

OPINION

From:

Assoc. Prof. Dr. Maya Dimitrova Doychinova, PhD,
Associate Professor in Operative Dentistry and Endodontics at the Department of
"Conservative Dentistry and Oral Pathology," Faculty of Dental Medicine, Medical
University – Varna, internal member of the scientific jury, according to the order No. P-109-
153/13.03.2025 of the Rector of the Medical University – Varna

Regarding: Dissertation on the topic: "**Evaluation of Changes in Hard Tooth Tissues in Patients with Bulimia**" for the award of the educational and scientific degree "Doctor" in the scientific specialty "Therapeutic Dentistry," professional field 7.2. Dental Medicine, 7. Healthcare and Sports.

Author: Dr. Mariyana Rosenova Kirilova, PhD student in full-time education at the Department of "Conservative Dentistry and Oral Pathology" at the Faculty of Dental Medicine, Medical University – Varna.

Scientific Supervisor:

Assoc. Prof. Dr. Tsvetelina Borisova-Papancheva, MD.

The dissertation contains 170 pages, illustrated with 35 tables, 54 figures, and 6 appendices. In terms of structure, the proportional relations between the main parts of the dissertation are well-maintained.

Literature Review: The literature review contains 299 sources, 18 in Cyrillic and 281 in Latin characters.

This dissertation emphasizes and analyzes all aspects of the relationship between the eating disorder bulimia nervosa and pathological changes in the hard dental tissues. Bulimia nervosa is part of neurotic eating disorders, characterized by self-destructive purging behaviors. These disorders are defined as diseases of modern times, related to unrealistic expectations and a painful desire to achieve a socially approved appearance. Statistically, a higher percentage of affected individuals are young women. Purging episodes directly influence the conditions in the oral cavity, thereby directly damaging both soft and hard dental tissues. In this sense, I believe it is timely to create the dissertation, which summarizes, analyzes, and complements the knowledge of dental medicine specialists as well as medical professionals from other specialties treating individuals suffering from the eating disorder.

Literature Review: The literature review improves the didactic understanding of the aspects and types of eating disorders, the accumulated data regarding the changes in the oral cavity caused by these disorders, diseases of hard dental tissues in bulimia nervosa, methods of diagnosis and classification, as well as known approaches to local dental treatment.

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679

The literature review concludes with an analysis and motivation regarding the necessity of the dissertation.

Formulated Goal: The goal is appropriately supported by three well-chosen tasks.

Materials: The material for all three tasks is sufficient, carefully selected according to strict criteria, and correctly distributed. The methodologies for processing the data are well-thought-out and scientifically sound. The statistical methods are precisely and skillfully chosen for the data analysis.

Results and Discussion: The results for all three tasks have been thoroughly verified.

For the first task, the author analyzes the properties of saliva in patients with bulimia nervosa, examining the following parameters: stimulated and unstimulated saliva, volume, viscosity, pH, and buffering capacity, comparing them with those of a healthy control group. It was found that patients with BN exhibit significantly reduced unstimulated salivary flow, increased viscosity, lowered pH, and reduced buffering capacity compared to the control group. No significant difference was found regarding stimulated salivary flow. All other differences between the groups were statistically significant and align with data from previous studies. The established changes in the composition and functional properties of saliva in bulimia patients highlight the negative impact of the eating disorder on oral health. As a conclusion, it is clear that clinical measurements of salivary parameters are a quick, easy, and effective method that can assist in the diagnosis and prevention of dental diseases in patients with eating disorders.

The second task aims to identify changes in dental status in patients with bulimia nervosa. The doctoral student divides it into two sub-tasks: examining the frequency of primary and secondary carious lesions, restored teeth, and their localization, and examining the clinical picture of erosive defects in hard dental tissues, evaluating their localization and size. The results of the first sub-task confirm that patients with bulimia nervosa are at an increased risk for dental diseases, including caries and erosive lesions, due to the combined effects of vomiting, eating habits, impaired salivary function, and oral hygiene. The DMFT/DMFS and BEWE indices are sensitive and clinically useful tools for objectively assessing dental health in this population. The localization of erosive lesions, particularly on the palatal surfaces of the upper frontal teeth, fully corresponds to the pathophysiological mechanism of the disease. The observed findings highlight the need for early prevention, a multidisciplinary approach, and regular dental monitoring in patients with eating disorders.

The results of the second sub-task confirm the high frequency and characteristic distribution of dental erosion in patients with bulimia nervosa (BN), with the most affected being the palatal surfaces of the upper frontal teeth and the occlusal surfaces of the lower molars. These findings correlate with the frequent recurrent vomiting typical of the clinical picture of BN and with the duration of the disorder. The use of the BEWE index demonstrates the predominance of erosions of the second degree and identifies sextants 2, 4, and 6 as the most affected. The data indicate that erosive defects in BN not only significantly affect hard dental

tissues but also deepen over time. The author has selected clinical cases that precisely demonstrate the results of the clinical study.

The third task is dedicated to the study of dentin hypersensitivity in patients with bulimia nervosa. In this study, the doctoral student found a high frequency of dentin hypersensitivity in patients with bulimia nervosa (BN), with this hypersensitivity being most pronounced in the premolars of the lower jaw. The results emphasize the direct connection between dentin hypersensitivity and the severity of the erosive process, with a higher BEWE index correlating with higher sensitivity. These data are consistent with previous studies showing that tooth erosion and hypersensitivity are closely related to the presence of active erosive processes caused by acid sources.

Based on the results obtained, Dr. Kirnova proposes a detailed **clinical protocol** for the prevention and treatment of oral complications associated with bulimia nervosa. I believe this protocol can be easily integrated into the practice of dental professionals to improve the care of patients suffering from this disorder.

Contributions: I consider the self-assessment of the contributions in the developed scientific work to be correct. The doctoral student combines them into five original, four confirmatory, and one applied scientific contributions.

The dissertation has been entirely carried out by the doctoral student under the guidance of her scientific advisor. In connection with her dissertation, the author has popularized her scientific work in three full-text publications and three scientific communications.

The abstract is properly structured, well-illustrated, and corresponds to the various sections of the work. I believe it is presented in an appropriate volume, in accordance with the rules set forth in the Regulations for the Development of the Academic Staff of MU-Varna, as well as in proportion to the total volume of the scientific work.

There are no omissions in the documentation submitted by Dr. Mariyana Rosenova Kirnova.

Conclusion:

Dr. Mariyana Rosenova Kirnova's dissertation is a completed and comprehensive study that makes a significant contribution to science. Throughout the process of the work and in the published materials on the topic, it is evident that the doctoral student possesses solid theoretical knowledge of the discussed issue and has the ability to conduct independent research. The excellent professional skills and in-depth knowledge of Dr. Kirnova are evident throughout the dissertation, which integrates theoretical literary data, original results, and their interpretation, from which important conclusions are drawn. In this context, I believe that the goals of the research have been successfully achieved.

I express my opinion that Dr. Mariyana Kirnova and her dissertation possess the necessary qualities and deserve a positive evaluation. Therefore, I will support the proposal for the awarding of the educational and scientific degree "Doctor" to Dr. Mariyana Kirnova. I

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2016/679

recommend that the members of the scientific jury vote in favor of awarding the "Doctor" degree in the scientific specialty "Therapeutic Dentistry."

10.05.2025, Varna

Signature:

/Assoc. Prof. Dr. Maya Doychinova, PhD/

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