

STANDPOINT

by **Prof., Dr. Sci. Diana Lilova Svetleva, PhD** on a dissertation for awarding the educational and scientific degree "**Doctor**" in the Field of higher education: **4.0. Natural Sciences, Mathematics and Informatics**; Professional field: **4.3. Biological Sciences**; Doctoral programme: "**Genetics**"

Author: *Stanislav Ivanov Ivanov*

Topic of the PhD thesis: "Human phenotypic diversity in a complex of descriptive and behavioral characteristics"

Scientific supervisor: Prof. Evgeniya Neshova Ivanova, Ph.D.
Department of "Developmental Biology"

1. General presentation of procedure and PhD student.

By order № PD-22-215 of 28 January, 2025 of the Rector of Plovdiv University "Paisii Hilendarski" (PU) I have been appointed as a member of a scientific jury to ensure a procedure for defense of PhD thesis by **Stanislav Ivanov Ivanov**, full-time PhD student at the Department of "Developmental Biology". He was enrolled as a full-time PhD student with Protocol № 259/19.01.2021 from the meeting of the Council of Biological Faculty.

Set of paper and electronic materials presented by PhD student Stanislav Ivanov is in full compliance with Art. 36 (para. 1) of the Regulations for Development of Academic Staff of Plovdiv University (PU). All references are signed and contain reliable information.

PhD student has met the national scientometric requirements for the defense of his PhD thesis. His total score is 89 out of a required 80.

Stanislav Ivanov was born on September 24, 1987 in the city Straldza. He graduated from high school in 2006 in Secondary school "Peyo Kracholov Yavorov", city Straldzha, and higher education - at Plovdiv University "Paisii Hilendarski, during the period 2014 - 2018 with a bachelor's degree in "Psychology". In 2020 he also received a master's degree in "Human Resource Management" at Plovdiv University.

In 2017, he conducted a student internship in psychological counseling of visually impaired people at the National Center for Rehabilitation of the Blind in Plovdiv (NCRS).

For some time (from 2014 to 2016) he worked at the Sofia Industrial Complex, and from 2017 until now, he is Deputy manager of the "Blagodat Christian Center for People with Disabilities" Foundation in the city of Plovdiv. From November 2024 (until now) works at KROS MEDIA EOOD, Sliven in the position of "Psychologist".

He has very good competences for working with Microsoft Office and Internet and a good level of English speaking and writing.

2. Relevance of the topic.

Relevance of PhD thesis is mainly determined by the following facts:

❖ Simultaneous study and characterization of descriptive and psychological signs is relatively rare worldwide, and it has not been conducted in Bulgaria;

❖ There are also no Bulgarian studies on the dependencies between these signs among elderly population. Need to obtain significant scientific data of a similar nature determines relevance and originality of the presented PhD thesis;

❖ There are still conflicting data and a lack of sufficient detail in the literature regarding distribution of monogenic and polygenic descriptive traits in human populations;

❖ Available data are insufficient regarding peculiarities in the manifestation of multifactorial signs, among which genetic predispositions and diseases of social significance, as well as individual creative characteristics, and their potential relationship with five main personality factors have not been studied in their entirety;

❖ Complex study of descriptive traits and genetic predispositions together with personality phenotypes is a way to clarify the complex mechanisms of adaptation to the changing environment and search for objective approaches to ensure the well-being of the individual;

❖ There are many theories about the types of personality traits, but the five-factor model of personality is emerging as one of the most widely used in psychology.

PhD student Stanislav Ivanov very consistently and categorically substantiates the need and importance of a complex study of problems discussed in the "Literature review" section and on this basis forms the goal of his PhD thesis development. Seven specific tasks have been set for its achievement.

3. Knowing the problem.

The dissertation is written on 202 pages in A4 format. A classic structure was used for its design.

The following sections are the largest in terms of volume:

✓ A "Literature Review" section is written in 44 pages. It includes 7 main sections, in which very competently are presented and discussed conducted and described in the literature studies in the PhD thesis field of investigations;

✓ Obtained results and their interpretation are elaborated on 87 pages;

✓ In a "Cited Literature" section literary sources included in the dissertation are described on 43 pages.

List of cited literature includes 456 sources, of which 5 were published in Cyrillic and 451 in Latin. It is particularly important to note that some of the cited sources (36 – 7,90%) were published in the last 5 years, which emphasizes the relevance of problem studied by PhD student Stanislav Ivanov.

In the cited literature, 4 sources (0,88%) were published in the period 1936-1951. This proves that all publications that may be tangential to the research conducted by PhD student in previous periods were very thoroughly searched.

My general opinion is that PhD student Stanislav Ivanov shows a very good knowledge of studied topic and competence in analyzing problems under consideration.

4. Research methodology.

PhD doctoral student has described in his thesis the entire research methodology very fully and in details.

Of the total of 945 individuals included in the study, 29,1% were men and 70,9% were women, aged between 16 and 90 years. Data was collected using 2 applications -

Questionnaire "Markers of the Big Five Factors" (Big Five - Big 5) and Form – "Key for calculating the results".

All investigated persons are of Bulgarian ethnic origin, with a registered place of residence on the territory of the entire country.

The following methods were used:

- Data collection, carried out with consultation and under the control of a leading researcher, regarding the appearance of descriptive signs (monogenic and polygenic) selected for analysis, as well as data on blood group type;

- Survey to collect data on prominent signs with genetic predisposition (multifactorial diseases diagnosed by a doctor and creative talents, including myopia and astigmatism, high blood pressure, migraines and allergies, musical and other talents);

- Survey using the "Big 5" questionnaire - "Markers for the big five factors" in its adapted version for the Bulgarian population (Aleksandrova-Karamanova, 2016) in order to study five basic personality characteristics - extraversion, benevolence, conscientiousness, emotional stability and openness to experience (intellect/imagination);

- Statistical analysis carried out by using IBM SPSS Statistics software package, version 22.0;

- A set of technical tools and specialized software for blind researchers.

All the results obtained by the PhD student have been processed statistically very properly, which gives reason to make an accurate reading of the obtained regularities.

5. Characterization and evaluation of the PhD thesis and contributions.

Structure of the PhD thesis follows generally accepted arrangement of the sections in this type of scientific works: Abbreviations used, Introduction, Literature review, Aim and tasks, Material and methods, Results and discussion, Implications and conclusions, Contributions of the PhD thesis, List of publications in connection with the thesis and Cited literature.

In the "Results and discussion" section, 37 tables and 38 figures are included, which very accurately reflect obtained results and make it possible, when reading the thesis, to easily see existing dependencies between the reflected parameters.

Discussion made about the obtained results illuminates quite clearly overall logic of the research conducted and relationships between them. Obtained results are properly supported with the results and studies of other researchers.

In the "Implication and Conclusions" section, PhD student Ivanov has adopted an interesting structure. First of all, 6 implications are presented in a convincing manner and with categorical evidence, and in point 7 emerging trends and dependencies are entered, which I accept unconditionally. They are an illustration of original, scientific and scientific-applied contributions of the thesis.

I believe that the obtained results and conclusions drawn by PhD student Stanislav Ivanov in his thesis can be successfully used by other authors when conducting research in this area.

Contributions of the thesis are outlined by the PhD student in 4 sections: "Implications of an original scientific nature", "Implications of a confirmatory nature", "Implications of a methodological nature" and "Implications of an applied nature".

PhD student outlined 5 original contributions, which prove that such research has not been conducted in Bulgaria. This is a great success for a thesis related to the defense and obtaining the educational and scientific degree "DOCTOR (Doctor of philosophy)".

It makes a very good impression that 2 methodical and one applied contribution are outlined, which outlines possibilities for future developments of the PhD student to further illuminate the investigated areas.

6. Evaluation of publications and personal contribution of the PhD student.

PhD student has submitted a list of 7 scientific papers published in English. Four of the articles are related to the topic of thesis, and 3 articles are outside the thesis development.

One of the articles related to thesis was published in the Journal of IMAB - Annual Proceeding (Scientific Papers) with SJR=0,225 and quartile Q3₂₀₂₀ (referenced in Scopus), two articles were published in the journal Ecologia Balkanica with SJR=0,202 and quartile Q4. The fourth article was published in the Journal "Scientific works" from the Balkan Conference on Biology, held in Plovdiv.

In one article, PhD student Stanislav Ivanov is first author, and in the other three articles he is in the second position.

Studies described in the articles are performed at the required level. An appropriate and modern methodology was used. Obtained results are properly analyzed and their discussion is supported by the opinions of other researchers who have published articles with studies close to the topic.

Part of the obtained by the PhD student results were presented at 6 scientific forums - one held in Edirne, Turkey and 5 - in Bulgaria.

Presented declaration of originality proves that analyzes included in the PhD thesis development, obtained results and summaries made, were with a personal participation of the PhD student Stanislav Ivanov.

7. Abstract.

Abstract is presented in Bulgarian and English variants. It is well laid out in a volume of 32 pages. Structured well and reflects in a summarized version the structure and content of the thesis. Abstract is illustrated with 4 tables and 38 figures. It is written clearly and well reflects the obtained results in the thesis. It is presented in accordance with all the requirements of the law for such a publication.

8. Recommendations for future use of the thesis contributions and results.

Thesis presented by PhD student Stanislav Ivanov is comprehensive and of great importance for human genetics and psychology. Research methods, innovative for Bulgaria, were applied and important results were obtained. Some of the mentioned contributions can serve as a basis for continuing research in this area, both for the PhD student and for some of his colleagues.

Considering the original and innovative nature of some of the contributions in the thesis, I would recommend that the PhD student continue and expand his research in this area. In my opinion, a similar more in-depth study could be done for the individual regions of Bulgaria.

I have the following questions for the PhD student:

Ⓢ In relation to my above suggestion - Will you continue your research on the subject of the PhD thesis in the future?

Ⓢ Do you think that part of your investigations can find its application at this stage and in what direction?

CONCLUSION

The PhD thesis ***contains scientific, scientific-applied and applied results, which represent an original contribution to science*** and meet all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDARB), the Regulations for the Implementation of LDARB and the relevant Regulations of the University of Plovdiv "Paisii Hilendarski".

Thesis shows that the PhD student Stanislav Ivanov possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Genetics", demonstrating qualities and skills for independent conducting of scientific investigations. He has presented 4 publications related to the developed PhD thesis, of which two are in journals with quartile Q4, one is in a journal referenced in Scopus with quartile Q3₂₀₂₀ and one of articles was published in the Journal "Scientific works" from the Balkan Conference on Biology, held in Plovdiv.

This is a very good certificate for the level of conducted studies, the adequacy of applied research methods and the level of obtained results, which are part of the thesis.

Due to the above, I confidently give my **POSITIVE ASSESSMENT** for the conducted investigations, presented by the above-reviewed thesis, abstract, achieved results and contributions, and ***I propose to the honorable Scientific jury to award the educational and scientific degree "DOCTOR (DOCTOR OF PHILOSOPHY)" to Stanislav Ivanov Ivanov*** in the Field of higher education: ***4.0. Natural sciences, mathematics and informatics; Professional direction: 4.3. Biological Sciences;*** Doctoral program: ***"Genetics"***.

20.02.2025
City of Plovdiv

PREPARED THE OPINION:.....
(Prof. Dr.Sci. D. Svetleva, PhD)