

REVIEW

by Prof. Albena Kerekovska, MD, PhD

Department of Social Medicine and Healthcare Organisation

Faculty of Public Health, Prof. Dr. Paraskev Stoyanov Medical University of Varna

Member of Scientific Jury according to Order No P-109-174 of 23 April 2021 issued by the Rector of Medical University of Varna

Regarding: competition for acquiring an academic position of "Associate Professor" in the area of higher education 7. *Healthcare and Sports, professional field 7.4 Public Health speciality Public Health Management* - for the needs of Rehabilitation Therapist Educational Sector at Medical College - Varna announced in State Gazette No 17 of 26 February 2021

One candidate participates in the announced competition - **Chief Assistant Silvia Ivanova Filkova, Ph.D.** From Rehabilitation Therapist Training Sector, Medical College, Medical University of Varna

The candidate has submitted all documents needed for participation in the competition in accordance with the requirements of Development of Academic Staff in the Republic of Bulgaria Act, its implementing Regulation and the Rules for Development of Academic Staff of Medical University of Varna.

Pursuant to Minutes 1 of 5 May 2021 of the first meeting of Scientific Jury I have been appointed to prepare a review of the competition for acquiring an academic position of "Associate Professor".

Candidate's Career Profile

In 1992, Silvia Filkova completed Yordanka Filaretova Medical College in the city of Sofia, majoring in Rehabilitation Therapist. In the period 1995 - 2000 she studied at Medical University of Varna and in 2000 she obtained master's degree in Health Management. In 2016, Silvia Filkova obtained another master's degree in Rehabilitation, Thalassotherapy, Wellness and SPA at Medical University of Varna.

In 2017, the candidate successfully defended her thesis on *prevention of spinal deformities in preschool children* and obtained educational and scientific degree Doctor in the scientific speciality Public Health Management at Medical University of Varna.

The professional career of Silvia Filkova began in 1992 in University Pediatric Hospital in the town of Bankya where she started to work as a rehabilitation therapist. After leaving the hospital, she worked as a rehabilitation therapist in Clinic of Rheumatic and Cardiac Diseases - town of Bankya (1994), Air Transport Polyclinic at Transport Medical Institute - city of Sofia (1994

- 1998), Pulse Health Centre - city of Varna (1999 - 2004), View Style Sole Trader - city of Varna (2004 - 2007) and Dr. Nikolay Nikolov Outpatient Clinic for Specialised Medical Care - city of Varna (2007 - 2011).

The academic career of Silvia Filkova started in 2012, when she was appointed as an assistant at Rehabilitation Therapist Educational Sector of Medical College - Varna. In 2018, after acquiring educational and scientific degree Doctor, she won a competition and started to hold the academic position of "Chief Assistant". Since July 2020, Silvia Filkova has been holding the position of Head of Rehabilitation Therapist Educational Sector at Medical College - Varna.

Silvia Filkova specialised in the area of recreation management, SPA and Wellness (2010 - 2011) and Yoga Fly (2014) at Continuing Education Centre at University of Economics - Varna. She has completed over 20 different postgraduate courses in the country and abroad in the area of professional position that she holds and training courses that upgrade her pedagogical training and develop skills for applying interactive teaching methods. This further contributes to her professional development and reputation of very well-prepared, committed and modern-thinking professional, practitioner, expert, lecturer and researcher.

Chief Assistant Silvia Filkova participates in the theoretical and practical training of students majoring in Rehabilitation Therapist - she conducts clinical practice, lectures and exercises in Kinesitherapy and Therapeutical Massage. She actively participates in national and international scientific forums. Silvia Filkova works with students in joint research.

She is actively involved in initiatives of the speciality and Medical College.

The candidate participates in the implementation of two research projects in the area of prevention and rehabilitation of spinal deformities and ergonomics of working environment.

Chief Assistant Filkova is a member of the Bulgarian Association of Physiotherapists and Bulgarian Scientific Society of Public Health.

She is fluent in English and Russian in her professional and research work.

General Characteristics of the Candidate's Research and Scientific and Applied Activity

The publications and references submitted for participation in the competition prove the quality and recognisability of the candidate's scientific production.

Chief Assistant Filkova applied for the competition with academic output, which covers and, based on some indicators, even exceeds the minimum scientometric requirements set by Medical University of Varna.

For participation in the competition a total of 17 scientific papers - real publications, 14 of which are used as evidence in the summary of implementation of the minimum requirements for acquiring the academic position of "Associate Professor", according to Development of Academic Staff in the Republic of Bulgaria Act of 2018 are presented. Three additional publications are submitted to support the evidence for implementation of the minimum requirements for acquiring the academic position of "Associate Professor".

The scientific papers submitted for participation in the competition were published in the period 2013 - 2021. The are of the following types:

1 PhD thesis:

Prevention of Spinal Deformities in Preschool-Age Children, 2017;

1 monographic (habilitation) thesis - *Modern Lifestyle and Functional Spinal Deformities, 2021;*

3 publications in scientific journals referenced and indexed in world-famous databases with scientific information;

9 publications in scientific peer-reviewed journals unreferenced in world-famous databases with scientific information;

3 publications to support the evidence for implementation of the minimum requirements for acquiring the academic position of "Associate Professor" published in scientific peer-reviewed unreferenced journals.

Half of the submitted publications (eight in number, including the habilitation thesis) are published in Bulgarian and eight of them are published in a foreign language: seven publications are published in English and one in Russian language.

All full-text publications are properly described and attached in full in electronic format to the competition materials.

In addition, the candidate provides information on another 14 full-text publications that are not subject to review for the current competition (5 of them are related to the thesis and 9 of them are related to her participation in the competition for acquiring the position of „Chief Assistant“).

The active participation in scientific forums also contributes to the good visibility of the candidate's scientific work. Information and evidence of 38 participations in scientific forums, 8 of them abroad and 11 of them with international participation in Bulgaria, are provided.

The personal contribution in the candidate's scientific papers has been proven. The candidate is an independent and first author of 7 (47%) of the presented real publications in magazines, second author in 7 scientific developments, and third and consecutive author of 1 article.

The papers are published in scientific journals abroad and in Bulgaria, such as: *World Journal of Pharmacy and Pharmaceutical Sciences; Research in Kinesiology; Activities in Physical Education and Sport; Science Time; International Journal of Recent Advances in Multidisciplinary Research; General Medicine; Trakia Journal of Science; Nursing; Health Economics and Management; Scripta Scientifica Salutis Publicae; Varna Medical Forum.*

The research activity and scientific contributions of Chief Assistant Silvia Filkova are in the area of scientific speciality of the announced competition. They can be grouped in the following thematic areas:

Health Promotion (publications D_7-1; D_7-3; D_8-4; D_8-7; D_8-8; not covered by the minimum requirements-2);

Prevention of Spinal Deformities and Lower Back Pain (publications A_1; B_3; D_8-1; D_8-3; D_8-5; D_8-6);

Innovative Approaches in Recreation and Rehabilitation (publications D_7-2; D_8-2; D_8-9; not covered by the minimum requirements -1 and 3).

The first thematic area in the candidate's scientific developments is focused on **Health Promotion**, in particular on the physical activity of children and adolescents - assessment methods, recommendations for optimal levels and health impact. The awareness of students from Medical College - Varna of the factors influencing healthy lifestyle is studied, with an emphasis being placed on physical activity. The opinion and attitudes of the parents regarding the role of general practitioners in conducting preventive examinations for poor body posture and spinal deformities in the children are studied. The level of the motor activity in the preschool-age and early school age children and the level of awareness of their parents of the age standards are studied. The development of recommendations for conducting health education programmes with an emphasis on the optimal physical activity age aimed at parents, with two main modules - training (with the support of general practitioners and physiotherapists) and motivational (with the participation of psychologists and psychotherapists) has practical contribution.

The in-depth analysis of the methods of assessment of physical activity in children and the obtained results, emphasising the need for application of uniform methodology, have also contributing nature.

The overview of the main groups of factors, which increase the risk of reduced physical activity has a cognitive nature: demographic, socio-economic, environmental factors and behavioural (cultural) factors.

Major field in the research work of Chief Assistant Filkova is **Prevention of Spinal Deformities and Lower Back Pain**. This topic is discussed in the thesis, monographic (habilitation) thesis of the candidate, and in four of the attached publications. Retrospective documentary analysis of the origin and development of screening programmes for spinal deformities in children has been made at national and global level. Based on a systematic review of the scientific literature and author's practical experience, both well established and innovative methods for assessment and diagnosis of functional and structural spinal deformities are described and summarised. The parents' awareness of spinal deformity prevention has been studied and modern possibilities for improving the health education have been systematised.

The developed author's methodology for improving body posture and the targeted study of the effect of exercises with sports hammock in preschool-age children is considered as contribution of practical applicability for the country. The posture and physical endurance of preschool-age children attending a kindergarten are assessed. The character of the author's proposed body posture assessment and screening model applicable in schools, age recommendations depending on the sex and specific tests developed on the basis of literature sources, practical experience and research work with patients with spinal deformities, is original.

The developed recommendations for ergonomics of the learning environment when using electronic technologies to improve physical activity and to support prevention of spinal deformities have practical and applied contribution.

The author summarises and presents toolkit of diagnostic methods and modern rehabilitation approaches for prevention and treatment of spinal deformities and lower back pain.

The innovative approaches in recreation and rehabilitation and the opportunities for their application and promotion are of research interest for Chief Assistant Filkova.

The attitude of Bulgarian citizens of different age groups to the alternative methods in medicine and their application for prevention purposes and comprehensive treatment have been studied.

The application of Rebound therapy suitable for use by all age groups in implementation of comprehensive rehabilitation measures has been studied. An analysis of literature sources proves that recreation creates opportunities for health prevention and utilisation of all resources for development of health tourism - natural, material and human resources.

This thematic area also reflects the interests and experience of Chief assistant Filkova in the area of innovative Yoga Fly system. The nature of the research on attitude towards the inclusion of innovative sports activities for students with aggressive behaviour is original. The impact of Yoga Fly system on reducing the risk of aggressive behaviour - as an anti-stress approach, balancing the processes of excitability and retention in the nervous system - is derived. The research on optimisation of motor skills of children with autism, applying Yoga Fly system in their daily activities, is considered as original contribution of practical applicability. Positive impact on their overall development and in particular on the musculoskeletal system, and motor skills has been established. Clear parental interest in this innovative system has also been established.

I hereby accept the scientific contributions indicated systematically in the candidate's documentary evidence. They are properly defined, distinguished by thematic areas and well substantiated in the attached scientific papers. The scientific production of Chief Assistant Filkova shows competence in the research areas and reflects her professional training, practical experience, erudition, interests and dedication to research.

I emphasise that the relevance of the considered topic, contributing nature and potential for practical applicability of the scientific results are a summary of the scientific papers. The scientific contributions are of cognitive, methodological and practical significance, and have both confirmatory and original nature.

Evidence of the high quality of the publications and their reflection in the Bulgarian and international scientific literature is presented. The report issued by Medical University - Varna contains a total of eight positive citations - one of them in scientific journals referenced and indexed in world-famous databases with scientific information, five of them - in monographs and peer-reviewed collective volumes and two of them in scientific peer-reviewed unreferenced journals, which proves the relevance of the considered topic and recognisability of the candidate by the scientific community.

There is no data on publications with Impact factor.

Documentary evidence which proves that Silvia Filkova has registered active scientific profiles in Google Scholar, Research Gate, ORCID, Researcher ID and eLibrary is presented.

Information on participation of Chief Assistant Filkova in two research projects - one at National Sports Academy in the area of prevention and rehabilitation of poor body posture and spinal deformities in students and one of the Research Fund at Technical University of Varna, aimed at ergonomics of the working environment to prevent musculoskeletal disorders is provided.

The candidate works actively and supports the scientific activity of students from Medical College - as a manager of their research and development. She participates in national and international scientific forums and working groups operating in the area of the announced competition.

Evaluation of the Monographic Thesis

The candidate has submitted peer-reviewed monographic thesis in the scientific speciality of the announced competition, identified by an international standard ISBN, according to the requirements of the Rules for Development of Academic Staff of Medical University of Varna.

The monograph *Modern Lifestyle and Functional Spinal Deformities* consists of 182 standard pages divided into preface, five chapters, conclusions, conclusion and references. The book contains 402 literary sources: 43 in Bulgarian and 359 in English language. A significant part of the sources reflect the current trends toward the studied issue.

The book presents the world experience in prevention, prophylaxis, diagnosis and treatment of functional and structural spinal deformities - an ongoing issue in modern lifestyle.

The development of the understanding of spinal deformities throughout history up to the present day is traced. The anatomical characteristics of human skeleton and different types of human body postures are described in detail. The risk factors for spinal deformities arising from the modern lifestyle are presented, and special emphasis is placed on the factors that can be corrected. The most up-to-date methods for diagnosis of scoliosis, and innovative and well-established correction and treatment methods are presented. An overview of the existing screening and prevention practices at the national and global level has been made. The model presented by the author of selected spinal deformity screening tests adapted for use in schools has great practical value. Recommendations for children's body posture ergonomics and guidelines for control by their parents and a set of exercises for prevention of spinal deformities at home are proposed. Special attention is paid to the specific physiotherapeutic exercises for scoliosis, as a main component of the comprehensive rehabilitation programme for treatment and prevention. The role of orthoses in the management of an already developed disease is considered. The recommended programme of rules and exercises for home use aimed at correcting poor body posture in children who spend a lot of time using electronic devices is of great practical value. The main elements of primary prevention are indicated and recommendations for specific preventive measures aimed at reducing the likelihood of developing scoliosis among adolescents are made.

The presented thesis is characterised by exceptional relevance, comprehensive coverage of the researched issue, and reference to modern sources and demonstrates high awareness and professional competence of the author. It is addressed to a wide range of medical professionals and can be a valuable tool of high scientific and practical value.

Evaluation of the Candidate's Teaching Activity

Chief Assistant Silvia Filkova has long experience in the speciality (over 25 years) and 9 years of teaching experience in Rehabilitation Therapist Training Sector at Medical College, Medical University of Varna, which fully covers the regulatory requirements for acquiring an academic position of "Associate Professor". Her academic workload is high (an average of 466 classes per year in the last 5 years) and significantly exceeds the teaching employment requirements.

The candidate's teaching activity is in the area of her professional training and scientific interests. She is involved in clinical practice and teaches two main subjects of the curriculum for the speciality Rehabilitation Therapist - *Kinesitherapy and Therapeutical Massage*, reads lectures and conducts exercises. The candidate actively participates in the development and update of the

educational documentation of these subjects (curricula, etc.), and in the preparation of teaching materials in them.

Chief Assistant Filkova is a member of the Programme Council of the speciality and Programme Council of the master's programme in Rehabilitation, Thalassotherapy, Wellness and SPA.

In the period 2017 - 2021, she participated in the implementation of two student internship projects as an academic mentor of students majoring in Rehabilitation Therapist.

The candidate has completed specialised training courses at Medical University of Varna in increasing her pedagogical qualification as a teacher, including in pedagogy of academic teaching, interactive teaching methods, and work with the e-learning platform Blackboard.

Compliance with the Requirements of Medical University of Varna for acquiring an Academic Position of "Associate Professor"

The presented information shows that Chief Assistant Silvia Filkova covers and exceeds in some groups the scientometric requirements for acquiring an academic position of "Associate Professor" according to the Rules for Development of Academic Staff of Medical University of Varna. (Table 1).

Table 1. Compliance with the scientometric requirements of Medical University of Varna for acquiring an academic position of "Associate Professor"

Groups of indicators	Required number of points	Number of points based on the evidence presented by the candidate
A	50	50
Б	-	-
B	100	100
Г	200	212.5
Д	50	85
E	-	-

Personal Impressions of the Candidate

My personal impressions of Chief Assistant Silvia Filkova are: she is purposeful, consistent, fit for work, prepared, conscientious and responsible professional, lecturer and researcher.

She has extensive practical experience in the area of rehabilitation care and is an approved and respected lecturer and colleague.

Conclusion

The candidate participating in this competition fully meets the requirements of Development of Academic Staff in the Republic of Bulgaria Act, its implementing Regulation and the Rules for Development of Academic Staff of Medical University of Varna for acquiring an academic position of "Associate Professor".

Chief Assistant Filkova has built an appropriate career profile with a strong desire for development and potential for further intensive work. She has long professional experience and is an approved lecturer in the area of rehabilitation care. The candidate provides updated, valuable and sufficient scientific production with innovative ideas and potential for practical applicability.

The overall evaluation of the candidate's professional development, teaching activity, work with students and young researchers, scientific performance and contribution, and her established authority and recognition lead me to give positive opinion and to propose to the members of Scientific Jury to choose Chief Assistant Silvia Ivanova Filkova, Ph.D to acquire an academic position of "**Associate Professor**" in the area of higher education 7. Healthcare and Sports, professional field 7.4 Public Health *speciality Public Health Management* - for the needs of Rehabilitation Therapist Educational Sector at Medical College - Varna, Medical University of Varna.

4 June 2021
City of Varna

Member of Scientific Jury
Prof. Albena Kerekovska, MD, PhD

