

To Vice Rector
of Science and Research Activities
of MU-Plovdiv
Prof. Dr. Blagoi Marinov, PhD

REVIEW

On a Dissertation for awarding an educational and scientific degree
"Doctor" on topic: "Dental care in children with haemophilia"

Author: Dr. Viktoriya Mandova

Doctorate Program: " Social Medicine and Organization of Health and Pharmacy "

Form of PhD: self-training

Scientific supervisor: Prof. Dr. Rumen Stefanov, PhD

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General description of the procedure and PhD candidate

The set of materials presented to me in paper and electronically comply with the requirements of Art. 15(1) and (2) of Section I of the procedure for awarding the educational and scientific degree "Doctor" according to the Regulations of MU-Plovdiv and include the required documents:

- Curriculum vitae European format signed by the author
- Notarized copy of high education "Master degree" diploma
- Rector's order for start of the doctorate program
- Rector's order for termination with the right for defending PhD at a viva voce
- Order of conducting a doctorate speciality minimum exam
- Dissertation
- Dissertation Abstract in Bulgarian and English
- List of scientific publications related to the subject of the dissertation
- Copies of all publications
- List of participations in scientific forums
- Declaration of authenticity and trustworthiness of the attached documents
- Certificate for credits received from Doctoral School of MU-Plovdiv

Biography and career

Dr. Mandova was born in 1990 in Plovdiv. She went to English Language School-Plovdiv and graduated with a diploma for extremely high achievements in the educational activities and excellent grade. From 2009-2015 she went to Medical University-Plovdiv, FDM

and gained a master degree in dental medicine. Dr. Mandova's work experience began as a dentist in her self-managed outpatient individual dental practice in Plovdiv.

From 2018 -2021 she is specialising in the Department of Social Medicine and Public Health. In 2021, Dr. Mandova increases her professional qualification with a specialty in "Public Dental Health", acquired after a state exam in Sofia.

Dr. Mandova is fluent in English, Cambridge level B2 certified, fluent in German as a second major language. She also speaks a pre-intermediate level of Spanish. Since then she has been an Assistant professor at the Medical University of Plovdiv, Department of Social Medicine and Public Health. She is teaching medical students II course, discipline SMME I in Bulgarian and English, dental medicine students II course, discipline SMME in Bulgarian and English, as well as medical students III course, discipline SMME II in Bulgarian and English language and dental medicine students V course, discipline Public dental health in Bulgarian and English. Over the years, as an assistant prof. she has taught the subject medical statistics to medical and dental students, II course. She has proficient computer skills using programs from the package Microsoft Office - Word, PowerPoint, Excel and others as Photoshop, SPSS. Dr. Mandova is a member of:

- Bulgarian Dental Union
- Union of Scientists in Bulgaria
- Bulgarian Society of Public Health
- Bulgarian Public Health Association
- European Public Health Association (EUPHA)

Dr. Viktoriya Mandova actively participates in research related to health promotion and prevention of dental diseases. Her interests include dental care improvement through prevention and health policy.

Relevance of the subject

The theme of the dissertation is up-to-date and dissertational. Haemophilia is the most common hereditary coagulopathy. Deteriorated oral health and the resulting consequences are problems of high social significance for children with haemophilia. Impaired masticatory and speech functions are often results of limited access to dental care. There is a limited social activity in patients with comorbidity, as they are patients with compromised oral health and accompanying diseases as bleeding disorders.

An assessment of the awareness and habits associated with oral health of children with haemophilia, aimed at both children and parents, makes it possible to define whether the treatment provided to each patient is appropriate for them. The direction of efforts should be towards evaluation of the activities of oral health promotion and prevention which are prioritised in a target group of children. In order to guarantee optimal oral hygiene and optimal dental health in children with haemophilia, a multidisciplinary approach could play a key role.

Specialists from different fields, implying an integrative approach, could improve the awareness of children and adults with haemophilia about their oral health.

Knowledge of the problem

The dissertation contains 158 pages. It includes 42 figures to illustrate the material and 14 tables. The References contain 158 sources, of which 31 are in Cyrillic and 127 in Latin. The research was conducted during the "National camp for families of children with haemophilia up to 7 years old ", in Strelcha; "Summer rehabilitation camp for children from 7 to 14 years old" in Kranevo; as well as in outpatient individual and group dental practices and dental centers throughout the country.

Literary review

The literary review is structured in five sections and covers 30 pages. It includes- awareness of children and parents with haemophilia about their oral health, knowledge of dentists about the oral health problems of children with haemophilia; recommendations for oral health promotion and dental treatment of children with haemophilia for dentists; health promotion policies to improve oral health in these patients, dental care for children with haemophilia during pandemic of COVID-19. An in-depth analysis of the literature shows a good understanding of the problem, as it helps the doctoral student to make a critical analysis and focus on unsolved issues on the subject.

Research Aim and Objectives

The goal is formulated clearly and accurately- **To study the awareness and habits associated with oral health in children with haemophilia and to create recommendations for improving dental care for them.**

The following objectives are formulated:

- 1.To examine the awareness and habits of children with haemophilia, parents of children with haemophilia and children without haemophilia associated with oral health
- 2.To examine dental practitioners' awareness of the impact of haemophilia on oral health
- 3.To develop recommendations for the promotion of oral health and prevention of dental diseases in children and adults with haemophilia aimed at dental doctors
- 4.To design a model of health-promotion policy aimed at improving dental care in children with haemophilia

The formulated objectives are sufficient and skillfully selected to realize the research aim of the dissertation.

Research material

A sociological method was used. The primary sociological information for children with haemophilia was collected through a direct individual questionnaire. The questionnaire used is original, developed by Dr. V. Mandova, based on OHIP-14. This questionnaire was applied to 31 children with haemophilia in Bulgaria. Questions which are related to self-assessment of the oral status of the children provide information about the quality of life related to the dental health of the respondents. Some questions give options for more than one answer.

Primary sociological information for parents of children with haemophilia was collected through direct individual questionnaire. The questionnaire used is original and its use gives information about the socio-demographic characteristics of the parents, their knowledge and oral hygiene habits, self-assessment of dental health, etc.

The primary sociological information for children without haemophilia was collected through a direct individual questionnaire similar to the form used for children with haemophilia. The questionnaire used is original, based on OHIP-14. This questionnaire was applied to a control group of 108 children who visited dental practices in Bulgaria. The use of this questionnaire provides information about the demographic characteristics of the contingent, their knowledge and oral hygiene habits, oral status self-assessment and an opportunity for comparison with children with haemophilia. Again, to perform the second objective a sociological approach was used. The primary sociological information for 104 dentists was collected through original direct individual questionnaire. The questionnaire used consists of open-ended, closed-ended and mixed questions. The questions are related to the work experience and qualification of the dentist, their knowledge and readiness to treat a patient with haemophilia. The questionnaire contains a question about the organization and participation of the respondents in a specialized team for dental care for people with haemophilia in Bulgaria by regions. Some questions give options for more than one answer.

Methodology

The methods used to perform the objectives are appropriate, which allows correct interpretation of data and achievement of the research aim. Algorithms have been developed for dental health promotion and oral diseases prevention for dentists. They are based on the inspected literature, on the original research concept, on the PhD candidate's own experience in treatment of children with haemophilia and their parents and all data, statistically analyzed. A model of health promotion policy has been developed for implementation in the healthcare system, as well as a model of an interdisciplinary team for comprehensive treatment of patients with haemophilia.

Results and discussion

This section includes 58 pages statistically processed with the correct methods and interpreted thoroughly and analytically. The conclusions drawn from the scientific investigation follow the logic of the results derived and allow all relevant recommendations made on their basis.

Characterization and assessment of the dissertation

The research aim and the objectives are fulfilled. As analysis of the results the following findings can be made:

- 1.Children with haemophilia who use fluoride supplements have a longer duration of oral hygiene habits;
- 2.Children with haemophilia who have received advice from a dentist on how to maintain proper oral hygiene spend more time brushing their teeth;
- 3.The frequency of oral hygiene habits two or more times a day is associated with the high level of education of parents;
- 4.Children with haemophilia visit a dentist mainly for prophylaxis, compared to healthy controls, which indicate as leading cause started or following treatment;
- 5.There is an association between intermediate meals in children with haemophilia, which rise with an increase in main meals;
- 6.There is no statistically significant difference between children with and without haemophilia in terms of self-assessment of their dental health;
- 7.Dentists are aware of the disease haemophilia, but a small number of them have treated a patient with haemophilia.

Contributions and significance of development for science and practice

1. Original scientific contributions

- 1.1. For the first time in Bulgaria, the awareness and habits related to oral health of children with haemophilia and parents of children with haemophilia have been studied and critically analysed;
- 1.2. For the first time in Bulgaria, the awareness and habits of children with haemophilia are examined and critically analysed compared to their healthy controls;
- 1.3. For the first time in Bulgaria, the awareness and attitudes of dentists on the treatment of patients with haemophilia are analysed;
- 1.4. Contribution of a theoretical nature is the literary review on the oral health of children with haemophilia.

2. Applied scientific contributions

- 2.1. A handbook of recommendations for improving dental care for people with coagulopathies is created
- 2.2. Recommendations for dental practitioners, for the prevention and treatment of children with haemophilia, divided by specialties are created;
- 2.3. A model of a multidisciplinary team for the treatment of haemophilia is created, part of which is the dentist;
- 2.4. An informative brochure is created for children with bleeding disorders to raise their dental health awareness;
- 2.5. An approbated plan-program for Lecture-game for oral health improvement of children with bleeding disorders, including haemophilia, in the age from 7 to 14 years old is also created.

Assessment of the publications

Dr. Viktoriya Mandova has 3 publications, two of which are in journals referred in Scopus. From the provided materials it is clear that the doctoral student fulfills the scientometric indicators, according to the Regulations of MU - Plovdiv. She has presented 4 participations in scientific forums.

Personal contribution of PhD student

I highly appreciate the personal participation and commitment of Dr. Mandova to solving the problem of dental care provision in children with haemophilia. She is the author and direct participant in the approbation of the plan-program for Lecture-game for oral health improvement of children with bleeding disorders, including haemophilia, in the age from 7 to 14 years old. Since 2015, Dr. Mandova has participated in numerous trainings in the country and abroad again related to her chosen scientific topics. What makes impression is the impact on the dissertation from one-month specialization in Germany in Medical University - Bonn, Institute of Experimental Hematology and Transfusion Medicine and Center for Haemophilia.

All of this speaks of high motivation and precision in the implementation of the dissertation.

Abstract of Dissertation

The abstract of the dissertation completely and accurately reflects the content of the dissertation. It contains 52 pages, well illustrated with 25 figures and 4 tables.

Critical remarks and recommendations

I have no critical remarks about the candidate. I appreciate her professionalism and responsible approach to work. She is a proven specialist in her field with extensive opportunities for teamwork. My recommendations to Dr. Mandova are to increase her publishing activity in impact factor journals, as well as to promote the results of this research among the dental community.

Conclusion

From the submitted and studied materials it follows that the dissertation fully comply with the mandatory requirements and criteria for obtaining the educational and scientific degree "Doctor" according to the Academic Staff Development Act (ASDA) in the Republic of Bulgaria, Regulations for implementation of ASDA and the results fully comply with the specific requirements adopted in connection with the Regulations of Medical University – Plovdiv for application of ASDA.

All this gives me a convincing reason to give a positive assessment of the research, results and contributions and to vote positively by proposing to the distinguished members of the Scientific Jury to award Dr. Viktoriya Mandova the educational and

scientific degree "Doctor" in the doctoral program "Social medicine and organization of healthcare and pharmacy, professional field 7.2. Dental Medicine.

14.06.2022

Assoc.prof. Musurlieva

Залчено на основание
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