

REVIEW

of a dissertation (PhD thesis) “**MULTIDISCIPLINARY TEAM CARE IN PROPHYLAXIS OF CHILDREN’S EYE HEALTH – A FOCUS OF THE NURSE’S PROFESSIONAL ACTIVITY**”

PhD student: **Krassimira Ivanova Dimitrova**

For awarding 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 specialty “*Management of Health care*”

Reviewer: Prof. Sonya Koleva Toncheva, PhD, DSc, Head of Shumen Branch, MU – Varna, Member of the Scientific Jury, according to Ordinance 109-497/ 22.11.2021 of the Rector of the Medical University "Prof. Dr. P. Stoyanov "- Varna

Data on the procedure

Krassimira Ivanova Dimitrova is enrolled as a PhD student in an self-conducted form of study for the acquisition of an educational and scientific degree “Doctor of Philosophy” in the field of higher education: 7. Health and sports, professional field 7.4. Public Health, in scientific specialty “Management of Health care” in Department of Health Care, Faculty of Public Health, Medical University - Varna, according to the Ordinance of the Rector № P -109-226 / 09.07.2020 with scientific supervisors prof. Silvia Borisova, DSc and Assoc. Member of the Bulgarian Academy of Science prof. Christina Grupcheva, MD, DSc.

On the grounds of article 24 and paragraph 6 and article 30, paragraph 3 of the Regulations for application of the Law for development of the academic staff in the Republic of Bulgaria, article 68, paragraph 1 of the Regulation for development of the Academic staff of MU-Varna and of decision of the Council of the Faculty of Public Health under protocol №173 / 09.11.2021 and successfully passed the PhD exam and in accordance with her readiness for public defense, **Krassimira Ivanova Dimitrova** was approved for public defense by Ordinance №P 109-497 / 22.11.2021 of the Rector of MU - Varna.

The dissertation was approved and proposed for public defense by the Council of the Department of Health Care at MU - Varna on 03.11.2021.

Biographical data and career development of the PhD student

Krassimira Dimitrova is a graduate of the IV Language School "Frederic Joliot-Curie" in Varna with French language, than she graduated the Medical College "Dr. Nencho Nikolaev" in Varna with a degree in "pediatric nursing (1985 - 1987), and later 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 (Faculty of Public Health, MU – Varna 2017-2019).

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 as an anesthesiological and operating nurse since 1996, where she still works. She has been a staff nurse of Eye department since 2012. She is one of the few children's orthoptic training specialists in the country.

Krassimira Dimitrova is a part-time lecturer for students majoring in nursing in the department of Health care since 2011; she began training students in "Nursing care for patients with eye and ear-nose and throat diseases" since 2020. In 2013 she began teaching "Special care for people with eye problems" the students majoring in Medical Optician at the Medical College - Varna. She has been a lecturer at the Center for Professional Training of BAHPN for northeastern Bulgaria since 2017.

Mrs. Dimitrova has an emphasized interest in scientific research – she has 21 participations in scientific congresses and conferences in Bulgaria and abroad for the period 2008 - 2021. Her publishing activity includes 19 scientific articles 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, nurse's preventive activities and team management.

She has been the coordinator of the preventive program "Children's Vision", conducted in cooperation between the Municipality of Varna and the University Specialized Eye Hospital since 2012.

In 2020 she began training in PhD student's program in the Department of Health Care in the scientific specialty "Management of Health Care".

Krassimira Dimitrova has contributed to changing the vision and public attitudes towards the nurse's profession, through active participation in the development of the professional organization (BAHPN). She has been successively elected as Deputy Chairman (2005-2010), Chairman of the Region of Varna (2010-2015), and she has been a member of the Management Board of BAHPN since 2016.

She was awarded the statuette of Lesses Kepra in the category "Manager of Health Care 2015", award for the development of the professional organization, award of the Rector of MU-Pleven (2010) and the Rector of MU-Varna (2019), award of the Mayor of the Municipality of Varna (2019).

Mrs. Dimitrova has a third certificate of professional qualification, issued by the National Quality Council of the Bulgarian Association of Health Professionals in Nursing. Krassimira Dimitrova speaks French, English and Russian.

General description of the dissertation

The dissertation (PhD thesis), presented by Krassimira Ivanova Dimitrova, was developed at the Department of Health Care, Faculty of Public Health at the Medical University - Varna.

The dissertation is structured in five chapters and contains 184 pages, including 24 tables, 56 figures and 6 appendices. A very good balance has been achieved between the different parts of the dissertation. The bibliography contains 330 literary sources with a predominance of cited sources in Latin, due to the fact that, the researched topic is not sufficiently studied in our country.

Assessment of relevance and significance of the topic

The topic of dissertation, that Mrs. Dimitrova has chosen, is significant and very relevant. Providing comprehensive care by a multidisciplinary team of eye specialists with different levels of competence, knowledge and skills, is a prerequisite for improving children's eye health, improving the access to ophthalmologic health care, increasing the satisfaction of the population and lessening the economic burden on society.

Ophthalmic nurses play a key role in every aspect of eye health. In order to respond, not only at the moment but also in the future, to the diverse needs of patients, to the expectations of society and the government, ophthalmic nurses must adapt, accept challenges, develop and expand their professional capacity, have to adopt innovative practices and new technologies, and to apply new highly specialized skills.

The author has looked for ways to quickly adaptation and interaction with the child - patient and parents, as well as opportunities and challenges facing ophthalmopediatric nurses, focused on preventive activities. The relevance of the topic of this dissertation is due to the lack of information for ophthalmological nursing in our country, the lack of specific research and models of ophthalmic nursing practices.

Based on a thorough literature review, showing the author's ability to handle literary sources, information was summarized and analyzed, aimed at the problem of the nurse's participation in a multidisciplinary ophthalmological team.

The topic of the dissertation is relevant also, due to the fact, that the author offers a comprehensive approach to involving the nurse in the prevention of children's vision.

Based on the analysis of the Bulgarian and international practice in the field of prevention of children's vision, her own research and based on her own clinical experience, Dimitrova presents her own **Model for providing a preventive environment for children's eye health, by applying multidisciplinary team care.**

Literature review

The literature review is developed in 44 pages, structured in **Chapter I**. The review has six main sections, which relate to clarifying the nature, characteristics and composition of the multidisciplinary team (with 4 subsections). The following are questions concerning visual screening, features and development of the children's visual system and children's blindness (with 3 subsections). A place has been set aside to discuss international experience in the prevention of children's eye health and an in-depth comparative analysis has been made. The problem of prevention of children's eye health in Bulgaria is presented (in 2 subsections). Traditions and good practices in the field of prevention of children's eye health in the city of Varna are also shared, in some of which the author also participates.

In the literature review, with logical sequence, Krassimira Dimitrova analyzes sources, concerning the problem and the author's concept, developed in the dissertation. The PhD student has conducted a thorough and detailed study of various bulgarian and international sources, referring to the problem of prevention of children's eye health with the participation of a nurse. The professional skills of the nurse, who can manage various preventive programs, interact with children, parents and apply adequate approaches, are also affected.

To develop the literature review, the author relies on sufficient number of sources, which she skillfully analyzes and shows in-depth knowledge of the opinions of other authors on her chosen problem. The structure of the literary review and the stylistic layout show the skills of Krassimira Dimitrova to handle literary sources and to express her own opinion on the topic of the dissertation.

The literature review presents the author's schemes of the Traditional Medical Team for Prevention of Child Eye Health (Figure 4), Multidisciplinary Team for Prevention of Child Eye Health (Figure 5), as well as photos, proving author's participation in training and care for the eye health of children from Varna.

I suggest to the author: The presented literature review should be developed as a "Guide for preventive activities of the nurse - part of the multidisciplinary ophthalmological team." The guide would be helpful to nurses in practice, as well as to the students majoring in nursing, attracted to work in the field of the prevention of children's vision.

Staging of the scientific research

Chapter II is entitled "Aim, tasks, material and methodology of the study". Based on a thoroughly developed literature review, the aim is successfully derived, 9 tasks and 3 hypotheses are formulated and the methods for their scientific proof are provided. The author has applied various methods that guarantee the reliability of the results obtained. The design of the study includes theoretical and empirical research. The study was aimed at **400 people**, divided into four groups, as follows:

- **first group:** parents of children under 16 years of age from the city of Varna, who

- visited the centers for preventive examination (n=150);
- **second group:** nurses from the country, providing ophthalmic health care in inpatient and outpatient care facilities (n=50);
 - **third group:** doctors - specialists in ophthalmology (experts) from medical institutions for inpatient and outpatient care, from the city of Varna (n=50);
 - **fourth group:** students from the Medical University of Varna – nurses, opticians and optometrists (n=150).

The activities of the dissertation are conducted in 5 stages, described in detail in the Methodology of the study.

The toolkit is self-developed and guarantees the reliability of the applied various methods (documentary, historical, survey method and standardized interview).

The author's view to present a conceptual framework in the methodology is original and facilitates the unambiguous perception of the terms used.

Appropriate statistical methods have been used to process primary sociological information.

Results

The dissertation presents the results of a huge work, done by the author. The results are logically shaped and structured in Chapter III. The aspects of the research with practical application are presented in Chapter IV. This approach proves the ability of K. Dimitrova, based on successfully proven in theoretical terms results, to offer practical approaches to effective multidisciplinary team care with the participation of the nurse, which enhances the merits of the dissertation. The expert assessment, given by the ophthalmologists, is important for the analysis of the results.

Chapter III of the dissertation, entitled "*Analysis, discussion of results and practical aspects of research*", presents the characteristics of the studied groups of respondents.

This chapter examines the health behavior and parents awareness how to care of children's eye health. The author proves, that the majority of parents have a high level of awareness about the frequency of preventive examinations during childhood and believe that care should be shared in clear partnership with ophthalmopediatric specialists. The author examines the trust of parents in the competence of the nurse in the team that conducted a preventive examination of their children (78.7%). The high level of trust in the nurse is also supported by the fact, that the majority of parents accept the given recommendations for annual prophylactic examination or mandatory full eye examination in a children's eye clinic (78.7%). Nurses in the ophthalmology team have made significant contributions to raising parent awareness. Opportunities for counseling and training are the

result of the development of the profession and the established relationships of partnership and trust between parents and nurses.

The attitudes of the students (nurses, medical opticians and optometrists) towards multidisciplinary team care and their role in the team were also studied. The author has looked for their perspective thinking and has studied if it corresponds to the current trends in the prevention of visual impairments in childhood and prevention.

Although the prevention of children's eye health in our country is carried out mainly by doctors and rarely with the participation of a nurse, the author includes other specialists, who can work in a multidisciplinary team and contribute to providing better health care in the future. In the study, conducted in this group, Dimitrova proves the positive attitude towards the multidisciplinary team approach, the desire of future young colleagues to improve and the opportunity for full professional realization in the field of children's eye health prevention.

Especially important for the studied problem is the researched opinion of the experts - ophthalmologists, for conducting activities for prevention of children's eye health by a multidisciplinary team. The results of the study show, that the traditional team "doctor-nurse" is significantly inferior to the multidisciplinary team (MDT), as more than half of the experts say, that prevention should be a professional activity of various eye health professionals united in MDT (64%). The study confirms the need for clear roles of specialists in the team. The experts express confidence and share their opinion on the wide range of activities that can be performed by nurses, medical opticians and optometrists in the team.

The study provided an opportunity for ophthalmological nurses to make a self-assessment of the process of professional development, to work in preventive programs, to define their role and activities in MDT and others.

The author clearly formulates questions, that she asks all groups of respondents and draws conclusions that prove her thesis. The depth of the analysis outlines important problems that could be solved in overcoming the existing barriers to the prevention of children's eye health and the wider involvement of various specialists in MDT.

In **Chapter IV** "*Multidisciplinary team care - good practice in the prevention of children's eye health*" the PhD student proposes a "**Model for creating preventive environment for children's eye health by applying multidisciplinary team care**", which completes the author's concept. The detailed model is significant in several aspects:

- optimizes the opportunities for access to ophthalmological health care and preventive care for children and families;
- assists in improving cross-sectoral cooperation and ensures coherence between all participants in prevention activities;
- expands the professional spectrum and optimizes the autonomous role of the nurse;

- creates an opportunity for the realization of medical specialists in the field of prevention of children's eye health and will increase satisfaction with professional activities.

Undoubtedly, the accumulated clinical experience of Krassimira Dimitrova has given the opportunity to develop basic parts of the Model, and it becomes understandable, easy to apply, delineates the territory of the participants in MDT, brings clarity to the roles, and minimizes the risk of errors and conflicts. The model contributes to the effective participation of each of the members and to significant satisfaction of patients - children and parents. An important place in the theoretical justification of the model is occupied by the author's outlined need for specific competencies of the nurse, as well as the opportunity for the nurse to train children and parents in areas "**Eye Health Care**" and "**Ophthalmological care for children**", provided by Dimitrova.

To facilitate the process of referring children to a specialist from a wide range of medical professionals, the author has also proposed "**Indications for referral of a child to an ophthalmologist.**"

I also appreciate the author's **Record book of Children's Eye Health**, which contains clinical and health information for parents of children with visual problems and eye examination data.

The rapid development of medical practice, modern models applied in the health care system, the significant increase in the requirements for medical professionals, justify the need for innovative approaches in health care practice, development and implementation of optimal ways to improve children's eye health prevention and support for parents in solving health problems.

The developed Model creates favorable basic conditions for the implementation of systematic studies, based on the search for a variety of effective common and private solutions to improve preventive activities for children's eye health, provided by MDT.

Nursing activities and care are a combination of knowledge, skills and specific professional behavior. Nursing is intensively developed and is charged with many responsibilities and professional functions to the patient and the medical team. Changing behavior, building new habits and skills to cope with the tasks can be done only by applying a unified approach to achieving team goals.

I recommend the PhD student to study an expert opinion on the functioning of the model and to study the attitudes of nurses to work according to the proposed model, in the future.

The conclusions from the study and the recommendations to various institutions related to the issues, discussed in the dissertation, are presented in **Chapter V**.

The author has formulated 10 **main conclusions** as a result of the tasks set in the dissertation, which proves their implementation. Three additional conclusions have been

formulated, which even more convincingly substantiate the need for preventive activities for children's eye health, due to the limited time to affect the morphologically and functionally immature visual system, which must create normal conditions in the period of intensive development. As well as emphasis is placed on the fact that the nurse and other specialists are a valuable resource of the health system in childhood.

The author has made valuable **recommendations** to institutions in the field of healthcare. I emphasize the importance of the recommendations: **to further develop and refine the current legislation** in the Republic of Bulgaria on activities for prevention and screening of children's vision, as well as **to create** a "National Program for Prevention of Children's Eye Health" and **to develop** "National Recommendations for the prevention of children's eye health ". The recommendations concerning the National Association of Municipalities in the Republic of Bulgaria and the budget of the municipalities, as well as to the Bulgarian Association of Healthcare Professionals, are partially implemented. In my opinion, a small part of the recommendations are not the subject of scientific research, but rather express the views of the author, based on her good knowledge of the problems and regulations in health care in our country.

Assessment of the contributions

The dissertation is the first large-scale, in-depth, comprehensive and focused of the possibilities for the participation of the nurse in MDT for prevention of children's eye health study, as well as the need to define specific and concrete competencies is of great scientific and practical importance.

The positive attitude of ophthalmic nurses towards multidisciplinary team care and their awareness of the wide range of professional activities in the team is an important prerequisite for changing nurse's role and expanding the field of competence towards autonomous promotional activities and care management. Expanding the range of interdependent and independent professional activities of the nurse in the dynamically changing environment and complex needs of children and families will lead to the construction of an effective system for providing health care, including preventive care.

The results of the scientific research, the formulated conclusions and recommendations outline theoretically substantiated contributions and contributions with practical application.

The report on the contributions, presented in the dissertation, reflects relatively objectively the real achievements of the author. From the contributions, presented by the author, I perceive the following:

Contributions original for the country / theoretically substantiated:

1. 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 in the prevention of children's eye health.

2. A study and analysis of the current legislation in the Republic of Bulgaria on the prevention of children's eye health and its application in the practice of medical professionals have been done.
3. The essence of modern ophthalmological health care has been developed.
4. The functions of the ophthalmological nurse in MDT for prevention of children's eye health have been developed.
4. The opinion of ophthalmological nurses, ophthalmologists, students and parents regarding the multidisciplinary team care and its importance for the prevention of children's eye health has been studied.
5. The barriers for prevention of children's vision in the country have been studied defined.

More significant contributions with practical application:

1. A model for providing a preventive environment for children's eye health through the application of multidisciplinary team care has been developed and proposed in practice.
2. In order to facilitate the practical application of the model, proposals for monitoring the child's eye health and criteria for referral to an ophthalmologist have been developed.
3. A training program on "Promotion of children's eye health" for a wide range of students has been developed.

Technically, the dissertation is designed according to the requirements. The author uses an approach to facilitate the perception of the dissertation - indexes of the attached tables and figures are displayed.

The executive summary contains 100 pages and comprehensively and correctly reproduces the most important moments of the dissertation.

The author's research portfolio currently includes one published scientific article and 4 online scientific communications – oral presentations of reports, related to the dissertation, which were realized in 2020 and in 2021, so Krassimira Dimitrova has met the requirements of the criteria for awarding educational and scientific degree “**Doctor of Philosophy**”.

I recommend the author to publish her research in specialized Bulgarian and international scientific journals to make the results of the study available to a wider range of ophthalmic health professionals working with children.

Krassimira Dimitrova fully meets the requirements for awarding the educational and scientific degree "Doctor of Philosophy" by Medical University - Varna, through the developed dissertation, which is sufficient in volume and can be considered as current scientific work with important theoretical and practical contributions.

Personal impressions

I consider it necessary to share my personal impressions. I have known Krassimira Ivanova Dimitrova since 2010 as a staff nurse in the Ophthalmological Department and a Chair of BAHPN in Varna, and later as a member of the Management Board of the Bulgarian Association of Health Professionals in Nursing.

She has a kind character, good communication skills, curiosity and consistency in action. She is an established and respected colleague, who has earned the trust for the organization and conducting of clinical training of students majoring in "Nursing". Dimitrova's practical ophthalmopediatric experience in hospital settings and her activity as a coordinator of the Children's Vision Preventive Program, conducted in cooperation between the Municipality of Varna and the University Specialized Eye Hospital, have provoked her desire to explore different approaches and established nursing practices in the field of prevention of children's vision. On the other hand, her innovative thinking leads her to modern models, applicable in nursing teamwork. Thus, as a lecturer and researcher, she successfully formulated the problem of her dissertation. Krassimira Dimitrova is well - meaning, curious, interactive with colleagues and students in solving various pedagogical cases. She has teamwork and team management skills.

In conclusion: Based on the professional development, scientific and teaching achievements and in accordance with the criteria of the Law for the development of the academic staff in Republic of Bulgaria, the Regulations of the Law and the Regulations for the development of the academic staff of Medical University "Prof. Dr. P. Stoyanov" - Varna, I give my positive vote and I strongly suggest to the esteemed Scientific Jury, PhD student **Krassimira Ivanova Dimitrova** to acquire the educational and scientific degree "**Doctor of Philosophy**" in scientific specialty "Health Care Management".

29.12.2021

Reviewer:



Prof. Sonya Toncheva, PhD, DSc