

To the members of the Scientific Committee,
Appointed by the order of the Rector of Medical
University - Varna No. R 109-129/01.04.2024
Based on Protocol No. 29/27.03.2024 of the
Faculty Council of Faculty of Dental Medicine –
Varna for the procedure for awarding the educational
and scientific degree of “Doctor”

OPINION

BY ASSOC. PROF. IVETA PLAMENOVA KATREVA, DMD, PHD
MEDICAL UNIVERSITY “PROF. DR. PARASKEV STOYANOV” – VARNA,
FACULTY OF DENTAL MEDICINE
DEPARTMENT DENTAL MATERIAL SCIENCE AND PROSTHETIC DENTAL
MEDICINE
FOR A DISSERTATION FOR THE AWARD OF THE EDUCATIONAL AND SCIENTIFIC
DEGREE "DOCTOR"

In the doctoral program "Orthopedic Dentistry"

Professional field: 7.2. Dental Medicine

Field of higher education: 7. Healthcare and Sports

Author:

Dr. Dimo Krasimirov Nedelchev

Topic:

**"Research on the Changes Occurring in Speech and Masticatory Functions during
Prosthetic Treatment"**

Academic advisors:

Assoc. Prof. Desislava Atanasova Konstantinova, DMD, PhD

Prof. Mario Petrov Milkov, MD, PhD

GENERAL ANALYSIS OF THE DISSERTATION

The dissertation by Dr. Dimo Nedelchev, a full-time PhD student in the Department of Dental Materials Science and Prosthetic Dental Medicine, comprises 182 pages. It is illustrated with 32 tables, 61 figures, and 3 appendices. The bibliography includes 251 literary sources, of which 16 are in Cyrillic and 235 in Latin script.

The structure of the dissertation complies with the requirements of the Regulations for the Development of the Academic Staff at the Medical University - Varna, and includes all the main elements of the commonly accepted structure for presenting a dissertation in our country.

Relevance of the topic

Articulated speech arises and develops exclusively in humans among all animals, providing the ability to communicate and express freely using diverse linguistic means and grammatical models. An individual's ability for verbal communication is crucial for their social integration, realization, and psycho-emotional expression.

Speech formation is accomplished with the help of all anatomical structures of the oral cavity—static (teeth, hard palate) and dynamic (lips, tongue). These structures amplify and modify sound to transform it into distinct (articulated) speech. Therefore, disruptions in the structural integrity of the teeth and dental arches directly affect both the masticatory function and the sound articulation of the patient.

The main goal of prosthetic treatment is prevention and full restoration of the functions of the masticatory and speech apparatus. For this reason, the topic of the impact of prosthetic treatment on speech and masticatory function has long been of interest to dentists and remains relevant today.

The introduction concisely and accurately identifies the main and current issues, surrounding modern prosthetic treatment and the aim to maintain optimal functionality of the dentition.

The literature review thoroughly discusses all major aspects related to the development of the thesis, and they are presented in a logical sequence.

Scientific data from multiple authors on the impact of prosthetic treatment on the phonetic quality of sounds and masticatory efficiency of the dentition are cited. Factors improving sound articulation are emphasized.

Dr. Dimo Nedelchev demonstrated a very good awareness and analytical approach in presenting the modern methods for the study of speech and masticatory function.

The review concludes with extensive conclusions that justify the need for thorough research on the unresolved issues, with the hypotheses substantiating the aim and objectives of the dissertation.

The aim and objectives fully correspond to the topic and content of the thesis. The aim is formulated as a logical conclusion from the analysis of the literature review. The tasks are precisely and clearly formulated and fully correspond to the stated aim.

Materials and Methods. The chosen methodology is interdisciplinary and is fully consistent with the implementation of the set tasks. The selected methods are objective and guarantee the reliability of the obtained results. They are systematically reviewed in a separate chapters by tasks.

Task 1 involved a clinical study of 80 patients with single frontal maxillary defects. Extraoral and intraoral examinations as well as laryngological screening using the ATMOS Strobo 21 LED laryngoscope were performed consecutively.

In task 2, 149 diagnostic cast models of maxillary diastema patients from Northeastern Bulgaria were studied. A retrospective study of the prevalence of maxillary diastema in a population from this region was performed. Microtech BIG SCREEN digital caliper, IP54, 300 mm, 0.01 mm was applied.

For task 3 forty patients with single frontal maxillary defects and no pathology in the vocal cords were selected. Primary and secondary speech therapy evaluation was performed by a specialist before and after temporary repair of the defects.

For the 4th task, a questionnaire survey was conducted among 462 patients who had completed prosthetic treatment and met the set criteria. The questionnaire was validated and statistically reliable, containing 17 questions on masticatory efficiency.

The results obtained from all tasks are reliable, illustrated with figures and well analysed.

The discussion of the results was done correctly.

The summary and **conclutions** are logically formulated, with emphasis on the contributions of the thesis.

The contributions are grouped as applied and scientific. There are 4 original and 2 confirmatory contributions. The author cites 2 applied contributions.

The abstract contains 71 pages. It is illustrated with numerous photographs, figures and tables. It presents in a synthesized form the main structural components of the thesis.

Conclusion

The dissertation work of Dr. Dimo Krasimirov Nedelchev entitled " Research on the Changes Occurring in Speech and Masticatory Functions during Prosthetic Treatment " is a contemporary scientific work with a number of contributions of an original and scientifically applied nature. The problems of the presented topic are studied in detail and are analytically presented. The author demonstrates qualities and skills to conduct independent scientific research.

I give my overall positive assessment regarding the dissertation and will vote with “Yes” for awarding the educational and scientific degree “Doctor” to Dr. Dimo Krasimirov Nedelchev.

23.05.2024

Prepared the opinion:

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

Varna

Assoc. Prof. Iveta Plamenova Katreva, Dmd, Phd