

Introduction to Health and Illness

Learning Objectives

After completing this unit, you will be able to:

- Define health and its changing concepts
- Describe the health-illness continuum
- Enumerate the various factors influencing health
- Explain the causation of disease with the help of model
- Discuss the impact of illness on patient and family

Unit Outline

- Definition of Health
- Concept of Health
- Wellness and Well-being
- Health-illness Continuum
- Dimensions of Health
- Maslow's Hierarchy of Needs
- Models of Health
- Factors Influencing Health
- Indicators of Health
- What is Illness?

Key Terms

- **Agent:** The agent is the microorganism that actually causes the disease.
- **Child mortality rate:** It is the number of deaths from 1 to 4 years of age during a given year per 1000 mid-year population of that age group. It excludes infant mortality rate.
- **Crude death rate:** It is the number of deaths per 1000 population in a year in a given area.
- **Disability rate:** It is the percentage of population unable to perform the routine activities due to injury or illness.
- **Environment:** External factors can affect an epidemiologic outbreak.
- **Health:** A dynamic state of being in which the developmental and behavioral potential of an individual is realized to the fullest extent possible. (*American Nursing Association*)
- **Health:** It is a "state of complete physical, mental and social well-being, not merely the absence of disease or infirmity" (WHO, 1947).
- **Host:** The agent infects the host, which is the organism that carries the disease.
- **Illness:** It is a condition characterized by a deviation from a normal health state which is manifested by physical and psychological symptoms.
- **Incidence rate:** It is the number of new cases of a particular disease per 1000 population of that year.
- **Infant mortality rate:** It is the number of infant deaths (0–12 months) per 1000 population.
- **Maternal mortality rate:** It is the number of maternal deaths (Antenatal, intranatal, postnatal) per 1000 population.
- **Prevalence rate:** It is the total number of both old and new cases existing in the population during a given period of time. It is the percentage of population suffering from a disease.

INTRODUCTION

Understanding the concept of health is the basis of all the health care. Health is perceived differently by individuals in the society as well as by the health professional groups (like biomedical scientists, social scientists, health administrators, ecologists) giving rise to confusion about the concept of health.

DEFINITION OF HEALTH

The World Health Organization (WHO) defines health as **“a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity”** (WHO, 1947).

CONCEPT OF HEALTH

The concept of “Health” has undergone changes over the period of time. It has evolved from the concept of individual concern to a social goal. Let’s see the major concepts of health.

Biomedical Concept

Health was viewed as an absence of diseases. The person was called healthy if he/she did not suffer from any disease. This concept is known as biomedical concept, and it is based on the **“germ theory of disease”**.

Health means “absence of disease”. Thus the medical professionals viewed human body as a machine. Breakdown/disease was considered as an outcome which was a result of wear and tear. The doctors were expected to repair the body. This concept has minimized the role of the environment, social and cultural determinants of health.

Developments in medical and social sciences led to the conclusion that the biomedical concept of health was inadequate.

Ecological Concept

Ecologists viewed health as a dynamic equilibrium between human and his environment, and the disease as maladjustment of the human to environment. Thus, if the human was able to maintain the balance between the environment and himself, he was healthy. Imbalance of body’s reaction to an environment resulted in disease.

Psychosocial Concept

Advances in social sciences showed that health is not only a biomedical phenomenon. It was discovered that health is influenced by social, psychological, cultural, economic and political factors of the people concerned. These factors affect health and therefore, there is a need to measure health by taking these into account. Thus, health is both a biological and social phenomenon.

Holistic Concept

The holistic model is a comprehensive approach and is a sum of all the above theories. It emphasizes the importance of social, economic, political and environmental influences on health.

- It has been described as a multidimensional process involving the well-being of a person as a whole.
- The emphasis is on the prevention, promotion and protection of health.

The holistic approach implies that agriculture, animal husbandry, food, industry, education, housing, public works and other sectors affect the health of mankind.

There is no consensus (agreement) about any definition of health. There is knowledge of how to attain (reach) a certain level of health, but health itself cannot be measured.

Nightingale defined health as “a state of being well and using every power the individual possesses to the fullest extent.”

Definition of Health (American Nursing Association): A dynamic state of being in which the developmental and behavioral potential of an individual is realized to the fullest extent possible.

Most people define and describe health as the following:

- Being free from symptoms of disease and pain as much as possible
- Being able to be active and to do what they want
- Being in good spirits most of the time

WELLNESS AND WELL-BEING

Wellness further describes health status. It allows health to be placed on a continuum from one's optimal level (“wellness”) to a maladaptive state (“illness”) (Fig. 1).

Wellness is a dynamic process that is ever-changing. A well person usually has some degree of illness and an ill person usually has some degree of wellness. This concept of health continuum negates the idea that wellness and illness are opposite because they may occur simultaneously in the same person in varying degrees.

HEALTH-ILLNESS CONTINUUM

It measures a person's perceived level of wellness. Health and illness/disease are opposite ends of health continuum. A person moves back and forth (forward) within this continuum day by day.

DIMENSIONS OF HEALTH

There are various dimensions of health. These dimensions interact with each other to decide the wellness of an individual (Fig. 2).

- **Physical:** This determinant refers to the ability of a person to carry out different activities required for normal functioning of the body. For example, pulmonary, cardiovascular, gastrointestinal function, maintaining adequate nutrition, avoiding drugs and alcohol or using tobacco products, and practicing good lifestyle habits.
- **Social:** This refers to the ability of an individual to interact with people in the society.
- **Emotional:** It refers to the ability to cope with stress and to express feelings and emotions appropriately. Emotional well-being is the ability to recognize, accept and express feelings.

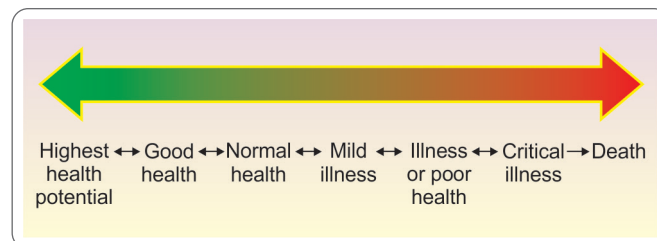


Fig. 1: Health continuum

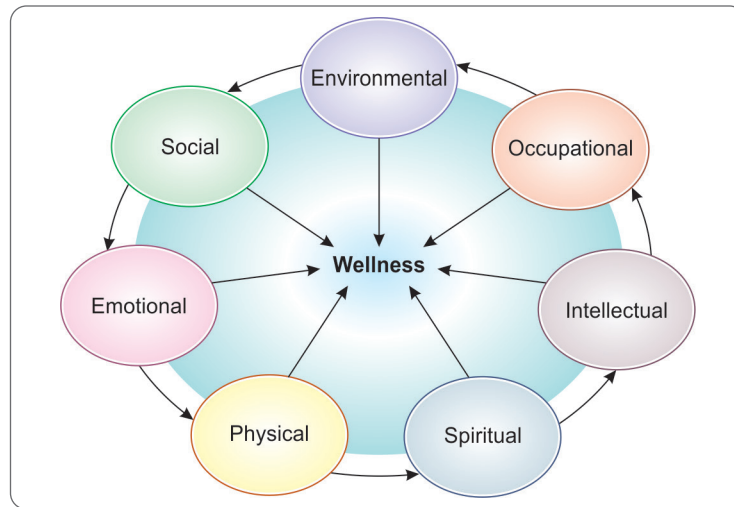


Fig. 2: Dimensions of health

- **Intellectual:** The intellectual ability refers to the higher level of the thinking in which a person is able to process the information and utilize critical thinking and rationale for taking the appropriate actions.
- **Spiritual:** It refers to the belief in some force that serves to unite human beings and provide meaning and purpose to life. It may be related to religion, beliefs and super power.
- **Occupational:** It refers to the ability to achieve an equilibrium between work and pastime. Personal satisfaction and relationships depend on a person's background information related to education, employment and home environment.
- **Environmental:** The ability to promote health measures that produces a healthy environment for good health. These measures will improve the standard of living and quality of life in the community.

MASLOW'S HIERARCHY OF NEEDS

Maslow's hierarchy of needs (Fig. 3) is a theory proposed by an American Psychologist Abraham Maslow in 1943. In this theory, human needs are arranged in a hierarchy from most to least processing.

- **Physiological needs:** These are needs that are necessary for the survival of human beings. These include air, water, food and sleep. If these needs are not met, the human body cannot function properly. These are the fundamental needs to sustain life. Higher needs like social esteem are not recognized until these basic needs are met.

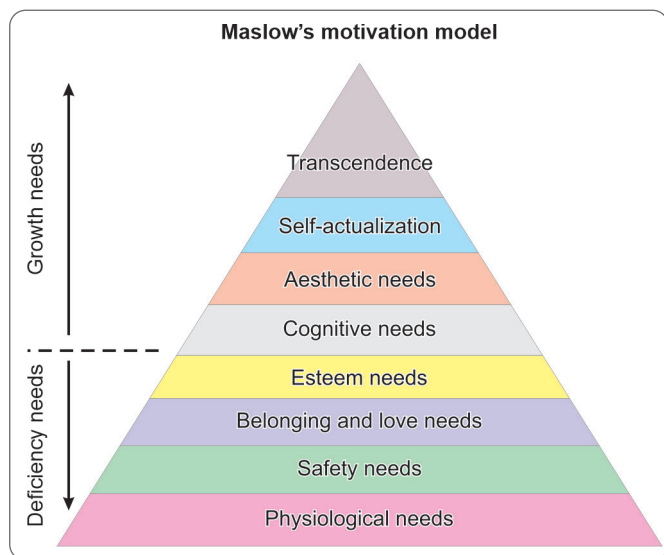


Fig. 3: Maslow's hierarchy of needs

- **Safety and security needs:** Safety and security are needed to remain free from threat of physical and emotional harm. It includes living in a safe area, job security, financial security, medical insurance, etc. Once physiological needs are met, the person then proceeds to satisfy security needs.
- **Love and belonging needs:** This is the third level in the hierarchy of human needs. These are the needs related to interpersonal relationship and it includes family, friendship, and sexual intimacy.
- **Esteem needs:** All humans have the need to feel respected and it includes self-esteem and self-respect. It can be classified as internal or external. Internal esteem is the need to respect yourself and achieve. External esteem includes social status, recognition and reputation.
- **Cognitive needs:** It is the natural tendency of humans to learn, explore, discover and create a better understanding of the world around them. Humans have the need to increase their intelligence and knowledge. If these needs are not met, it may lead to confusion.
- **Aesthetic needs:** It is stated that humans need beautiful things or something new or aesthetically pleasing to continue up toward self-actualization. It leads to beautiful feeling of intimacy with nature.
- **Self-actualization:** It is the need of the humans to make the most of their abilities and to strive to the best they can. It is the realization of our full potential.
- **Transcendence:** It is the existence or experience beyond the normal or physical level. It is the realization that you are one small part of a greater whole and acting accordingly. Individuals transcend their own personal concerns and see from a higher perspective. These experiences often bring positive emotions like joy, peace and self-awareness.

MODELS OF HEALTH

Based on various dimensions of health, models of health are as follows:

- Clinical Model
- Role Performance Model
- Adaptive Model
- Eudemonistic Model
- Agent-Host-Environment Model
- Health-Illness Continuum Model

Clinical Model

The clinical model is based on the concept of various physiological systems in our body. It provides the narrowest interpretation of health. The believers of this model view humans as physiological systems. As per this model, health is identified by the absence of signs and symptoms of disease or injury. It is a state of not being “sick”. Opposite of health is disease or injury.

Role Performance Model

This model emphasizes that a person is said to be healthy, if he/she has the ability to fulfill the societal roles. It assumes an individual to be healthy even if clinically ill, if roles were fulfilled. It considers sickness as the inability to perform one's role.

Adaptive Model

As per the adaptive wellness model, health is viewed as a creative process. Disease is a failure in adaptation or maladaptation. A person is considered to be in extreme good health, if he/she is flexible and adapts to the environment. The focus is stability. Treatment aims restore the ability of a person to adapt.

Eudemonistic Model

This model viewed health in a comprehensive way. Health was viewed as a person's ability to realize their own potential and achieving the same. In other words, it is a prerequisite for self-actualization. Illness is a condition that prevents self-actualization. **Actualization** is the apex of a fully developed personality as per Maslow's Hierarchy.

Agent-Host-Environment Model

This model is also called epidemiological triad or triangle (Fig. 4). The triad consists of an external agent, a susceptible host and an environment that brings the host and the agent together. In this model, the disease results from the interaction between the agent and the susceptible host in an environment that supports transmission of the agent from a source to that host.

The model states that each factor; that is, agent, host and the environment, constantly interacts with each other. When they are in balance, it results in health. Imbalance of the same causes disease.

Agent: The agent is a microorganism that actually causes the disease. It could be virus, bacteria, protozoa, fungus or parasite.

Host: The agent infects the host, which is the organism that carries the disease. A host doesn't necessarily get sick; hosts can act as carriers for an agent without displaying any outward symptoms of disease. Hosts get sick or carry an agent because some part of their system is hospitable or attractive to the agent.

Environment: External factors can affect an epidemiologic outbreak. The environment includes many factors that affect the spread of a disease but are not directly a part of the agent or the host. For example, temperature, humidity, sunlight, pollution, socioeconomic, poverty, etc.

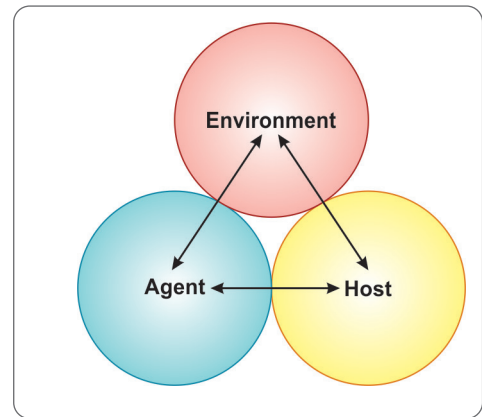


Fig. 4: Epidemiological triad

Health-Illness Continuum Model

It measures a person's perception of wellness. Health and illness/disease are the extreme ends of the continuum. There is a constant change in the degree of health day by day along this continuum (Fig. 5).

Thus, wellness is a term that arises from the above model. "Well-being is a subjective perception of vitality (energy) and feeling well. It can be described objectively, experienced, and measured and can be plotted (design) on a continuum". It is a component of health.

FACTORS INFLUENCING HEALTH

Health depends on interplay of various factors. These factors surround us and can create a positive or negative impact on health. The major determinants of health can be classified into:

1. Internal factors
2. External factors

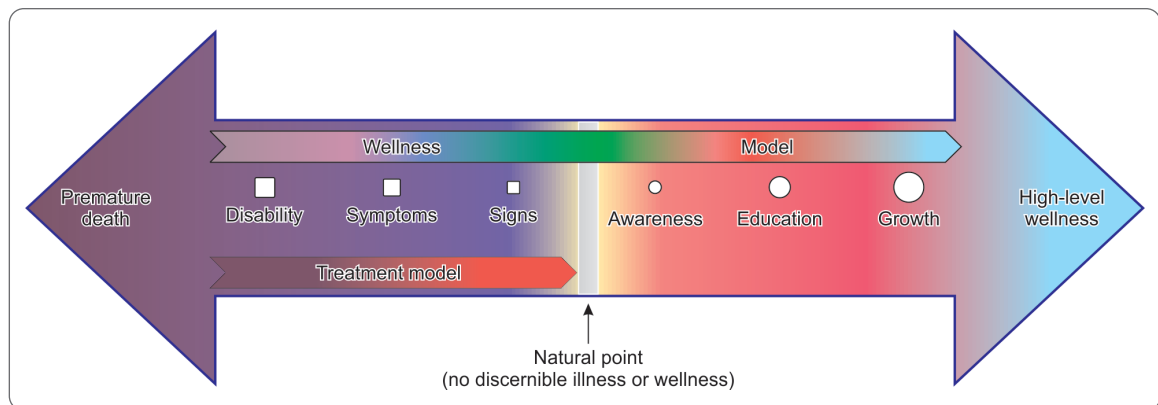


Fig. 5: Health illness continuum model

Internal Factors

These are the factors that are a part of an individual.

- **Biological factors:** These consist of genetic makeup, sex, age and developmental level. These factors play a significant role in influencing a person's health.
- **Psychological factors:** Emotional factors influencing health include mind-body interactions and self-concept. For example, mood, social interaction, mental stability.
- **Cognitive factors:** These include lifestyle choices (diet, sleeping habits, other habits like smoking/drug use, etc.) spiritual and religious beliefs.

External Factors

These are the factors that are present around us or a part of our living.

- **Environment:** The atmosphere around us has an impact on our health. Pollution of air, water, noise adversely affects health.
- **Standard of living:** These include occupation, income and education.
- **Family and cultural beliefs:** Patterns of daily living and lifestyle to offspring, religious beliefs and attitudes affect health.
- **Social support networks:** Relatives, family members, friends act like pillars of support. Their contribution plays a major role in maintaining health.
- **Health care adherence (obedience):** It is the degree to which an individual complies with the restrictions imposed on him. The person may either follow the health advice or he may completely disregard and ignore the recommendations given to remain healthy.

INDICATORS OF HEALTH

These are necessary to understand the health standard of a country. The main purposes of various health indicators are as follows:

- To measure health status of a country
- To compare the health status of one country with the other
- To assess the health care needs
- To plan and implement health care services
- To evaluate the health services being provided

Types of Health Indicators

- Mortality indicators
- Morbidity indicators
- Disability rate
- Nutritional status
- Health care delivery indicators
- Social and mental health indicators
- Utilization rates
- Quality of life indicators
- Environmental indicators
- Other indicators
- **Mortality indicators:**
 - **Crude death rate:** It is the number of deaths per 1000 population in a year in a given area.
 - **Infant mortality rate:** It is the number of infant deaths (0–12 months) per 1000 population. It is the most important indicator of health as it reflects the quality of maternal and child services and also their utilization.
 - **Maternal mortality rate:** It is the number of maternal deaths (antenatal, intranatal, postnatal) per 1000 population.
 - **Child mortality rate:** It is the number of deaths from 1 to 4 years of age during a given year per 1000 mid-year population of that age group. It excludes infant mortality rate.
- **Morbidity indicators:** These reveal the burden of disease in a community. The following are the morbidity indicators used.
 - **Incidence rate:** It is the number of new cases of a particular disease per 1000 population of that year.
 - **Prevalence rate:** It is total number of both old and new cases existing in the population during a given period of time, it is the percentage of population suffering from a disease.
- **Disability rate:** It is the percentage of population unable to perform the routine activities due to injury or illness.
- **Nutritional status:** These include incidence of:
 - Low birth weight babies
 - Weight and height standards for children from 0 to 5 years
 - Basic metabolic index
- **Health care delivery indicators:** These include the number of hospitals, doctors, nurses, etc. available to provide health care to the community.
- **Social and mental health indicators:** These include rates of suicide, crime, assault, accidents, theft, murders, etc. These indicators are used to plan resources and improve the social and mental health of individuals.
- **Utilization rates:** It is the proportion of the people actually utilizing the health care services in a given population in a given year. For example, percentage of infants completely immunized.
- **Quality of life indicators:** These deal with the condition of life resulting from a combination of the effects of a complete range of factors such as those affecting health, happiness, education, social and intellectual attainment, justice, etc.

WHAT IS ILLNESS?

Illness is a condition characterized by a deviation from a normal health state which is manifested by physical and psychological symptoms. (Kozier)

Sickness: It is a state of social dysfunction.

Disease: It is maladjustment (physiological/psychological) of a human being to his/her environment.

Common Causes of Disease/Illness

- **Biologic agent:** It can be virus, bacteria, protozoa or any other microorganism
- **Inherited genetic defect:** For example, cleft palate
- **Developmental defect:** For example, imperforate anus
- **Physical agents:** Radiation, ultraviolet rays
- **Chemical agents:** Carbon monoxide, lead
- **Tissue response to injury/irritation:** Fever, inflammation
- **Faulty chemical/metabolic process:** Inadequate insulin in diabetes
- **Emotional/physical reaction to stress:** Fear, anxiety

Classification of Illness

Illness can be classified based on the duration:

- **Acute illness:** It is for a shorter duration; usually less than 3 months. The onset of symptoms is sudden. It usually results in complete recovery, death or develops into a chronic disease.
- **Chronic illness:** It is for a long term. The onset is slow. The symptoms are less severe. It results in optimizing the level of functioning and coping with the illness. It usually requires modification in the lifestyle, habits, daily activities, etc.

Stages of Illness

The way people experience illness differs. There are 5 stages that an individual usually goes through. The stages of illness are:

- **Stage I: Symptom experience:** The person feels something is wrong, but he/she is unable to diagnose. There is awareness of physical change like pain, fever, rash, lump, etc. At the end of this stage, the person is sure that the symptoms belong to an illness.
- **Stage II: Assumption of sick role:** If the symptoms persist, the client will assume sick role. They confirm the sickness through the family members and others and are excused from performing their normal routine duties and activities.
Assumption of sick role results in emotional changes like withdrawal, depression. The person may deny or will avoid contact with health care system. Once the client accepts the persistent nature of symptoms or potential threat to life, medical assistance is sought.
- **Stage III: Medical care contact:** The client acknowledges the illness. He seeks advice, consultation regarding the cause, duration of illness, complications, etc. Health professional determines the illness and its severity.
- **Stage IV: Dependent client care:** Once the client accepts the diagnosis, they become dependent on health care team to get treatment. There is acceptance of care, sympathy, protection from the demands and stress of life. The client adjusts to the disruption in daily activities. This disruption may affect the client's role, occupation, family, community and lead to stress.
- **Stage V: Recovery/rehabilitation:** In this stage, the symptoms subside. The person assumes the original health. In case of chronic illness, it results in adjustment and measures taken to prevent complications.

Emotional Response to Illness

An emotion is a bodily state that involves feeling which may be conscious or unconscious. The way the emotions are expressed will depend on the personality of the person, perception and extent of support. The common emotional responses to illness are:

- **Fear:** It is an emotional response characterized by expectation of harm or unpleasantness. The person may withdraw or avoid threat. The client may express fear and some may be reluctant to express it freely.
- **Overdependence and feeling of helplessness:** The feeling of dependence and helplessness increases to the extent that it can be harmful to the client. The nurse can assist the client to reduce this feeling by assessing his capability and helping him to become independent.
- **Anxiety:** Illness results in anxiety, especially due to lack of insight, knowledge regarding the illness, investigations, etc. Anxiety may cause insomnia, diarrhea, change in BP, fatigue, inadequate coping. It is the duty of the nurse to identify anxiety and implement interventions to reduce the same.
- **Hope:** People hope for the best outcome of their illness and expect to resume a long and healthy life. Physical and emotional balance gets disturbed and death may result in case the person loses his will to live. Reinforcing and providing hope and encouraging the client will help in the recovery.
- **Anger and hostility:** This is an emotion that results due to frustration in dealing with a difficult situation. Anger is seen when a person is unable to move forward in meeting his goal, objectives and self-respect gets lowered. Hostility is a desire for aggression. Sarcasm and abusive remarks are expressions of hostility.

It is necessary that the nurses understand these emotions and assist the clients to adjust/adapt to the situation.

Factors/Variables Affecting Illness Behavior

The two main factors that affect the illness behavior can be classified as internal and external factors/variables.

Internal Factors

These are variables that are within a person. They differ from person to person. These are:

- **Perception of symptoms:** It is the way a person perceives the symptoms of illness that influence the illness behavior. If a person takes symptoms not too seriously and takes prompt and adequate treatment; recovery is fast. If the person takes the symptoms too seriously, whether they are or not, they may become life-threatening.
- **Nature of illness:** In case of acute illness, client may take adequate treatment and recover fast. In chronic illness, the client will take responsibility for self, may cope and adjust or may get frustrated and not comply with the treatment.
- **Characteristics of person:** The way the person responds to illness will depend on his personality, coping ability and adjustment.

External Factors

These are variables that influence from outside.

- **Visibility of symptoms:** Visibility of symptoms affect body image as well as behavior. If symptoms are visible, the chances of seeking medical help will be more.
- **Social group:** The social support available through family, friends, relatives may assist the client to recognize the threat of illness and support the denial of potential illness.
- **Culture and values:** They teach the client how to remain healthy and recognize the illness.

- **Economic variable:** The socioeconomic background affects how early medical assistance is sought by the person. Economic constraint may delay treatment.
- **Accessibility of the health care system:** The proximity of health care system influences the frequency and the interval for seeking medical advice.

Impact of Illness on the Patient and the Family

While studying the impact, it is necessary to consider the patient and the family as one unit. We cannot realize the effect of illness if we consider only the patient as the patient belongs to a family and his role, functions, etc are interdependent. Illness is not a solitary event. It results in:

- **Behavioral and emotional changes:** People react differently to illness. The reaction depends upon:
 - Nature of illness: For example, duration, intensity
 - Clients' attitude toward illness
 - Others' reactions (family) to the client's illness
- **Impact on body image:** Body image has been defined as the subjective concept of physical appearance (Potter & Perry, 2014). The reaction to the body image changes with each individual. The reaction to the change depends on:
 - Nature and type of change
 - Individual's capacity of adaptation
 - The available support system
- **Impact on self-concept:** A person's adaptation to the illness and the change in body image will determine the impact of illness it has on his self-concept. Self-concept thus will depend on the coping mechanism adopted by an individual.
- **Impact on family roles:** People perform various roles in and out of the family. During illness, it has a direct impact on the roles played by a particular individual. The roles could be like breadwinner, decision-maker, homemaker, parent, etc. During an illness, there is an alteration in performance of these roles. The change can be small or huge and this will depend upon the nature of disease, its severity, duration and the person's ability to cope with illness.
- **Impact on family dynamics:** Family dynamics involves family coping, decision-making and family support system. Illness may result in reversal of roles, new patterns of functioning, conflict resolution, etc. Thus, inclusion of family in the care of an individual is important. The nurse needs to assess the family dynamics and plan and provide interventions accordingly.

ASSESS YOURSELF

(University Pattern Questions)

Short Answer Questions

1. Which is the concept of health: health-illness continuum?
2. Mention the factors influencing health.
3. What are the dimensions of health?
4. Write down the risk factors of illness development.
5. Which is the impact of illness on client?

Long Answer Questions

1. Explain the dimensions of health with example.
2. Discuss the factors affecting health and the role of nurses in promoting health.
3. Explain the stages of illness. Discuss the impact of illness on the patient and the family.

Multiple Choice Questions

1. Which of the following is a hereditary disease?
 - a. Rabies
 - b. Color blindness
 - c. Polio
 - d. Small pox
2. In the epidemiological triad, _____ is known to cause a disease.
 - a. Agent
 - b. Host
 - c. Environment
 - d. None of these
3. All of the following are internal factors affecting health, Except:
 - a. Biological
 - b. Psychological
 - c. Cognitive
 - d. Environment
4. _____ is an example of morbidity indicator.
 - a. Crude death rate
 - b. Maternal mortality rate
 - c. Incidence rate
 - d. Both A and B

Answers to MCQs

1. b
2. a
3. d
4. c