

REVIEW

ON THE DISSERTATION PAPER ON THE TOPIC :

**"STRESS AND WORK ABILITY AT
HEALTH CARE SPECIALISTS
IN THE HOSPITAL CARE"**

With author :

**RALITSA IVAILOVA STOYANOVA
for awarding the educational and scientific degree "Doctor"**

**Area of higher education 7 "Health and sports"
Scientific specialty "Hygiene /incl. labor, communal, school, radiation, etc./"**

**SCIENTIFIC SUPERVISOR: ASSOC PROFESSOR KATYAVANGELOVA,
PHD**

Curriculum vitae data

Ralitsa Stoyanova was born in 1985. In 2008, she graduated from Sofia University "St. Kliment Ohridski", Faculty of Biology as a bachelor in molecular biology. In 2009 graduated as an Ecologist - master's degree in environmental protection. She has conducted national and international trainings in the field of occupational health and safety. Her career includes work as an expert ecologist and biologist in the period 2009-2013. Since 2013 she has been an expert, and since 2016 until now, she has been an assistant at the National Center for Public Health and Analyzes, participating in research related to safety and health at work, assessment of occupational risk factors for various occupational groups, hormone screening, evaluation of work capacity, etc.

RELEVANCE OF THE TOPIC:

The dissertation concerns the current topic of the health of medical specialists in health care - nurses, midwives and laboratory workers, who are distinguished by

specific labor-medical characteristics and risks in the workplace. The insufficient number of these workers and the high psychological stress lead to a significant risk to their health.

STRUCTURE OF THE DISSERTATION:

The dissertation contains 141 pages and is illustrated with 30 figures and 31 tables.

The bibliographic reference includes a total of 170 literary and Internet sources, of which 14 are in Cyrillic.

The completed literature review shows the dissertation student's awareness of the problem under consideration. It examines: Models of professional stress; Psychosocial risks at work; - Occupational risk factors in healthcare. A detailed biochemical characterization of stress is presented, describing the mechanisms of the stress reaction, the biomarkers of stress and the changes that occur in the body during shift work and circadian rhythms. The concept of workability has also been developed.

The purpose of the dissertation work is precisely and clearly formulated. The set 5 tasks logically follow from the goal, allowing a good implementation of the planned study.

The research methodology is well described, and the tests, questionnaires and research object used are correct. The methods used are described in detail and all the indicators used for the analysis of the results are presented.

The "Results" section presents data from a survey of a representative group of 1,811 healthcare professionals working in 19 hospitals in the city of Sofia, which ensures the reliability of the results obtained. The results are clearly and accurately presented and illustrated with appropriate figures and tables. The excellent analysis of the large amount of collected information is impressive. An assessment of psychosocial risks in the workplace was carried out and the risk factors for increasing emotional and physical exhaustion and psychosomatic complaints in the main groups of health care professionals were outlined.

Challenges are shift work, long working hours, working in conditions of time shortage, lack of feeling of safety in the workplace, emotional burden from patients and their relatives. For the first time in Bulgaria, the concentration of cortisol in saliva was monitored in nurses from the intensive care unit and wards during the day and night shift. The data showed maintenance of the diurnal rhythm of cortisol, but with higher values, especially in nurses in the intensive care sector, confirming the survey data of high levels of stress and increased health risk.

For the first time in Bulgaria, an assessment of the working capacity of health care specialists was carried out with the use of IR. The data show good performance and relatively reliable retention over two years. Risk factors for the deterioration of working capacity have been identified, such as poor working conditions, night work, mental and physical exhaustion, and poor health.

The Discussion section is professionally written and reflects the most important achievements of the paper. It compares the data obtained in the study with those from similar studies in our country and abroad.

CONCLUSIONS:

Based on the obtained results, 12 conclusions were formulated, which follow logically from the set tasks.

CONTRIBUTIONS OF A SCIENTIFIC AND THEORETICAL CHARACTER:

An assessment of psychosocial risks in the workplace was carried out and the risk factors for increasing emotional and physical exhaustion and psychosomatic complaints in the main groups of health care professionals were outlined.

For the first time in Bulgaria, the concentration of cortisol in saliva was monitored in nurses from the intensive care unit and wards during the day and night shift, and the data confirm the subjective assessment of high levels of stress.

For the first time in Bulgaria, an assessment of the working capacity of health care specialists was carried out with the use of a working capacity index.

Factors determining work ability have been established.

✓ **SCIENTIFIC AND APPLIED CONTRIBUTIONS:**

✓ A survey was conducted on a representative group of 1,811 healthcare professionals working in 19 hospitals in the city of Sofia, which ensures the reliability of the results.

✓ The data on psychosocial risks, emotional and physical exhaustion, as well as their interrelationships in the covered professional groups and types of jobs are the basis for scientifically based measures for the prevention of the risk associated with psychosocial risks, stress and the spread of the burnout syndrome.

✓ The data from the analysis of working capacity enable differentiated measures to improve the organization of work and increase the working capacity of different professional groups of health care specialists and those working in different workplaces.

✓ Recommendations have been developed to limit the risk to the health of healthcare professionals in hospital care.

Publications: As a result of the dissertation work, 6 publications were presented, in 3 of which the dissertation student was the first author.

Scientific forums: The dissertation student has presented the results of the work at 5 scientific forums.

I have no critical remarks on the dissertation work.

CONCLUSION:

The topicality of the topic, the use of modern scientific methods and the obtained important practical results and the significance of the conclusions and contributions of the dissertation work, give me reason to confidently state that the development of RALITSA IVAYLOVA STOYANOVA meets the requirements of the Law on the Development of the Academic Staff in Bulgaria for acquisition of a scientific and educational degree "doctor".

Based on the above, I recommend the members of the scientific jury to vote positively for acquisition of a scientific and educational degree "Doctor" to RALITSA IVAYLOVA STOYANOVA.

Sofia, 15.02.2024.

Prof. Karolina Lyubomirova, MD, PhD

