

## Editorial 'Αρθρο σύνταξης

# The "Biopsychosocial Model": 40 years of application in Psychiatry

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In 1977, the American pathologist and psychiatrist George Engel (1913-1999) published in the *Journal Science* his paper "The need for a new medical model: A challenge for biomedicine", introducing the term Biopsychosocial Model. This model based on the results of Engel's studies in ulcerative colitis, depression and psychogenic pain, constituted a challenge for biomedicine and the biomedical model.

The basic principles of the model included the biological, psychological and social dimensions of the person's life and the perception that the person suffers as a whole and not as isolated organs. The doctor should use a holistic approach regarding illness and should consider his/her relation with the patient socially equal. The personality and the emotional reserves of the patient, as well as the particular environmental conditions in which the person lives in should be taken into account. There is no doubt that the biopsychosocial model has established a more empathetic and compassionate approach in medical practice.

Already since 1936, the general adaptation syndrome had been proposed by the Austrian-Canadian endocrinologist Hans Selye (1907-1982), who emphasized that psychological stressful factors may have injurious consequences on health, while the response systems to stress may be dysregulated not only by genetic factors, but also from experiences and stressful life events, as well as by harmful behaviors such as smoking, alcohol consumption and lack of physical exercise.

Psychosocial factors may co-determine the patient's vulnerability and the illness's severity and course. The biopsychosocial model consider the interactions with genetic susceptibility, personality, stressful events and, generally, with the patient's social context. Environmental factors increase the probability of the clinical expression of a mental disorder, play a role in the time of onset of an illness's manifestation, and they can also protect a vulnerable person from the disease.

Stressful experiences modify immunological response and influence treatment compliance. Non adherence to pharmacotherapy, as well as to the psychosocial interventions, may cause defective recovery of psychosocial functioning, recurrence of the disorder, as well as insufficient use of health resources and a higher health care cost. The psychoeducation of patients and their relatives by the application of the biopsychosocial model plays an important role in psychiatric therapeutics, and it may also be used via Internet in the frame of telepsychiatry.

Results from neuroimaging studies have shown that the different kinds of human experiences, traumatic or therapeutic, have measurable influences on the brain function. Psychotherapy may modify the neuronal connections of the brain in the frame of its plasticity, as was found by the discovery of synaptogenesis in response to learning and can, thus, be considered not only as a strictly psychological but also as a biopsychosocial form of treatment.

Among the disadvantages of the biopsychosocial model have been reported the lack of a concise theoretical framework regarding its function and content, that it is complicated, difficulties in its coordination and assignment of responsibilities, as well as problems with the education on it being multifaceted. The biopsychosocial model has been criticized that it does not constitute a scientific or philosophical model, it does not provide an answer to the crucial question of how the biological, psychological and social variables interact in the disease's expression, that it does not provide guidance on the exact time of its application and, finally, that it allows for a wide range of interventions without providing specific guidelines of a concrete therapeutic scheme.

The person-centered diagnosis is based on the biopsychosocial model, connects science with humanism and uses all the possible ways so that the clinicians, the patients and their families collaborate for a more effective management of the disease. This approach has been established by the World Psychiatric Association (WPA, 2007) as the program "Psychiatry for the Person".

Psychiatry in everyday practice presents particularities versus other medical disciplines due to the complexity and polymorphism of the expression of mental disorders, their close relation to psychosocial factors, the lack of explicit pathognomonic elements and the stigmatization of mental illness. For these reasons, the biopsychosocial model is particularly applicable in psychiatric disorders, but it should not be overlooked also in somatic illnesses.

The biopsychosocial model, despite the criticism it was subjected to, continues to offer valuable clinical, educational and research services, as well as to provide an important contribution to the formation of health policies, not only for psychiatry, but for the whole of medicine as well.

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