Systems of Reference of Disease and Health

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What is the focus of medicine? Is it the disease or the sick human being? Health and illness encompass a number of definitions: What is normal, what is pathologic? How do medical practitioners, the healthcare system, and the patients themselves define and at a personal level experience health and illness? Social science and psychological fundamentals are no „Troubles-on-top-of-everything-else“ at the preclinical stage of education, but rather an important pillar for subsequent work in the medical field. The following summarizes everything important with regard to systems of reference in health and disease: This is the perfect article to learn for your USMLE!

Definition of health and illness

Several nuances and variations exist between the 2 extremes of health and disease. Medicine primarily takes cues from the **World Health Organisation (WHO) for a definition of health**:

> Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

However, not every deviation from the normal can be classified as an illness or a pathological status. Doctors are often aware of the several gradients and nuances of the well-being of a person, but due to outer structures (health insurance, employer, etc.), they often have to categorize patients as healthy or ill.

Health and illness: What is the norm?

- **Biological and physiological:** Diagnostic standards define certain limits and deviations from such limits are classified as pathological. Laboratory results with precise ranges of values are indicative of such limits and values lying outside these limits are indicative of ‘abnormalities’.
- **Social**: Codes of behavior are learned and differ a lot between different cultures.
- **Statistical**: The statistical average is considered as normal.
- **Ideal**: Wants and ideals create a target status, which is aimed at.
- **Functional standard**: The functional ability within the known limit of performance.
- **Reference standard**: Normal within a reference group.
- **Role standard**: Behavior in a defined role.

Basic concepts in health and disease

You will encounter some important technical terms regarding health and illness throughout your studies. So it is worthwhile to memorize the following:

- As a doctor, the cause of a patient’s illness in its entirety is termed etiology.
- The empiric origin and development of illness are called pathogenesis.
- Some people have **risk factors** that are genetic or due to lifestyle choices which can precipitate the outbreak of an illness.
- On the other hand, **protective factors** can prevent the outbreak of an illness.
- People with many protective factors can be exceptionally resistant and resilient (technical term, **resilience**).
- In the case that illness is temporarily out of character, we speak of its **chronification**.
- If there is a flare-up of the illness after healing, then the patient is experiencing a **relapse**.
- Ideally, the healing process of a disease or a procedure is followed by the regaining of abilities (**rehabilitation**).

The affected person: Subjective feelings and experiences

Image: Advice, assistance, healthcare, healthy, help. By www.audio-luci-store.it, License: CC BY 2.0

When it comes to sharing findings and diagnosis with the patient, the doctor should demonstrate empathy. In the medical environment, time is often a limiting factor. Nevertheless, the medical practitioner should always try to evaluate the subjective condition of the patient and to adjust the doctor-patient-talk individually.

Terminology for the subjective experience of health and illness

Next to common terms like well-being, discomfort, and symptoms, it is important to get acquainted with a number of terms that are associated with the subjective experience of illness and health.

1. Symptom awareness

Each individual perceives symptoms differently.

Insufficient symptom awareness	Enhanced symptom awareness
Very high symptom tolerance	Even minimal changes are recognized and observed with low symptom tolerance
i.e. depressive patients, people dealing with alcohol abuse, etc.	Very pronounced in hypochondria

Note that the ability for patients to practice self-reflection cannot be assumed by the medical practitioner.

2. **Interoception / Exteroception:**

To be able to experience discomfort, physical awareness is required. **Proprioception, viscероception, and nociception** fall under interoception, which is an awareness of one's body.

- Proprioception: awareness of the locomotor system
- Viscероception: awareness of the organs
- Nociception: perception of pain
- Exteroception: awareness of a person's own body, e.g. by seeing, smelling, tasting (outer awareness)

Hypochondria and somatization:

Two examples of divergent experiences are **hypochondria** and somatization disorder.

When it comes to **hypochondria,** an excessive self-perception leads to the overvaluation of the smallest symptoms or non-symptoms. The patient feels a constant state of anxiety and fear and worries about being or falling ill.

In the case of a somatization disorder, psychic or mental distress is not expressed, neither in front of oneself nor in front of others. The body finds a way out of this stressful situation by 'talking via the organs', i.e. physical symptoms.

The subjective perception includes interoception, exteroception, and the ability to act.

The quality of life with reference to health is never dependent on a single factor. With regard to WHO's definition of health: **physical, psychological, and social wellbeing** constitute, together with the patient's ability to act, the **quality of life for an individual**.

Implicit theories of illness

The **implicit theories of illness** have a large impact on the healing process. A patient who considers illness as ‘punishment’ will have a different healing process than someone who sees it as a ‘temporary obstacle’. If a doctor can appreciate these highly subjective theories of illness, it will facilitate the understanding of the patient’s perception of the illness.

Disease-sustaining cognition: primary and secondary gain

In the psychodynamic model, illness can be interpreted as a follow-up to a conflict: it does contribute to the resolution of the conflict while the patient draws a hidden, intra-psychological advantage from the illness. The secondary gain is easier to understand and has to do with objective unloading and gratification.

Primary gain	Secondary gain
Reduction of the intra-psychological tension	The afflicted person gets to rest and is looked after.
	The afflicted person is freed from school attendance /obligation to work and possibly draws sickness benefits.
	Relatives and friends react with heightened thoughtfulness and sympathy.
	People who possibly feel neglected, receive increased attention from others and the medical staff.

Examples from medical practice: Often older patients living alone ‘enjoy’ finally being looked after extensively and being at the center of attention.

Medicine as knowledge- and action-system

Medical findings and diagnosis

Before imaging procedures were invented, the doctor was dependent on the patient’s visual appearance in order to **correctly assess the patient**. Currently, X-ray, sonography, CT, and MRI considerably facilitate the diagnostic work. They are, however, just a part of the pool of methods, which a doctor could use to arrive at findings. Part of complete medical findings and diagnosis are:

- **Anamnesis**: With the anamnesis, you record the history of the illness. Often with children, traumatized, or confused/unconscious patients, history is gathered from others.
- **Exploration**: Determining the reason the patient is presenting.
- **Behavior monitoring**: By monitoring the patient’s behavior, you evaluate important information about the symptoms of the illness.
- **Physical examination**: Important elements of the physical examination are inspection (seeing), percussion (tapping), palpation (touching).
- **Medical-diagnostic procedures:** Physical examination involves listening and looking, and allows the physician to formulate a working hypothesis. For further adjustments, laboratory and imaging procedures are employed accordingly.

Notice: The state of health describes a subjective experience-based value, while the

report describes objective data.

Classification systems for health and illness

The classification systems for psychological and somatic illnesses are instruments of categorical diagnosis.

International Classification of Diseases ICD-10

Attempts have been made since the 19th century to compile some kind of catalog for the purpose of organizing physicians' diagnostic experience in one classification. What was, in the beginning, the international nomenclature of causes of death from 1893, has been developed further to the International Classification of Diseases (ICD). More than 2500 somatic and psychic diseases are classified into 21 categories. Since 1958, WHO has been responsible for the work on the ICD-10 catalog. ICD-11 is not planned, but there are annual updates by WHO.

Diagnostic and Statistical Manual of Mental Disorders (DSM)

Initially introduced in the USA in the 19th century as the first classification for idiocy/insanity, the DSM has been adapted and updated by the American Psychiatric Association since 1952. The latest version is called DSM-V. DSM has a bigger impact on psychological research than ICD-10.

Society: Societal viewpoint on the aspects of health and illness

Fulfillment of/Deviation from social norms and roles

Our behavior is measured against different norms and roles (see above). **The role differentiation is the result of task specification within our society. Being new in a group** comes the conception of roles: roles are redistributed and/or assumed. There are certain expectations attached to a role: the physician fulfills a precisely defined, formal role, whereas the expectations for a student in his informal role are rather variable.

For example, being a goalkeeper or the leader of a choir is associated with different roles. Attributed roles, like gender roles, are less modifiable. In order to cut ties with an attributed role or to change it, distance from the role is required (e.g., women's emancipation). The opposite of distance from the role is role identification. The person accepts and affirms the role.

Usually, a conflict between roles exists: the expectations of different roles an individual is expected to fulfill could diverge and lead to a conflict, for instance, if a person has several roles as a medical student, teaching assistant, and flat occupant. Moreover, conflicts within a role are called intra-role conflicts and could arise, e.g., the expectations of a doctor on the part of the nursing staff and the completely different expectations on the part of the patient.

The environment sanctions role compliance or non-compliance with positive sanctions (praise, gratitude, approval) **and negative sanctions** (penalties, disbelief, disapproval), respectively.

Legal regulations of the health and social systems

The health and social systems are important in the field of occupational medicine/social medicine. Sick certificates, rehab applications, and level of care categorizations are bureaucratic problems that are difficult for both aspiring and seasoned doctors.

The following basic terms that legally define different stages of disease should be memorized:

- **Sick certificate**: By means of the medical certificate you legally release someone from work, exams, or court appearances.
- **Occupational disability and disability**: The patient is not able to practice the originally learned profession because of health reasons. In contrast to an occupational disability, a patient with a total disability is not able to pursue any other career options either.
- **Invalidity**: The patient is permanently affected by an accident at the mental and/or physiological level.
- **Pension**: Pension is a complex topic with many subcategories, including retirement pension, early retirement pension, pension because of partial disability, pension because of full disability, and widow's and orphan's pensions.

Assessment of health and disease under sociocultural aspects

Image: The physician. By Adrian Clark, License: CC BY 2.0

In society, illness is a state that deviates from the normal state, and attempts should be made to change this divergent state is to normalcy. To this end, specific rules exist and adherence to or non-compliance with these rules is sanctioned positively or negatively, respectively. **The illness of the individual is not a personal matter,** as it has repercussions on the society (e.g., high-cost factor for chronic diseases or the additional work, which has to be covered by colleagues when a person is absent).

Great emphasis is to be put on the fact that society views diseases of organic or psychological origin differently. Patients with psychological diseases are often exposed to **serious stigmatizations**. The common chronification of mental illness emphasizes the

negative societal valuation of these patients.

Notes