

## **OPINION**

on dissertation

for the acquisition of the educational and scientific degree "doctor"

in professional direction 4.1 Physical Sciences,

by defense procedure at the Faculty of Physics

of Sofia University "St. Kliment Ohridski" (SU)

The opinion was prepared by: Prof. Asen Enev Pashov, SU "St. Kliment Ohridski", Faculty of Physics, in his capacity as a member of the scientific jury according to order RD38-448/25.07.2022 of the Rector of Sofia University.

**Dissertation topic:** "Vision screening in school-age children"

**Author of the dissertation:** Mila Dragomirova

### **Applicant data**

Mila Dragomirova received her first higher education in 1988, when she graduated from the Technical University in Sofia. With the defense of MSc thesis, she became an optometrist with the first master's class, graduated in 2012. Owner of a small company in the optical industry, member of committees at the European Council of Optics and Optometry. Co-founder and chairman of the Bulgarian Union of Optometrists since 2014. Since 2016, assistant professor at the University of Sofia, active teacher at the specialty Optometry at the Faculty of Physics. Organizer and participant in a number of mass studies of children from Sofia and the country.

### **General description of the candidate's scientific achievements**

The presented dissertation is the first one in the doctoral program in optometry at Sofia University. It differs from most dissertations defended in the Faculty of Physics because it is in a new field for the faculty, characterized by its interdisciplinary nature. Optometry overlaps knowledge from optics, ophthalmology, biophysics, biochemistry, etc. as the specialty can generally be described as eye health care.

The dissertation is devoted to mass examinations (so-called screenings) of the visual status of children. The topic is relevant because preventive examinations of children are forgotten in our country, and at the same time their importance is great. Undetected vision disorders can delay children's development and learning of school material, and early detection of vision disorders can prevent complications that may be irreversible in later life.

The specificity of the screenings is that they should cover as many children as possible from a given school, therefore there can be no question of a detailed examination here. It is necessary to select a small number of tests in a certain sequence, so as to quickly screen out children who will subsequently be sent for an examination by an ophthalmologist.

The dissertation presents a methodology for conducting screenings (ch. 2 and ch. 3). Chapters 4 and 5 present the results of some of the screenings conducted by the doctoral student, together with other specialists and Optometry students. Ch. 4 tells about the prevalence of myopia among children, based on research in four schools in different settlements in Bulgaria. A detailed statistical

analysis was performed. Chapter 5 reports on an unusual prevalence of color vision deficiencies in a small Bulgarian town. The results of both chapters have been published.

Ch. 6 is different from the previous 5 and it summarizes the dissertation's long-term work in the field of skill management in the health care system for children's vision. Two publications are presented.

Mila Dragomilova submitted 4 publications to her dissertation. One in a journal with an impact factor (IF 2.13), one in the Sofia University Yearbook, one in the Pedagogical Forum journal and one conference report published in full text (SJR 0.21). 3 reports were presented at international conferences, one poster was presented. I want to note that a total of 8 articles of the PhD student are visible in Scopus, cited 9 times.

### **Critical remarks and recommendations**

I don't have any

### **Personal impressions**

I have known Mrs. Dragomirova since a student. She actively joined the work of the SU team responsible for optometry training at the Faculty of Physics. She is an erudite specialist who constantly supplements and enriches her knowledge, and the present dissertation is an illustration of this.

### **Conclusion**

I am convinced that the author's contribution to the research described in the dissertation is significant, and the research itself is original and at a very good level. I have not detected any plagiarism. The dissertation, abstract and scientific publications of Mrs. Dragomirova cover the minimum national scientific requirements of the National law and its Regulations, as well as the additional requirements of the Faculty of Physics of SU "St. Kliment Ohridski". I support the awarding of the educational and scientific degree "doctor".

29/08/2022

Sofia