



UNIVERSITY MULTIPURPOSE HOSPITAL FOR ACTIVE TREATMENT AND EMERGENCY MEDICINE
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To
The chairman
of the scientific jury,
appointed by order of the Rector
of MU-Varna No. R-109-124 dated 28.03.2024

OPINION

by

Prof. Dr. Krasimira Milcheva Kazalakova, MD,

Head of Department of "Physical and Rehabilitation Medicine"

UMHATEM "N. I. Pirogov" – Sofia, external member of the scientific jury

of the dissertation work for the acquisition of an educational scientific degree

"Doctor"

in the field of higher education 7. Healthcare and sports,

professional direction 7.1. Medicine,

scientific specialty "Physiotherapy, resourt therapy and rehabilitation"

Dr. Dafina Velinova Bacheva-Chausheva,

Department of "Physiotherapy, Rehabilitation and Thalassotherapy"

Faculty of Public Health

Medical University "Prof. Dr. Paraskev Stoyanov" - Varna

Dissertation topic:

"Rehabilitation of patients with lung diseases in conditions of a pandemic caused by the SARS-Cov-2 coronavirus"

Dear members of the scientific jury,

By order of the Rector of MU-Varna No. R-109-124 dated 28.03.2024 and as a member of the SJ, I am determined to participate with an opinion on the defense of the dissertation of Dr. Dafina Bacheva-Chausheva.

1. Significance of the problem and formulation of the goal and tasks:

The relevance and importance of the problem are related to the risk for patients who have recovered from COVID-19 of developing various complications of the disease: impairment of lung function, neurological damage, reduced physical capacity, muscle weakness, and psychological and cognitive impairment. The presented research is the result of interdisciplinary work of specialists from various clinics. Despite the considerable number of studies on the benefits of respiratory rehabilitation, an update of the current guidelines related to the rehabilitation of patients with Covid-19 pneumonia is needed.

The objective is clearly formulated and concerns the evaluation of the effectiveness of respiratory rehabilitation in patients with COVID-19 pneumonia and respiratory failure in terms of clinical course, impact on quality of life and psycho-emotional status.

The tasks that the dissertation student sets are 6 in number. They are correctly worded and meet the purpose of the study.

2. Structure of the dissertation:

The dissertation has a classic structure. It is written in 189 pages and contains the following sections: literature review, aim and objectives, material and methods, results and discussion, conclusions, contributions, rehabilitation algorithm, and bibliography. The dissertation contains 32 tables and is illustrated with 23 figures.

The proportions between the individual sections are respected. I would like to point out that each of the parts of the dissertation follows the logic of the set tasks and purpose, and the conclusions naturally arise from the own results, the statistical processing of the data and the discussions.

3. Literary awareness of the dissertation student:

The literature review of the dissertation is set out in 63 pages, where the author thoroughly presents data from studies, according to which respiratory rehabilitation is an effective and safe method for improving lung function and quality of life in patients with symptoms due to mild to critical course of COVID-19. The problem of the lack of sufficient research on the effects of rehabilitation is also presented regarding clinical symptoms, paraclinic, quality of life and psychological status of patients with COVID-19.

The conclusions of the literature review are specific and directly related to the purpose and tasks of the scientific development.

4. Methodological level and research design:

The scientific study includes 124 patients with X-ray and computed tomography confirmed bilateral pneumonia and respiratory failure caused by Sars-Cov-2 virus. The study included hospitalized patients who underwent a physical examination and laboratory tests. The patients in the study group underwent a physical capacity test, were determined their degree of shortness of breath, and filled out questionnaires regarding the quality of life and psycho-emotional state. The results were processed using statistical methods.

The research methods and clinical material chosen by the dissertation student have allowed the achievement of the set goal, and the tasks set to be solved have received an adequate response.

5. Consistency among the objective, the results and the conclusions:

There is a logical correspondence among the objective, the results obtained, the discussion and the conclusions drawn. The own results and discussion are set out in 31 pages and are richly illustrated. They follow the progress of the set tasks and are presented in detail. The presented data show the in-depth and detailed analysis that the dissertation makes when examining patients, which gives grounds for the credibility of the conclusions drawn.

6. Analysis of conclusions and contributions:

The dissertation ends with 7 conclusions and 5 contributions. I accept the contributions according to the author's self-assessment, wanting to emphasize that the dissertation is the first study on the effectiveness of respiratory rehabilitation for patients with COVID-19 in the acute phase of the disease in a hospital setting. For the first time in Bulgaria, a structured rehabilitation program is implemented for patients with moderate and severe course of pneumonia caused by COVID-19, and an exemplary algorithm has been created for the rehabilitation of patients in the acute and subacute phases of COVID-19.

7. Nature of critical remarks and recommendations:

I have no critical remarks to question the methods, the evidence, the discussion of the results obtained, and the conclusions drawn.

8. Publications and scientific events:

The dissertation's publications on the subject have found a place in 2 scientific journals: Journal of Varna Medical College (2023) and International Journal (2021)

Personal impressions of the candidate:

Dr. Dafina Bacheva-Chausheva is an established specialist in Physical and Rehabilitation Medicine. She is one of the colleagues who is constantly developing and showing interest not only in daily work, but also in the novelties in our field.

9. Conclusion:

The dissertation "*Rehabilitation in patients with lung diseases in conditions of a pandemic caused by the SARS-Cov-2 coronavirus*" meets the needs of Bulgarian science and healthcare and is aimed at improving medical practice. It shows that the dissertation student has had the necessary theoretical and professional skills to conduct qualitative research. Bearing in mind what has been stated so far, I consider that the study meets the requirements of the Law on the development of the academic staff in the Republic of Bulgaria and the Regulations for the conditions and procedure for acquiring scientific degrees and occupying academic positions at the Medical University - Varna.

I give a positive rating and I propose to the Honorable members of the Scientific Jury to vote positively for the awarding of the educational and scientific degree "Doctor" to Dr. Dafina Velinova Bacheva-Chausheva in the scientific specialty "Physiotherapy, Spa Medicine and Rehabilitation".

22.04.2024

Sofia

Assoc. Prof. Dr. Krasimira Milcheva Kazalakova, MD

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