

Statement

From Prof. Dr Georgi Neichev Onchev, PhD

Department of Psychiatry and Medical Psychology

At Medical University (MU) Sofia

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For obtaining the educational and scientific degree "Doctor" in the doctoral program "Psychiatry" in the field of higher education 7. "Health and sport" and the professional field 7.1 "Medicine"

Author: Dr Raya Zlatislavova Dimitrova

Type of doctoral program: full-time

Department: Psychiatry and Medical Psychology at Medical University "Prof. Dr Paraskev Stoyanov" Varna

Research supervisor: Assoc. Prof Petar Milchev Petrov, PhD, DSc

1. Overview of the candidate's procedural preparation

The presented dissertation and the accompanying materials are **in accordance** with the procedure for obtaining the educational and scientific degree "Doctor" according to the Law for the development of the academic staff of the Republic of Bulgaria (LDASRB) and Regulations for the development of the academic staff of MU-Varna and its appendices.

2. Short biographical information about the candidate

Dr Raya Zlatislavova Dimitrova graduated from the First Language school in Varna (2009) and completed medicine at MU-Varna in 2015. She has a continued interest toward child and adolescent psychiatry. Since 2017 she is lecturer with the Department of Psychiatry and Medical Psychology at MU-Varna, and since 2019 is a full-time doctoral student with the same department, and in 2020 she has acquired a specialty in Child psychiatry. She is an active participant in national and international conferences and research seminars.

3. Relevance of the topic and appropriateness of the postulated goals and tasks

The dissertation topic is current because of the degree of non-suicidal self-injuries (NSSI) in adolescence, which in the developed countries and in some populations can reach epidemic proportions.

The formulated purpose and objectives are orientated towards a population-based study of the scope of NSSI in adolescence as a first step toward a more detailed study of the phenomenon. The cross-sectional epidemiological design is appropriate research approach for the nature of the issue and the related hypothesis.

4. Understanding of the problem

The literature review demonstrates comprehensive knowledge into the studied object. It encompasses historical and cultural aspects, terminological clarifications, epidemiological data, demographic and descriptive characteristics, presentation of NSSI in clinical samples, differentiation from suicidal behaviour and the relationship between the two behaviours, comorbidity, theoretical explanatory models, neurobiology, functions, which NSSI serves, assessment instruments, and diagnostic aspects. The topics are covered with an analytical and critical eye toward the existing contradictions and uncertainties regarding the topic.

The summary of the review points out disputable areas and gaps in the knowledge in this field and ensures a transition toward the formulation of the actual study.

5. Methodology

The aim and tasks are clearly formulated, and the methodology and the particular instruments are adequate for the constructs, which they are supposed to assess. Through the self-assessment instruments demographic data is collected and the scope of NSSI is assessed in a non-clinical population along with their characteristics, such as method of self-harm, predisposing factors and functions, which NSSI serves. The author searches for criteria to identify a group with a more severe NSSI, and one with addictive features.

To achieve this a hybrid questionnaire was designed on the basis of two established instruments, Non-suicidal self-injury disorder scale (NSSIDS) and Ottawa self-injury inventory (OSI), with a modification for the Bulgarian population. The study is cross-sectional, non-interventional, and epidemiologically oriented. The statistical methods are relevant to the proposed tasks and include descriptive methods and methods for testing hypotheses, mainly correlation analysis, including cluster, regression and factor analysis – principal components with Varimax rotation. The study has received approval from the Ethics commission for scientific research at MU – Varna.

6. Characteristics and evaluation of the dissertation

The dissertation is organized according to the requirements of the Regulations for the development of the academic staff at MU “Prof. Dr Paraskev Stoyanov” Varna and includes: introduction, literature review, aim and tasks of the study, study population and methodology, results and discussion, limitations and possibilities for future work, conclusion, summary points, contributions, appendix and bibliography. The volume and the proportions between the separate chapters is optimal. The dissertation is illustrated with 61 tables and 5 figures, the main instrument used in the study is in Bulgarian and presented in the appendix, and the bibliography has 193 sources, of which 5 in Cyrillic and 188 in Latin.

The results and the discussion are presented together, and not in separate chapters, which allows for a smooth transition between the uncovered data and its interpretation. The reporting of the results is clear, and they are neatly and concisely illustrated. They encompass the demographics characteristics of all screened subjects and the ones included in the study, prevalence of NSSI in the studied sample (20.2%), results from the main assessment instrument regarding methods, predisposing factors, functions, and gender differences in each characteristic. The cluster analysis successfully identified a group of adolescents with more severely pronounced NSSI, and a group that meets the criteria for NSSI disorder according to DSM-5q and an attempt has been made to differentiate a subgroup of individuals with addictive features.

The limitations of the study are presented correctly, and from their overview it can be seen that the first 4 (out of 5) are due to circumstances not under the control of the author.

7. Contributions and relevance of the work for science and practice

The listed contributions and summary points are focused on the established frequency of NSSI in a non-clinical population of adolescents in a large city, the characteristics of the problematic behaviour, the psychometric properties of the implemented hybrid instrument, and the differentiation of groups with varying severity of the presentation and course – one covering the diagnostic criteria for NSSID (22.2% of those with NSSI and 4.9% of the whole population studied), and one with addictive features of the behaviour. A practical contribution is the implementation of a hybrid instrument and demonstrating its application in Bulgarian.

8. Personal involvement of the candidate

The presented dissertation uses a methodology designed by the author herself in original research and represents an individual effort of the candidate.

9. Thesis summary and publications

The structure of the thesis summary corresponds to the requirements of the Regulations for the development of the academic staff at MU -Varna and its appendices and follows the dissertation structure (without the literature review) and represents precisely and concisely its contents. It is recommended that a thesis summary is accompanied by a short overview in the form of a summary in Bulgarian and English.

Three publications on the topic of NSSI are presented in Bulgarian journals.

10. Critical notes

The title of the dissertation points to an adolescent population in the Varna area, while in the text the studied population is comprised only of pupils from chosen schools in the city of Varna city, which are not representative of their peers from the whole area. The study is carried out remotely, with no contact between the pupils and the investigator, and is based solely on the participants' own account, which makes problematic the degree to which the questions and the statements are understood by all adolescents, and the reliability of the self-report regarding psychopathology, substance use and others. The translation procedure of the instruments NSSIDS and OSI is not explained, as well as the approbation of the hybrid model, created on the basis of those two, and the "adaptation" for the Bulgarian population. In the assessment of the psychometric properties of the scale its validity is correctly analysed (using Cronbach's Alpha coefficient of internal consistency and the data from the factor analysis), but an unfounded assumption is made regarding its "reliability" – applicable as a term used in the evaluation of an instrument to the reproducibility of its result and the degree of diagnostic agreement (which has not been studied). Some results are needlessly repeated in the texts, tables and figures. The summary points are too many (15) and could be combined in several larger statements, which do not repeat verbatim the results, and summary point 14 is more of a clinical assumption, rather than a summary point.

The tables with statistical data, accompanying the main tables with texts (like 5.1, 6.1, 6.2 and others) are presented in a "technical" raw way, like copies from a computer program, without integrating the statistical indicators in the main tables, according to the standards for publication (as this is appropriately done in other tables 35, 38, 39 and 53, for example), and the relationship of these indicators with the particular variables is unclear. The texts could benefit from a more careful editing, which would filter out words and phrases such as "variable" and "preoccupation", "participant in the informed consent for participation", and others. The sources

in Bulgarian are very scarce and the sources in English are only Anglo-Saxon. Summaries in Bulgarian and English accompanying the dissertation and the thesis summary are missing.

11. Suggestions for future implementation of the contributions and the results

It's appropriate to widen the study on the topic with validation of the current results from the self-assessment instruments by an in-person interview, which would give greater clinical consistency of the results. The necessity of developing therapeutic approaches is evident in the light of the presented results, that no one of the pupils in the study reported school counselling as a possible approach.

12. Conclusion

The presented dissertation reflects an original research on a current issue, with methodical precision, and personal contributions. The dissertation meets the requirements for obtaining the educational and academic degree "doctor" in accordance with LDASRB and the Regulations for the development of the academic staff at MU-Varna, which allows me to give a positive statement for acquiring the scientific degree "Doctor" in medicine to Dr Raya Zlatislavova Dimitrova.

Prof. Georgi Onchev MD, PhD

A handwritten signature in blue ink, appearing to read 'G. Onchev', is positioned below the printed name.