

FUNDAMENTALS OF NURSING SCIENCE I

Lesson 1

The Concept Health and Illness

The balance between a person his environment, unity of his soul and body, and origin of disease, was the basis for the perception of health. However, The World Health Organization in 1948, gave a better definition for health proposed by Dr Andrija Štampar (a prominent scholar from Croatia in the field of social medicine and public health and one of the founders of the WHO).

This generally accepted definition states that “**health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity**”

It was seen to be a better defining of health because it included both mental and social welfare is an integral component of an individual’s overall health rather than just the physical aspects.

Health is therefore a relative state in which one is able to function well physically, mentally, and socially to express the full range his/her unique potentialities within their environment. Health and wellness are therefore closely related concepts which are both dynamic processes. Wellness further describes a person’s health status. It allows health to be placed on a continuum from an optimal level where the individual experiences a sense of *perfect health* called **wellness** to a maladaptive state where they observe signs or symptoms suggestive of a disease called illness.

As healthcare providers, the public health approach to health advocates that we should not only focus on the health of individuals, but also the health of the groups and communities given that individuals are bound to interact within social environments. This is in line with Aristotle, who described man is a social being by his very nature; who tends to live in communities with the duty to respect the moral standards and ethical rules.

On the other hand, Hippocrates the creator of the concept of “positive health” said proper diet and exercise were essential for health, and that seasons’ changes had a profound effect on the mind and body, resulting in different types of predominant diseases for example in wet or rainy seasons people are bound to experience common cold, cough etc.

Conclusively, health it is essential to understand that health is characterized by three qualities: wholeness, pragmatism, and individualism.

1. **Wholeness** is relating to health as a *holistic phenomenon which encompasses the mental, emotional, intellectual, spiritual, social, environmental and psychological aspects of an individual's being*
2. **Pragmatism** referring to a relative *phenomenon* which explains that health is experienced and evaluated according to what people find reasonable to expect, given their age, medical conditions, and social situation.
3. **Individualism** relates health as a highly *personal phenomenon*. The perception of health depends on who you are as a person even though to be part of a society and to feel being close to other persons seems to be important to all. however, each human being is unique, hence strategies for improving health must be individualized.

The Health Illness Continuum

The *health illness continuum* is a graphic illustration of well-being which was proposed by John.W.Travis in 1972. It describes a process of change, in which an individual experiences various states of **health and illness** ranging from high level of wellness or good **health** to lower levels of health or poor to premature death. A process that fluctuate throughout an individual's life time



MASLOW'S HIERARCHY OF NEEDS

Maslow's hierarchy of needs is a motivational theory in psychology comprising a five level model of human needs, often shown as hierarchical levels within a pyramid. In this model Maslow emphasised that needs lower down in the hierarchy must be satisfied before individuals can attend

to needs higher up. From the bottom of the hierarchy upwards, the needs are: physiological, safety, love and belonging, esteem, and self-actualization.

1. **Physiological needs** - these are biological requirements for human survival, e.g. air, food, drink, shelter, clothing, warmth, sex, sleep. If these needs are not satisfied the human body cannot function optimally. Maslow considered physiological needs the most important as all the other needs become secondary until these needs are met.
2. **Safety needs** - Once an individual's physiological needs are satisfied, the needs for security and safety become relevant. People want to experience order, predictability and control in their lives. These needs can be fulfilled by the family and society (e.g. police, schools, business and medical care). For example, emotional security, financial security (e.g. employment, social welfare), law and order, freedom from fear, social stability, property, health and wellbeing (e.g. safety against accidents and injury).
3. **Love and belongingness needs** - after physiological and safety needs have been fulfilled, the third level of human needs are social needs which is expressed as the feeling of belongingness. The need for interpersonal relationships motivates behaviour e.g. friendship, intimacy, trust, acceptance, receiving and giving affection and love or being part of a group (family, friends, work).
4. **Esteem needs** are the fourth level in Maslow's hierarchy - which Maslow classified into two categories:
 - ✓ Esteem for oneself (dignity, achievement, mastery, independence) and
 - ✓ The desire for reputation or respect from others (e.g., status, prestige).

Maslow indicated that the need for respect or reputation is most important for children and adolescents and help them to develop real self-esteem or dignity thereby attributing worth their personalities and consequently their abilities.

5. **Self-actualization needs** are the highest level in Maslow's hierarchy, and refer to the realization of a person's potential, self-fulfilment, seeking personal growth and peak experiences. Maslow describes this level as the desire to accomplish everything that one desires to become in life. Individuals may perceive or focus on this need very specifically. For example, one individual may have a strong desire to become an ideal parent. In another, the desire may be expressed

economically, academically or athletically. For others, it may be expressed creatively, as in arts and craft.

Maslow later proposed that the order in the hierarchy “is not nearly as rigid” as he may have implied in his earlier description as he came to realise that the order of the needs might be flexible based on external circumstances or individual differences. For example, for some individuals, the need for self-esteem is more important than the need to love and beloved. For others, the need for creative fulfilment may supersede even some basic needs.

Note that the most recent Maslow's hierarchy of needs model has been expanded to include cognitive needs, aesthetic needs and transcendence needs as they have become part and parcel of man in recent times.

Cognitive needs - knowledge and understanding, curiosity, exploration, need for meaning and predictability.

Aesthetic needs - appreciation and search for beauty, balance, form, etc.

Transcendence needs - A person is motivated by values which transcend beyond the personal self (e.g., mystical experiences and certain experiences with nature, aesthetic experiences, sexual experiences, service to others, the pursuit of science, religious faith, etc.).





MODELS OF HEALTH

Biomedical Model

This model describes health as the presence of illness or injury and believes that illness can be cured based on scientific knowledge of causes and treatment. According to this model, doctors have more control of the situation than the patient. This thought is not the best as it can easily lead to conflicts in care for patients, especially on the concept of informed decision making. Because this model is limited to the medical problem of a person, rather than the person as a whole, it is thus described as limiting.

Holistic Model

This model focuses on the person as a whole, with their bio-physio-social issues being taken into account to assess health, rather than just physical illness or injury. This model details that a complete health assessment of an individual must include aspects of spiritual, emotional, social, intellectual etc. as seen on the diagram.



The Health Belief Model

The health belief model assumes that people will take action if they believe that their health deterioration can be avoided for them to remain healthy by their own definition. The actions people will take may be explain in three categories; Preventative health behaviour, illness behaviour and sick-role behaviour. The aim of this model is to educate society about disease prevention and is used as a guide to health promotion activities or initiatives. For example, it will be easy for Silver to commit to undergoing breast cancer screening if she notice a lump in her breast if her mother was diagnosed of breast cancer.

FACTORS AFFECTING HEALTH

1. Policymaking

Policies at the local, state, and regional level affect individual and population health. For example, increasing taxes on tobacco sales, can improve the health of the population by reducing the number smokers.

2. Social Factors

Social determinants of health reflect the social factors and physical conditions of the environment in which people are born, live, learn, play, work, and age. Also known as *social and physical* determinants of health, they impact a wide range of health, functioning, and quality-of-life outcomes.

Examples of **social determinants** include:

- Availability of resources to meet daily needs, such as educational and job opportunities, living wages, or healthful foods
- Social norms and attitudes, such as discrimination
- Exposure to crime, violence, and social disorder, such as the presence of trash
- Social support and social interactions
- Exposure to mass media and emerging technologies, such as the Internet or cell phones
- Socioeconomic conditions, such as concentrated poverty
- Quality schools
- Transportation options
- Public safety
- Residential segregation

Examples of ***physical determinants*** include:

- Natural environment, such as plants, weather, or climate change
- Built environment, such as buildings or transportation
- Worksites, schools, and recreational settings
- Housing, homes, and neighbourhoods
- Exposure to toxic substances and other physical hazards
- Physical barriers, especially for people with disabilities
- Aesthetic elements, such as good lighting, trees, or benches

Poor health outcomes are often made worse by the interaction between individuals and their social and physical environment.

3. Access to Health Services

Both access to health services and the quality of health services can impact health. Lack of access, or limited access, to health services greatly impacts an individual's health status. For example, when individuals do not have health insurance, they are less likely to seek preventive care and are more likely to delay medical treatment.

Barriers to accessing health services include:

- Lack or unavailability
- High cost
- Inadequate insurance coverage
- language

These barriers to accessing health services lead to:

- Unmet health needs
- Delays in receiving appropriate care
- Inability to get preventive services
- Hospitalizations that could have been prevented

4. Individual Behaviour

Individual behaviour also plays a role in health outcomes. For example, if an individual quits smoking, his or her risk of developing heart/lung disease is greatly reduced. Many public health and health care interventions focus on changing individual behaviours such as substance abuse, diet, and physical activity. Positive changes in individual behaviour can reduce the rates of chronic diseases

Examples of ***individual behaviour determinants*** of health include:

- Diet
- Physical activity
- Alcohol, cigarette, and other drugs use

- Hand washing

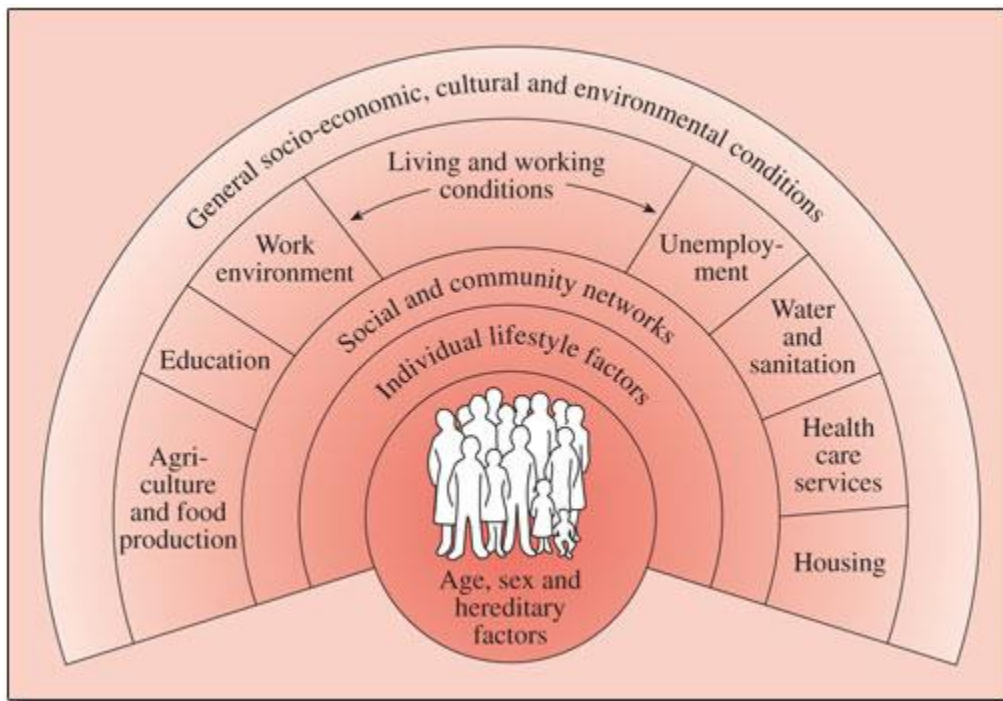
5. Biology and Genetics

Some biological and genetic factors affect specific populations more than others. For example, older adults are biologically prone to being in poorer health than adolescents due to the physical and cognitive effects of aging.

Sickle cell disease is a common example of a genetic determinant of health. Sickle cell is a condition that people inherit when both parents carry the gene for sickle cell.

Examples of *biological* and *genetic social determinants* of health include:

- Age
- Sex
- HIV status
- Inherited conditions, such as sickle-cell anaemia, haemophilia, and cystic fibrosis
- Carrying the BRCA1 or BRCA2 gene, which increases risk for breast and ovarian cancer
- Family history of noncommunicable disease like heart diseases, diabetes etc



The figure above summarises the main determinants of health (Dahlgren and Whitehead, 1991) in a diagram of layers which can be peeled away.

CAUSES AND RISK FACTORS FOR DEVELOPING ILLNESSES

Illness is a condition of disease which can either be pathogenically, behavioral or biomedical. When illness is caused by a pathogen it is termed direct otherwise it is called indirect or a risk factor.

Health **risk factors** are attributes, characteristics or exposures that increase the likelihood of a person developing a disease or health disorder. For example, family history with NCDs and inheritable diseases

Behavioral risk factors are those that individuals have the most ability to modify. For example, being obese due to a sedentary lifestyle, tobacco use, high blood pressure

Biomedical risk factors are bodily states that are often influenced by behavioral risk factors. For example, poor body hygiene, douching by ladies giving them candidiasis because of imbalance in the microbial flora of the vagina, bed sores in bedridden patients due to poor care etc.

TYPES OF ILLNESS

A disease is a particular abnormal condition that negatively affects the structure or function of all or part of an organism, and that is not due to any immediate external injury(accidents). Diseases

are often associated with specific symptoms and signs caused by external factors such as pathogens or by internal dysfunctions. For example, internal dysfunctions of the immune system can produce various forms of immunodeficiency allergies and autoimmune disorders. Death due to disease is called death by natural causes.

There are four main types of disease: namely

- infectious diseases,
- deficiency diseases,
- hereditary diseases (genetic diseases and non-genetic hereditary diseases), and
- physiological diseases.

The study of disease is called pathology, which includes the study of aetiology, or cause. Diseases can also be classified as

- Acquired vs congenital
- Acute or chronic
- Iatrogenic
- Idiopathic
- communicable versus non-communicable diseases.

In developing countries, the diseases that cause the most sickness overall are infectious and deficiency condition unlike in the developed world where neuropsychiatric conditions, such as depression and anxiety.

Assignment: *What is the impact of illness to a patient and the family?*

ILLNESS BEHAVIORS

Illness behavior refers to those behaviors that individuals engage in once they believe that they are ill

It is equally an active rather than a passive process that involves interpreting symptoms, evaluating possible responses and finally deciding on whether to try to alleviate those symptoms or simply ignore them. The determinant of illness behavior includes the following

1. Recognition of illness symptoms

2. The extent the perceives symptoms as serious
3. Information, knowledge and cultural assumption
4. Disruption in family work and social activity
5. Frequency of appearance
6. Tolerance level
7. Physical proximity of treatment resources

HEALTHCARE DELIVERY SYSTEMS

LEVELS OF ILLNESS PREVENTION

Unlike in the past where medicine was focused primary on improving health by identifying and treating health problems that have already produces signs and symptoms. This isn't the case was modern approach to health. It's now common to hear of preventive care. This approach to health focuses on diagnosing the problem before symptoms or complications arise for improved prognosis. When done well prevention improves overall health and reduce healthcare cost. The goal of here is to reduce a person's likelihood of becoming ill, disabled or die a premature death. It is also individualized to fit personal risk profiles.

There are three levels of preventive health categorized as primary, secondary and tertiary

- a. **Primary prevention.** This level focuses on strategies aimed at changing altitude and high-risk behaviors to positive (healthful lifestyle-physical activity and exercise-quitting smoking-safe sex practices-limiting alcohol-adequate sleep etc.). Activities here include vaccination, counselling and health education or sensitization.
- b. **Secondary prevention.** The aim of activities here is early diagnosis before symptoms appear to prevent serious complications. These activities include screening such as mammography to detect breast cancer, early consultation
- c. **Tertiary prevention.** This level aim to restore and rehabilitate. It involves managing chronic diseases from further damage.eg tertiary prevention for diabetes focus on tight control of blood sugar, skin care, frequent feet examination and frequent exercise to prevent heart and blood vessel disease. Tertiary strategies involve supportive and rehabilitation services to prevent deterioration and maximize quality life, such as rehabilitation from injury, stroke or heart attack. It also involves preventing complications among people living with disabilities e.g. bedsores from bedridden patients.

LEVELS OF CARE

Like preventive health, care has also been segregated into primary, secondary, tertiary and quaternary levels. Each of these levels is determined by the medical cases being treated as well as the skills and specialties of the providers. These levels also denote the order of referral which a patient can undergo.

Primary care is the less specialized level of care which usually is the entry level of care sought by patients when they observe the first symptoms from an acute medical problem. It's also responsible for coordinating patient care among specialist and other care levels. They offer basic health care services for early and quick diagnosis. Primary care providers (PCP) may include generalists, nurse practitioners or physician assistant. Specialist like gynecologist, pediatricians and geriatricians are also PCPs.

Secondary care on the other hand is when a patient is referred to a specialist with more specific expertise about an already identified health condition. Examples of providers here may be cardiologists, end urologists, oncologists etc. they have specialized in particular systems of the body.

Tertiary level of care is when a patient is referred for more advance care where highly specialized equipment and expertise is required. Here procedures like coronary bypass surgery, renal or hemodialysis, plastic surgeries and other complex treatment procedures are carried out.

Quaternary care is considered as extended tertiary care because it is typically more advance and highly unusual. The type of care that may be considered to be quaternary would be like experimental medicine and procedures as well as research centers

Summarily, primary level of care can be regarded as general care, secondary as specialized care, while tertiary can be called advance or sophisticate and lastly quaternary as exploratory care level. It is worth of note that a single hospital can provide all the four levels of care or not.

TYPES OF HEALTHCARE AGENCIES/ FACILITIES

Healthcare can be provided in different settings with different scopes. These setting may include but are not limited to hospitals, clinics. Hospice, rehabilitation centers etc.

a. Clinics: a clinic is a facility for diagnosis and treatment of outpatients. it is often for patients who need short-term care. They are typically more convenient and affordable for patients as

well. These facilities may include day surgery centers, urgent care clinics, and specialty clinics. Most often they are in close proximity to a patient's home, providing easier access to high-quality, non-emergency care.

- b. Hospitals:** these facilities primarily provide diagnostic and treatment services for in-patients requiring patients to stay under the supervision of specialized health care professionals until discharged. Hospitals typically have a wide range of units that can be loosely broken into intensive care and non-intensive care units.

Intensive care units deal with emergencies, serious illnesses and injuries. Patients with imminently life-threatening problems go here.

Non-intensive care units include things like childbirth, surgical, medical, rehabilitation, step-down units for patients who have just been treated in intensive care and many others

- c. Hospice:** this is another type of health care facility. A hospice facility cares for the terminally ill or people nearing the end of life. They offer more of supportive and palliative care services for a peaceful death process. The medical team in these centers comprises of spiritual advisors, and counselors among others to support both the patient and their family during the transition.
- d. Rehabilitation centers or Long-term care** facilities support people with short-term recovery, ongoing health conditions, or disabilities. They are designed to help patients complete daily activities as safely and as independently as possible
- e. A clinical laboratory** completes diagnostic tests ordered by physicians and primary care providers using biological specimens and monitor a patient's health. Clinical lab facilities can be organized by function or test specialization. General clinical labs run common tests, while other labs, such as cancer clinics, run disease-specific tests.

Other extended healthcare facilities are nursing homes, birth centers, ambulatory surgical centers, diabetes education centers, imagery and radiological centers, telehealth etc.

TYPES, ORGANIZATION AND FUNCTIONS OF HOSPITALS

By definition, a modern hospital is an institution which possess adequate accommodation, well qualified experienced personnel to provide services of curative, restorative, preventive and health promotional services of the highest quality possible to people without discrimination

Hospitals are generally classified by the type of ownership, treatment, facility size, and length of a patient's stay. The majority of them are nonprofits, typically governed by a regional health authority.

The functions of the hospital include **intra-mural and extra-mural** functions.

Intra-mural functions

- i. Therapeutic which include-diagnostic, curative, rehabilitative and care of emergencies
- ii. Preventive- antenatal and postnatal services, primary health care service, family welfare services, control of communicable diseases and health education
- iii. Training/education- medical, paramedical, nursing, specialty and community health
- iv. Research- clinical medicine and hospital administration

Extra-mural functions

- Outpatient services
- Homecare or outreach or domiciliary services

Essential components of a hospital

- Trained and competent personnel in adequate numbers
- Appropriate infrastructure to facilitate smooth functioning
- Efficient organization to maximize quality of service and patient satisfaction
- A holistic approach
- An atmosphere conducive to staff, self and professional growth through regular in-service educational programs and continuous medical education (CMEs)

ORGANIZATIONAL STRUCTURE OF A HOSPITAL

Organizational structure defines the hierarchy and administration within the hospital. It entails leadership planning organizing and decision making. This is usually characterized by different positions of leadership as discussed below.

- a. **Board.** All hospitals include some form of governing body responsible for making high-level decisions about the organization. A hospital's board of directors is often made up of experts from respective health fields. In regions hospitals the clergy are included or make up on their

boards of directors whereas teaching hospitals often include university faculty from the medical school with which they're affiliated.

- b. **Executives:** hospital executives are responsible for managing the organization, making financial decisions and overseeing business strategy. Medical and health services managers may oversee entire practices or clinical areas.
- c. **Department Administrators:** department administrators report to the hospital executives and manage the day-to-day operations of specific departments within a hospital. The chief of surgery, for example, is responsible for overseeing daily activities within the surgical department as well as performing surgery.
- d. **Patient Care Managers:** nurse managers and supervising physicians are both patient care managers. These individuals manage small groups of professionals who provide direct patient care. They ensure that orders are carried out, that hospital employees are fulfilling their duties appropriately and that employees are complying with legal requirements.
- e. **Service Providers.** The vast majority of hospital workers are service providers: doctors, nurses, hospital attendant, physical therapists, laundry workers and the many other people required in order for a hospital to function. They provide patient care, maintain records and ensure that the hospital is able to deliver care to patients in an effective manner.

Assignment: Identify the different healthcare members that make up a healthcare team in a hospital