

REVIEW

**by Assoc. Prof. Violeta Silvi Chernodrinska, MD, PhD
member of Scientific Juri**

Concerning: of a dissertation (PhD thesis) for obtaining an educational and scientific degree “Doctor of Philosophy ”, in a field of high education 7 “Healthcare and sports”, professional field 7.4 “Public Health”, Scientific speciality “Management of Health care”

Topic of the PhD thesis: MULTIDISCIPLINARY TEAM CARE IN PROPHYLAXIS OF CHILDREN’S EYE HEALTH – A FOCUS OF THE NURSE’S PROFESSIONAL ACTIVITY

Autor: Krassimira Ivanova Dimitrova

General presentation of the procedure

I present this review as a member of the Scientific Jury, to evaluate the dissertation of Krassimira Ivanova Dimitrova - PhD student in the scientific specialty "Health Care Management" , with scientific supervisors Prof. Christina Grupcheva, MD, DSc and Prof. Silvia Borisova, DSc. The dissertation was discussed and proposed for defense by the Department Council of the Department of Health Care at the Medical University "Prof. Dr. Paraskev Stoyanov"- Varna. The PhD student has completed all activities provided in the individual curriculum, she has received positive attestation grades for all academic years and has met the requirements of the minimum scientometric indicators of MU-Varna.

Biographical data and career development

Krassimira Dimitrova is a graduate of the IV French Language School "Frederic Joliot-Curie" in Varna. In 1987 she graduated the Medical College "Dr. Nencho Nikolaev" in Varna with a degree in "pediatric nursing". In accordance with modern trends for lifelong learning and for acquiring higher educational and qualification degrees she obtained a bachelor degree in Management of health care (MU – Varna 2006 - 2009) and also two master degrees – in Management of health care (MU – Pleven 2009-2010) and in Health management (MU – Varna 2017-2019). In 2020 she began training in PhD student’s program in the Department of Health Care in the scientific specialty "Management of Health Care" (MU - Varna). He has a third certificate for professional

qualification from the National Quality Council of the Bulgarian Association of Health Professionals in Nursing.

Her professional career as a pediatric nurse began at the First children's clinic of the University Hospital "St. Marina" in Varna. Krassimira Dimitrova has been part of the team of Eye Hospital in Varna since 1996, where she still works today. She is one of the few orthoptic training specialists in the country.

Krassimira Dimitrova is a part-time lecturer for students majoring in nursing and medical optics. Her publishing activity includes 19 publications in the field of ophthalmic health care and the development of nursing. She participates in the author's team of two textbooks on eye diseases, edited by Professor Grupcheva. Her clinical and research interests are focused on children's eye health, visual training for children, promotional activities of the nurse and team management.

She is a member of the Management Board of the Bulgarian Association of Health Professionals in Nursing. She is a regular member of the Union of Scientists – Varna. She has been a coordinator of the municipal prophylactic program for children's vision in Varna since 2012. She speaks French, English and Russian.

The presented dissertation (PhD thesis) corresponds the requirements of the Law for development of the academic staff in the Republic of Bulgaria, the Regulations for its application and the Regulations for development of the academic staff of MU - Varna. The dissertation consists of 184 pages and is logically structured in five chapters, adequate to the requirements of the professional field. A good balance has been achieved between the individual parts: content 2 pages; resume 2 pages; abstract 2 pages; abbreviations used 1 page; list of tables and figures 3 pages; introduction 3 pages; literature review 43 pages; aim, tasks, material and methodology of scientific research 10 pages; analysis, discussion of the results and practical aspects of the research 45 pages; multidisciplinary team care - good practice in the prevention of children's eye health 27 pages; conclusions, recommendations, contributions 4 pages; conclusion 2 pages; applications 15 pages; scientific publications and participation in scientific forums 1 page, bibliography 18 pages. It is illustrated with 56 figures and 24 tables with impressive graphic design. The bibliography contains 330 literary sources, of which 83 in Cyrillic and 247 in Latin. The use of a bibliographic application and a modern approach to citing sources make a good impression.

Assessment of the topicality of the issue

World experience shows the importance of screening for early detection of visual impairments in childhood. Over 80% of ophthalmic diseases diagnosed in early childhood can be prevented and treated. Children's blindness represents 4% of

blindness and 1% of visual impairment worldwide. World standards for prevention of children's eye health define early first examination, screening of certain age groups to look for age-specific eye problems and periodic monitoring and evaluation of visual function.

Screening is not a diagnostic procedure, it is an initial, referral test. This is the author's reason for including in preventive activities other medical specialists in eye health - nurses, medical opticians and optometrists, available in our country, in addition to ophthalmologists.

In the Bulgarian legislation defining nursing activities, there are general texts for the participation of the nurse in health promotion, without specification. Examining the international and Bulgarian experience regarding the participation of the nurse in teams for prevention of children's eye health, essential differences were found.

At the time of the study in our country there is no data on self-conducted screenings by a nurse. International practice shows that in some countries there is a delegated role of a trained nurse in prevention activities.

Ophthalmic nursing is dynamic and constantly evolving. Ophthalmic nurses play a key role in every aspect of eye health.

The significance of the researched problem is based on the fact that at present there is no scientific research on the prevention of children's eye health with a focus on multidisciplinary approach and nursing competencies. The expected long-term benefits of the research are in two aspects: to improve the child's eye health and quality of life; to change the attitude to the nursing profession and to outline new perspectives for its development.

I accept the PhD student's reasons for writing the dissertation and I evaluate the topic as current, significant and with a contribution to the development of nursing science and practice.

The literature review is written competently, in a good language style. It shows excellent knowledge of the issue and reflects the PhD student's ability to analyze and synthesize scientific information. It includes six subtopics.

A detailed review and in-depth analysis of Bulgarian and foreign scientific literature concerning the nature, composition and characteristics of multidisciplinary teams, the update of the nurse's role in modern health care and in multidisciplinary teams have been done. The history of the visual screening has been studied and its significance for children's eye health has been assessed. The anatomical, physiological features and the development of the children's visual system, which are the scientific basis for early detection of visual disorders through visual screening, have been studied and

systematized. The importance of preventive activities in order to control, reduce and eliminate one of the most severe disabilities - child blindness has been also justified. A review and comparative analysis of international experience in the prevention of children's eye health and the participation of medical specialists in this process have been done.

A historical review of the preventive programs for children's vision in our country has been done. The good traditions and practices in the prevention of children's eye health in the city of Varna have been described. Emphasis is placed on the nurse's participation in the preventive and training activities during the screening. The current state of the problem "prevention of children's eye health" has been analyzed by outlining the legislative framework. The practical implementation of the preventive measures for children's vision in the modern Bulgarian healthcare and the participation of the medical specialists have been studied. Medical specialists from four different specialties, who can take care of children's eye health and have competencies to carry out preventive activities in our country have been presented.

This clearly has outlined the need to study the attitudes of pediatric ophthalmologists to prevention of children's eye health and the barriers they face to provide multidisciplinary team care.

The nurse's multifunctionality in the team and the expanding opportunities for her professional realization in the field of promotion of children's eye health is a scientific interest for the author.

The methodology and organization of the scientific research are presented in detail.

The aim of the dissertation is precisely formulated: to study and analyze the activities for prevention of children's eye health, to identify attitudes and barriers to multidisciplinary team care and to define the functions of the nurse in the team.

The aim is decomposed into nine tasks, which reflect the work done by the PhD student:

1. To present the essential characteristics of multidisciplinary team care in the prevention of children's eye health.
2. To study the legislation governing the activities for the prevention of children's eye health.
3. To study the best practices for the prophylaxis of children's eye health.
4. To study the awareness, health behavior and attitudes of parents in the city of Varna for the prevention of children's eye health.
5. To study the attitudes and barriers in front of the ophthalmic nurses in the country for providing multidisciplinary team care in the prevention of children's eye health.

6. To study the attitudes of ophthalmologists in the city of Varna to conduct activities for the prevention of children's eye health by a multidisciplinary team of specialists.
7. To study the attitudes of students from the Medical University of Varna to participate in a multidisciplinary team to carry out activities for the prevention of children's eye health.
8. To define the functions of the nurse in the multidisciplinary ophthalmological team.
9. To develop a model for multidisciplinary team care for prevention of children's eye health.

Three working hypotheses, regarding the positive attitude and barriers for the nurse to participating in the MDT for the prevention of children's eye health and awareness of nursing multifunctionality in team activities were made.

The tools developed by the author reflect the complex nature of the study. The study was aimed at 400 people: ophthalmic nurses from the country; parents of children from the city of Varna; ophthalmologists from the city of Varna; students from the Medical University of Varna – nurses, opticians and optometrists.

The PhD student successfully applies a wide range of methods adequate to achieve the aim: sociological methods, statistical methods for processing and analysis of information, graphical analysis to illustrate the studied processes and discovered patterns.

The results and the discussion are presented for each group of respondents separately. The adequate structuring and logical sequence of this chapter is impressive. The presentation of the results shows the PhD student's ability to analyze and interpret scientific data. The discussion is systematic and considers its own results in the context of similar studies by leading Bulgarian and foreign authors. The analysis of the results of the scientific research allows the synthesis of a sufficient number of conclusions that fully correspond to the set tasks and the set hypotheses:

1. In different countries around the world there are different approaches and practices for the prevention of children's eye health, which involve different medical professionals. There is a delegated role of a trained nurse in prevention activities.
2. In our country the legally regulated activities for prevention of children's eye health are limited and imposed only on ophthalmologists while there are also

other eye health professionals from three medical specialties - nurse, medical optician and optometrist. There is no national program and national recommendations for the prevention of children's eye health.

3. The level of awareness of parents on children's eye health is relatively high. Their health behavior shows a certain underestimation of preventive activities.
4. 78,7% of parents have high confidence in the nurse in the team. They appreciate the usefulness of preventive activities and declare that they will follow the recommendations, which is a basic prerequisite for the implementation of the promotional function of the nurse.
5. Although the majority of nurses have not participated in screenings (78%), they have a positive attitude towards preventive activities (68%) and are aware of their multifunctionality (56%) in MDT.
6. Leading factors (barriers) hindering the participation of nurses in MDT for the prevention of children's eye health are lack of time due to professional workload (38%) and lack of knowledge and skills (32%).
7. The majority of ophthalmologists (64%) have a positive attitude towards MDT, state high confidence (78%) and assess the professional multifunctionality (56%) of the nurse, which is an important condition for expanding nursing functions and for effective teamwork.
8. The positive attitude of the students (92.7%) towards a multidisciplinary team approach and the striving for improvement is a prerequisite for full professional realization.
9. In practice, the application of the model for multidisciplinary team care in the prevention of children's vision will expand the professional spectrum and optimize the promotional role of the nurse.
10. The practical application of the multidisciplinary model will contribute to improving the access of the population to ophthalmological health care and will provide comprehensive care for children's eye health, based on modern standards, approaches and competencies of all medical professionals involved in MDT: ophthalmologist, nurse, optometrist and medical optician.

The presented practical aspects of the scientific research indisputably prove the professional maturity of the PhD student, the significance and relevance of the dissertation and they deserve high evaluation.

These contributions of the dissertation to the development of nursing science and practice objectively reflect the originality and scientific achievements of the author and

show that she has the ability for independent research. I accept the indicated contributions - **original for the country (theoretically substantiated) and with practical application.**

The presented publication and participation in scientific forums by the PhD student are a result of her professional competence and a striving for independence, represent a stage of scientific research and meet the requirements for the minimum scientometric indicators set by the Regulations for the development of the academic staff of MU - Varna.

The executive summary meets the requirements, contains 91 pages and reflects the most important moments of the dissertation.

I recommend the PhD student to continue her research in the field of multidisciplinary approach in the prevention of children's eye health and to publish the results in a book.

Conclusion

This is the first dissertation in the field of ophthalmological health care in the country. The first complex and in-depth study of the Bulgarian and international experience in the prevention of children's eye health from the perspective of the nurse's participation was made. The essence of modern ophthalmological health care has been developed. The main functions of the nurse, defined by the WHO, are concretized and adapted to the ophthalmological practice and to the need for promotional ophthalmopediatric care. The scientific research confirms the need for a multidisciplinary approach in the prevention of children's eye health. The nurse's participation in the team provides an opportunity for the development of the nursing profession through changes and improvements in the nature of health care and of the teamwork, as well as for developing the full professional potential of nurses.

The dissertation (PhD thesis) is an important prerequisite for redefining the role of the modern ophthalmic nurse and for expanding the field of her competence in the direction of autonomous promotional activities and healthcare management.

The developed model for providing a preventive environment for children's eye health through the application of multidisciplinary team care would optimize children's access to ophthalmic health care and would help to improve children's eye health.

In conclusion, with full conviction I give a positive assessment to the presented dissertation **“MULTIDISCIPLINARY TEAM CARE IN PROPHYLAXIS OF CHILDREN’S EYE HEALTH – A FOCUS OF THE NURSE’S PROFESSIONAL ACTIVITY”**.

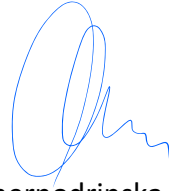
I propose to the members of esteemed Scientific Jury to award the educational and scientific degree **“Doctor of Philosophy”** to **Krassimira Ivanova Dimitrova** in the scientific specialty **“Management of Health Care”**.

12..12.2021

Sofia

Rewiever:

Assoc. Prof. V. Chernodrinska, MD, PhD

A handwritten signature in blue ink, consisting of several loops and a trailing line, positioned above the reviewer's name.