The multifaceted approach of the disease, from the perspective of Health Psychology
Concepts about the disease

The biomedical model

- the disease consists only from the absence of health;
- claims that (physical) illness is a biological process that can be explained only by the occurrence of physiological disorders, stemming from an injury, a biochemical imbalance or the action of a biological factor (e.g. infection), while the psychological and social factors are irrelevant.
- is incomplete and simplistic, because it does not take into account:
  - the psychosocial factors causing people to act in order to prevent or detect the disease in its early stages;
  - the role of personality and habits in health maintaining or in the onset of the disease.
The psychological model

- identifies, in addition to biological causes, psychological and behavioral factors involved in the etiology of the disease, or influencing therapeutic compliance and recovery from illness;
- these models are relevant for the identification and implementation of various therapeutic modalities (in addition to health) to maintain health status, prevent disease and improve quality of life.

The psychosocial model

- the disease has a plurifactorial etiology and is characterized by dysfunctions that affect interpersonal relationships, patient’s family, social and professional life, normal roles.
Beside the individual perception of the disease, these dysfunctions are often associated to an altered, “deviant” and unwanted social role.
The biomedical model:
Disease = a collection of somatic signs and symptoms

The psychosocial model:
In addition to somatic signs and symptoms:
- psychological symptoms
- the patient role

The bio-psycho-social model
The bio-psycho-social model

Engel, 1980

Biological factors
- infectious agents;
- genetic predisposition;
- hormones;
- organic lesions.

Psychological factors
- perceived stress;
- coping style;
- behavior stemming from stress;
- disease perception.

Social factors
- social class;
- job;
- social relationships, social support;
- health education.

Ecological factors (Ikemi)
- behavior related to health;
- regulation of the contact with the social environment;
- philosophical / religious views about life.
Social and cultural aspects of the disease

**Social support**
- “the individual's interpersonal relations as a whole, which provides its positive emotional connection, practical help and information in a threatening situation"
- includes family, work colleagues and friends.
Benefits of social support:
- maintains a better health status;
- promotes addressability to the doctor and treatment adherence;
- decreases the predisposition to risky behavior;
- is associated to a favorable course of chronic diseases or low residual disability (by increasing adherence to treatment, survival and quality of life, and by maintaining psychosocial functioning);
- is associated to a decrease of mortality in the elderly (e.g., in diabetes, cardiovascular disease, rheumatoid arthritis);
- is associated to a low incidence of mental disorders, depressive symptoms and anxiety;
- has a direct protective role ("buffer") against psychological stress;
- encourages the use of functional coping strategies in acute or chronic illness;
- may contribute to a decrease of perceived pain.
Psychosomatic Medicine

- highlights "the interrelation between body, the individual psyche and the social environment" (von Uexküll);
- consists from a comprehensive framework and multidisciplinary assessment of the role of psychological factors affecting individual vulnerability and evolution of the disease;
- represents an approach of the suffering person from a biopsychosocial perspective. It considers that psychological stress and social environment may have a substantial influence on the disease occurrence and evolution;
- has practical utility, by including psychological interventions in the prevention and treatment of somatic diseases;
- highlights that psychosomatic patients have a double vulnerability to stress, psychological and organic.
The psychological vulnerability

Can be influenced by various factors:

- **stress**: stressful life events (acute or chronic);

- **personality**:
  - the presence of protective cognitive traits provides resistance to stress and is protective against illness;
  - higher risk of illness is brought by specific behavioral patterns (types A, C, D) and alexithymia (the difficulty in describing and identifying one’s emotions and thoughts);

- **risky behavior and lifestyle**: has a negative effect on health and may represent a risk factor for the occurrence of the disease (e.g., heart attack, high blood pressure, obesity, diabetes) (see also the Alameda study);

- **social support**: has a positive role in health preserving and the recovery after the disease and the overall prognosis.
Correlated mental processes and emotions

Intense acute changes in physiological processes, as a result of stress. Reversible.

Psychosomatic disorders

Organic diseases, occurred on a potentially vulnerable organ. Cyclic evolution, partially reversible or irreversible.
Represent the psychological / psychiatric symptoms generated by the somatic symptoms of a disease.

Can be substantial in life-threatening conditions, such as
- myocardial infarction;
- cancer;
- HIV / AIDS.
Explanatory models in Psychosomatic Medicine

Pavlov’s Model:
- explains the formation of conditioned reflexes;
- in rats, injection of histamine associated with an acoustic signal can eventually cause asthma attacks, triggered only by the exposure to the acoustic signal.

Cannon’s Model:
- emotions, through the physical changes they produce, prepare the body to cope with events and adapt to external demands;
- in a stressful situation emotions mobilize the individual’s defense mechanisms of "fight or flight";
- under stressful circumstances, the hypothalamus is activated, this leading to autonomic and neurohormonal reactions which eventually cause functional or even organic disorders.

Adler:
- the concept of "locus minoris resistentiae" (some organs are more susceptible to the disease than others).
Alexander’s Model:
- "disease-specific psychodynamic conflict theory“;
- unconscious conflicts are mediated by the autonomic system and, if not unloaded in a fight or flight reaction, they may lead to specific disorders and even irreversible changes.

Dunbar’s Model:
- the existence of specific personality traits or profiles for certain psychosomatic disorders and diseases.

Selye’s Model:
- "stress theory“;
- any prolonged stress can cause physiological changes that lead to a psychosomatic disorder / disease;
- everyone has one or more vulnerable organ(s) to stress;
- anxiety and depression favor the emergence of psychosomatic diseases;
- prolonged stress triggers general adaptation syndrome, which activates the hypothalamic-pituitary-adrenal axis with increased cortisol secretion and injuries that occur in different organs (PS disorders and diseases).
Contributions of psychological factors in various chronic conditions

- **Gastric and duodenal ulcer**

Factors involved in pathogenesis:
- Helicobacter pylori;

Behavioral:
- the use of aspirin, NSAIDs, minor tranquillizers;
- smoking;
- clorhidro-peptic acid hypersecretion;
- drinking alcohol;
- skipping breakfast;
- insufficient sleep (< 7 hours per night).
Psychosocial factors (present in 20-65% of ulcer patients):
- stress (especially if it is unpredictable and uncontrollable);
- traumatic life experiences;
- hard working conditions (especially in individuals with passive coping strategies and low social support) and unemployment;
- frustrations regarding salary income, insecurity regarding money;
- low socioeconomic status (+ poor hygiene, smoking, high alcohol consumption);
- predisposing personality traits (dependency, repressed hostility, impulsivity, depression);
- comorbid conditions (anxiety, depression).
Cardiovascular diseases

Risk factors involved in the etiology of cardiovascular disease:

Factors that can be controlled, changed or treated:
- hypertension;
- smoking;
- diabetes;
- physical inactivity;
- unhealthy diet;
- cholesterol;
- obesity;

Factors that can not be controlled:
- age;
- gender;
- the family history of coronary heart disease and / or stroke.
Psychosocial factors

1. Social environment:
   - low socio-economic status;
   - major life events;
   - job stress;
   - low social support;

2. Personality traits:
   - type A;
   - type D;

3. Negative emotional states:
   - depression;
   - anxiety;
   - hopelessness/ helplessness.
Tuberculosis

- an infectious disease, caused by the Koch’s bacillus).

“Social determinants”:
- socio-economic conditions;
- poor diet or malnutrition;
- poverty, poor housing conditions (overcrowding, poor ventilation);
- poor hygiene;
- low accessibility to health services;
- high prevalence in vulnerable groups;
- risky behavior (smoking, alcohol and drugs, HIV infection).

The psychological impact:
- anxiety;
- helplessness;
- isolation;
- stigmatization, discrimination.
Patients’ specific reactions to illness

*Regression*

In the case of a severe or acute disease, with major psychosomatic discomfort, the patient may display a regressive behavior.

*Characteristics*

**Egocentrism:** the patient is preoccupied exclusively with his/her illness.

**Dependency:** both to doctor and family (the patient has a lower number of responsibilities = secondary benefit);

**Primary emotions:** intense, with a low duration (e.g., crying, anger).

**Anxiety:** a state of fear unmotivated by a real danger (fear without object). May be legitimate in the case of the patients with lack of information regarding the seriousness and prognosis of their illness.

**Depression:** is often met in severe cases or in chronic patients with a history of many therapeutically failures.

**Aggressiveness:** may be observed during the anamnesis and may be in relation to dependency.
**Evasion**
- the disease is an opportunity to mentally escape from a world of disease, full with difficulties, to a world without concerns and no responsibilities;
- patients may express unjustified aggravation of their symptoms, unjustified fear regarding the healing and exaggeration of medication’s side effects.
- secondary benefit.

**Exaltation of the Self**
- the disease may expose some latent histrionic characteristics of the patient;
- some patients may use the disease as a tool for self-valorization (“I am an interesting case”).

**Informational contagion**
- some chronic patients become “experts” and they display “competent” opinions regarding the disease and its treatment.
- these opinions can influence the behavior of surrounding patients, especially if they have a decrease of their critical abilities, high anxiety, or if the doctor-patient relationship has a low quality.
Theoretical models regarding health / illness behavior
Health Belief Model (HBM)

Key factors:

- **threat perception:**
  - perceived susceptibility (individuals believe that they are more/less likely to suffer a negative health outcome);
  - perceived severity (cognitions about the consequences of the illness).

- **behavioral evaluation** – with 2 sets of beliefs:
  - perceived benefits of understanding a health-related behavior;
  - perceived barriers (costs) in undertaking that behavior.

- **triggers** (factors that stimulate the activation of health behavior):
  - internal (e.g., mood, symptom perception);
  - external (e.g., media, advertising, social influence).
Utility

Assessing:
- adherence to screening programs (e.g., colorectal cancer, cervix cancer);
- risk-taking behaviors;
- health behavior (breast self-examination, smoking cessation, eating a healthy diet).
Theory of Reasoned Action (TRA)

Health behavior and attitudes are conditioned by **socio-cultural factors** (norms and social reasons);

This model places the individual in a social context:

- the individual adopts a behavior related to health in accordance with what is accepted in the community to which he/she belongs;

- **the norm group** (expressed through the implicit / explicit pressure from the leader) influences individual behavior → the individual may reject a medical / therapeutic act or may adopt it uncritically.

**Utility**

- in conditions where the patient affiliation to a cohesive group (for ethnic, religious, sexual reasons) may significantly influence behavior;

- the conducting popualational health interventions (e.g., vaccination, quarantine, screening) (better results are obtained when the medical staff asks for the leader’s support).
Theory of Planned Behavior (TPB)

Behavioral intention is predicted by 3 factors:

- **attitude** = core beliefs about the outcomes of a behavior;
- **subjective norm** = those beliefs we have about how other people would like us to behave (normative beliefs);
- **perceived behavioral control** = how much control a person thinks (s)he has over a behavior.

Additional factors:

- **anticipated regret** = people’s perception of the likelihood of regretting undertaking a behavior in the future;
- **the role of habits** or past behavior on future behavior (well-learned behaviors may occur repeatedly in the same context).
**Key points:**

- expectancy-value judgments may play a critical role in the formation of a behavioral intention;
- social influence from significant others can be important for behavioral conformity;
- perception of control may be significant in forming an intention to act.

**Utility**

In predicting health-related behavior:

- drug use;
- physical activity;
- risky sexual behavior;
- adherence;
- acceptability of screening.
Self-Regulation Model of Illness Cognitions and Behavior (Leventhal)

Is a cognitive-affective model.

Components:

- **illness representations:**
  - *identity* (illness label and the symptoms that match the given label);
  - *timeline* (beliefs about how long the illness will last);
  - *control/cure* (beliefs about how far illness or symptoms can be controlled internally by the individual or externally by professionals);
  - *consequences* (reflects individual’s expectancies about the effects of the illness on their own psychological and physical functioning);
  - *cause* (refers to an attributional process characterized by beliefs about what may have caused the illness);

- **emotional reaction:** negative affect associated with symptoms;

- **coping resources:** the effectiveness of one’s psychological response in restoring the equilibrium.
Key points:
- how people identify and respond to the threat or onset of illness;
- how an individual uses coping strategies to address the problem and to appraise the response in terms of its effectiveness;
- the role of individual’s basic (core) values in the process of appraisal.

Utility
- predicting health-related behavior:
  - adherence to cardiac rehabilitation programs;
  - diabetes;
  - chronic fatigue syndrome;
  - rheumatoid arthritis.
Health Action Process Approach (HAPA)

The model comprises 2 phases:

- **motivational (pre-intentional):**
  The intention to act on the behavioral goal is predicted by:
  - self-efficacy;
  - outcome expectancies;
  - risk perception processes;

- **volitional:**
  People undertake a planning process and focus on those factors that are important for the initiation and control of action.
Transtheoretical Model of Behavior Change (TTM) (Prochaska & DiClemente)

Comprises 5 stages:

- **precontemplation**: no intention to change within the next 6 months;

- **contemplation**: a behavioral intention to make a change within the next 6 months;

- **preparation**: the individual has made action plans to make a change in the next 30 days;

- **action**: the change has occurred for less than 6 months;

- **maintenance**: the changed behavior has lasted for more than 6 months.

Sources: Grimley 1997 (75) and Prochaska 1992 (148)
Additional stages:
- **termination**: an individual has overcome all temptations;
- **relapse**: a person returns to a previous way of acting.

Some individuals may move backwards from one stage to a previous one =>

*the spiral model of the stages of change.*

Factors that influence the transition from one stage to the adjacent stage:
- decisional balance: weighing up of the pros and cons (benefits and barriers) in behavior change;
- self-efficacy: the balance between a confidence in one’s ability to moderate health protective behavior against the temptation to behave in an unhealthy manner.

**Utility**
Assessment of changes in health-related behavior:
- smoking, alcohol consumption;
- exercise;
- condom use;
- diet.