

Sofia University "St. Kliment Ohridski"
Medical Faculty
Department of "Neurology, Psychiatry, Physiotherapy and Rehabilitation,
Preventive Medicine and Public Health"
SU "St. Kliment Ohridski"

REVIEW

by Assoc. Prof. Velina Guergueltcheva, M.D., Ph.D.

Associate Professor at the Department of "Neurology, Psychiatry, Physiotherapy and Rehabilitation, Preventive Medicine and Public Health", SU "St. Kliment Ohridski"; Head of the Clinic of Neurology, UMHAT "Sofamed"

Chairman of the Scientific Jury regarding a dissertation for the award of an educational and scientific degree "Doctor" in professional direction 7.1 "Medicine", scientific specialty "Physical and Rehabilitation Medicine"

on

Dr. Desislava Metodieva Gerasimova

Dissertation topic:

"A clinical approach based on the biopsychosocial model in the treatment of chronic cervical spine pain"

Research supervisor Iskra Dimitrova Takeva, M.D., Ph.D.

Dr. Desislava Gerasimova was born in 1973. In 2001 she graduated "Medicine" in Craiova, Romania. She worked as a family doctor from the end of 2001 till the end of 2008 in her hometown of Vidin. She began specialization in 2009 at UMHAT "St. Anna" and in 2013 acquired a clinical specialty in "Physical and Rehabilitation Medicine". She has additional qualifications in "Laser Therapy", "Postisometric Relaxation", "Peripheral Joint Mobilization", "Manual Therapy", "Biofeedback Stress Management".

She is interested in the development of an individual and complex approach to the treatment of patients, which includes an analysis of the lifestyle, the causes that lead to the disease and the changes that occur not only on a structural, but also on a psycho-emotional level.

For the period from 2015 to 2018, she conducted postgraduate training at the Bulgarian Society for Logotherapy and Existential Analysis and acquired a consultant certificate in this field. She uses the acquired knowledge in her practice as a doctor of physical medicine.

She has a professional experience as a doctor - FRM specialist with outpatient and

inpatients from 2009 to the present (in St. Anna UMHAT - Sofia).

She's been teaching students from the "rehabilitation" specialty at the "Yordanka Filaretova" Medical College since 2015 and students of Medicine (Bulgarian-language training) since 2022, as an assistant at the Department of FRM at Sofia University.

She speaks English, Romanian, French and Russian languages.

Relevance of the topic:

In connection with the modern sedentary lifestyle, pain in the cervical region of the spine is of increasing frequency, significantly limiting the activities of daily life of patients. It often becomes chronic and causes anxiety and depression.

According to the biopsychosocial model, somatic, psychological, and environmental factors interact to determine the intensity of pain. Depression, anxiety and emotional factors are present as the most common participants in the experience of pain. Mental disorders lead not only to increased pain intensity, but also cause a high risk of relapse.

Last but not least, an important condition for choosing a successful therapeutic program is the recognition, assessment and prevention of endogenous and exogenous risk factors that lead to chronic neck pain and deterioration of the quality of life of these patients.

In connection with modern trends, in line with the new concepts of pain and the biopsychosocial model, there is a need to update the programs applied in physical therapy (PT) practice for the treatment of patients with chronic pain in the cervical region of the spine.

Structure of the dissertation:

The dissertation contains 200 pages, of which 45 pages are an overview, methodology of the scientific study with results - 115 pages, discussion - 11 pages, publications related to the dissertation - three, a bibliographic reference of 175 titles, of which 29 are in Cyrillic and 146 in Latin. A list of used abbreviations and an introduction that reveals the possibilities of the specialty of physical and rehabilitation medicine (PRM) for a complex and interdisciplinary approach to the treatment of diseases, such as the biopsychosocial approach to the treatment of chronic pain.

The study is illustrated in 7 figures, 4 histograms, 51 diagrams and 47 tables.

It was conducted in the clinic of physical and rehabilitation medicine of UMHAT "St. Anna" - Sofia.

Characterization of the content

There is a logical and meaningful connection between the individual parts of the dissertation.

The literature review includes definition, classification, physiology and psychology of pain. Data on the anatomic-functional features of the cervical spine, the etiology of neck pain, diagnosis, differential diagnosis, clinical picture and the therapeutic approach, which includes cognitive-behavioral and other approaches, are presented. A summary of the literature review has been made, which reveals the need to accumulate evidence for the benefits of complex therapeutic programs, consistent with the biopsychosocial model for the assessment and impact of chronic neck pain, as they are the basis for increasing the effectiveness of applied therapies in these patients. The literature review is presented comprehensively enough for the purposes of the dissertation work

The purpose of the study is clearly formulated - to track and compare the therapeutic effect of a physiotherapy program, combined with methods to influence the psycho-emotional state, compared to a conventional physiotherapy program in persons with chronic neck pain. I think that the topic of the project is current and socially significant. 7 tasks for its implementation are indicated, as well as 6 working hypotheses related to the tasks.

For the purposes of the study, 70 persons aged from 22 to 87 years, treated in the Clinic of Physical and Rehabilitation Medicine (PFRM) at UMBAL "St. Anna" - Sofia for the period from January 2020 to January 2023. The patients were allocated in equal proportion to two experimental groups of 35 people each on a random basis.

Inclusion and exclusion criteria were defined. Methods for objectifying the results have been selected, which are presented as applications, and the research methodology is outlined. The research methodology is described in detail. Dr. Gerasimova followed in the short- and long-term the therapeutic effect of the application of a physiotherapy (PT) program (reformed physical factors and kinesitherapy) combined with methods of psycho-emotional impact in comparison with a control group of patients, in which only the PT program was applied.

Substantial results were achieved, which were interpreted in detail after detailed statistical processing, displayed graphically and various connections and dependencies between the various factors were sought, which is proof of the analytical nature of the dissertation work. An analysis of the risk factors, of the studied variables, a descriptive analysis of the monitored indicators and a graphical comparison of the change in the subjective indicators pain, index of disability in the cervical region, the psycho-emotional state was made. A comprehensive assessment of the clinical complaints and symptoms of patients with chronic pain in the cervical region was made, and the presence of Headache (HA), Vertigo (VRT), Formication of upper limbs (Form) was followed.

The discussion is built on the basis of the formulated 6 hypotheses. In large studies in other countries of people with chronic back pain, a change in mood was found in about 50% of them. These data, as well as the results of Dr. Gerasimova's study, support the need to consider both psychological and pain symptoms when evaluating and developing a treatment plan for patients with chronic neck pain. In Bulgaria, recommendations to physical medicine specialists for evaluation and influence of psycho-emotional changes in the treatment of such patients are still not commonly applicable and imposed. The conclusion includes recommendations for building a complex approach in the treatment of this pathology,

including the combined application of physiotherapy methods and strategies to influence the psycho-emotional state of these patients.

Seven conclusions were drawn and 2 original scientific, 4 confirmatory and 3 scientific-applied contributions were formulated. For the first time in Bulgaria, an extended comprehensive assessment of accompanying psycho-emotional changes in patients with chronic neck pain, based on the biopsychosocial model, is offered. For the first time, a clinical comparative observation of the therapeutic effect was conducted after the application of a conventional physiotherapy program, compared to a physiotherapy program combined with psycho-emotional methods of influencing patients with chronic neck pain. The doctoral student has fulfilled his intention to create an algorithm based on the obtained results for the construction of a combined rehabilitation program based on the biopsychosocial model and the new concepts of pain. An algorithm for complex assessment of patients with chronic neck pain is proposed. A patient information brochure has been proposed in order to increase his awareness of the nature of the disease, the prognosis and the possible ways to influence the complaints of patients with chronic neck pain.

The abstract for the dissertation reflects the content of the development in a true and systematic manner.

Conclusion:

The dissertation of Dr. Desislava Metodieva Gerasimova deals with a current medical topic and meets all the requirements fulfilling the qualitative and quantitative criteria of the RSARB, the Regulations for its application and the specific requirements of Sofia University "St. Kliment Ohridski".

Dr. Gerasimova has presented the required number and thematic focus of publications in which she is the first author and one report at a congress.

The dissertation shows that the candidate has in-depth theoretical knowledge in the field of Physical and Rehabilitation Medicine and the ability to conduct independent research. The dissertation contains scientific and applied scientific results that represent an original contribution to science.

With her study, Dr. Gerasimova contributes to optimizing the physiotherapy treatment of patients with chronic pain in the cervical region of the spine in Bulgaria.

On the basis of the presented dissertation work, I recommend to the Scientific Jury awarding Dr. Desislava Metodieva Gerasimova the educational and scientific degree "Doctor" in professional field 7.1 "Medicine", scientific specialty "Physical and Rehabilitation Medicine".

Assoc. Prof. Velina Guergueltcheva, M.D., Ph.D.

Date: 27. 01. 2024