

## OPINION

**By Assoc. Prof. Hristina Ivanova Milanova ,MD, PhD**

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Basis for drawing up the opinion: By order of the Rector of MU-Varna № P-109-234/11.04.2023 г., I am determined to participate with an opinion on the defense of Dr. Grozdeva.

**REGARDING:** dissertation work for acquisition of the educational and scientific degree “Doctor of Philosophy” (PhD) in scientific area 7 Healthcare and sports, professional direction 7.1. Medicine, in specialty “Physiotherapy, resort science and rehabilitation”, prepared by Dr. Denitsa Grozdeva – a PhD student at the Department of Physiotherapy, Rehabilitation and Thalassotherapy, Faculty of Public Health, Medical University “Prof. Dr. Paraskev Stoyanov” – Varna

Dissertation topic: **“Quality of life and rehabilitation in patients with total hip replacement”**

**Scientific Supervisor:** Assoc. prof. Dr. Evgenia Petrova Dimova, MD, PhD

**Scientific Consultant:** Prof. Gergana Boncheva Nenova, PhD, DSc

### **General presentation of the procedure and the PhD candidate**

The opinion was prepared in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation, the Regulations for the Development of the Academic Staff at the University of Varna.

The presented materials on paper/electronic media are in accordance with the procedure for acquiring the scientific and educational degree "doctor" and the regulations of the MU - Varna.

Dr. Denitsa Nedelcheva Grozdeva was born in the 1976, in the city of Varna. In 2001, she finished her studies at the Varna Medical University with a Master's degree in medicine. In 2009, she received a diploma for the specialty of "Physical medicine and

rehabilitation". From 2009 to 2017, she worked as a doctor in Physical medicine and rehabilitation specialist at Tuzlata Rehabilitation hospital. In 2010, Dr. Denitsa Nedelcheva Grozdeva was appointed as an assistant at the Department of Conservative Dental treatment and oral pathology. Since 2014 she works at the University dental clinic of the Varna Medical University as dental physical therapy specialist. Since 2017 she works at the University center for eastern medicine as an acupuncturist. Dr. D Grozdeva has finished a number of qualification courses and post-graduate studies: Laser therapy, Electrodiagnostics and Electrostimulation, Manual medicine, Acupuncture, Dental physical therapy, Traditional Chinese medicine, Ayurveda, Cupping therapy, Mediation.

#### **Significance and relevance of the research topic**

Dr. Grozdeva's dissertation presents a current topic in the field of physical and rehabilitation medicine, related to evaluating the effectiveness of individualized rehabilitation measures and the holistic approach by quality of life monitoring. Timely and complex medical rehabilitation with a patient-oriented approach is an important and necessary factor for achieving an optimal level of functional recovery and social reintegration in total hip replacement patients. The increased requirements for faster and complete recovery and resocialization of patients make the issues of developing a model for rehabilitation approach and behavior, and on the other hand, a toolkit for analyzing the outcome of hip arthroplasty patients, particularly relevant.

#### **Characteristic and evaluation of dissertation work**

The dissertation submitted for opinion contains 126 standard pages and is structured according to the generally accepted model: introduction, literature review (41 pages), research methodology (13 pages), results (22 pages) and discussion (14 pages), summary (5 pages), conclusions and contributions (3 pages), bibliography (15 pages), appendices (7 pages). The list of used literature includes 134 titles, of which 53 are in Cyrillic and 81 are in Latin. The reference is up-to-date and comprehensive, with over 71% of the sources being from the last 10 years.

**In the introduction**, the relevance of the topic is well outlined and the reasons for the choice are demonstrated. **The literature review** is well structured and contains enough informational material. It is written competently, at a high scientific level. The author presents the modern views on a holistic approach to hip arthroplasty and the complete recovery after it, the main clinical tasks and the patient-oriented rehabilitation approach and the possibilities of its application in the recovery period, the international and national experience in the rehabilitation of hip arthroplasty patients. The concept of quality of life and the tools for its evaluation are examined. The analysis of literary data leads to a precise formulation of the **aim** of the dissertation work and the **objects** for its achievement.

In the **Material and methods** section of the study, the studied clinical contingent is represented by 72 patients with precisely defined inclusion and exclusion criteria. The used methods of treatment and objectification of the results are presented. The selected sociological methodology through a WHOQOL BREF quality of life questionnaire has been tested and enables the achievement of the set goal. The material and methods are described in detail and informatively. The statistical methods used are adequate and allow an appropriate visualization of the results and the drawing of the main conclusions from the conducted study.

**The results** obtained in the implementation of the set tasks are convincing, well illustrated with 24 tables. In the dissertation work, the dynamics in the general assessment of the

quality of life were traced, and a comparison was made by areas with a view to assessing the impact of the holistic approach on health in the studied contingent.

**In the discussion**, a logical and thorough analysis of the results of the clinical trial is made in the light of the data from the world literature. Dr. Grozdeva emphasizes that the statistically significant differences in the quality of life prove that the complex, individual rehabilitation program leads not only to the improvement of the function of the endoprosthetic joint, but also to the overall impact and shortening of the rehabilitation period of patients after conventional hip arthroplasty. The PhD candidate offers a model of the organization of the rehabilitation process, aimed at optimizing rehabilitation resources and satisfying the personal needs of patients and changing the quality of life, and the expected results of its application are associated with the confirmation of early hospital rehabilitation and the imposition of the patient-centered approach at preparation of the rehabilitation program.

The **conclusions drawn and the contributions presented** logically follow the results achieved and the discussion made and bring the scientific and practical benefit of the presented dissertation work.

**The abstract** meets the scientific requirements for this form and is written on 70 pages. It reflects the main points of the study and the results obtained.

Related to the dissertation work, 1 scientific publication, as well as 1 scientific announcement, are presented, and they are directly related to the topic of the dissertation work. In both, the doctoral student is the first author.

**In conclusion**, the dissertation submitted to me for opinion by Dr. Denitsa Grozdeva "Rehabilitation and quality of life in patients with hip arthroplasty" is a study on a current topic with a good theoretical basis. The obtained results fulfill the set specific tasks, therefore I assume that the aim of the dissertation work has been achieved. The work contains theoretical-applied and practical-applied contributions and I believe that it meets all the normative requirements for awarding the educational and scientific degree "Doctor".

Based on the above, I give a positive assessment and propose to the respected members of the Scientific Jury to vote positively for the awarding of the educational and scientific degree PhD to Dr. Denitsa Nedelcheva Grozdeva in the scientific specialty "Physiotherapy, resort science and rehabilitation", code 03.01.58.

18.05.2023  
Sofia



Assoc prof. H. Milanova, MD, PhD