

# STATEMENT

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For public discussion of a doctoral dissertation for the award of

Educational and scientific degree “PhD”

Field of higher education: 1. Pedagogy

Professional field: 1.3. Pedagogy of Training in .... (The methodology of training in physical education and sport – kinesitherapy)

Scientific specialty: kinesitherapy

University: Sofia University “St. Kliment Ohridski”, Department of Sport

Theme of the dissertation: MONITORING THE EFFECT OF KINESITHERAPY METHODOLOGY IN UNIVERSITY STUDENTS WITH MUSCULOSKELETAL DYSFUNCTIONS, OVERWEIGHT AND OBESITY

Authors' Name: Gergana Despotova

Scientific Supervisor: Prof. Kostadin Kostov, PhD

Overweight and obesity are high risk factors for multiple diseases, especially in childhood and in youth. Hypodynamics and unhealthy diet are at the root of this medico-social problem. In this regard, the dissertation work of assistant Despotova is relevant because it is associated with scientific researches on the application of more effective methodologies to counteract overweight, obesity and various musculoskeletal dysfunctions among university students.

The dissertation work was developed in a volume of 194 pages, containing: introduction, 5 chapters, literature and 4 applications. It is illustrated with 38 tables, 16 figures.

A total number of 177 information sources were used, including 60 in Cyrillic, 111 in Latin and 6 internet sources.

In the first chapter "Theoretical formulation of the problem", the author analyzes the social significance of obesity according to our and other experiences, considering the nature, prevalence, etiopathogenesis, the importance of neuro-humoral regulation, and comorbidities due to obesity.

The wide variety of means for regulating body weight is presented, such as: diet therapy, behavioral therapy, applicable with great success and in eating disorders, pharmacotherapy, and surgical therapy. A significant place is devoted to the role of physical activity, and in particular kinesitherapy, for the treatment of overweight and obesity, as well as for prevention from complications related to obesity, analyzing the rich experience of Bulgarian and foreign specialists who have worked and applied kinesitherapy in this field.

In connection with the theme of the dissertation work, the problems related to obesity and overweight among university students are addressed, which logically led to the formulation of a working hypothesis based on an insufficiently developed and still unresolved problem to take into account the effect of applying kinesitherapy, to affect overweight and obesity in university students with musculoskeletal dysfunctions.

The author moves on to chapter two, which begins with a clear aim and 5 tasks of the study. The contingent is from 162 women and 56 men from the 1th to 4th course of Sofia University "St. Kliment Ohridski", aged 19 to 25, attending "Sport – Kinesitherapy".

Unintentionally, 2 experimental groups (EG) of 20 students were formed, visually distributed in a table according to BMI, waist circumference and risk of metabolic complications.

In addition, the PhD student also made a distribution of the contingent according to the most common musculoskeletal dysfunctions among students. EG 1 has kinesitherapy classes once a week, while EG 2 is three times a week. Various

methods have been used to assess the effect of kinesitherapy methodology such as: posture assessment, survey method, anthropometry, including: weight, height, BMI, waist circumference, hip circumference, skin folds, body fat percentage.

Appropriate functional tests such as the Ruffier test with standard physical exertion and the Kraus-Weber test for static strength endurance of the trunk muscles have been selected. The VAS was applied to quantify the pain. The entire organization of the experiment is very well described.

Chapter three presents the methodology of kinesitherapy with a certain clear purpose and tasks in combination with diet therapy and lecture course.

Very correctly, the exercises are selected mainly of a cyclical nature, performed more often of moderate-intensity aerobic exercises, at a slow to moderate pace, without pain.

The complexes also include strength, balance and coordination exercises, respiratory exercises – static (diaphragmatic breathing) and dynamic, relaxing exercises and those to improve posture.

The results of the experiment were well analyzed on the basis of very good statistical data processing, which are presented correctly in tables and illustrated with graphs in the fourth chapter of the dissertation work.

At the end of the dissertation work, the author formulates 7 conclusions and 5 recommendations. The conclusions fully reflect the experimental work done, and the recommendations set the direction for enriching the organization for the application of kinesitherapy in overweight and obesity among university students.

### **CRITICAL NOTES**

I would note that there is no description of the applied diet treatment and only its tasks are listed.

### **SCIENTIFIC CONTRIBUTIONS**

1. An in-depth study was conducted among university students with overweight, obesity and musculoskeletal dysfunctions and the results obtained gave grounds for adjusting student's curricula and the inclusion of



more hours of kinesitherapy and sports classes in these socially significant diseases.

2. A comprehensive specialized kinesitherapeutic program for and prevention of for reducing body weight musculoskeletal dysfunctions in a large contingent of university students has been prepared and conducted.
3. Survey cards are prepared for self-assessment of the health status of university students, which can be used in other research.
4. A thematic lecture course has been developed, which is included in the curriculum of the students in the discipline "Sport" to enhance the health culture of university students.

The author's abstract corresponds to the content of the dissertation work.

The PhD student has 4 scientific publications on the topic, presented at scientific conferences, in all of them she is an independent author.

No attempts of plagiarism have been found.

### **CONCLUSION**

I highly appreciate the research and practical work of Gergana Despotova.

Based on the qualities and contributions of the dissertation submitted to me for evaluation, containing theoretical statements and scientific and practical solutions to the socially significant problem related to obesity and musculoskeletal dysfunctions among university students, I propose to the members of the scientific jury to award Gergana Despotova the educational and scientific degree doctor in professional field 1.3. Pedagogy of training in ... (The methodology of training in physical education and sport – kinesitherapy).

I declare my positive opinion.

10.09.2021

Statement prepared by:

Prof. Nezabravka Gencheva, PhD

