

REVIEW

From: Assoc. prof. dr. Veselina Kondeva Kondeva-Glavinkova, DMD, PhD, Department of Pediatric Dentistry, Faculty of Dental medicine, MU - Plovdiv, member of the Scientific Jury based on Order P-109-239 of 04/13/2023 of the Rector of the Medical University - Varna.

To: Dissertation for the award of the educational and scientific degree "Doctor" in the scientific specialty "Pediatric Dentistry", field of higher education 7. Health care and sports", professional direction 7.2. Dental medicine

Author: dr. Siyana Georgieva Atanasova

Form of the doctorate: regular form of study, Department of Pediatric Dentistry, FDM at the Medical University of Varna.

Topic: „Oral manifestations in children with autism and some syndromes“

Scientific supervisor: Prof. dr. Radosveta Stoyanova Andreeva-Borisova, DMD, PhD, DSc

General presentation of the procedure and the doctoral student

According to Art. 32 of the Regulations for the implementation of ZRASRB and Order P-109-239 of 13.04.2023 of the Rector of the Medical University - Varna, at the first meeting of the Scientific Jury I have been appointed to prepare a review as an external member of the Scientific Jury of the dissertation work of Dr. Siyana Georgieva Atanasova. The presented set of materials on paper and electronic flashdrive is in accordance with the Regulations for the terms and conditions for acquiring scientific degrees and occupying academic positions at the Medical University - Varna.

Brief biographical data of the doctoral student

Dr. Atanasova graduated as a Master of Dental Medicine in 2018 at the Faculty of Dental Medicine, Medical University - Varna. After successfully passing the exam, from 2018 until now she is an assistant in the Department of Pediatric Dentistry, Faculty of Dental Medicine, Medical University - Varna.

In 2022, Dr. Atanasova acquired a specialty in pediatric dentistry. She speaks English and participates in the training of Bulgarian and English speaking students in Pediatric dentistry.

Relevance of the topic and of the set goals and tasks

Oral health is a very important aspect of general health, especially for vulnerable groups such as children with specific health needs. These children are at a disadvantage compared to their peers. Their treatment is difficult, requires special conditions, skills and can take a long time. Prevention for children with specific health needs should be a priority.

There are studies in the country about the oral health of children with various specific health needs, but the society is in debt to these children and the dissertation work of Dr. Siyana Atanasova is up-to-date, modern and useful for dental science and practice.

Familiarity with the problem

Dr. Atanasova shows excellent knowledge and theoretical training. The literature review is thorough, comprehensive, written in a good scientific style and allows comparative analysis of the results of own studies with similar ones from the scientific literature.

The literary review is supported by 399 literary sources, of which 33 are in Cyrillic and 366 are in Latin. The literature reference is modern and up-to-date. Bulgarian authors who worked in the field of oral health of children with specific needs are correctly cited. The extensive overview of the topic shows that the doctoral student knows the problem in detail and analytically evaluates the data from the scientific literature. The review of the literature emphasizes the unsolved problems on the topic and points to the purpose and tasks of the dissertation work.

Characterization and evaluation of the dissertation work

The dissertation work of Dr. Siyana Atanasova presented to me for review is the personal work of the doctoral student and contains all the necessary sections, in accordance with the requirements: introduction, literature review, aim and objectives, material and methods, results and discussion, main conclusions, contributions of dissertation, bibliography and appendices. The structure of the dissertation work is balanced and corresponds to the modern formulations for the internal ratio of the parts of the dissertation work. A clear style is demonstrated, with an excellent command of specialized terminology.

The dissertation is written on 178 standard pages, illustrated with 37 tables, 26 graphs, 15 figures and 6 appendices. The bibliography includes includes 399 literary sources, of which 33 in Cyrillic and 366 in Latin. The dissertation work was discussed and directed

for defense to the departmental council of the Department of "Pediatric Dentistry" at the Faculty of Dental Medicine, Medical University - Varna, where the doctoral student works.

The literature review is extensive, logical, properly structured, addressing the main problems of oral health in children with autism and some syndromes, focusing on the prevention of children with autism and some syndromes.

The aim of the dissertation work is to investigate the oral status of children with autism and some syndromes, and the treatment-prophylactic approach to these children. The goal is clearly formulated and is a logical consequence of the conclusions in the literature review, corresponds to the title and is specified by the text of the tasks of the dissertation work.

In fulfillment of the goal, four tasks are set for implementation. The goal and tasks of the dissertation work are formulated precisely and clearly, which allows for the successful realization of the set goal and contributes to the enrichment of knowledge on this problem. Four hypotheses are also formulated.

The methods used for the dissertation work are clinical and sociological.

The object of observation are 240 children aged 3-18 from the Varna region, divided into four groups.

- ✓ 60 children with autism spectrum disorders (19 girls and 41 boys)
- ✓ 60 children with Down syndrome (33 girls and 27 boys)
- ✓ 60 children with Silver-Russell syndrome (31 girls and 29 boys). Children with Silver-Russell syndrome participate in a growth hormone treatment program at the Expert Center for Rare Endocrine Diseases at Sveta Marina UMBAL, Varna, with the head of the center Prof. Dr. Violeta Yotova, DMD, PhD. and were sent for dental and orthodontic treatment in the University Medical Dental Centre at FDM Varna.
- ✓ 60 healthy children (36 girls and 24 boys) for control group.

Inclusion and exclusion criteria were developed for patient screening.

The object of observation in sociological research are:

- ✓ 180 parents
- ✓ 60 dentists

Questionnaires have been developed to study the awareness of parents and dentists.

On the basis of the analysis of the results of the clinical and sociological research, protocols for the prevention and treatment of children with autism and some syndromes have been prepared, the purpose of which is to update the existing ones in our and world literature. Informative and motivational materials have been prepared for patients and their parents regarding nutrition, oral hygiene, fluoride prophylaxis and dental office visits. Materials have also been created that aim to help dental doctors to successfully conduct prophylaxis and treatment of these patients in outpatient settings.

The obtained results show significantly higher scores on the DMFT index in children with autism compared to the other two groups and the control group. The plaque index

in all studied groups showed similar high values. Children with Down syndrome have a severe periodontal status with bone loss that does not always correspond to the level of dental plaque. It was found that the children in the studied groups with specific needs have a significantly higher degree of SEN, compared to the control group. Hypodontia is very common in children with Down syndrome. The study of orthodontic status showed the highest prevalence of Angle Class II in children with Silver-Russell syndrome, and of Angle Class III in children with Down syndrome.

Despite parents' motivation for dental treatment and prevention, recorded results show a high prevalence of oral diseases in children with autism and some syndromes.

Regardless of their knowledge, dentists do not feel confident in treating these patients and want more information.

Collaboration between treating doctors and dentists is needed in order to better conduct effective oral prophylaxis and treatment for children with autism and some syndromes.

The methods used enable the fulfillment of the set goals and tasks, and the selected statistical methods guarantee the reliability of the results. The obtained results are very well presented, precisely illustrated with tables and figures, with presented statistical reliability and dependencies. The discussion of the results demonstrates the author's ability to objectively compare the obtained data with those of the available literature.

Contributions and significance of the dissertation for science and practice

Two original contributions for the country, two contributions of a practical-applied nature and five confirmatory contributions have been formulated, which I accept.

A Handbook for parents is proposed for maintaining the oral health and dental care of children with autism and some syndromes, which gives the opportunity to improve their lifestyle.

Assessment of dissertation publications

In connection with her dissertation, Dr. Siyana Georgieva Atanasova has published four full-text articles. Dr. Atanasova is the first author of three of the presented publications.

Personal participation of the doctoral student

The dissertation work was carried out entirely by the doctoral student, under the guidance of the supervisor, which is confirmed by the attached list of publications and participations. The personal merits of the doctoral student in connection with the realization of the dissertation work are indisputable. Her personal work is the overall activity of conducting the studies, collecting, processing and analyzing the data, formulating conclusions and contributions and the final shaping of this fully completed dissertation work.

Abstract

The abstract is designed according to all requirements and adequately presents, in a reduced form, the content and results of the dissertation work.

Critical remarks and recommendations

I have no critical remarks about the dissertation work of Dr. Siyana Atanasova submitted to me for a review. I recommend the author to popularize the results of her own research through lectures in the framework of continuing education at BDA and participation in scientific forums, as I believe that this will contribute to the enrichment of knowledge in this field and improve the quality of dental practice, especially regarding of pediatric dentistry.

CONCLUSION

The dissertation contains scientific and applied results, which 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 (ZRASRB), the Regulations for the Implementation of ZRASRB and the relevant Regulations of the Ministry of Education - Varna. The presented materials and dissertation results fully correspond to the specific requirements of the University of Varna.

The dissertation shows that the doctoral student Dr. Siyana Georgieva Atanasova possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Pediatric Dentistry", demonstrating qualities and skills for independent conduct of scientific research.

Based on the written above, I confidently give my positive assessment for the conducted research on a dissertation work on the topic: "Oral manifestations in children with autism and some syndromes", abstract, achieved results and contributions, and I propose to the honorable scientific jury to award the educational and scientific degree "Doctor " of Dr. Siyana Georgieva Atanasova in the doctoral program in Pediatric Dentistry.

Author of the review:

Assoc. prof. dr. Veselina Kondeva, DMD, PhD

03.05.2023

Plovdiv