

OPINION

by Assoc. Prof. Vanya Atanasova Boycheva (Birdanova), MD, PhD

Department of Hygiene, Medical Ecology, Occupational Diseases, and Disaster Medicine
Faculty of Public Health, Medical University – Pleven

Subject: Public defense of the doctoral dissertation of Dr. Tatyana Boykova Mateva, PhD student at the Department of Hygiene and Epidemiology, Faculty of Public Health, Medical University – Varna

General Presentation of the Procedure

By Order No. R-109-169/25.03.2025 of the Rector of the Medical University – Varna, I have been appointed as an external member of the Scientific Jury for the defense of the doctoral dissertation entitled *"Assessment of Psycho-emotional Stress Levels in Executive Staff and Opportunities for Stress Management through an Active Physical Program"* submitted by Dr. Tatyana Boykova Mateva in fulfillment of the requirements for acquiring the educational and scientific degree "Doctor" in the field of Higher Education 7. "Healthcare and Sports", professional field 7.1 "Medicine", doctoral program "Hygiene" (incl. occupational, environmental, school, radiation, etc.). The dissertation supervisor is Prof. Dr. Teodora Dimitrova Dimitrova, MD, PhD.

The PhD candidate has submitted all necessary documentation, as required by the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations for Academic Staff Development of the Medical University—Varna.

Professional Background of the Candidate

Dr. Tatyana Boykova Mateva was born in Varna. She graduated from the Fourth Language High School "Frédéric Joliot-Curie" in 1986 and received her MD degree from the Medical University – Varna in 1992. Her professional career began as a physician in the Department of Obstetrics and Gynecology at St. Anna University Hospital. Between 1994 and 1999, she was head of the Health Service for Emergency Medical Care in the village of Kitka, Varna Region. Since 2000, she has served as Medical Development Manager at Boiron Bulgaria, and since 2006, she has also worked as a physician at the Occupational Medicine Service of MC Mladost – Varna.

Dr. Mateva holds two medical specialties: Occupational Medicine (2016) and Nutrition and Dietetics (2020).

She is a member of the Bulgarian Academic Society of Occupational Medicine, the Bulgarian Society of Nutrition and Dietetics, and the Bulgarian Medical Homeopathic Organization. She is also a member of the Management Board of the National Association for Practical Dietetics and Integrative Medicine. She speaks French and Russian.

Relevance of the Topic

The topic of the dissertation, addressing stress among executive staff and the role of physical activity in its management and control, is highly relevant in contemporary society. In hierarchically structured and high-demand work environments, managers face specific stressors such as unclear responsibilities and high expectations with insufficient support. These factors make them particularly vulnerable to chronic stress and its consequences—burnout, psychosomatic complaints, and reduced work performance.

Against this background, physical activity emerges as a scientifically validated and socially significant mechanism for reducing stress and improving psycho-emotional health. Exploring this relationship has important practical applications in shaping policies for healthy workplaces and organizational well-being, which underlines the high scientific, social, and economic relevance of the present dissertation.

Structure of the Dissertation

This dissertation is the first of its kind in Bulgaria to develop and implement a methodology for indirect, combined (self-assessment, instrumental, laboratory, and letter-correction) evaluation of workplace stress levels. The scientific work of Dr. Mateva is structured by the accepted standards for the award of the doctoral degree in the respective academic field and complies with national academic requirements. The dissertation is presented in 128 standard pages and is illustrated with 34 tables, 27 figures, and 8 appendices. The bibliography includes 172 sources, of which 170 are in English and 2 in Bulgarian. All cited references are relevant to the researched problem. The presentation is clear, the structure of the dissertation is logically built, and the chapters are well balanced.

The literature review comprehensively covers all key aspects of the topic and logically substantiates the necessity of the conducted scientific investigation. The PhD candidate demonstrates a deep understanding and creative approach in presenting modern concepts concerning the physiological and pathophysiological mechanisms of stress, as well as its social significance. Special attention is given to occupational stress. Two dedicated chapters analyze the health benefits of physical activity and its potential as a means for stress management. The review reflects the candidate's high level of awareness of the current scientific discourse in the field under study. The dissertation's aim is clearly defined: to

determine the relationship between psycho-emotional stress levels and physical activity, implemented through an active physical program among executive personnel. The six objectives are properly formulated and fully correspond to the aim of the research. A monocentric prospective study was conducted in three phases, forming a single research cycle. Over the period 2021–2023, a total of 153 individuals occupying executive positions in Varna and the Varna region were examined. The methodology, developed by the research team, integrates a complex of approaches: documentary, sociological (Four-Dimensional Symptom Questionnaire – 4DSQ for stress levels), quantitative, and occupational physiology methods, including laboratory analyses, imaging diagnostics, statistical, and graphical analysis. All employed methods are described in detail, and their relevance to the study goals is scientifically substantiated. The results are competently discussed based on a substantial body of cited literature. Five main conclusions and five recommendations have been formulated, all of which I fully support. The conclusions and recommendations are consistent with the objectives and highlight the main contributions of the dissertation.

Contributions of the Dissertation

The contributions of the dissertation are articulated and grounded in the study's findings. Dr. Mateva presents six scientific contributions, all of which I accept and support. Two of these are of particular scientific and methodological significance: the precise definition of the concepts "executive staff" and "active physical program" in the context of occupational stress research. A major methodological and applied contribution is the development of a novel, complex methodology for indirect assessment of stress, combining self-evaluation, instrumental, laboratory, and letter-correction methods. This innovative approach has the potential to serve as a foundation for future scientific studies. Another notable contribution is the use of the 5PB device by © GETA Centrum s.r.o. for assessing reaction time, introduced as an indirect indicator of stress levels.

Publications Related to the Dissertation

In connection with the dissertation, Dr. Mateva has authored four scientific publications and participated in five national conferences and symposia. All presented works are thematically related to the dissertation topic.

Abstract of the Dissertation

The abstract fully meets the formal requirements and accurately summarizes the research conducted by the doctoral candidate.

Conclusion

The dissertation presented by Dr. Tatyana Boykova Mateva contains scientific and applied contributions of significance to the field and fully meets the criteria for the award of the educational and scientific degree “Doctor.”

Based on the above, I vote in favor and recommend that the esteemed members of the Scientific Jury also vote positively for the award of the degree “Doctor” to Dr. Tatyana Boykova Mateva in the doctoral program “Hygiene” (including occupational, environmental, school, radiation, etc.).

Date: 12.05.2025

Respectfu

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679
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Assoc. Prof. Vanya Boycheva (Birdanova), MD, PhD