

REVIEW

by

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*Appointed as an 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: Procedure for the defense of a dissertation work titled:
“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” for awarding of educational and scientific degree “Doctor” in the field
of higher education: 7. Healthcare and Sport, Professional field: 7.4 Public Health,
Scientific specialty: “Health Care Management”

Author: Anushka Strahilova Uzunova

a doctoral candidate pursuing an independent study under program “Health Care
Management”, Department of Health care, Sliven Affiliate, Medical University
“Prof. Dr. Paraskev Stoyanov” – Varna, enrolled by Order No. P-109-377 dated
23.08.2023.

Scientific supervisor: Assoc. Prof. Svetlana Peneva Angelova, DrPH

General overview of the procedure

The administrative documents and materials submitted to me for review have
been prepared and presented in accordance with the Law on Academic Staff
Development in the Republic of Bulgaria, the Regulations thereto and the
Regulations for the Development of the Academic Staff at the Medical University –

Varna. They are meticulously prepared and I consider them to be fully compliant with the requirements of the regulatory framework.

Biographical data and career development of the doctoral candidate

Anushka Uzunova was born on 9th September, 1970, in the town of Pazardzhik. In 1999 she completed her medical education as a rehabilitationist at the Medical college of Trakia University in Stara Zagora, obtaining her educational and qualification degree of “specialist.” In 2007 she continued her education at the Faculty of Medicine of Trakia University, earning a Bachelor degree in “Health Care Management”, and in 2009 at Medical University, Faculty of Public Health – Sofia she obtained the educational and qualification degree of “Master” in the same specialty.

In 2012 she was appointed as a senior lecturer at the Medical College of Trakia University – Stara Zagora, and since 2020 she has served as a head of the “Medical Cosmetologist” specialty at the same college.

She participated in the Erasmus+ program with two outgoing mobilities – to Lithuania in 2016 and to Republic of North Macedonia in 2018.

Anushka Uzunova has an extensive publishing activity. She has participated in numerous scientific forums and conferences. She has authored 44 publications in various Bulgarian and foreign journals. She has been a member of the research team in 11 scientific projects. Her memberships include the Bulgarian Association of Health Care Professionals (BAHCP) and the Association of Physiotherapists in Bulgaria (APB).

The educational and career development of the candidate clearly demonstrate her significant professional and teaching experience, establishing her as a competent specialist in her field of occupation. A series of proofs of publications and certificates of participation in scientific forums, attached to the documents, demonstrate her desire to continuously improve her qualifications and competence.

The academic development of Anushka Uzunova continues with her enrollment as a doctoral student and her paper work on the dissertation: “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”.

Content and structure of the dissertation

The dissertation presented by the doctoral candidate follows the classical structure of other similar scientific works, consisting of 143 pages (117 pages of main text), by the separate internal parts of the work are logically organized and interconnected. It includes an introduction, a literature review, objectives, research tasks and methodology of the study, results of the author's own research and discussion, recommendations, conclusions and contributions. It is illustrated with 51 figures and 33 informative tables presenting the results of the study and providing clarity on the problem investigated. The dissertation is written in a clear academic style with the appropriate use of scientific terminology. The bibliography spans 14 pages and includes 175 literary sources: mostly foreign publications, 25 Bulgarian sources, and 11 internet references. The doctoral student has also included 3 appendices related to the research tools.

Two publications related to the dissertation topic have been submitted.

Relevance and significance of the topic

The pandemic, caused by coronavirus COVID-19, is a global health crisis of our time and the greatest challenge we have faced in recent years. The pandemic situation has proven to be extraordinary, highly dynamic, requiring rapid and adequate responses, which has convincingly demonstrated that humanity is not protected from fast-spreading epidemics with broad impacts. The viral invasion caused significant disruption in health, economic, social, and educational aspects.

The relevance of the issue addressed in this dissertation lies in the forced social isolation that affected the behavioral and mental health of society. One form of isolation was the introduction of online learning and working. This led to isolation of participants; prolonged screen time; lack of ergonomics in the working environment; physical inactivity; and adverse effects on circadian rhythm and on physical and mental health.

The scientific value of the dissertation stems from its multidimensional examination of the problem and the study findings in this area can contribute to mitigating and/or overcoming the negative effects on the physical and mental health of those using the online educational environments.

Characteristics and evaluation of the dissertation

The introduction clearly substantiates the relevance of the issue and the motivation of Anushka Uzunova to choose the topic of her dissertation paperwork.

The doctoral candidate has presented a comprehensive **literature review**, logically structured and systematized, demonstrating her objective and in-depth awareness of the subject. The analysis is structured in several sections, which gradually present the individual aspects of the problem under study.

The overview begins with key statistics on the global spread of the coronavirus pandemic. It examines the restrictive measures taken during the COVID-19 pandemic that were necessary and effective in protecting public health. Particular attention is paid to the transition to remote learning, which while maintaining educational continuity, created numerous social and health-related challenges. The main negative effects of online learning have been identified – social isolation, reduced physical activity, increased stress and anxiety levels, as well as the related consequences – mental health disturbances, changes in eating habits, and weight gain. The preventive measures necessary to maintain good physical and mental health under conditions of remote work and learning are thoroughly discussed. Special attention is paid to balanced nutrition and regular physical activity, which are established as key preventive measures.

Based on the research performed in our and global scientific databases, the doctoral student derives conclusions about the state of affairs and suggestions to address the issues stemming from the COVID-19 pandemic.

Evaluation of objectives, tasks, and methodology

Based on the literature analysis, the doctoral candidate Anushka Uzunova has clearly defined the goal of her dissertation paperwork: – *Exploring the impact of online studying during the COVID-19 pandemic on physical activity and nutrition among students and their trainers at the Medical College – Stara Zagora, to develop and propose a universal set of healthy practices to reduce and/or overcome the negative consequences, affecting the physical and mental health of the users of online environment for study and work.* The tasks are logically aligned with the research objectives, by after their resolution the work gains completeness and wholeness. The two working hypotheses formulated are specific and clear. The sequence of stages in

the study is accurately and clearly described, thus allowing for a proper understanding of the nature of the actions taken. The methodological approach is sufficiently comprehensive, enabling the collection of high-quality data and achievement of the goals and objectives previously set.

An empirical study was conducted, by its subject were a total of 191 respondents, including students and teachers enrolled in remote learning programs. A proprietary toolkit consisting of two questionnaires was used, through which the candidate obtained information about the negative changes in the physical activity and nutrition of students and teachers as a result of the measures imposed due to COVID-19.

The doctoral candidate made an experimental study with 90 participants divided into two groups – experimental and control one, on whom measurements and studies were conducted before and after the period of relative social isolation during online studying. An individual diagnostic chart was applied to quickly and accurately record specific clinical indicators related to hypodynamia, nutrition and social isolation of respondents.

The statistical approaches used to determine the sample, as well as the overall statistical analysis of the results, are accurate.

Evaluation of research results

Chapter Three presents the essence of the dissertation. In 50 pages, the author provides a well-structured analysis of the data collected from her own research. The results are presented in a logical sequence, have completeness, and are supported by detailed figures or tables that present the data obtained in a more synthesized form, ensuring their correct perception and understanding. The volume of information is sufficient, which suggests reliable results.

In the discussion, A. Uzunova provides a detailed analysis of the results of her findings. She proves that prolonged remote studying negatively affects the health status of both students and educators in the online environment. For both groups of respondents, the results objectively indicate a decrease in physical activity. A high proportion of respondents also describe their eating habits during the pandemic as unhealthy. It is assumed that this is due to the synergy between stress, social isolation, and physical inactivity.

In her study the author conducts an experimental diet and exercise regimen and healthy practices in an online studying environment for a period of 3 months. The experiment finds statistically significant differences between the experimental and control groups in terms of key indicators – body mass, BMI, chest mobility during breathing, muscle mass, distance walked, and bone density, proving the effectiveness of the methodology applied in the experimental group, while also showing the unfavorable tendency upon absence of targeted physical activity or intervention.

Conclusions and recommendations

Based on the analysis and research conducted in the dissertation, nine conclusions providing a complete picture of the results of the paperwork have been substantiated and logically systematized. The conclusions are specific, yet comprehensive, and fully reflect the most important findings of the study.

Particularly important are the recommendations made to reduce and/or overcome the negative consequences affecting the physical and mental health of those using the online studying environment.

Evaluation of contributions

I acknowledge the following contributions of scientific-theoretical and practically applicable significance, which are outlined by the results of the scientific study and the conclusions formulated:

Of theoretical and cognitive nature:

1. After analysis of Bulgarian and foreign literature sources and a number of regulatory documents, the interrelation between physical activity, nutrition and physical and mental health is confirmed.
2. Definition is made of the negative effects of social isolation combined with hypodynamia and poor eating habits, which can be reduced or overcome by appropriate healthy practices.

Of practically applicable nature:

1. An author's model of nutrition in cases of reduced physical activity was compiled in accordance with Ordinance No.1 dated 22.01.2018 on the physiological norms of nutrition of the population.

2. A set of exercises for training in the home environment was developed to compensate for reduced motor activity due to the online environment for work and study.

3. An experiment was performed to apply the developed dietary and exercise regimen in combination with controlled respiratory gymnastics, under online training and work conditions, the results of which confirmed the effectiveness of the methodology applied.

Evaluation of dissertation publications

The doctoral candidate Anushka Uzunova submits two publications related to the topic of the dissertation, presented in peer-reviewed journals.

Abstract

The abstract presented in 75 pages is structured in accordance with legal requirements, having illustrative material of high-quality, and reflects the dissertation neatly, correctly and completely.

Personal participation of the doctoral candidate

The doctoral candidate Anushka Uzunova has contributed to the entire proposed dissertation, and all conclusions, contributions, and results are her personal merit.

CONCLUSION

The presented dissertation thesis “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” by Anushka Strahilova Uzunova

meets all the requirements of a completed doctoral dissertation – it features clearly defined objectives and tasks, appropriately selected methodology, competent analysis and contributions of theoretical and practical importance, in full compliance with the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations on the Terms and conditions for acquiring scientific degrees and holding academic positions at MU – Varna.

The dissertation work shows that the doctoral candidate has in-depth theoretical knowledge and demonstrates the qualities and skills necessary to perform an independent scientific research.

Based on the complex evaluation of the dissertation and the abstract, **I give my positive assessment** and recommend that the esteemed Academic jury award the educational and scientific degree “**Doctor**” to **Anushka Uzunova** in professional field: 7.4 Public Health in the field of Higher education: 7. Healthcare and Sport, and Scientific specialty: “Health Care Management”.

Date: 18th August 2025

Place: Sofia

Prepared by:

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679
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Prof. Delyana Hadzhideleva, PhD