

REVIEW

of a dissertation on the topic:

"Development of physical ability and physical qualities of students in field hockey" for the award of the educational and scientific degree "doctor"

Scientific specialty: "Methodology of teaching in physical education and sports"

Field of higher education: 1. Pedagogical sciences

Professional direction: 1.3. Pedagogy of teaching in...

Author of the dissertation: Maria Stefanova Ivanova

Scientific supervisor: Prof. Teodora Nikolaeva Simeonova, PhD

Review by: Prof. Stefan Hristev Bazelkov, PhD

As a member of the jury, I have received:

1. Order of the Rector of Konstantin Preslavsky University of Shumen – No. RD-16-108/14.07.2026
2. Doctoral dissertation in the field of "Methodology of Physical Education and Sports Training," along with accompanying appendices
3. Abstract of the dissertation
4. Curriculum vitae
5. Summary of contributions
6. Scientific publications related to the dissertation.

I. Information about the doctoral candidate: Maria Stefanova Ivanova was born on June 1, 1974, in Stara Zagora. She obtained her Bachelor's degree in 1999 from the South-West University "Neofit Rilski" in Blagoevgrad, specializing in "Pedagogy of Physical Education" and qualifying as a physical education teacher. In 2006, she earned a Master's degree in "Pedagogy of Physical Education" from the University of Plovdiv "Paisii Hilendarski." At the same university, she completed a second Master's degree in "Applied Psychology."

She began her professional career as a physical education and sports teacher in Stara Zagora at the "Mityo Stanev" Primary School and the "Romain Rolland" Foreign Language High School. Later, she continued her teaching work at the "Hristo Smirnenski" and "Vasil Levski" Secondary Schools in Stara Zagora. From 2008 to 2009, she worked as a psychologist at the Home for Medical and Social Care for Children (DMSGD) in Stara Zagora.

She began her academic career in 2009 at Trakia University in Stara Zagora, where she has been working as a senior lecturer to the present day.

Maria Ivanova possesses extensive pedagogical experience and appropriate qualifications, which attest to her professional competence. She is distinguished by a high level of tolerance, strong communication skills, and an ability to work effectively in a team. She is skilled at organizing and delegating the functions and duties associated with the specific tasks assigned to her. These are qualities that make her an educator with a sense of personal responsibility, a positive mindset, and an optimistic attitude in her interactions with colleagues and in her educational work with students.

II. Doctoral studies data: The dissertation work of Maria Ivanova proposed for review, for the award of the educational and scientific degree "doctor", on the topic "Development of physical ability and physical qualities of students during field hockey activities" is developed in a volume of 192 printed pages, including 171 pages of main text and 21 pages for a list of literature used and appendices. The study is further illustrated with 86 figures, 34 tables, and 3 appendices, which provide a more comprehensive overview of the theoretical section. The bibliography includes 105 sources: 81 in Cyrillic, 8 in Latin script, and 16 online resources. These sources cover the theory and methodology of physical education and sports training, biomedical sciences, pedagogy, and psychology, as well as the specific aspects of physical development, physical capability, and motor training among university students.

The dissertation was preliminarily reviewed and discussed at a meeting of the Department of Theory and Methodology of Physical Education and Sport on July 3, 2026. It has been referred for public defense before a Scientific Jury within the scientific field of "Pedagogical Sciences" and the professional area "Pedagogy of Teaching..."

III. Information regarding the dissertation and the abstract: The doctoral dissertation by Maria Ivanova is, in essence, a theoretical-applied and prognostic study concerning the theory and methodology of physical education and sports training.

The content of the work is structured in accordance with the requirements for scientific texts of this type. Separate chapters, sections, and subsections have been established in compliance with standards. The main text comprises an introduction and three chapters, covering the theoretical foundation, the methodological part, the analytical component, and conclusions and recommendations. The supplementary material includes the mandatory list of references. The appendices are placed at the end of the work.

The abstract is prepared in a concise format, adhering to the requirements for pedagogical research, and accurately reflects the key premises and scientific contributions of the dissertation.

IV. Evaluation of the results and contributions of the dissertation:

In the introduction, the doctoral candidate provides a concise overview of the negative trends currently affecting physical education and sports in higher education. The study highlights the need to counteract physical inactivity in students' daily lives and to boost their motivation and interest in physical exercise and sports through the use of innovative and engaging physical activities. This serves as an effective way to introduce the dissertation topic and summarize the rationale behind its selection. Emphasis is placed on the need to implement sports disciplines that not only stimulate cognitive engagement but

also significantly enhance students' motivational readiness and physical activity levels.

The first chapter is titled "Literature Review and Problem Statement." It spans 36 pages, representing 22% of the entire study. Structurally, it comprises nine sections. These contain an in-depth analysis of the literature relevant to the research topic. The research hypothesis is developed in Section 5.

In the context of the research topic, the first three sections are dedicated to the origins, development, and evolution of the sport of field hockey. A brief analysis of the sport's inception and early stages in the country is provided, structured into six distinct periods. Particular emphasis is placed on women's field hockey.

The second half of the first chapter presents a theoretical analysis of issues related to motor qualities and physical performance capacity. The system for monitoring and assessing physical performance capacity—viewed as an integral indicator of human physical fitness—is characterized from a retrospective perspective. A theoretical analysis regarding the characteristics and classification of specific motor qualities is also conducted. Shortcomings in data systematization concerning indicators of physical development, physical performance capacity, and neuropsychic reactivity during the period following Bulgaria's transition from a planned to a market economy are highlighted.

At the end of the first chapter, the research hypothesis is formulated based on the analysis of available literature, as well as the arguments and generalizations presented. It is related to the topic of the dissertation and largely forms the basis of the doctoral student's research work.

Chapter Two, titled "Aim, Objectives, Subject and Object, Methodology, and Organization of the Research," presents the study's toolkit and methodological framework. Spanning 17 pages, it outlines the methodology and the sequence of actions taken to address the set objectives.

To achieve the aim and to confirm or reject the hypothesis, six main objectives were identified. In my view, the most ambitious objective is the development and implementation of a field hockey training program for female students.

The subject and object of the research are correctly defined in alignment with the study's topic. The size of the participant group is sufficient to support a comprehensive study, thorough analysis, and the drawing of reliable conclusions. The chronology of the study's various stages is described in detail.

The methods employed were appropriately selected based on the objectives set. A sociological survey of the female students was conducted to assess their interests, attitudes, and competencies regarding physical education and sports, as well as their motivation to engage in regular physical exercise and sports activities. Pedagogical observation was used to track the process of mastering specific motor skills and to evaluate their effectiveness in improving key physical attributes.

Mathematical-statistical methods included frequency and comparative analysis to process the survey results, variation analysis to determine the mean levels and variability of the studied characteristics, and comparative tests for dependent and independent samples to establish statistical significance.

Chapter Two examines the essence of the field hockey curriculum for female students. Reference is made to Appendix 3 for further details.

Chapter Three is the most extensive and is titled "*Results and Analysis*." It is structured into six main sections. The first section analyzes the results of a survey regarding the female students' attitudes toward and motivation for physical education and sports at both the secondary and higher education levels. This is followed by an analysis of the results from the anthropometric study, which serves as a baseline for developing and improving motor qualities.

The remainder of Chapter Three tracks and analyzes the changes in physical performance indicators for both the control and experimental groups.

Statistical methods were employed to conduct a comparative analysis to test the research hypothesis. Statistical indicators derived from the analysis of variance are presented clearly in tabular form. For the differences observed between the initial and follow-up assessments, values indicating the level of confidence probability and statistical significance were calculated. This enables the doctoral candidate to draw more precise conclusions regarding the trends in the indicators under study.

Numerical values within the analysis are illustrated using bar charts and pie charts to provide a comprehensive overview of the trends in the studied indicators. The overall theoretical analysis—supported by numerous figures, tables, and charts—demonstrates the effectiveness of the structured field hockey training program. At the end of Chapter Three, a table is proposed for monitoring and assessing the female students' motor qualities.

Based on a theoretical review of available literature and an analysis of the empirical and evidentiary data, doctoral candidate Maria Ivanova presents seven conclusions. My overall assessment is that the conclusions largely align with the set objectives and sufficiently demonstrate that the research hypothesis is confirmed.

Immediately following the conclusions, **three practical recommendations** are presented; these are primarily addressed to the teaching community and certain educational management bodies.

The scientific contributions of the study can be summarized as follows:

1. The motivational sphere of female students regarding physical education and sports was identified and analyzed; the study revealed the characteristics of their attitudes and expectations during the transition from secondary to higher education and outlined opportunities to increase their active participation in sports activities.

2. The baseline level was established, and the dynamics of the female students' physical development, physical qualities, and physical performance

capacity were monitored; a positive trend in the studied indicators was demonstrated as a result of the systematic implementation of the developed experimental field hockey program for women.

3. A methodologically grounded field hockey training program for higher education institutions was developed. It is tailored to the students' baseline physical fitness, capabilities, and needs. The program has been implemented in practice, creating conditions for the targeted development of physical qualities, the enhancement of physical performance capacity, and the stimulation of interest in competitive sports activities.

4. A system of standards and criteria for the individual assessment of the level and improvement of the students' physical qualities was developed and tested. This enables a more objective tracking of individual progress and allows for a more precise differentiation of pedagogical interventions.

5. The potential for using field hockey—and other sports less familiar to students—as an alternative form of physical education in higher education was scientifically and practically substantiated, with the aim of increasing motivation and active participation, as well as enhancing the effectiveness of the pedagogical process.

I have the following questions for the doctoral candidate:

1. Can the field hockey program also be used for training male students?
2. At what age is it best to start practicing field hockey?
3. Can we estimate the motor activity density of the field hockey sessions with female students?

Three appendices are included at the end of the paper; of particular interest is the field hockey curriculum for women.

Reviewer's Final Opinion

In conclusion, I consider that the dissertation submitted for the award of the educational and scientific degree "Doctor" meets the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria. The

dissertation contains scientific and applied scientific results that represent an original, innovative, and confirmatory contribution to the field. Furthermore, the dissertation demonstrates that the candidate possesses in-depth knowledge of the subject matter and the ability to conduct independent scientific research. In my view, the work with literature sources and regulatory documents is thorough, precise, and accurate. For these reasons, I will confidently vote to award the educational and scientific degree "Doctor" to doctoral candidate Maria Stefanova Ivanova and urge the other members of the scientific jury to do the same.

15.09.2026

Signature:

(Prof. Dr. Stefan Bazelkov)

