

REVIEW

of a dissertation on a topic:

“Monitoring the Effect of Kinesitherapy Methodology in University Students with Musculoskeletal Dysfunctions, Overweight and Obesity”

For awarding educational and scientific degree “Doctor” in the higher education field: 1.3 Pedagogy of education in...(Methodology of education in Physical Education and Sports – kinesitherapy).

PhD student: Gergana Georgieva Despotova

Supervisor: prof. Kostadin Kostov, PhD

Reviewer: Assoc. prof. Boryana Tumanova, PhD

General presentation of the procedure

The analysis of the presented procedure documents shows that PhD student Gergana Georgieva Despotova has presented a complete set of materials, in both paper and electronic form, which all are in accordance with the Higher Education Act, the Law on the Development of the Academic Staff of Republic of Bulgaria, the University “St. Kliment Ohridski” Regulation on the acquisition of the educational and scientific degree “Doctor”. The other documents in the procedure also fully comply with the related administrative requirements.

Short biographical data for the PhD student

Gergana Despotova has a Master’s Degree in Kinesitherapy from the National Sport Academy, since 2014. She worked in the specialty as an intern in a hospital, as a

kinesitherapist for people with disabilities, as an ergo therapist for children with cerebral palsy and others. Since 2019, she has been appointed assistant professor in Sofia University "St. Kliment Ohridski" Sport Department, and for one year now, she has been the Head of the Center for kinesitherapy.

Relevance of the topic, structure and knowledge of the problem

The selected and developed theme of the dissertation work has a complex focus and is essential in the prevention and treatment of overweight and obesity, and for strengthening the health. The topic is specifically related to the research, the specifics of the dissertation work addresses a serious and up-to-date contemporary problem.

The generally accepted model and structure for this type of scientific work is followed, and it is presented in 194 pages, including 38 tables and 16 figures. The work is structured in introduction, five chapters, bibliography and 4 applications of which, 178 pages are subject to review.

The bibliography consists of 177 titles, of which 60 are scientific researches written in Cyrillic, 110 in Latin and 6 websites. There have been used 20 redundancies.

The **Introduction** introduces the problem of overweight and obesity as a socio-significant disease, seen through the kinesitherapy. Obesity and overweight are an essential factor for the occurrence of a number of diseases and complications in health and social aspect and are long time considered but unresolved to this day problem.

Chapter I "Theoretical staging of the problem" is in a volume of 42 pages and includes 4 sections and 11 subsections directly related to the topic of the dissertation. In **Section One**, "1.1. Obesity as a socio-significant disease" are summarized a large number and sufficiently informative publications. Opinions on the nature of the

problem, its epidemic, etiopathogenesis and the regulation of energy balance are presented competently and thoroughly. The **Second section** systemizes and analyzes data about diseases caused by overweight and obesity, as well as treatment options. In **Section 3** of this chapter is broadly examined the kinesitherapy as one of the treatment options.

The formulated **work hypothesis** is justified and gives grounds for the assumption that the application of kinesitherapy methodology once a week to Sofia University "St. Kliment Ohridski" students, who are overweight, obese and with musculoskeletal dysfunctions, will lead to a decrease in body weight and improvement of their functional state, but applied three times a week, will have more pronounced effectiveness. On this basis, a methodology of kinesitherapy in overweight and obesity, administered at different weekly frequency, can be developed. The systematic analysis of the problem under consideration gives the PhD student reason to indicate, for the first time in the specialized literature, the possibilities for impact of a kinesitherapy methodology applied at different weekly frequency in university students with the appointed problem. The integrated scientific and factual information is essential in issues and depth. The PhD student critically expresses views and demonstrates professional competencies in characterizing different opinions. We come to a summary that he has in-depth knowledge of the subject of the dissertation and clearly expresses positions on the issues under consideration, which positively characterizes this part of his creative activity.

Chapter II "Purpose, Tasks and Methods of Research" has a volume of 22 pages. The aim is in accordance with the topic and the working hypothesis and builds the guidelines of the research: to track the effect of applied methodology of kinesitherapy with different weekly frequency in Sofia University "Kliment Ohridski" students, with musculoskeletal dysfunctions, overweight and obesity, by

developing and approving in practice of kinesi-therapeutic complex, including health-educational lecture course.

Five research tasks are clearly and correctly formulated, which successfully decompose the achievement of the aim, while respecting the balance between scientific and methodological organizational research activities. The object, subject areas and surveyed persons are characterized circumstantially. The methods of research applied are informative, sufficient as a methodical variety and are adequate for the fulfilment of the objectives and tasks set. Objective quantitative data on significant in number and content indicators that have been processed using relevant mathematical and statistical methods have been systematized and measured. They objectively characterize the studied individuals' body reaction and the changes in the monitored indicators resulting from both individual and systemic kinesitherapy activities. Additions to the results obtained are set out in the "Annexes" section. Subsection II. 4. "Organisation of the study" makes a clear periodization of the stages of the activities carried out.

Chapter III presents "Methodology of kinesitherapy in overweight and obesity". This is the real part of the work, in which Despotova examines the aim and tasks and the means for achieving them, attention is paid to the general methodological requirements and rules for conducting kinesitherapy. Offers to our attention a scheme of procedure, as well as sample complexes. The Chapter has a volume of 14 pages.

Results and analysis – Chapter IV has a volume of 65 pages and integrates the results and analyses from the comprehensive research and analytical activities of the PhD student. It shows the ability to interpret competently and in-depth analyses of a large amount of data. The results of a survey by alternative analysis; statistical processing of anthropometric and functional indicators by variation, and comparative analysis; values of As and Ex coefficients; absolute and relative

growths with a corresponding guarantee probability P_t ; and Student's t-test for independent and dependent samples, are presented. The results for the presence of pain and evaluation of the posture were derived separately for each group, and are ranked in tables. The applied effectiveness of the original methodology of kinesitherapy in Sofia University "St. Kliment Ohridski" students, who are overweight, obese and with musculoskeletal dysfunctions, is presented and analyzed.

Conclusions and recommendations

The seven conclusions and five recommendations derived from the results obtained and analyzed, correspond to and provide answers to the study's aim and tasks.

Together, they cover the extensive subject areas of research and have both original and affirmative character.

With a confirmatory nature, we evaluate the conclusions and recommendations related to the developed methodology of kinesitherapy applied three times a week, workload in students with musculoskeletal dysfunctions, overweight and obesity in combination with a hypocaloric balanced diet, as well as low awareness of students regarding issues related to physical activity and health.

Nature of the scientific contributions

The analyses, conclusions and recommendations contain a number of partial scientific and applied contributions, which the PhD student integrates into two main:

- Contributions of a scientific-theoretical nature;
- Contributions of a practical nature.

Assessment of dissertation's abstract and publications

The abstract is well structured and reflects in summary, the content of the dissertation. The various main parts of the work are presented – the bibliography

research, work hypothesis, aim, tasks, methods of research, to the essence namely the obtained results and analyses, formed conclusions, recommendations and scientific contributions.

The PhD student has fulfilled the requirement for publicity of the work before the official public defense, by presenting four publications in a referenced journal, in which he is an independent author. They reflect parts of the results, analyses and conclusions of the dissertation work, which allows us to build an objective initial idea of the process of its creation.

Critical Notes

It is established that the recommendations and critical notes made by us in the internal discussion of the dissertation work have been taken into account in its entirety. Appropriate structural and meaningful adjustments have been made.

Conclusion

The dissertation of Gergana Despotova is a complex theoretical-experimental work in nature, which contains original scientific and applied results characterizing the specifics of obesity as a socio-significant disease and the resulting complications, as well as the application of kinesitherapy, with different weekly frequency to solve the problem under consideration.

The PhD student with professional competence has organized and carried out research, processed and analyzed experimental results and formulated the conclusions arising from them. Through analysis of a large volume of quantitative data and pedagogical experiments, trends and facts enriching the theory and methodology of sports pedagogy and Physical Education, in particular the theory and methodology of kinesitherapy have been established.

I vote YES and propose to the esteemed scientific jury to award Gergana Georgieva Despotova with the educational and scientific degree "Doctor" in the higher education field - 1.3 Pedagogy of education in...(Methodology of education in Physical Education and Sports – kinesitherapy).

09.09.2021

Reviewer:

Assoc. prof. Boryana Tumanova, PhD