIP WITH DEVELOPMENT

You might have heard the proverb, 'health is wealth'. Of course, health is a frequently used term. For the common man, its meaning is to have a well-toned, well –built body. It is usually said that the people of Punjab are healthier than people from other states, but this does not reflect the true health status of the state and there are other heath indicators such as maternal mortality, infant mortality, etc. in which the state might be lagging behind compared to other state.. Let us now discuss a few definition of health.

The word "health" is derived from an old English word "heal" which means "whole", which signifies the whole person and his well-being. A few definitions of health are given below:

According to the World Health Organization, health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

Dubos says, "Health is the expression of the extent to which the individual and the social body maintain in readiness the resources required to meet the exigencies of the future".

Parsons said that "health is a state of optimum capacity of an individual for the effective performance of that roles and tasks for which he has been socialized".

2.2.1 Importance of Health

The World Health Assembly in its historic Alma Ata Ata Declaration (1978) advocated that the main social target for countries should be to have all citizens of the world attain a level of health that will permit them to lead a socially and economically productive life. The guiding principles of UN ICPD conference (1994) also state that "everyone has the right to enjoyment of the highest attainable standard of physical and mental health. States should take appropriate measures to ensure on a basis of equality of men and woman universal access to health care services". The enjoyment of good health needs to be one of the fundamental aims of every nation.

2.2.2 Relationship between Health and Development

Many social scientists have noted that there is both direct and indirect relationship between health and development. According to Szirmai, improving the state of health contributes to the realization of other developmental objectives such as economic development, labour productivity growth, responsiveness to innovation, and future oriented-ness. Gills and others said that the relationship between health and development is a reciprocal one. Economic development tends to improve health status, while better health contributes to economic development. Health has a direct association with labour productivity. Illness and malnutrition lead to loss of strength and energy and productivity capacity which, ultimately, has a negative effect on labour income. Basta et. al., found that in Indonesia men with anaemia were 20 per cent less productive than men without anaemia. Gallup and Sachs found a significant negative relationship between the incidence of malaria and economic growth. According to Chambers, illness leads to reduced production in subsistence agriculture.

From all these arguments it could be deduced that health is closely associated with labour productivity, income, and economic growth. Poor health leads to loss of stamina, which further results in less hour of work and less productivity and less income. Less income leads to poor consumption, which further affect health, and this vicious circle continues. In a historical research, Fogel claimed that about one third of economic growth in England in the past 200 years is due to improvements in nutrition and health. It is remarked that investments in healthcare make substantial positive contributions to economic growth and development. The circle of relationship between health and development is given in Figure 2.1

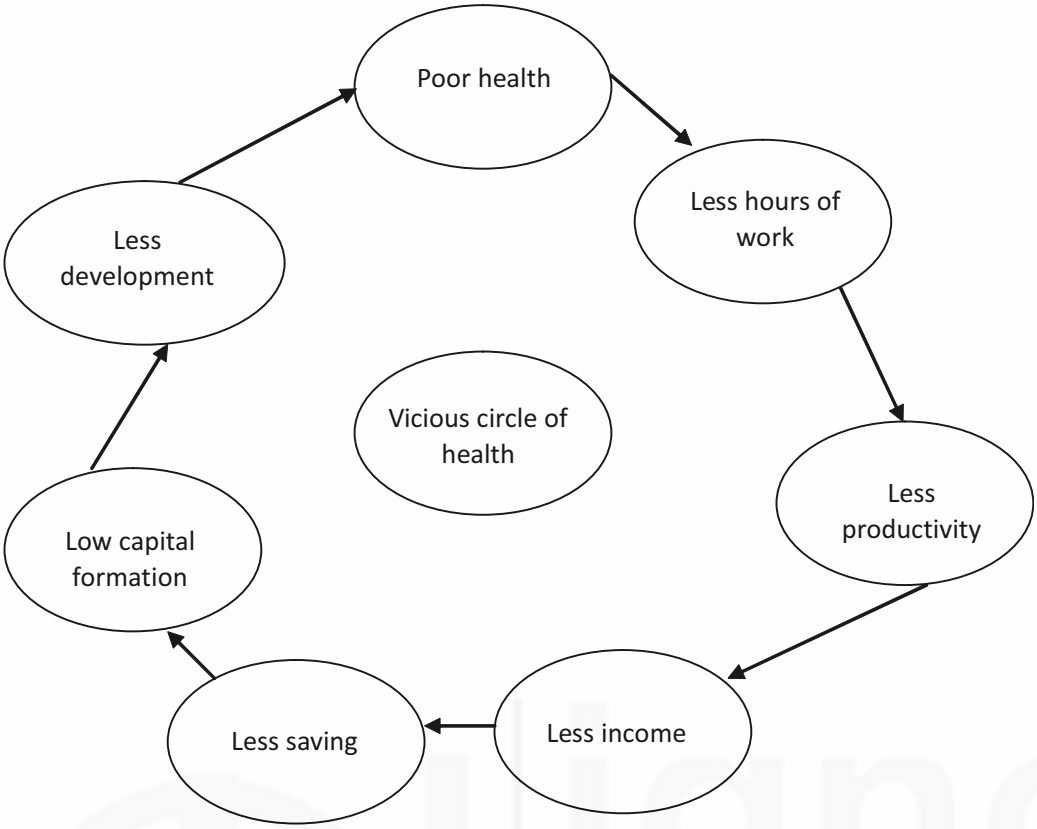

Fig. 2.1: Circle of Health and Development Relationship

Health is regarded as one of the important components of development. The Millennium Declaration by the United Nations in September 2000 has accepted health in general and health care of women and children in particular as important component of development.

The eight Millennium Development goals are:

i) Gender equality and women empowerment

ii) Reduction in child mortality

iii) Improvement in maternal health

iv) Combating HIV/AIDS, malaria and other diseases

v) Ensuring environmental sustainability

vi) Developing a global partnership for development

vii) Eradication of extreme poverty and hunger

viii) Universal primary education

Among the eight Millennium development goals, three goals are related to health. These are: reduction in child mortality, improvement in maternal health, and combating HIV/AIDS, malaria and other diseases.

In this section, we discussed health and its relationship with development. Now, answer the questions given in *Check Your Progress 1*.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What do you mean by health?

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2) How the health and development are related?

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2.3 COMPONENTS OF HEALTH CARE

In the earlier section, you studied the meaning of health and its relationship with development. In this section, you will find discussion on various components of health care. Health care consists of various aspects such as

i) Primary health care

ii) Health care programmes and policies

iii) Occupational health care

iv) Mental health care

The important components of health care are discussed below.

2.3.1 Primary Health Care

In the Alma Ata Ata Declaration, Primary Health Care was accepted as the key approach to ensure health care for achieving the goal of 'Health for All' by 2000. The World Health Organization advocated that primary health care should at a minimum include

- education concerning prevailing health problems
- promotion of food and proper nutrition
- basic sanitation and adequate supply of safe water
- maternal and child health care including family planning
- immunization against major infectious diseases
- prevention and control of locally endemic diseases

- appropriate treatment of common diseases and injuries
- provision of essential drugs.

From these points, it could be identified that some of the key components of primary health care are :

i) maternal and child health care

ii) safe drinking water and sanitation

iii) control of diseases

iv) health education and communication

The Key features of Primary Health Care

i) essential

ii) scientifically sound and socially acceptable

iii) accessible to individual and community through their full participation

iv) it is affordable and cost effective

v) it encompasses preventive, curative, promotive and rehabilitation services

vi) it is delivered through the existing health structure easily

vii) it takes care of all common health problems of the community

i) Maternal and child health care

In India, Primary Health Care services are delivered through health sub centres, Primary Health Centre (PHCs), and Community Health Centre (CHCs), district hospitals, and dispensaries situated at the village, Block and District level.

Maternal and child health care means taking care of the health of the mother and children**.** Maternal and child health care is an essential component of primary health care. WHO (World Health Organisation) has envisaged that maternal health care should ensure that every expectant and nursing mother should maintain good health, learn the art of child care, has a normal delivery, and bears healthy children. As far as child health care is concerned, the WHO has said that every child, wherever he, or she, lives and grows up in a family unit, with love and security, in healthy surroundings, receives adequate nourishment, healthy supervision and efficient medical attention and is taught elements of healthy living.

Key Components of Maternal and Child Health Care

- care for antenatal woman, i.e., care during pregnancy
- provision of institutional delivery, i.e., delivery should be conducted in health care institutions
- post natal care - care of lactating mother after delivery
- nutritional care of ante natal and post natal mother
- care of the new born
- immunization of children
- nutritional care of children
- health education to women and children
- prevention of maternal mortality, infant and child mortality.

The Maternal and Child Health Care has been renamed as Reproductive and Child Health Care. The important aspects included in the Reproductive Child Health Care programme of which maternal and child health care is a component are

- checking of abortion related maternal mortality
- checking HIV/AIDS among the women and new born child, virus transmitted from infected mother to new born child
- checking sexually transmitted diseases (STDs).

The International Conference on Population and Development held in Cairo, 1994, recommended the implementation of the Reproductive and Child Health (RCH) Programme. The important points highlighted at the conference are given below.

a) The empowerment of women and improvement of their status are important ends in themselves. Reproductive health including family planning should, therefore, be promoted within this context in which woman would be provided with greater choices through expanded access to education, health services, skill development and employment.

b) Family planning programmes should not be viewed as instruments for achieving demographic goals but as part and parcel of providing reproductive health care to woman and couples.

c) At no stage in the programme of reproductive health and family planning are women's rights to be violated by incentives or coercion directly or indirectly. There should not be compulsion of any sort regarding the family size and choice of a contraceptive method. Both men and women should be adequately informed and the widest possible choices should be available in the selection of safe contraceptive methods.

ii) Safe Drinking Water and Sanitation

Access to portable drinking water and sanitation is closely related to the health status. Diseases associated with contaminated water supply and/or poor sanitation can be classified as follows.

- Water washed diseases **-** insufficient water use and poor personnel hygiene lead to diseases, these can be scabies, skin infections, typhoid and it also includes certain intestinal infections related to poor excreta disposal that is dysentery, these can be controlled by increasing water quality and improved personal hygiene and sanitation.
- Water related vector-borne diseases - spread by insects that breed in water or bite near it and unrelated to excreta disposal such as yellow fever, filariasis, malaria, and dengue. Can be controlled by providing reliable water supply and sociological management such as clearing of bush, draining out stagnant water.
- Excreta disposal diseases - spread by improper disposal of excreta and open defecation. Associate diseases are hookworm, tapeworm and roundworm.

Another type of environmental sanitation problem which the developing countries are facing, particularly in their rural and urban slum areas, is housing with

insufficient space, ventilation, and access to sunlight. This promotes the spread of airborne diseases such as tuberculosis and asthma. In developed countries, improvement in sanitation has reduced the occurrences of diseases. However, in developing countries it has not been given due importance for a long period. Therefore, the proponents of healthcare programmes have urged that development should not only emphasize on reducing mortality and morbidity; special attention has to be given towards nutrition, healthcare and environmental sanitation.

Table 2.1: Status of Portable Water and Sanitation in selected Countries, 2004

Countries	% of population using improved sanitation	% of population using an improved water source
US	100	100
UK	NA	100
Japan	100	100
China	44	77
India	33	86
Pakistan	59	91
Nepal	35	90
Nigeria	44	48
Uganda	43	60
Zambia	55	58

Source: *World Development Indicators, World Bank, 2007.*

Water and sanitation related diseases are governed by the host-agent-environment triad, shown in Figure 2.2

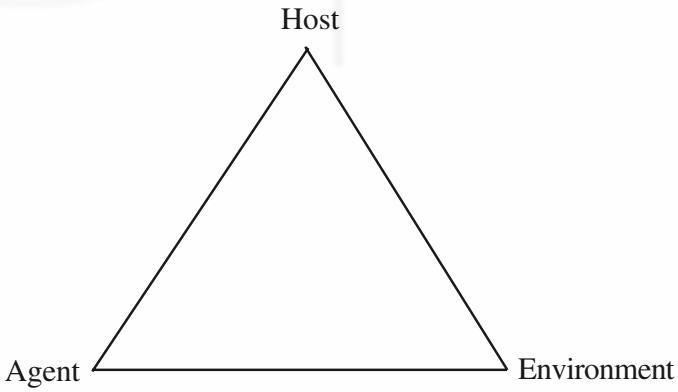

Fig. 2.2 : The Host –Agent-Environment triad

For example, tuberculosis requires an agent - the micro-organism mycobacterium tuberculosis; a susceptible host (the patient who may be a malnourished alcoholic) and an environment (perhaps, sharing an overcrowded shelter for the homeless with others who may have been infected).

iii) Heath Education and Communication

Health education is important for creating awareness and generating demand for health care services by the people for a healthy living. The health education is a process that informs, educates, motivates and helps people to know, adopt and maintain healthy practices for better quality of living. The Alma Ata Declaration (1978) has given a dynamic definition of health education in following words "a process aimed at encouraging people to want to be healthy, to know how to stay healthy, to do what they can individually and collectively do to maintain health and to seek help when needed." Some important aspects that need to be covered in health education are maternal health care, child health care, family planning, nutrition, environmental sanitation, disease prevention and control, mental health, use of health services and health care delivery system, and community participation. However, the content of health education can vary from area to area and from one target group to another. Health education has been integrated into the school curriculum in many countries. Health awareness among the children and adults would promote healthy future parenthood.

Health education can be imparted to the people through various approaches and methods such as, individual, group, and mass approaches. The individual approach includes personal contact, home visits, personal telephone calls, and e-mails. The group approach includes lecture-demonstration, focus group discussion, panel group discussions, role play, folk dances, and dramas. The mass education approach includes television, radio, news paper, posters, and wall painting. To be effective, health education strategy needs to apply certain principles. It should be interesting, create participation among the people, it should be from the known to unknown, it should be motivating, and it should create enthusiasm among the people.

2.3.2 Health Programmes and Control of Diseases

The government and international agencies in different countries are spending a lot of money on health programmes for the control of diseases. For example, important health programmes launched in India for the control of specific diseases are

i) National Malaria Eradication Programme

ii) National Leprosy Eradication Programme

iii) National Tuberculosis Programme

iv) National AIDS control Programme

v) National Programme for Control of Blindness

vi) Universal Immunization Programme

vii) Reproductive Child Health Programme.

The National Malaria Eradication Programme was launched in 1958. It was based on indoor residual spraying of DDT (Diclorodiphenyl trichloroethare). It helped to control malaria, although, it could not eradicate it from the country. The National Filarial Control Programme has been underway since 1955. Under this programme, in rural areas, anti-filarial medicines and morbidity management services were provided through primary health care system. The National Leprosy Control Programme has been underway since 1953.The strategy is based on early detection of cases, short term multi drug therapy, health education, ulcer and

deformity care, and rehabilitation activities. The National Tuberculosis Programme has been in operation since 1962 and it aims at reducing the tuberculosis in the community. The programme includes vaccination of children against tuberculosis and care of tuberculosis case through DOTs (Direct Observed Therapy). The National Programmes for Control of Blindness was launched in 1976 for providing eye care facilities and control of corneal blindness, refractive errors among school going children and control and management of cataract cases. The National AIDS Control Programme was launched in 1985. The programme aims at prevention, care and surveillances, and, because of the seriousness of the disease, the Government of India has formulated a National AIDS Prevention and Control policy in 2002.

The Universal Immunization Programme (UIP) was launched in 1985 by removing the previous Expanded Programmes on Immunization (EPI). Its aim was to ensure immunization facilities to pregnant and lactating mothers and children below five year against vaccine preventable diseases. It is ensured through the existing health care system. The Reproductive Child Health Programme was launched in 1977. The programme incorporated the components of Child Survival and Safe Motherhood and includes two additional programmes such as STD (Sexually Transmitted Disease) and RTI (Reproductive Tract Infections). The National Rural Health Mission (NRHM) is a recent programme, launched in 2005, which aims at delivery of maternal and child health care services and ensures other capacity building and infrastructure development in the health care system through active community participation. These are a few important health programmes, ongoing in India, for improving the health status and quality of living of people.

Considerable advancement has been made in health and medical sciences. But at the same time, developing countries have not been successful in controlling diseases and disease related deaths. Communicable diseases like tuberculosis are responsible for 30 per cent of deaths. More than 20 million people died of AIDS and many more are suffering. Adding to this, non communicable diseases and injuries have surpassed the burden imposed by communicable diseases which accounted for 33.5 million and 5.2 million deaths respectively out of global mortality of 57 million.

Table 2.2 : Incidence of Tuberculosis per 1, 00,000 people in Selected Countries, 2005

Countries	Incidence of Tuberculosis
Bangladesh	227
Botswana	654
China	100
Ethiopia	334
Germany	7
Japan	28
India	168
Sri Lanka	60
UK	14
US	5

Source: *World Development Indicators, World Bank, 2007.*

Non communicable diseases are emerging as the major cause of mortality and morbidity. The global burden of cardiovascular diseases, diabetes, cancer, and stress and associated medical disorders are on rise. The risk associated with medical disorders is on rise. The risks associated with the non-communicable diseases have raised blood pressure, high cholesterol, obesity or overweight and physical inactiveness.

2.3.3 Occupational Health

Occupational health aims at the prevention of diseases and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations. Workers in all types of occupations be it in agriculture, or industry, or in the construction sector, and other unorganized sectors are liable to physical, chemical, biological, mechanical, and psychosocial hazards. The workers in the tobacco factories are more likely to be affected by asthma and tuberculosis. The health of the workers needs to be protected, not only to raise their work capacity, but also their well being. Some occupational diseases are cancer, tuberculosis, leukemia. Medical maternity, disability, and sickness benefits should be given to the workers employed in various occupations by the government and by private employers. The government of India in its directive principles of state policy has mentioned that "the state shall, in particular directs its policy towards securing that the health and strength of the workers, man, woman and the tender age of the children are not abused and citizen are not forced by economic necessity to enter vocations unsuited to their strength".

2.3.4 Mental Health

According to WHO statistics, about 500 million people in the world are believed to suffer from neurotic, stress related, and somatoform (psychological problems which present themselves as physical complaints) ailments. The causes of mental illness may be due to organic conditions, heredity, and social causes. The mental health services include early diagnosis and treatment, rehabilitation, group and individual psychotherapy. Mental health affects the family health. Globalization and modernization and growing aspirations have heightened the mental health problems. The tension in the workplace and in the family, day by day enhancing the number of people suffering from mental problems. If the situation is not tackled, it will be a major health problem in the years to come.

In this section, we discussed the components of health care: primary health care, maternal and child health care, health programmes and control of diseases, occupational health, mental health, health education and communication, indigenous system of medicines. Now, answer the questions in *Check Your Progress 2*.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What is the focus of the National Tuberculosis Programme?

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2) What is the aim of National Rural Health Mission?

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3) Write a short note on mental health.

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4) Write a short note on occupational health.

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2.4 INDICATORS OF HEALTH

In the previous section, you read about various components of health care. In this section, you will study about the various indicators of health.

The various types of indicators which are used to assess the health development of a nation follow.

2.4.1 Health Services Indicators

Health services indicators such as the number of health care delivery centres and the number of medical and paramedical staff posted per centre, influences the delivery of health care services. Per patient availability of doctors, nurses, and other paramedical staff and hospital beds are also determinants of the effectiveness of health care delivery system. The expenditure on health care influences the health care services provision. Countries which spend more money have better provision of health care services than their counter parts. The per capita health care expenditure of the developed nations is much higher as compared to the developing nations. You will find the expenditure on health care by a few countries, both developed and developing in Table-4. By this figure you can see how the developed countries are more serious about the health care of their citizenry.

Table 2.3: Health Care Facilities in selected Developed and Developing Countries

Country	Birth attended by skilled health personnel (1997-2005)	Physician (per 100000 people) (2000-04)
US	99	256
UK	100	449
Japan	100	198
China	97	106
India	43	60
Nepal	11	21
Pakistan	31	74
Sri Lanka	96	55
Nigeria	35	28
Zambia	43	12

Source: *Human Development Report, 2007/08, UNDP, 2007*

Table 2.4: Health Expenditures in Selected Developed and Developing Countries

Country	% of GDP	Per capita ($)
US	15.2	5711
UK	8.0	2428
Japan	7.9	2662
China	5.6	61
India	4.8	27
Nepal	5.3	12
Pakistan	2.4	13
Sri Lanka	3.5	31
Nigeria	5.0	22
Zambia	5.3	164

Source: *World Development Indicators, World Bank, 2006*

2.4.2 Mortality Indicators

Maternal Mortality Rates and Infant Mortality Rates are largely used as indicators of health development by different nations, and by agencies involved in assessing and promoting health care. The infant mortality rate of India is more than ten times higher than that of U K. The infant mortality rates in developing countries are astoundingly high as compared to the developed countries. The definition and calculation of maternal mortality and infant mortality is given in the keyword at the end of the unit.

Table 2.5 : Mortality rate for under 5 age group per 1000 in selected countries in 2006

Country	Under-Five Mortality Rate
Bangladesh	69
Mozambique	138
Pakistan	97
South Africa	69
Sri Lanka	13
India	76
U K	6
USA	8

Source: *World Development Report, World Bank, 2009*

2.4.3 Morbidity Indicators

The number of people suffering from various diseases are also used as indicators of health. The WHO has devised a new parameter to assess the global burden of diseases called Disability Adjusted Life Year (DALY). DALY is a time based measure that combines the year of life lost (YLL) due to premature mortality and years of life with disability (YLD) or years of life lost due to time lived in states of less than full health. The definition and calculation of maternal mortality and infant mortality are given in the keywords at the end of the unit. Morbidity varies from country to country, and particularly from developed to underdeveloped countries. According to WHO (1987) in poor developing countries infectious intestinal and respiratory diseases are the most important cause of death, while in rich countries neoplasms (cancer), cardiovascular diseases and degenerative diseases rank high among the causes of death. The AIDS-related mortality is quite high in poor African countries, as compared to others developed countries. One of the statistics shows that AIDS is seen as accounting for no less than 22.6 per cent of total mortality and including AIDS, infectious disease accounts for 63.8 per cent of mortality in Africa. The money which could have been spend for other development purposes is used in controlling STD, HIV and AIDS in these countries. According to WHO (2001) in recent years, morbidity which is receiving more attention is mental disorders. World wide, 45 million are affected by schizophrenia, 29 million people suffer from dementia and 40 million people suffer from different types of epilepsy (WHO, 1997). Thus, morbidity eats away the countries resources which could have been utilized for developmental purposes, such as essential infrastructure, provision of basic amenities, education, and primary health care.

Table 2.6: HIV Prevalence % of Population ages 15-49 in Selected Countries, 2005

Country	% of Population
Bangladesh	<0.1
Mozambique	16.1
Pakistan	0.1
South Africa	18.1
Sri Lanka	<0.1
India	0.9
U K	0.2
USA	0.6

Source: *World Development Report, World Bank, 2009*

A recent World Development Report has mentioned that 18.1 per cent of the population is affected with HIV in South Africa, as against 0.9 in India and only 0.2 percent in U K.

2.4.4 Demographic Indicators

Demographic indicators such as birth rate, death rate, and life expectancy rate are also used for assessing the health status of a nation. Both the birth rates and death rates are high for developing countries as compared with developed countries. The quantity and quality of health care services influences birth and death rates. The propensity to enjoy higher standards of living and good health and to remain in workforce participation are among many factors responsible for lower fertility. Frequent pregnancies restrict the workforce participation of woman. Besides the birth rate, death rate, and fertility rate, life expectancy in developing countries is lower compared to developed countries (Table-7). The life expectancy for males and females in Japan is 85.7 and 78.7, respectively, while in India, the rates are 65.3 and 62.3 for males and females. Immunization is nearly universal in developed countries.

Table 2.7: Life Expectancy at Birth of Selected Countries 2005

Country	Male	Female
US	80.4	75.2
UK	81.2	76.7
Japan	85.7	78.7
China	74.3	71.0
India	65.3	62.3
Nepal	62.9	62.1
Pakistan	64.8	64.3
Sri Lanka	75.6	67.9
Nigeria	47.1	46.0
Zambia	40.6	40.3

Source: *Human Development Report 2007-08, UNDP 2007.*

2.4.5 Immunization Indicators

The demographic and health surveys conducted by various international agencies, nowadays, use immunization as one of the indicators of the health status of a nation. Various immunization packages used by countries are BCG, polio, measles, and hepatitis. There is a direct relationship between immunization and child survival rate. Samuel studied the relation between average per capita income and life expectancy and found that there is a positive relation between per capita income and life expectancy. By analyzing world development indicators 2005 data, it was found that of countries with life expectancy below 45 years, 86 per cent of the population lives below the poverty line at two dollar a day; and, in countries with a life expectancy greater than 70 years, only 18 per cent live below the poverty line.

Table 2.8: Comparative indicators of Child Health in Developed and Developing Countries, 2002

Indicators	Developing Countries	Developed Countries
Infant Mortality rate	62	5
Under-5 Mortality rate per 1000 live births	90	7
Percentage of infant with low birth weight (1995-2000)	17	7
Wasting (12-23 months) moderate and server (1995-2000)	10	-
Percentage of one year old fully immunized for TB	81	-
Percentage of one year old fully immunized for DPT	73	95
Percentage of one year old fully immunized for Polio	73	91
Percentage of one year old fully immunized for Measles	73	90

Source: *Status of the World Children, UNICEF, 2004.*

The percentage of immunization influences the maternal and infant mortality rate. Immunization also enhances the access to health care services particularly of children and woman

2.4.6 Nutrition Indicators

Malnutrition is one of the important causes of mortality and morbidity in developing countries. Almost all developing countries are facing this problem and it is more pervasive in rural areas, among the impoverished sections of society, and, particularly, among woman and children. There is considerable evidence that workers who receive higher caloric intake outperform their counterparts who do not consume the required calories. Malnutrition is considered as a primary

cause of deaths among children under five in low income countries. The most common form of malnutrition is known as protein calorie malnutrition (PCM). The deficiency of these specific nutrients resulted in diseases like rickets, scurvy and beriberi. Among the others, deficiency in Vitamin A causes blindness and iron deficiency anaemia. The percentage of population suffering from malnutrition is quite high in South Asia and sub Saharan Africa as compared to other developed countries. Rentlinger and Selowsky remarked that in Asia, the Middle East and Africa, there were shortfalls ranging from 135 to 230 calories per day. To bring the averages for these regions up to the standards would require an additional 269 thousand million calories daily or, approximately 25 million metric tons of food grains annually.

Malnutrition has serious consequences on the health of a population in general, and on woman and children in particular. Some of the consequences of malnutrition are

i) Malnutrition among the toiling masses reduces their labour capacity and consequently affects productivity

ii) Malnutrition in women results in spontaneous abortion, poor conception, and even infertility

iii) Malnourished women may give birth to low birth weight babies, infants that weight less than 2.5 kg, and premature delivery

iv) Malnourishment among women sometimes results in still birth and spontaneous abortion

v) Malnourishment among children is one of the causes of infant and child mortality

vi) Malnourishment leads to loss of memory among school going children

vii) Malnourished children are lethargic compared to normal children, and are less likely to take part in sports and scout activities

Table 2.9: WHO cut off Criteria for Anaemia

Year	Haemoglobin
Children 6 months- 6 years	119/dl
Children 6 -14years	129/dl
Adult male	139/dl
Adult female (Non pregnant)	129/dl
Adult female (Pregnant)	119/dl

Source: *Gupta, P and Ghai OP, Text Book of Preventive and Social Medicare, Second Edition, CBS Publisher & Distributors, New Delhi, 2007, P.147.*

Table 2.10 : Malnutrition status in selected countries

Countries	% of population under nourished (2002-04)	% of children < 5 under weight for age (1996-2005)	% of children < 5 under height for age (1996-2005)	% of infant with low birth weight (1998-2005)
US	< 2.5	-	-	8
UK	< 2.5	-	-	8
Japan	< 2.5	-	-	8
China	12	8	19	4
India	20	47	51	30
Nepal	17	48	57	21
Pakistan	24	38	42	19
Bangladesh	30	48	51	36
Sri Lanka	22	29	18	22
Nigeria	9	29	43	14
Zambia	46	20	53	12

Source: *Status of the World Children, UNICEF, 2004.*

The status of malnutrition of a few countries is given in Table-9 which reveals that the percentage of malnourished people living in developing countries like India, Nepal and Pakistan is eight times higher than in the developed countries like USA, UK, and Japan.

In this section, we discussed the indicators of health, like mortality, morbidity, demographic, immunization, and malnutrition. Now, answer the questions in *Check Your Progress 3.*

Check your Progress 3

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

1) Why is immunization an indicator of health?

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2) Write a short note on demographic indicators of health.

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2.5 HEALTH CARE SYSTEM: ISSUES AND CHALLENGES

The performance of a health care system varies from country to country, and even within the country, from region to region. This performance influences the health indicators. Some of the problems which affect their performances are described below.

2.5.1 Insufficient Allocation of Resources

The percentage of money spend on health to GDP in developing countries is low compared to developed countries. Besides, there is also a gross imbalance in spending in different activities, such as expenditure on service delivery, salary of the staff, construction of health institutions, etc. A major share of health care expenditure goes to the salary component, followed by infrastructure building, and a meager amount of money is spend on the provision of services and capacity-building of health care delivery personnel. Thus, low provision and erratic distribution of health care expenditure is a major problem of a health care system in many developing countries.

2.5.2 Inequity

Inequity is another important feature of health care system in many countries which are facing problems of inefficiency and ineffectiveness of their health care system. Reaching out to the unreached must be the motto of public health care services. However, the people living in the rural areas and belonging to economically weaker sections of society are largely devoid of quality health care facilities. Government spending disproportionately goes into upgrading health care facilities in the urban, sophisticated tertiary care hospitals. The health care delivery units situated in inaccessible, sub mountainous, and rural areas have poor health infrastructure and manpower facilities. Even if posted, many health personnel particularly medical and paramedical staffs are not adequately motivated to work in inaccessible areas. This inequity promotes a health dualism, where modern health care facilities are enjoyed by economically stronger sections, while the poor receive most of their health care services from unqualified private practitioners.

2.5.3 Inefficiency

Inefficiency in spending money and inefficient health care delivery by personnel are largely observed in a country which has poor health status. Ineffective allocation of resources leads to inefficiency in delivery of services by the health centre. Sometimes improper selection of health manpower affects the efficiency of the system.

2.5.4 Inadequate Community Participation

The state led health care services are a one-sided government driven programme, where community is treated as beneficiaries. There is lack of feeling of ownership and participation among the community. Community participation is a process by which individuals and families assume responsibility for health and family welfare for themselves and for the community in which they live. In this way, they become the participants as well as beneficiaries of health care system. The

Community Based Organization's (CBO) role is key to successful implementation of health care services at the grassroot level. They will not only motivate people to use and contribute to health care services, they will also help the health care service providers for effective delivery of services. They would act as go-between the people and the health services providers. Therefore, Simone has remarked " community participation is not just about getting together with a common goal and the desire to make it happen…they are sharing time, space and common path, but no community participation takes place unless they connect with each other in the experience they share. The sense of belonging and feeling related to a larger whole does not happen when each person remains within a separate self-reality even though the physical circumstance is shared. To be able to participate and communicate to each other people need to connect". A relationship of community participation with the local organization is given in Figure 2.3.

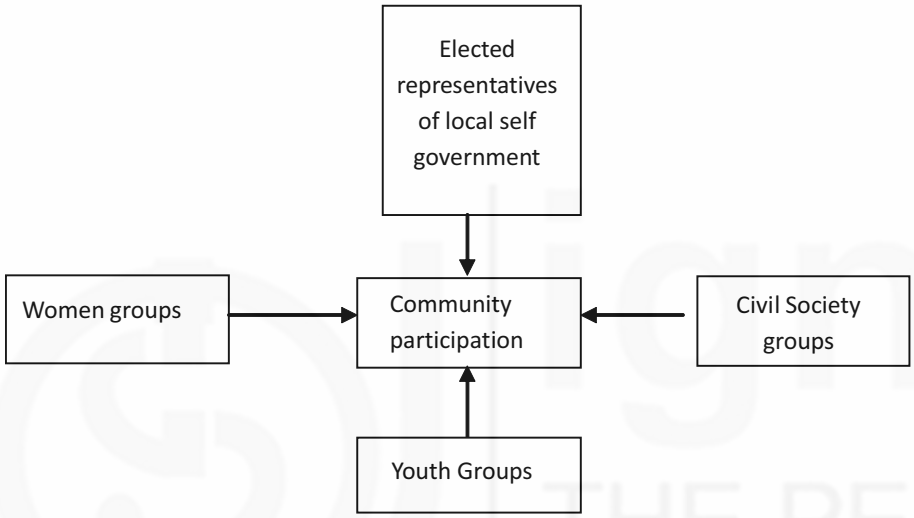

Fig.2.3 : Community Participation

2.5.5 Poor Information Education and Communication (IEC) System

IEC systems are inadequate in rural areas and, particularly in unreached areas in the developing countries. IEC systems are important for countries having low literacy rate. The aim of an IEC system is to inform and educate the people regarding various health and family welfare issues through different communication techniques, and to motivate them to adopt various practices for their health and well being and of their families. Commonly used IEC methods are lecture discussion, radio talk and advertisement, film show, posters, charts, wall paintings, television show etc and face-to-face communications, such as focus group discussions (FGDs), individual counselling , etc. IEC methods are the most effective and appropriate means to promote health care delivery. However, it is very weak in many places and, as a result, the use of health care services has been affected. You will come to know some of the IEC methods used in LIP (local Initiative programmes are one of the innovative project launched for the health care of women and children in the villages of Punjab, Himachal Pradesh and Uttaranchal and urban slums of Kolkata with financial help from the Bill and Milenda Gates Foundation)is given in the box below.

Innovative IEC Practices

- Procuring, developing and distributing BCC (Behavioural Change communication) materials such as posters, charts, pamphlets, etc
- Capturing the attention of the people through wall paintings in every village
- Holding cluster meetings and focus group discussions with ante natal mothers and community members
- Promoting awareness by holding health *melas*
- Holding focus group discussions and organizing lecture in schools with the adolescents.

***Source**: Management Science for Health, Boston, USA; Technical Assistance Incorporated, Dhaka, Bangladesh; Centre for Research in Rural and Industrial Development (CRRID), Chandigarah, India, 2003 www.india-lip.org*

2.5.6 Lack of Inter-sectoral Coordination

Inter-sectoral coordination means the health sector has to coordinate with other related sectors such as public health, woman and child welfare, rural development, and local self government and education for the effective implementation of its various programmes. The coordination with public health department which largely deals with the provision and maintenance of sanitation and drinking water, is essential for controlling diseases associated with water and sanitation. Health and the public health department and its personnel have to be strategically linked for the effective delivery of services of both the departments for their mutual benefit and for the wellbeing of the people. Health development linkages with the woman and child health department and education department would improve the health status of women, children, and adolescents. An example of inter sectoral coordination is given in Figure2.4

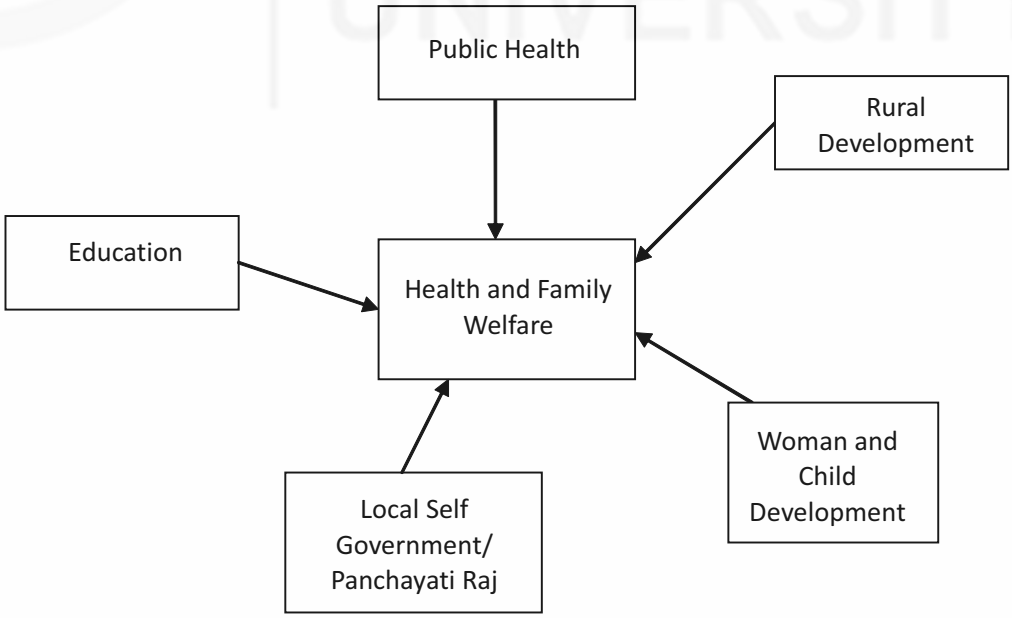

Fig. 2.4 Inter-sectoral Coordination Chart

The linkages of health with the health related departments are weak in many countries, which is adversely affecting the performance of health sector.

2.5.7 Poor Health Security and Health Insurance Facility

In developing countries, there is poor provision for health security, particularly for those who work in the unorganized sector. The impoverished families are even unable to pay paltry insurance premium. The cost of medical services and drugs are increasing day by day, therefore, the economically weaker families in rural and urban slum areas are dependant on low cost and poorly qualified private practioners. Even the critical pregnancy cases are being handled by traditional birth attendants, some of the practices even leading to maternal mortality. Health security is essential in the workplace and for the common man for the enhancement of the health status of the population.

2.5.8 Illiteracy

Education is an important determinant of health. Countries with high literacy rate perform better in health indicators as compared to the countries having low literacy rate. For example, the health indicator of Sri Lanka is better than those of Bangladesh, India and Pakistan. The literacy rate of Sri Lanka is quite high as compared to other South Asian Countries. In India, the health indicator of Kerala which has a literacy rate more than eighty per cent is much higher as compared to Madhya Pradesh, Bihar, Rajasthan and Uttar Pradesh. Lower literacy in general, and women's literacy in particular, affect health and the family welfare status. The relationship between health and literacy is well established in many research studies.

In this section, we discussed the issues and challenges of the health care system. Now, answer the questions in *Check Your Progress 4.*

Check your Progress 4

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit

1) Write in brief five problems of the health care system.

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2) What is IEC?

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2.6 LET US SUM UP

Health is one of the important indicators of development. This unit has discussed the relationship between health and development. The unit also comprises discussions on important components of health care and health care indicators. Malnutrition has an adverse impact on health as well as development. The health care system suffers because of some problems in health care delivery system. These are inequity, inefficiency, inadequate community participation, lack of inter sectoral coordination, etc. Health and development are deeply interrelated. Healthy people are necessary for the promotion of development.

2.7 KEYWORDS

$$\textbf{Birth Rate} = \frac{B}{P} \times 100$$

B = Number of birth occurred in a given period

P = Mid-year population during the given period

$$\textbf{Death Rate} = \frac{D}{P} \times 100$$

D = Number of death occurred in a given period

P = Mid-year population during the given period

Total Fertility Rate = is an estimation of the average number of children that would be born alive to a woman throughout her reproductive age span as per prevailing specific fertility rates. TFR = sum of ASFRs

$$\textbf{ASFR} = \frac{\text{Number of live births to mothers of a specified age group}}{\text{Mid-year female population of the same age-group}} \times 1000$$

$$\textbf{MMR} = \frac{\text{Number of deaths due to puerperal causes in women}}{\text{Number of live births}} \times 1000$$

IMR = Number deaths of infants under one year of age in a given year per 1000 live birth in that year

$$\textbf{IMR} = \frac{\text{Number of deaths under 1 year of age in a year}}{\text{Number of live births in that year}} \times 1000$$

Life Expectancy at Birth- The average number of years a new born could expect to live if he, or she, were to pass through life subject to the age specific death rates of a given period.

2.8 REFERENCES AND SUGGESTED READINGS

Basta, S and Others (1979), "Iron Deficiency Anemia and Productivity of Adult males in Indonesia", *American Journal of Clinical Nutrition*, 32 (4), April, p.p. 916-25.

Barker, C (1996), *The Health Care Policy Process*, Sage, London.

Chambers, R (1982), "Health Agriculture and Rural Poverty; 'Why Seasons Matter", *Journal of Development Studies*, 18 (2).

Dubos, R (1962), *The Torch of Life: Continuity in Living Experience*, Simon and Schuster.

Fosel, RW (1986) , "Nutrition and the Decline in Mortality since 1700: Some Preliminary Findings" in S.L. Engerman and R.E Gallman (eds.) *Long Term Factor in American Economic Growth.*, NBER, University of Chicago Press, p.p. 439-455.

Gallup, J and J Sachs (1998), "Development and Poverty in a Global Age: Location, Geography and Economic Development", *Harvard Institutional Review*, 21 (1) p.p. 56-61.

Gills, M, Perkins, D.H, Roemer, M and Snodgrass, DR (1996), *Economics of Development*, WW Norton & Company, New York.

Preston, SH (1975), "The changing relation between Mortality and the level of Economic Development", *Population Studies*, 29 (2), p.p. 231-48.

Parsars, T (1958), "Definitions of health and illness in high of American Values & Social Structure" in E. Gartley Jaco (ed.) *Patients, Physicians & Illness*, New York, Free Press 2nd Edition, 1972.

Rentlinger, S and Selowsky, M (1976), *Malnutrition and Poverty: Magnitude and Policy Options,* World Bank Staff Occasional Paper No. 23, the John Hopkins University Press, Baltimore.

WHO(1978), *International Conference on Primary Health care held a Alma-Ata* USSR, 6-12 September.

WHO (1987), "Evaluation of the Strategy for Health for all by the year 2000" *Seventh report on the World Health Situation*, Vol.1, *Global Review***,** Geneva, WHO.

WHO (1997), *World Health Report*, 1997, Geneva, WHO.

WHO (2001), *World Health Report, 2000, Mental Health*: New Understanding, New Hope, Geneva, WHO.

2.9 CHECK YOUR PROGRESS-POSSIBLE ANSWERS

Check Your Progress 1

1) What do you mean by health?

   The word "health" is derived from an old English word "heal" which means "whole", which signifies the whole person, and his wellbeing. It has been

defined differently by different organizations and individuals. According to the World Health Organization (WHO, 1947) it is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

2) How are health and development related?

Many social scientists have noted that there is a positive relationship between health and development. Economic development tends to improve health status, while better health contributes to economic development. Health has a direct association with labour productivity. Illness and malnutrition lead to loss of strength and energy and productivity capacity; and, which ultimately have a negative effect on labour income. According to Szirmai (2005) improving the state of health contributes to the realization of other developmental objectives, such as economic development, labour productivity growth, responsiveness to innovation, and future oriented-ness.

Check Your Progress 2

1) What is the focus of the National Tuberculosis Programme?

The main focus of the National Tuberculosis Programme is to reduce tuberculosis in a community. The programme includes vaccination of children against tuberculosis and care of tuberculosis cases through DOTs (Direct Observed Therapy).

2) What is the aim of the National Rural Health Mission?

The National Rural Health Mission (NRHM), a recent programme launched in 2005, aims at the delivery of maternal and child health care services, and ensures other capacity building and infrastructure development in the health care system through active community participation.

3) Write a short note on mental health.

According WHO statistics, about 500 million people in the world are believed to suffer from neurotic, stress related, and somatoform (psychological problems which present themselves as physical complaints). The causes of mental illness may be due to organic conditions, heredity, and social causes. The mental health services include early diagnosis and treatment, rehabilitation, and group and individual psychotherapy. Mental health affects family health. Globalization and modernization and growing aspirations have enhanced the mental health problem.

4) Write a short note on occupational health.

Occupational health aims at the prevention of diseases and maintenance of the highest degree of physical, mental, and social wellbeing of workers in all occupation. Workers in all types of occupations, be they in agriculture, or industry, or in construction, and in the unorganized sectors are liable to physical, chemical, biological, mechanical and psychosocial hazards. The workers working in the tobacco factories are of greater chance to be affected by asthma and tuberculosis.

Check Your Progress 3

1) Why is immunization an indicator of health?

   Immunization is considered one the important indicators of health because in developing countreis it plays an important role in the survival of infants and children. The polio vaccination programme has checked occurrences of polio to a great extent in India. It also influences the maternal mortality of pregnant and lactating women.

2) Write a short note on demographic indicator of health.

   Demographic indicators, such as birth rate, death rate, and life expectancy rate are also used for assessing the health status of a nation. Both the birth rate and death rates are high for developing countries as compared to developing countries. The quantity and quality of health care services influences the birth and death rate. The propensity to enjoy higher standards of living, enjoy good health; and, the work force participation rate among woman are a few among many factors responsible for the lower fertility rate.

Check Your Progress 4

1) Write in brief five problems of the health care system.

   The five problems of the health care system are: (i) inefficient allocation of resources; (ii) inequity and inefficiency; (iii) inadequate community participation; (iv) poor information, education, and information system; and (v) lack of intersectoral coordination.

2) What is IEC?

   IEC systems are a means to inform and educate the people regarding various health and family welfare issues through different communication techniques, and to motivate them to adopt various practices for their health and wellbeing, as well as of their families. Different IEC methods usually used are lecture discussion, radio talk and advertisement, film show, audio-video like poster, charts, wall paintings and television, and other face-to-face communication, such as focus group discussions (FGDs), and individual counselling, etc. IEC is the most effective and appropriate means to promote health care delivery.