

## **REVIEW**

**by Prof. Maya Lyubomirova Vizeva, PhD**

**Medical University – Sofia, Medical College “Y. Filaretova”**

**External member of the Scientific jury**, pursuant to Order No. P-109-318/24.07.2025 by the Rector of Medical University “Prof. Dr. Paraskev Stoyanov”, town of Varna

**Subject:** Dissertation work for awarding of educational and scientific degree “Doctor” in the Scientific specialty: “Health Care Management”, Professional field: 7.4 Public Health, field of higher education: 7. Healthcare and Sport

**Author of dissertation:** Anushka Strahilova Uzunova, a doctoral candidate in Health Care Faculty at Medical University “Prof. Dr. Paraskev Stoyanov” – Varna, Sliven Affiliate

**Title:** “The impact of the COVID-19 pandemic on nutrition and physical activity of those involved in the educational process – trainers and trainees at the Medical College – Stara Zagora”

**Scientific supervisor:** Assoc. Prof. Svetlana Peneva Angelova, PhD

### **General overview of the procedure**

I represent this recension in my capacity as an external member of the Scientific jury, appointed by order No. P-109-318/24.07.2025 by the rector of Medical University “Prof. Dr. Paraskev Stoyanov”, town of Varna, to perform a procedure on the dissertation defense.

The dissertation submitted is in full compliance with the Law on Academic Staff Development in the Republic of Bulgaria, Regulations on the Terms and conditions for acquiring scientific degrees and holding academic positions at Medical University “Prof. Dr. Paraskev Stoyanov” – Varna.

### **Professional biography and development of the doctoral candidate**

Anushka Strahilova Uzunova was born on 9<sup>th</sup> September, 1970, in the town of Pazardzhik. In 1999 she graduated as a "Rehabilitationist" at the Medical college of Trakia University. In 2007 she graduated with a Bachelor's degree in the specialty "Health Care Management" at Trakia University, and in 2009 she obtained Master's degree in the same specialty at Medical University – Sofia.

The academic career of Anushka Uzunova as a lecturer began at the Medical College of Trakia University – Stara Zagora in 2012, where she currently holds the position of senior lecturer. Since 2020 she has served as a head of the "Medical Cosmetologist" specialty.

She has participated in international educational programs, including Erasmus+, and has been an active participant in scientific conferences and research projects.

The doctoral candidate makes impression with her extensive publishing activity – more than 30 scientific publications in reputable journals.

### **General characteristics of the dissertation**

The dissertation is based on a rich empirical and theoretical foundation. Its structure complies with the regulatory academic requirements and modern norms for doctoral research. The manuscript consists of **143 pages**, including core sections, in accordance with the recommendable volume ratios between them.

The scientific work contains 33 tables, 51 figures, and 3 main appendices. The total number of literary sources used is 175.

The rich presence of authors from recent years is impressive, which testifies to the use of contemporary achievements in science on the current problem.

The dissertation is of significant social, health, and educational relevance. It analyzes the impact of the COVID-19 pandemic on the physical activity and nutrition of teachers and students at the Medical College – Stara Zagora. The study is interdisciplinary in nature, integrating knowledge from public health, dietetics, kinesitherapy, psychology, and pedagogy. Methodologically, the thesis combines documentary, sociological, statistical, and laboratory analysis. It proposes proved and adopted models for nutrition and exercise regimens as a practical contribution.

This data demonstrates the in-depth research work, scientific validity, and well-visualized results.

### **Relevance of the topic**



The dissertation topic is highly relevant, especially in the context of the global consequences of the COVID-19 pandemic. The emergence of unexpected changes in the educational process, related to the mass shift to remote learning, requires an in-depth study of the consequences for the health of those involved in this process. Linking the topic to nutrition and physical activity is in line with one of the main goals of public health—prevention and promotion of a healthy lifestyle.

### **Problem investigation**

The literature review is comprehensive and systematic. It examines various aspects: physiological, social, pedagogical, as well as mental health dimensions of the problem. The author skillfully combines international and national sources, presenting contemporary scientific understanding of physical activity, nutrition, social isolation, online education and their impact. The citation of an impressive number of scientific works (over 170 sources) demonstrates depth and wide coverage of the analysis. The theoretical section is logically structured and convincingly substantiates the subsequent empirical part.

### **Adequacy of objectives and research tasks**

The formulated target objective – to examine the impact of the pandemic on the nutrition and physical activity of teachers and students – is clearly defined and socially relevant. The research tasks identified are specific, interrelated, and logically deriving from the objective. They reflect both diagnostic and intervention elements, including the elaboration of experimental programs. The hypotheses are scientifically grounded and testable within the selected methodology.

### **Methodological justification**

*The methods used* are appropriately selected and ensure the achievement of the goal and tasks set by the doctoral student. The research was performed using a comprehensive approach involving four main methods: documentary, sociological (survey), laboratory (biochemical analysis), and statistical. Validated instruments were used and ethical standards were observed upon working with the sample. The organization of the research is described in detail, and the sample presented (teachers and students) is well justified in view of the target group. The statistical processing is adequate – descriptive and comparative methods were used, including analysis of variations and percentage ratios. The methodology ensures the reliability and validity of the results obtained.

**The study sample consists of 191 respondents** divided into two target groups: **32 teachers** in various disciplines who were active during the pandemic period; and **159 students** from the disciplines of “Medical Cosmetologist”, “Assistant pharmacist”, “Rehabilitationist” and “Medical Laboratory Technician”.

The sample is representative of the college environment and provides an opportunity for comparative analysis between the both groups in terms of changes in motor activity, diet, psycho-emotional status, and overall perception of remote education.

This is a sufficient sample in terms of size and informative value, allowing for the formulation of well-founded conclusions related to the state of the problem.

### **Nature and organization of the study**

The study is **empirical and applicable in nature** and is based on an integrated approach that includes both diagnostic and intervention components. It goes through several main stages:

**Diagnostic stage** – a survey was conducted using a proprietary questionnaire and a diagnostic chart. The following were assessed:

- the level of physical activity before and during the pandemic;
- the manner and rhythm of eating;
- subjective self-assessment of health and psycho-emotional state;
- attitudes to and satisfaction from online studying.

**Analytical stage** – survey and quantitative data were processed using statistical methods, including variation, comparative, and correlation analysis. A comparison was made between teachers and students, as well as between subgroups by age, gender, and specialty.

**Intervention stage** – based on the results obtained, two experimental complexes were developed:

- **Diet** – a home-adapted balanced nutritional regime;
- **Physical activity** – including gymnastics, breathing exercises, and a home workout split.

These programs were tested and adopted on a limited sample and analyzed in terms of their effectiveness in restoring psychophysical balance and enhancing health literacy.



### **Analysis of key findings**

The results are systematized in three main areas: the psychophysical status of teachers and students in the context of distance learning; changes in diet; and levels of physical activity before and during the pandemic. Significant differences between the groups have been identified, as well as a proven link between a sedentary lifestyle, poor nutrition, and self-reported health. The data from the diagnostic chart has been interpreted convincingly. The author enriches the analysis with graphs, tables and interpretations that provide clarity and scientific rationale. Particularly valuable are the two developed models for balanced nutrition and physical activity, tailored to the home environment, is extremely valuable – their applicability is theoretically justified and empirically proven.

### **Contributions and significance of the thesis for science and practice**

The dissertation contains both scientific-theoretical and applicable contributions. Among them stand out: an interdisciplinary approach to the research problem; the creation and testing of programs for physical activity and nutrition; enrichment of knowledge about the effects of remote education on health. These contributions are highly reproducible and socially significant.

#### **Scientific-theoretical contributions**

➤ **Interdisciplinary conceptualization** of the impact of the COVID-19 pandemic on the lifestyle of participants in the educational process – with an emphasis on the links between physical activity, nutrition, and mental health.

➤ **Systematization and enrichment of scientific information** on the effects of social isolation and distance learning on the health of teachers and students, with an emphasis on new behavioral patterns that emerged during the pandemic.

➤ **Formulation of a new research framework** applicable to the analysis of health behavior adaptations in the context of extraordinary social and educational circumstances.

➤ **Creating an adapted diagnostic toolkit** for assessing physical activity, eating habits, and emotional well-being among individuals involved in medical education.

#### **Scientifically-applicable contributions**

- ✓ **Development and testing of two practical models:**

- **A balanced diet**, in line with the restrictions imposed by the pandemic situation;
- **A home-based exercise program**, including breathing exercises, gymnastics, and functional training.
- ✓ **Establishment of a structure for health intervention** that can be implemented in educational institutions to improve adaptation to shifting to online learning.
- ✓ **Formulating specific recommendations** to academic managing bodies and educators to improve the healthy behavior among students during crises.
- ✓ **Creating a training resource** that can be used in teaching practice, including in courses on healthy lifestyles, hygiene, nutrition, and rehabilitation.
- ✓ **Providing a database** that can be used for future comparative studies in a national and international context.

### **Publications related to the dissertation work**

Anushka Strahilova Uzunova published two articles related to the developed subject matter in the reputable scientific journal *KNOWLEDGE – International Journal*, being the first author of the one and sole author of the other article. The number and quality of the publications meet the requirements of the Medical University “Prof. Dr. Paraskev Stoyanov” – Varna, by reflecting the results and content of the dissertation to a great extent.

### **Abstract**

The dissertation abstract has been prepared in accordance with academic requirements and summarizes the objectives, tasks, methods, results, conclusions, and contributions, including concisely the objectives, tasks, methods used, results, conclusions and summaries, as well as scientific contributions.

### **Critical notes and recommendations**

I have no critical remarks for the doctoral candidate. In view of the career development of Anushka Uzunova and the promotion of her research findings, I recommend the publication of a monograph dedicated to the actual issues discussed.

### **Conclusion**

The dissertation by Anushka Strahilova Uzunova is an independent, original, and comprehensive scientific elaboration that fully meets the requirements for a complete dissertation in content and volume, as set by the Law on Academic Staff Development in

the Republic of Bulgaria, and the Regulations thereto, of Medical University "Prof. Dr. Paraskev Stoyanov" – Varna.

I consider the stated objective of the study is achieved, as the research tasks set have been completed.

The dissertation of Anushka Strahilova Uzunova contains scientific-theoretical, scientifically-applicable and applied results that represent an original contribution to the field of healthcare management.

Based on the indisputable merits of the presented dissertation paper work, I am confident in giving my **positive assessment** of the research presented in the above-reviewed dissertation, abstract, results achieved and contributions, and I recommend that the esteemed Scientific jury award the educational and scientific degree "**Doctor**" to Anushka Strahilova Uzunova in the scientific specialty of Health Care Management, professional field: 7.4. Public Health, field of higher education: 7. Healthcare and Sports.

**Date:** 18.08.2025

**Place:** Sofia

**Reviewer**

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**Prof. M. Vizeva, PhD**