

Review by

From: Assoc. Prof. Dr. Janet Kirilova Nikolova, PhD

Department of Conservative Dentistry,

Faculty of Dental Medicine,

**Medical University – Sofia, member of the scientific jury under Order No
№ P-109-153/ 13.03.2025 of the Rector of MU-Varna**

Concerning: Dissertation on the topic "Assessment of changes in HDT in patients with bulimia" by Dr Mariyana Rosenova Kirova for awarding the educational and scientific degree "**Doctor**" in the doctoral program "Therapeutic Dentistry" in the professional field 7.2. Dental Medicine, the field of higher education 7. Health and sports.

Author: Dr Mariyana Rosenova Kirova, PhD student at the Department of Operative Dentistry and Oral Pathology, Faculty of Dental Medicine – Varna.

Supervisor: Assoc. Prof. Dr. Tsvetelina Borisova-Papancheva, MD, PhD

1. General presentation of the procedure and the PhD student

The presented set of paper materials is complete following the procedure for acquiring a doctorate at MU-Varna and the regulations of MU-Varna.

The PhD student, **Dr Mariyana Rosenova Kirova**, has made a significant and commendable contribution to the field by attaching three published articles related to the dissertation. The presented full-text publications do not have a complete bibliography but are presented in full in the attached documents.

2. Brief biographical data of the PhD student

Dr Mariyana Rosenova Kirova's academic journey began with her secondary education at the Language High School in Varna in 2012, and 2019 she graduated from the Medical University of Varna, Faculty of Dental Medicine. Since 2019, she has been a full-time assistant at the Department of "Conservative Dentistry and Oral Pathology" at the Medical University of Varna, Faculty of Dentistry. She obtained a speciality in "Operative Dentistry and Endodontics" in 2024. The doctoral student is fluent in spoken and written English and Spanish.

3. Relevance of the topics and appropriateness of the set goals and objectives

Patients with bulimia are a problem in the daily clinical work of the dentist. Bulimia is the most common neurosis of the 21st century. The disease is a psychosomatic eating disorder in which appearance is of leading importance. Patients with bulimia have recurrent episodes of self-induced vomiting that significantly affect the condition of the hard dental tissues in the oral cavity. These patients rarely, if ever, mention the problem they suffer from to dental professionals.

For this reason, examining such patients, changes in their saliva, and the condition of hard dental tissues is relevant and significant.

The presented dissertation contains 170 typewritten pages, illustrated with 54 figures and 35 tables. It is structured correctly and contains sections such as introduction, literature review, aim and objectives, materials and methods, results and discussion, conclusions, conclusion, main contributions, publications, and announcements related to the dissertation work. The bibliography includes 299 sources, of which 18 are in Cyrillic and 281 are in Latin.

4. Knowledge of the problem

The introduction is 1 page long. It is written clearly and introduces the problem precisely.

The Literature Review

The literature review is 50 pages long and purposefully examines in detail the problems related to the classification of bulimia, the methods for diagnosing and assessing changes in saliva and hard dental tissues, and the treatment approaches and means for eliminating the consequences in the oral environment and on the hard dental tissues.

Dr. Kirova logically deduces the goal of the dissertation to analyze the relationship between the disease Bulimia nervosa and poor oral health due to the role of self-induced vomiting as a leading risk factor and to examine the oral complications resulting from the disease clinically. To solve the set goal, the author works on three tasks with two subtasks, sufficient to achieve the set goal.

5. Methodology of the study

The applied materials and selected methodologies are described in detail on 16 pages. Ninety patients are studied. The author applies a saliva test, and changes on hard tooth surfaces are recorded with DMFS, DMFT index, and BEWE index

(Basic Erosive Wear Examination). The hypersensitivity of patients with bulimia is recorded, and a visual analogue scale (VAS) is applied for pain intensity. Results are processed using modern statistical methods.

6. Characteristics and evaluation of the dissertation

Results and discussion are written on 68 pages. The results are described in detail and illustrated with figures and tables. The judgment follows the results of each task. The conclusions are summarized separately.

Task 1. To analyze the saliva qualities in patients with bulimia nervosa. The following indicators are examined: stimulated and unstimulated saliva, quantity, viscosity, saliva pH, and buffer capacity and compared with the indicators in a healthy control group.

Patients with bulimia demonstrate a statistically significant higher incidence of decreased salivary secretion, which has serious negative consequences for oral health. The control group has normal levels of salivary secretion. Patients with bulimia are at greater risk of impaired salivary gland function. Patients with bulimia are at greater risk of impaired salivary gland function. Patients with bulimia have changes in saliva viscosity and lower pH than normal compared to controls. There are no changes in salivary flow compared to controls.

In terms of saliva buffering capacity, a statistically significant difference was observed between the two study groups. Patients with bulimia had a reduced saliva buffering capacity.

The tests for clinical assessment of saliva quality are easy and quick to use, with understandable and easily reproducible results. They could be successfully used in daily clinical practice to aid in the diagnosis of eating disorders and serve as motivation for patients. **This is a contribution to the dissertation from a scientific and practical point of view.**

Task 2. To establish the changes in the dental status in patients with bulimia nervosa. 2.1 To investigate the frequency of primary and secondary carious lesions, filled teeth and their localization. 2.2 To investigate the clinical picture of erosive defects of hard dental tissues, assessing their localization and size.

Dr. Kirova proves that the most affected teeth in patients with Bulimia are the lower molars and premolars, and more precisely, their occlusal surfaces, followed by the upper molars and premolars. In the front teeth, both on the upper and lower jaws, the most frequently affected surfaces are the vestibular ones, which are more common in the upper jaw and much less common in the lower jaw.

Dr. Kirova proves that the palatal surfaces of the upper front teeth are the most commonly affected in the upper jaw. In addition, the tongue also exerts an abrasive influence for some time after brushing, as stomach acid is retained in the filiform papillae.

The development of proximal caries is also increased, especially in the upper molars and premolars. The vestibular surfaces in the upper front teeth are most severely affected by caries. The surfaces least affected by caries are the lingual surfaces of the lower front teeth, which are thought to be influenced by the position of the tongue, the outlets of the many minor salivary glands nearby and the cleansing role of saliva. **This is a contribution to the dissertation.**

Task 3. To study dentin hypersensitivity in patients with bulimia nervosa.

Dr. Kirova proves that in bulimia nervosa, the severity of erosive damage is a key factor in increasing dentin hypersensitivity. **This is a contribution of the dissertation.**

7. Contributions and relevance of the development to science and practice

There are five contributions of the original character and 4 of the confirmatory character and one with an applied character.

8. Evaluation of the publications on the dissertation

In the main parts of the dissertation, Dr Kirova is a leading author in the research, emphasising the doctoral student's contribution. Some of the tasks were done with collaborators, which shows Dr Kirova's ability to work in a team. The clinical studies were done and followed personally by the dissertation.

9. Abstract

The content and quality of the abstract, with a conclusion, are 72 pages and meet the requirements. It reflects the main results, findings, and contributions of the dissertation.

10. Personal impressions

Dr. Kirova has done significant work, which resulted in the dissertation. The way the research is presented and the logical and detailed discussion of the results are impressive.

11. Recommendations for future use of dissertation contributions and results

As Dr. Kirova reports, based on the research conducted, the proposed protocol for examination and behavior in patients with Bulimia should be presented and promoted to the dental community. Dr. Kirova has made some technical inaccuracies in her dissertation. It is advisable to pay attention to the exact spelling in the bibliography. These technical inaccuracies do not reduce the value of the dissertation.

CONCLUSION

The dissertation contains scientific, scientifically applied and applied results that represent an original contribution to science and meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (RASRB), the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the relevant Regulations of the Medical University - Varna. The presented materials and dissertation results fully comply with the specific requirements of MU-Varna.

The dissertation shows that the PhD student **Dr Mariyana Rosenova Kirova** has in-depth theoretical knowledge and professional skills in the scientific specialty "Therapeutic Dentistry", in the professional field 7.2. Dental Medicine, a field of higher education 7. Health and Sports by demonstrating qualities and skills for independent scientific research.

Because of the above, I confidently give my positive assessment of the research carried out, presented by the above-reviewed dissertation, abstract, results achieved and contributions. I propose to the honourable scientific jury to award the educational and scientific degree of 'Doctor' to **Dr Mariyana Rosenova Kirova** in the doctoral program in "Therapeutic Dentistry" in the professional field 7.2. Dental Medicine, a field of higher education 7. Health and sports.

Заличено на основание чл. 5,
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13.05.2025

Associate Professor Dr **Janet Kirilova**, PHD

Sofia