

STATEMENT

By Assoc.prof. Dr. Miglena Assenova Kolarova - Dimitrova, MD, PhD

Department of Hygiene and Epidemiology

Faculty of Public Health, Medical University - Varna

Subject.

To Dr. **Zlatina Yordanova Pandelieva**, PhD student in full-time studies at the Department of Hygiene and Epidemiology, Faculty of Public Health at MU-Varna

Doctoral thesis titled: 'Management of occupational health and safety conditions in the Hospital "Prof. Dr. D. Stamatov" Varna'

Scientific supervisor: prof. Dr. Teodora Dimitrova, Ph.D., prof. Dr. C. Paunov, Ph.D.

By Order No. P-109-191/ 16.04.2025 of the Rector of Medical University - Varna I was elected as a member of the Scientific Jury, and on the basis of Protocol No. 1/ 29.04.2025 I was appointed to prepare an opinion on the procedure for obtaining the PhD degree with candidate Dr. Zlatina Pandelieva, PhD student in full-time form of study at the Department of Hygiene and Epidemiology, Faculty of Public Health at Medical University - Varna.

Data about the procedure

Dr. **Zlatina Yordanova Pandelieva** is enrolled as a full-time doctoral student in the doctoral programme "Hygiene (including occupational, communal, school, radiation, etc.)" in the field of higher education 7. "Health and Sport", professional field 7.1. "Medicine", with the topic of the dissertation **"Management of Healthy and Safe Working Conditions at the Hospital "Prof. Dr. D. Stamatov" Varna"** - Prof. Dr. Teodora Dimitrova, Ph.D. and Prof. Dr. Tsonko Paunov, Ph. , according to the Order № № P 109 - 49 / 31.01.2020. of the Vice Rector of MU "Prof. Dr. Paraskev Stoyanov" - Varna prof. dr. Albena Kerekovska, Ph. She has successfully passed the examination for doctoral minimum.

Dr. Zlatina Pandelieva was discharged with the right to defense by Order № P109-191/ 16.04.2025 of the Rector of Medical University - Varna.

All the administrative documents on the procedure provided for in the Law on the Development of Academic Staff in the Republic of Bulgaria (LADRB), the Regulations for its Application and the Regulations for the Development of Academic Staff of MU-Varna have been submitted.

Brief biographical data

Dr. Pandelieva was born she was born in the city of Yambol. In 2003, she obtained a master's degree in medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" in Varna.

After that she started working in general medicine practice. In 2004 - 2005 he worked in the Medical Center of Varna. In 2008 she worked in the Department of Neonatology of the Shumen Hospital. Since 2010 she has been working in the Department of Neonatology of St. Anna-Varna Hospital. In 2010 he acquired a specialty in pediatric diseases, and in 2017 - in neonatology. Since 2017 she started working in the Department of Neonatology of the Hospital "Prof. D. Stamatov", Sofia. From the beginning of 2023 he is the head of the same department. Since 2016 she has a master's degree in health management and social medicine. Since 2024 he is a visiting assistant professor at the Department of Obstetrics and Gynaecology at the Medical University "Prof. Dr. Paraskev Stoyanov", Sofia. Since 2025 she has been appointed as Assistant Professor at the same Department.

Dr. Pandelijeveva has participated in numerous scientific Bulgarian and international forums, as well as numerous courses for additional qualification. Her clinical and scientific interests are in the field of neonatology - primary and prolonged respiratory resuscitation, neurological diseases in the neonatal period, follow-up of preterm infants.

She is fluent in English and German.

General characteristics of the thesis

The dissertation, developed by Dr. Zlatina Pandelieva, consists of 153 pages and is illustrated with 53 figures, 13 tables and 3 annexes.

The annexes contain 3 questionnaires

- Questionnaire for the assessment of working conditions and lifestyle
- Questionnaire on safety at work
- Work Ability Index (WAI)

The bibliographic list includes 207 references, 7 in Cyrillic and 200 in Latin.

The structure is followed, which is made up of the following elements: Literature review (14 pages), Aim, Objectives, Methodology and organization of the study (2 pages), Results and discussion (47 pages), Conclusions (3 page), Conclusion (3 pages).

Relevance of the topic

Workers in the healthcare sector are exposed to a variety of occupational health and wellbeing risks associated with complex working conditions in the work environment. These include biological agents, such as various infectious agents, due to the risk of skin exposure or the risks of puncture, cut, development and HAI chemical agents represented by various chemicals - surface disinfectants, medical consumables, aerosol drugs, anaesthetic gases etc., antineoplastic agents used for the chemotherapy of malignancies and cytotoxic drugs used in the treatment of cancer and non-cancer patients present in healthcare facilities. Psychosocial risks associated with high levels of stress and occupational burnout due to the intensity of work and the high demands and responsibilities of the workplace. These include long working hours, shift work, hazardous working environments, daily exposure to human suffering and death, there is a risk of slips, trips and falls, and there is the possibility of contact with aggressive patients or

visitors. Fatigue, injury and stress to healthcare workers are associated with a higher risk of errors in patient care.

Hospital work can be surprisingly dangerous. Any exposure to a risk agent requiring removal from the workplace generates serious costs for the Medical facilities.

A sustained commitment to ensuring optimal safety and health conditions for all healthcare workers will provide maximum protection for healthcare workers and patients, ensuring the delivery of quality medical care. Despite the actions taken, there is a need to continuously update strategies to protect and adapt to new risks emerging in this dynamic sector.

Heavy work schedules with prolonged workloads and long shifts in obstetrics and gynaecology practice rapid patient turnover, heavy workloads and emergency calls outside the workplace, which creates an environment conducive to occupational stress and burnout and maladaptation. Busy schedules leave little time for personal activities, family and rest, which is a significant stress for many physicians Shift work poses serious health challenges and carries occupational safety risks. Those working long hours have been found to have a decline in reasoning and association tests, with a risk of medical errors.

The literature review is focused, thorough and well-structured. Abilities to critically evaluate, summarize, systematize, and interpret the scientific literature are demonstrated.

The purpose of the dissertation is clearly and accurately defined. The 6 tasks are well formulated and meet the stated aim.

Methodology The methods used for the research are highly appreciated because a complete set is used to explore the multifaceted nature of the problem and are consistent with the stated aim and objectives.:

documentary - a thorough analysis of available sources in Bulgarian, Russian, English and French was carried out, including publications, articles, books and textbooks related to the topic under consideration;

Sociological methods

Qualitative sociological methods

Observation and description of the organization of work, the presence of so-called "simple forms of work" (assignment of tasks that do not correspond to the professional capabilities of the worker - risk of burn-in), extensive forms of work (unnecessary repetition of the same and repetitive activities by different persons with loss of working time), lack of control over the activity and overwork (risk of burn-out)

Quantitative sociological methods

Questionnaire developed for the study to involve workers in the risk assessment process", including the following main areas:

- Subjective assessment of risks arising from the work process

- Risks associated with the working environment - biological agents and surgical smoke
- Lifestyle

Apparatus testing of indoor air quality indicators - particulate matter up to a diameter of 10, particulate matter up to a diameter of 2.5 and carbon dioxide with a portable sensor model BQ30 from Trotec GmbH

Statistical methods

The data were analysed with the statistical package IBM SPSS v.25

The following statistical methods were used in the data analysis:

✓ Statistical data grouping method - the attributes are arranged according to their type in variational, interval, categorical, stepwise and time series statistics.

✓ Descriptive methods

✓ Statistical estimation method

In hypothesis testing, the significance level of the null hypothesis is defined according to established practice as $\alpha = 0.05$.

** Analysis of variance*

** Non-parametric analysis*

Graphical methods

In order to illustrate and make statistical information accessible, some of the results of the study are presented through tables and figures.

The results and their discussion.

The presentation of the survey results follows the set objectives.

The 25 **conclusions** drawn are correctly formulated. They meet the stated aim and objectives and follow logically from the results and statistical analysis.

The conclusion is linked to and recommendations for health promotion and prevention of negative effects related to workplace hazards among the workers in the SBACS. Based on the findings, Dr. Pandelieva suggests that the data from this study should be used by all stakeholders, including employees, employers, health managers at various levels, physicians with specialty in obstetrics and gynecology, and midwives, both in inpatient and outpatient practice for preventive health promotion in the workplace. The data from this study should be used by occupational health services in the development of a Bulgarian methodology for the identification, assessment and management of occupational health risks.

Contributions of an original nature are well argued:

1. Workplace risk assessment in a specialized hospital for active obstetric-gynecological treatment in Bulgarian practice.
2. For the first time in Bulgaria, a complex methodology for subjective assessment of mental health in the healthcare workplace is created and applied.
3. Air quality monitoring in an operating theatre during electrosurgery is approbated at national level.
4. An original questionnaire has been created to involve workers in the risk assessment process for specific workplaces in the SHSCAS
5. A systematic analysis of subjective and objective assessment of work environment parameters in an obstetrics and gynecology operating room was applied..
6. For the first time, a four-dimensional survey design is being applied globally to examine levels of neuropsychological strain in healthcare settings using the Work Capacity Index, Perceived Stress Questionnaire, SelfAssessment of Work Environment and Lifestyle Questionnaire.

The dissertation is written in good language, precise in terminology. Technically, the dissertation is formatted as required,

The abstract faithfully reproduces the content of the dissertation. It is prepared in 67 standard pages and accurately presents the structure and content, contributions, participations and publications of the dissertation.

In connection with the dissertation, the doctoral candidate has submitted 3 publications

- Dimitrova T., Pandelieva Zl., Health risk management of operating room workers when using electrical instruments, (2025) Journal of the Union of Scientists - Varna. Medicine and Ecology Series. Online First
- Pandelieva Zl., Infant feeding, Medical Magazine, (2022), 2, 24-26
- Pandelieva Zl., Krasimirova M., Radoslavova E., Clinical case of a newborn with staphylococcal skin infection - SSS syndrome, Reproductive Health.

Three participations in scientific forums are mentioned:

- Jubilee Scientific Conference 75 years of Medical University – Plovdiv "Medicine of the Future", 29-31.10.2020
- Final Conference "Science in the Service of Society", 25 October 2024.
- XVI National Congress of Pediatrics with International Participation , 2024

In **conclusion**, the dissertation meets the requirements of the Law on the Development of Academic Staff of the Republic of Bulgaria. The work is presented in a complete form.

The content of the dissertation is properly and thoroughly developed, well illustrated and presented in good professional language. The dissertation "**Management of Occupational Health and Safety Conditions in the Hospital "Prof. Dr. D. Stamatov"**" has scientific and practical value and can be applied in other medical institutions.

I *positively* evaluate the dissertation "**Management of occupational health and safety conditions in the hospital "Prof. Dr. D. Stamatov"**" and I give my positive vote for the award of as. Dr. Zlatina Yordanova Pandelieva to the scientific and educational degree "Doctor" in the field of higher education 7. "Health and Sport", professional field 7.1. "Medicine", in the scientific specialty "Hygiene (including occupational, communal, school, radiation, etc.)".

06.06.2025

Varna

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679

Prepared the statement:

Assoc.prof. Dr. Miglena Assenova Kolarova - Dimitrova, MD, PhD /