

REVIEW

by

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Regarding: Competition for the academic position of Associate Professor in the Higher Education area 7. Health and sports, professional field 7.4. Public health and specialty **Disaster medicine** for the needs of the Department of Disaster Medicine and Marine Medicine at the Medical University Prof. Dr. Paraskev Stoyanov – Varna promulgated in State Gazette, issue 43 /May 31st, 2019

The only candidate in the competition – Nikolina Radkova Radeva, Chief Administrative Assistant at the Department of Disaster Medicine and Marine Medicine, Faculty of Public Health at the Medical University Prof. Dr. Paraskev Stoyanov – Varna, with documents in accordance with the requirements of the Development of Academic Staff in the Republic of Bulgaria Act and the Regulations for the development of the academic staff in the Medical University – Varna.

I. Biographical data

Assistant Professor Nikolina Radkova Radeva was born on 07.07.1983. In 2008 she received her Master's degree in Corporate Finance from the University of Economics – Varna, and in 2012 she completed the Health Management Master's Degree of the Medical University Prof. Dr. Paraskev Stoyanov – Varna. From 2012 to 2015 she worked as an expert at the International Projects and Programs, Department of the Medical University of Varna, and since May 2015, after a winning acompetition, she was appointed Assistant Professor of Disaster Medicine. Since April 2018 she has been a Doctor of Disaster Medicine after successfully defending her dissertation on: "Stress Prevention as a Significant Problem for Disaster Risk Groups" and as of August 2018 – Senior Assistant Professor at Department of Disaster Medicine and Marine Medicine. Senior Assistant Professor Radeva has acquired additional professional skills by participating in various specialized courses and workshops on Disaster Medicine conducted in Italy, Belgium, Hungary, Israel, and others. She is a member of the Bulgarian Scientific Society for Public Health, the Union of Scientists in Bulgaria – Varna Branch, the Bulgarian Society for Disaster Medicine, the Society of Disabled Persons – Varna, the French Society for Disaster Medicine (La société française de médecine de

catastrophe). The applicant has good computer skills and language skills in English, French, Russian and German.

II. Scholarly contribution

In support to her application Senior Assistant Professor Radeva provided a list of 33 scientific papers presented in Table 1.

Table 1. Scientific papers beyond those required for the PhD

Publications	Number
1.Total number of the presented scientific papers:	33
- in Cyrillic	25
- in Latin	8
2.By authorship of the submitted works:	
- independent	2
- first author	8
- second and next author	23
3.By type of scientific work:	
- monographs and textbooks	4
- publications in Bulgarian scientific journals	24
- publications in compendia of scientific reports	5

Of those, 2 are independent and 8 as a first author. She is second and co-authorauthor in 23 publications. Single authorship of one of the monographs and textbooks. She has also co-authored three of them. There are 24 of her publications in Bulgarian scientific journals. The candidate's scientific publications in collections of papers presented at national and international congresses and symposiums are 5. Senior Assistant Professor Radeva is involved in the preparation, design and implementation of four projects: "Creation of a modern career advancement system for the lecturers at the Medical University Prof. Dr. Paraskev Stoyanov – Varna", "Student Practices", "General Activities for Planning and Forecasting Human Resources in Healthcare" and "European Scientists Night 2014".It should be noted that the scholarly contribution of the candidate also includes participating in 51 national and international scientific events, with 35 reports.

III. Characteristics of the scholarly activity of the candidate

The scientific studies of Senior Assistant Professor Radeva are mainly in the following fields:

- population protection management, planning and organization in case of disasters;
- medico-biological characteristics of the Ecological Catastrophe characteristic of the Varna Black Sea region;
- research studies on fires, floods, earthquakes, chemical accidents and their consequences for the Varna region;
- studies of at-risk populations and in particular the disabled people;
- psychological problems in distress situations;
- study and analysis of awareness and training of the medical personnel and the population in emergency situations;
- experimental scientific studies on laboratory animals.

The population protection management in case of disasters makes a significant contribution to the scientific output of the candidate. This thematic strand is one of the most elaborated fields of the scholarly activity of Senior Assistant Professor Radeva. In the monograph "Current Aspects of Population Protection management in case of disasters" and a number of publications, an analysis of the organizational structure and operations management of the population protection in case of disasters has been made with a systematic review of the orchestration of medical measures. The organizational principles of medical activities during the different phases of medical care are well elaborated. The tasks and activities for mass disasters are developed in detail: medical triage and evacuation, compared to the opinions of specialists from other countries. The importance is underlined in the timely participation of the Fire Safety and Civil Protection specialized forces, the ministries and agencies which contribute to limiting the risk to the environment and losses amongst civilian populations. The prerequisites for effective training of health personnel on disasters problems are well identified.

Another key strand of the candidate's scientific publications is the environmental disasters characteristic of the Varna Black Sea region. The peculiarities of climatic and meteorological factors and their influence on the distribution of atmospheric pollutants are well presented, followed by an extensive characterization of anthropogenic factors, and evaluation of the potential risk to the life and health of the population after an accident in an

industrial site storing and producing toxic substances. Water pollution has been studied and basic methods for detecting marine pollution have been analyzed.

The third key strand of the applicant's scientific publications is studies on fires, floods, earthquakes, chemical accidents and their consequences for the Varna region. There is an analysis of the number of fires, which have occurred in the country, and their impact for the 2010-2016 period, with risk assessment and summarized measures for remediation and mitigation of the consequences. In several of the scientific papers both the potentially dangerous enterprises and companies located mainly in Varna and Devnya municipality have been studied and analyzed, as well as the main toxic substances representing a risk of mass poisoning – ammonia, chlorine and chlorine compounds, dichloroethane, trichloroethane, soda ash, nitrogen and phosphorus fertilizers, cyanide compounds, petroleum products, acetylene and more. The necessary preventive, organizational and legislative measures for the Varna Black Sea region have been examined.

Studies for groups at risk and especially for the group of people with disabilities include: strategic and operational decisions for the protection of populations at risk in case of disaster, awareness and health knowledge for protection in a disaster situation, preparedness for disasters, risk factors for cardiovascular disease, nutritional status and eating habits of people with disabilities, etc.

Psychological problems in distress situations are a serious part of the research activity of Senior Assistant Professor Radeva. In-depth studies have been conducted on the level of stress, somatic and psycho-emotional effects, as well as behavioral attitudes of students from the Medical University – Varna. The effects of stress on the elderly people have been studied and training strategies for the prevention and management of stress of at-risk groups have been developed.

The knowledge of disasters and their consequences, as well as prior preparation for protection activities, are particularly important. A number of publications present the results of the studies conducted to assess the awareness and training of medical personnel and the population in emergency situations. The studies of people with disabilities for protection in case of disaster situation warrant special attention. The insufficient preparation of this risk group determines the need for the elaborated "Manual for self-help and mutual aid in critical situations for people with lasting harm".

Senior Assistant Professor Radeva also has been involved in experimental studies with laboratory animals. Studies have been conducted on the distribution of radioisotopes –

rubidium 86 and selenium 75 methionine – in different organs, after exercise and treatment with protein hydrolyzate and vitamin C.

IV. Candidate's scientific papers contribution in the scientific literature

An academic report from the repository of the library of the Medical University – Varna was presented, for 1 citation in monographs and collective volumes with scientific review and 8 citations in non-refereed journals with scientific review. All citations specify the titles of the publications and the authors who made the citations.

V. Scientific contributions

The scientific contributions of Senior Assistant Professor Radeva can be summarized in the following main areas:

1. Applied scientific:

- developed and proposed the necessary preventive, organizational and legislative measures in case of disasters in the Varna region;
- Significant applied scientific contribution is the development packages of protection, self-help and mutual aid to groups at risk in different specific disasters;
- The training strategies for the prevention and management of stress of the at-risk groups, as well as the preparation “Manual for self-help and mutual aid in critical situations for people with lasting harm” are of great importance and topicality.

2. Scientific-theoretical:

- thoroughly analyzed the organizational structure and management of operations for the population protection in case of disasters and systematized the orchestration of all medical activities during the different phases of rendering medical care;
- analyzed the geographic and anthropogenic prerequisites for eco-catastrophes in the Varna Black Sea region, the risk of water pollution and the main methods for detection of marine pollution;
- studied and analyzed the potentially dangerous enterprises and companies located in the municipalities of Varna and Devnya and the main poisonous substances representing a risk of mass poisoning;
- conducted an in-depth study of the level of stress, somatic and psycho-emotional effects, as well as behavioral attitudes in students and examined the effects of stress in at-risk groups;

- conducted an analytical study of the awareness and training of medical personnel and the population in disaster situations, and the protection of people with disabilities in case of disaster situation warrant particular attention.

3. Scientific-educational:

- the candidate is a co-author of 2 teaching manuals on Disaster Medicine;
- developed original case studies, didactic tests, methodological manuals and practical tasks that prepare students and trainees to deal with real-life situations;
- has contributed to improve the training in "Disaster Medicine", in accordance with the specific features of our country and the new trends in education.

VI. Educational activity

Senior Assistant Professor Radeva has 4 years of teaching experience in "Disaster Medicine" course unit. She has successfully participated in the conduction of lectures and exercises with students from different specialties in Bulgarian and English. According to the slip issued by the chancellor's office of the Medical University – Varna, her academic workload covers the regulated teaching hours (Table 2).

Table 2. Teaching hours 2014–2019

<i>School year</i>	<i>Workload in hours</i>	<i>Hour requirement pursuant to the Decision of the Academic Council</i>
2014/2015	0	360
2015/2016	337	360
2016/2017	404	360
2017/2018	297	360
2018/2019	316	360

VIII. Compliance with the requirements of the Medical University – Varna for the academic position "Associate Professor"

The report showed that Senior Assistant Professor Radeva fully covers, and for a certain group of indicators exceeds the requirements of the Regulations for development of

academic staff in the Medical University – Varna for the academic position "Associate Professor" (Table 3).

Table 3: Fulfillment of the requirements of the Medical University – Varna for the academic position "Assistant Professor"

<i>Groups of metrics</i>	<i>Required Score</i>	<i>Score based on the evidence presented</i>
A	50	50
B	0	0
C	100	100
D	200	314
E	50	50
F	0	100

VIII. Personal impressions

My personal impressions of the applicant as a scientist and teacher are positive. Senior Assistant Professor Radeva is an intelligent person showing organizational skills, research persistence and precision. She demonstrates good knowledge of the material taught and a developed sense of responsibility for the tasks undertaken.

CONCLUSION

Assistant Professor Nikolina Radeva is the only candidate in the competition for the academic position of Associate Professor in the Higher Education area.

Health and sports, professional field 7.4. Public health and specialty Disaster medicine for the needs of the Department of Disaster Medicine and Marine Medicine at the Medical University Prof. Dr. Paraskev Stoyanov – Varna. She provided 33 scientific papers. Her scientific papers, as a whole, represent applied scientific, scientific-theoretical and scientific-educational contributions to Disaster Medicine. Senior Assistant Professor Radeva is a skilled lecturer of a high professional reputation in the field of Public Health and Disaster medicine.

In view of the above and in accordance with the criteria of the Development of Academic Staff in the Republic of Bulgaria Act and the Regulations for the development of

the academic staff in the Medical University – Varna, I strongly encourage the members of the honorable scientific jury to appoint Senior Assistant Professor Nikolina Radkova Radeva, MD, to the position of Assistant Professor, for the needs of the Department of Disaster Medicine and Marine Medicine at the Medical University Prof. Dr. Paraskev Stoyanov – Varna.

September 3rd, 2019

Sofia

Reviewer: */signed/*



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