OPINION

by Assoc. Prof. Stoil Mavrodiev, Ph.D., D.Sc., South-West University “Neofit Rilski”, Blagoevgrad
on a dissertation for the award of the educational and scientific degree “Doctor”
in the field of higher education 3. Social, Economic, and Legal Sciences
professional direction 3.2. Psychology
doctoral program “Positive Psychology”
Author: Radoslav Shterev
Topic: “Influence of Vibro-Acoustic Stimulation on the Psychological Resilience of Patients with Chronic Pain”
Scientific Supervisor: Prof. Yury Yanakiev, Ph.D., Plovdiv University “Paisii Hilendarski”

1. General Overview of the Procedure and the Doctoral Candidate

The set of materials submitted by Radoslav Shterev in hard copy complies with Article 36 (1) of the Regulations for the Development of the Academic Staff at Plovdiv University and includes the dissertation, an abstract, a CV, and other documents. The procedure is lawful.

2. Relevance of the Topic

Resilience is a multidimensional construct with various dimensions—from physiological to personal and social—and can be viewed as a mechanism of adaptation. At the same time, individuals must develop their personal potential to respond to stressors from the broader social environment. The mediator in the "person-environment" relationship is psychological resilience and the processing of adverse events.

The concept of the dissertation is original and unexplored within the specified parameters. It is related to the application of modern technological tools (vibro-acoustic stimulation and others) as psychotherapeutic methods or as complements to more classical approaches in working with clients. This gives me grounds to evaluate the topic as relevant, meaningful, and significant for psychological science and practice.

3. Knowledge of the Problem

Radoslav Shterev demonstrates in-depth knowledge of the dissertation topic, displaying creativity and advanced experimental skills in its development. The study is interdisciplinary in nature. The author successfully proves that the hardware-based research-therapeutic methodology of vibro-acoustic stimulation (VAS) has the potential to enhance resilience. Specific mechanisms of VAS’s impact on psychological resilience and the ability to voluntarily maintain attention concentration in individuals have been identified.

4. Research Methodology

The design of the experimental and empirical study reflects an original research approach. The following methods were used to verify the vibro-acoustic stimulation model:

- Psychophysiological stress test measuring changes in skin electrical conductivity following exposure to stressors;
- Hardware-based vibro-acoustic stimulation;
- Computerized test assessing the sustainability of attention concentration;
- Computerized test with a visual-analog scale for self-assessment of experienced pain;
- Computerized test with a visual-analog scale for self-assessment of latent resilience factors.

All methods are appropriate and relevant to the objectives, tasks, and formulated hypotheses of the study.

5. Characteristics and Evaluation of the Dissertation

The dissertation follows a classical structure and spans 230 pages.

In the first chapter, the construct of "resilience" is presented. The analysis of various approaches, theories, and mechanisms related to resilience is particularly impressive. The transition to the neurobiological foundations of psychological resilience serves as a starting point for examining the physiology of stress and its connection to behavior. The biological foundations of psychological resilience, including issues of neuroplasticity, genetic predispositions, and volitional control over behavior and psychological activity, are thoroughly presented. Hardware-based methods used in psychophysiology are discussed informatively, clarifying the relationship between vibro-acoustic stimulation and resilience.

In the second chapter, an original quasi-experimental research plan is presented. Five hypotheses, relevant to the study's objectives and tasks, are formulated. The research procedure is described accurately.

Appropriate statistical methods were applied in the analysis of empirical data. Following descriptive statistics, the results of the experimental study are presented in detail and clearly, accompanied by statistical summaries. The doctoral candidate's skills in working with statistical methods are impressive. Based on these analyses, an in-depth qualitative interpretation and discussion of the results were conducted.

The conclusion and summary are accurate and correspond to the obtained results.

Contributions

I accept the self-assessment of contributions formulated by the doctoral candidate. These accurately reflect the achievements of the dissertation, which is original and innovative in its concept and implementation. The contributions can be summarized as follows:

1. The effectiveness of a multidisciplinary approach, particularly the application of hardware-based methods to improve psychological resilience, is substantiated and proven.
2. An original model and research plan for applying VAS to optimize psychological resilience were developed.
3. The model's effectiveness was proven, and prospects for its application in various practical fields were outlined.

6. Evaluation of Publications and the Doctoral Candidate's Personal Contribution

The candidate has four publications on the topic, meeting the minimum national requirements. The dissertation is the work of the doctoral candidate. The work is consistent in style, and the contributions and results are his personal merit. No evidence of plagiarism was found.

7. Abstract

Structurally, the abstract accurately reflects the content of the dissertation. It presents the main theoretical premises, the design, and the results of the candidate's own research.

8. Recommendations for Future Use of the Dissertation's Contributions and Results

I recommend that R. Shterev publish the current study in the form of a monograph.

CONCLUSION

The dissertation is original in concept and execution, realized at a high scientific level. Radoslav Shterev possesses excellent psychological training, experimental, and research competencies.

Based on the above, I confidently give my positive evaluation of the conducted research and will vote IN FAVOR of awarding the educational and scientific degree "Doctor" to Radoslav Shterev in the field of higher education: 3. Social, Economic, and Legal Sciences; professional direction 3.2. Psychology; doctoral program "Positive Psychology."

Date: April 25, 2025

Prepared by:

Assoc. Prof. S. Mavrodiev, Ph.D., D.Sc.