

POSITION

of

Vili Slavchev Zahariev, MD, PhD, Assoc Prof. at

Department of Preventive Medicine – Medical University of Sofia

Concerning: dissertation thesis for awarding the scientific degree of
Doctor of Science

Author: Hristiana Angelova Romanova – Radeva, MD, PhD, Professor and Head of
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Theme: “POPULATION PROTECTION DURING FLOODING RISK IN VARNA REGION”

The dissertation thesis is discussed, approved and proposed for defense during a departmental meeting of the Department of Disaster Medicine and Marine Medicine, Faculty of Public Health, Medical University of Varna “Prof. d-r Paraskev Stoyanov”.

Prof. Romanova's work is dedicated to a very topical and significant public health problem not only nationally, but globally as well. Information analysis shows a trend for continuous increase of floodings. They are one of the largest in scale disasters in the country, and come on top in terms of frequency and generated economic losses. This necessitates a thorough and multifaceted study, analysis and outlining of the most important problems facing the medical provision and the protection of the population in floods.

The dissertation submitted to me for position has a total volume of 225 pages. It is illustrated with 9 tables, 82 figures, 5 photos and 10 applications. The bibliography includes 289 literary sources, 116 of which are in Cyrillic and 173 in Latin. The usage of contemporary sources allows Prof. Romanova to present an in-depth literature review examining the problem studied in the context of the most recent research in the field domestically and globally. The dissertation is written in the modern language of science and pertains to a very good style.

On the basis of thorough and critical review of the available literature, the purpose and objectives of the study are clearly defined, as well as the program and methods for carrying out the research. 5 specific tasks are included, that are sufficient, relevant to the goal set and contributing to its achievement. For the accomplishment of the set tasks, a

researcher's own contribution is required. The methodological toolkit used to achieve the goal of the study is comprehensive and meets the needs for solving the scientific problems.

The analysis of the results of her own studies was conducted at a good methodological level, which allowed Prof. Romanova to reach significant conclusions and recommendations. Here are some of them:

- a real flood risk in Bulgaria (and in particular in Varna region) exists, it is dependent on all factors potentially related to the flood risk; human and natural systems exposed to stranded waters and the vulnerability of these systems;
- more than 2000 of the 4,390 dams in Bulgaria are found to be "at risk" and 81 are in "pre-emergency" condition, which requires urgent measures and material investments to reduce the risk of floods;
- the flood risks for Varna region lie mainly in flooding of the Kamchia River and the Provadia River; floodings of the Eleshnitsa Dam and flood of Grozdevo, Nova Shipka, Dabravino and Venelin villages from Dolni Chiflik Municipality; as well as the central part of Varna, the area around the Central Railway Station, Devnya and G. Piachevich streets; VI. Varnenchik, Maria Louisa, and Tsar Osvoboditel Blvds. where the lowest catchment points are located in heavy rainfall;
- in Varna region, medical needs during floods can be met with own medical staff and available medical provision;
- the performed sociological survey found that the awareness and preparation for protection and first aid in floods of Bulgarian citizens is insufficient in comparison to foreign nationals;
- recommendations for the preparation of "Personal Evacuation Backpack", "Travel Bag for a Flood or Other Disaster", "Personal Emergency Evacuation Jacket", Protected Products Reserve in the Household, First Aid Medical Pack for Injuries and Floods;
- the need for better informing and better preparation of the public in Bulgaria for the risk of floods and compulsory annual training of the population for proper actions and first aid through the assistance of the Ministry of Education, Ministry of Environment, Ministry of Labor and Social Policy, the Bulgarian Red Cross, the media, the Municipal management, Fire Safety and Population Protection, the Basin Directorate "Black Sea Region", and others.

The thesis is of undoubtedly contributing nature. The following contributions can be seen as developing the theory and practice of medical provision in floodings. In my opinion, the dissertation has significant contributions and merits in the following directions:

- the risk of floods in Bulgaria (and in particular Varna region) is summarized and analyzed; the factors on which it depends were outlined and a model for flood risk assessment was prepared.;
- analysis and systematization of health risks and medical provision in case of floods have been performed;
- a sociological survey of Bulgarian and foreign nationals on the awareness of flood protection and first aid was conducted;
- a training strategy has been developed to increase the preparation for the protection of the population in case of floods;
- a conceptual model for population monitoring was developed to assess the awareness, preparation and knowledge of first aid in floods;
- leaflets have been developed to raise awareness and knowledge of the population on flood-related issues;
- analysis, systematization and expert evaluation of the potentially dangerous water bodies in the Varna region was carried out.

The auto-abstract is developed on 62 pages and meets the requirements of the Law for the Development of the Academic Staff of the Republic of Bulgaria and the Regulations for its implementation. It accurately reflects the structure and content of the work, focusing on the most important points and conclusions of the research. In connection with the dissertation, the doctoral student has published 12 scientific publications, which reflect separate parts of the thesis.

I have no significant critical notes regarding the value of the thesis. I can recommend to Prof. Romanova to promote her scientific results appropriately among colleagues.

In conclusion, I believe that the dissertation work of Prof. Dr. Romanova on the topic "Protection of the population at flood risk in Varna region" is an own development of a topical theme, with original contributions and great practical significance. The dissertation fulfills all criteria for awarding the degree of Doctor of Science, which gives me a reason to give a positive assessment.

Considering all the above, I allow myself to recommend to the honorable members of the Scientific Jury to award the scientific degree "Doctor of Sciences" to Prof. Hristiana Angelova Romanova - Radeva, MD, PhD, for her dissertation work.

28/01/2020

Sofia

Member of the scientific jury:



/assoc. prof. Vili Zahariev, MD, PhD/