

Opinion

by

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internal member of the Scientific Jury,
appointed by Order of the Rector of Medical University – Varna No. P-109-398/26.09.2025

regarding

the dissertation thesis of Dr. Mariya Stoeva Stoeva-Milanova
for the acquisition of the educational and scientific degree “Doctor” in the scientific specialty
“Ophthalmology”, professional field 7.1. Medicine

Title of the dissertation thesis:

“Myopia Control”

Brief Biographical Data

Dr. Mariya Stoeva Stoeva-Milanova is a specialist in ophthalmology with clinical and teaching experience in the field of ophthalmology. In 2002, she graduated in Medicine from the Medical University “Prof. Dr. Paraskev Stoyanov” – Varna. In 2016, she acquired a specialty in Ophthalmology at the Military Medical Academy – Sofia. Since 2017, she has been a part-time assistant lecturer, and since 2018 – a lecturer at the Department of Optometry and Occupational Diseases at the Medical University – Varna. Since 2019, she has been working as an ophthalmologist at the University Specialized Eye Hospital for Active Treatment – Varna.

Her professional qualification includes numerous specialized courses in the field of contemporary ophthalmic diagnostics and treatment, including corneal transplantation, structural retinal imaging (FA and OCT), laser treatment in ophthalmology, ultrasonographic diagnostics, amniotic membrane transplantation, intravitreal administration of medications, and strabology.

Relevance of the Problem

Myopia represents one of the most significant and rapidly growing problems in contemporary ophthalmology and public health. Its increasing global prevalence, especially among children and

adolescents, as well as the elevated risk of severe ocular complications in high myopia, determine the necessity for early diagnosis and effective strategies for controlling its progression.

According to the literature data presented in the dissertation thesis, by the year 2050 nearly 5 billion people worldwide are expected to be affected by myopia, which highlights the social and economic significance of the problem.

Particularly relevant is the issue of prevention and slowing the progression of myopia in childhood, when the risk for future development of pathological myopia and irreversible visual impairment is established. In Bulgaria, there is a lack of sufficiently large-scale studies related to myopia control and its impact on quality of life, which makes the present dissertation especially valuable and timely.

Structure of the Scientific Thesis

The dissertation thesis comprises 225 pages. It includes an introduction, literature review, aims and objectives, methodology, results, discussion, conclusions, contributions, and references. It is illustrated with 49 figures and 34 tables.

The dissertation contains the following sections: Abbreviations – 7 pages; Contents – 1 page; Introduction – 3 pages; Literature Review – 79 pages; Aim and Objectives – 2 pages; Methodology of the Dissertation Thesis – 17 pages; Results – 41 pages; Discussion – 43 pages; Conclusions – 1 page; Final Conclusion – 1 page; Contributions – 3 pages; Publications Related to the Dissertation Thesis – 1 page; References – 24 pages.

Literature Review

The literature review demonstrates excellent knowledge of the contemporary scientific literature. The author discusses in detail the epidemiology of myopia, theories regarding its development, risk factors, and possibilities for control.

The various methods for myopia control are thoroughly presented – orthokeratology, atropine therapy, multifocal contact lenses, defocus spectacles, and behavioral interventions. Their mechanisms of action, effectiveness, advantages, and limitations are analyzed in detail.

Particularly positive impression is made by the critical analysis of the influence of myopia on the quality of life and psycho-emotional status of patients, which gives the thesis an interdisciplinary character.

Aim and Objectives

The main aim of the dissertation thesis is to analyze the effectiveness of different methods for myopia control in children and adolescents and their impact on quality of life.

The objectives are logically formulated and correspond to the main aim of the study. They include:

- analysis of the prevalence and characteristics of myopia;
- evaluation of different methods for progression control;
- monitoring changes in axial length and spherical equivalent;
- analysis of risk factors;
- assessment of quality of life and psycho-emotional status of patients.

Materials and Methods

The methodology of the study is described in detail and appropriately selected. Contemporary clinical, diagnostic, and statistical methods were used.

The study included patients with myopia who were followed dynamically over a two-year period. Objective indicators such as axial length, spherical equivalent, corneal topography, and biometry were used, as well as standardized questionnaires for assessing quality of life and anxiety.

The statistical analysis was performed correctly and allows reliable interpretation of the obtained results.

Original Investigations. Results. Discussion

The results are presented clearly, consistently, and analytically. A detailed comparative analysis between the different methods for myopia control was performed.

Higher effectiveness of certain approaches in slowing myopia progression and axial elongation of the eyeball was demonstrated. The influence of heredity, near work, time spent outdoors, as well as the psycho-emotional aspects of the disease were analyzed.

Particularly valuable is the analysis of quality of life in children and adolescents with myopia and its relationship with the different methods of correction and control.

The obtained results are discussed in depth and compared with data from the international scientific literature. The author demonstrates the ability for critical analysis and correct interpretation of the results.

Conclusions

The presented conclusions are logically formulated and derived from the obtained results. They reflect the importance of an early and individualized approach in myopia control and emphasize the role of contemporary methods in slowing its progression.

Contributions

Original Contributions

1. A comprehensive clinical study on myopia control in children and adolescents within a Bulgarian population has been conducted.
2. The effectiveness of different methods for controlling myopia progression has been analyzed.
3. The relationship between different correction methods and patients' quality of life has been investigated.
4. Risk factors associated with myopia progression have been identified.

Scientific and Applied Contributions

1. The obtained results may be applied in everyday clinical practice for monitoring and controlling patients with myopia.
2. The study data are important for the development of preventive programs and strategies for early intervention in pediatric ophthalmology.
3. The necessity for active follow-up and early introduction of myopia control methods in high-risk patients is emphasized.

Publications Related to the Dissertation Thesis

Publications related to the dissertation thesis have been presented in peer-reviewed scientific journals, including a publication in an international journal with an impact factor.

1. Stoeva, M., Stefanova, D., Boyadzhiev, D., Zlatarova, Z., Nencheva, B., & Radeva, M. (2025). *Assessment of the Quality of Life in Children and Adolescents with Myopia from the City of Varna*. *Journal of Clinical Medicine*, 14(13), 4546.
2. Stoeva, M. (2025). *Comparison of the efficiency of different approaches for myopia control in children and adolescents from the city of Varna for a two-year period*. *Bulgarian Review of Ophthalmology*, 69(1).

Opinion

The dissertation thesis of Dr. Mariya Stoeva Stoeva-Milanova has been developed at a high scientific and methodological level and is dedicated to an extremely relevant and socially significant problem in contemporary ophthalmology – the control of myopia in children and adolescents. The topic possesses substantial practical importance due to the continuously increasing prevalence of myopia worldwide and the necessity for effective strategies for early prevention and limitation of its progression.

The dissertation contains original scientific and scientific-applied contributions and demonstrates profound theoretical preparation, excellent awareness of the problem, and very good knowledge of the contemporary international scientific literature. The author demonstrates the ability for critical analysis and correct interpretation of published scientific data, as well as the capacity for independent formulation and implementation of a scientific research task.

The study was conducted using modern diagnostic, clinical, and statistical methods, while the obtained results are presented clearly, analytically, and consistently. Particularly positive impression is made by the comprehensive approach of the author, including not only evaluation of the effectiveness of the different methods for myopia control, but also analysis of their influence on the quality of life and psycho-emotional status of the patients. This gives the dissertation an interdisciplinary character and further increases its practical significance.

The dissertation demonstrates good methodological culture, correct planning and implementation of the study, as well as skills in statistical processing and interpretation of the obtained results. The conclusions are logical, well-argued, and directly derived from the conducted research.

I consider that the dissertation thesis fully complies with the requirements of the Academic Staff Development Act in the Republic of Bulgaria and the Regulations for its implementation regarding the acquisition of the educational and scientific degree “Doctor”.

Based on the above-mentioned considerations, I give my positive evaluation and strongly recommend that the esteemed Scientific Jury award Dr. Mariya Stoeva Stoeva-Milanova the educational and scientific degree “Doctor” in the scientific specialty “Ophthalmology”.

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