

„CAROL DAVILA”
UNIVERSITY OF MEDICINE AND PHARMACY, BUCHAREST
DOCTORAL SCHOOL
DOMAIN: MEDICINE



Abstract of the Habilitation thesis

**AN INTEGRATIVE PERSPECTIVE ON MENTAL HEALTH DISORDERS: FROM
PSYCHOPATHOLOGY TO PERSONALIZED SOCIAL INTERVENTION**

Candidate

Mihnea-Costin Manea

Associate Professor

„Carol Davila” University of Medicine And Pharmacy, Bucharest

The habilitation thesis "An Integrative Perspective on Mental Health Disorders: From Psychopathology to Personalized Social Intervention" represents a synthesis of my post-doctoral professional, academic, and scientific activity, reflecting a holistic approach to mental health issues, starting from psychopathological aspects and reaching social implications. The doctoral thesis, "The Effects of Antipsychotic Medication on Behaviour in Experimental Schizophrenia" constitutes the starting point of this evolution.

My scientific and professional activity is characterized by a coherent approach, bringing together research addressing three main, interdependent directions: a complex perspective on schizophrenia, with an emphasis on predictive factors, innovative therapeutic approaches, and the essential role of imaging; the role of oxidative stress, inflammation, and new treatment strategies in affective disorders; and, last but not least, the importance of improving the quality of life as a fundamental therapeutic goal in the management of mental disorders, through a holistic approach that integrates medical and social aspects.

I have developed and published numerous papers and studies focused on early identification, the therapeutic approach to disorders of perception, thought, and behavior in major psychiatric disorders. I have also researched new diagnostic methods, specific biomarkers for major psychiatric disorders, as well as new treatment approaches.

In various presentations at scientific events related to the field of interest, I highlighted both traditional approaches and innovations regarding psychiatry.

The first direction of research focused on the implication of major perception disorders and schizophrenia on the quality of life, because these afflictions still have a significant annual incidence, affecting both patients and their families. Magnetic resonance imaging (MRI) is valuable for studying structural changes in the brain in patients with schizophrenia. Despite extensive research, including anatomopathological, imaging, electrophysiological, and genetic studies, the pathophysiological mechanisms remain unclear. My research using MRI studies revealed cerebral alterations such as enlarged Virchow-Robin spaces, white matter lesions with a demyelinated appearance, changes that have a significant clinical impact and serve as instruments for clearer understanding of this severe pathology.

Another cross-sectional, observational, prospective study in which I participated aimed to investigate the relationship between quality of life and the level of functioning in a group of Romanian patients with schizophrenia. Significant correlations were found between all aspects of quality of life (physical health, psychological health, social relationships, and environmental health). The research revealed that lower overall functionality in patients with

schizophrenia was associated with a reduced quality of life. Thus, I demonstrated that the development and implementation of new psychology and pharmacology related tools in clinical practice in order to improve these outcomes are extremely necessary.

Therapeutic intervention, especially biological treatment, is a priority for me. The modern approach of administering long-acting treatment with reduced frequency is the desired outcome. Thus, the developed study aimed to analyze the differences between patients with schizophrenia receiving oral antipsychotics and those receiving long-acting injectable antipsychotics in terms of relapse prevention.

Another topic of interest is the safety of controlled electroconvulsive therapy (ECT). I analyzed the socio-demographic and clinical profile, efficacy, and association of pharmacological treatment in patients who underwent electroconvulsive therapy in the last 10 years in the largest psychiatric hospital in Romania.

Our findings offer valuable guidance to clinicians for adequate ECT protocols administration. Recognizing and considering the nature of patients' pathology, following our analysis, clinicians can develop personalized ECT strategies that address the patient's unique needs and characteristics. This personalized approach has the potential to improve treatment outcomes and minimize adverse events, thus optimizing the therapeutic benefits of ECT for people with severe mental illness.

The second direction of research concerns the interaction between oxidative stress, inflammation, and new therapeutic strategies in the context of affective disorders. Thus, I published a study that aimed to identify and track markers that may appear in affective pathology, especially in the severe depressive episode of Bipolar Affective Disorder, the research providing a comprehensive perspective on the early identification of the pathology. The results were published in specialized journals and presented at international conferences of interest to the scientific community.

My research provides an overview of the theory of inflammation regarding the etiopathogenesis of depression and the basic mechanisms, that are often invoked in generating and amplifying depressive symptomatology.

The evolution of chronic pathology has been significantly influenced by the COVID-19 pandemic, so this aspect has also become of interest to my team. Thus, the results obtained from our research provide a picture of the immediate and long-term consequences of the COVID-19 pandemic and isolation measures on patients' access to mental health care in the form of hospitalization, and these findings form the basis for developing a different approach in possible times of crisis.

The third direction of research stemmed from the fundamental hypothesis that improving the quality of life is a central objective of every healthcare professional in managing mental disorders. To reinforce this hypothesis, I believe that a holistic approach, which correlates both medical and social perspectives, can facilitate effective treatment and complete recovery. Regarding my activity, I wanted to study and contribute to the improvement of the quality of life of patients facing mental disorders.

By combining my two specialties, as a psychiatrist and psychologist, I aim to better understand the specific needs of these patients and develop therapeutic strategies that offer them an increased quality of life. Throughout my academic and professional development, the directions of my research have been diverse, including both social aspects (the impact of Romania's delayed accession to the Schengen Area on mental health and quality of life) and the close link between chronic organic pathology and affective disorders. Concurrently, a topic of interest was also the correlation between vitamin D deficiency and mental illnesses, especially those in the psychotic spectrum, depression, as well as neurodevelopmental and neurocognitive disorders.

Moreover, I believe that regarding quality of life, a condition with a major impact is neurocognitive pathology, whose therapeutic approach requires competencies not only in the medical field but also regarding its social aspect. Thus, I turned my attention to the scientific literature to implement additional therapy means in clinical practice to complement the pharmacological approach. I found that patients with dementia who participate in music and art therapy showed improvements in their quality of life.

My future plans focus on continuing research activity, with the main objective being the publication of specialized manuals and scientific articles in international journals indexed in globally recognized databases. At the same time, I want to disseminate the research results also through participation in national and international scientific manifestations, where I aim to create a framework for interaction and exchange of experience for a wider audience of mental health professionals, from students to residents and attending physicians.