

OPINION

by Assoc. Prof. Dr. Gena Georgieva Penkova, MD, PhD
for the dissertation of Kichka Dimitrova Trendafilova on the subject
"Improving the quality of life in children with burn injury"

By Order R-109-66/06.03.2024 of prof. Dr. SVETOSLAV GEORGIEV, MD, PhD - Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna I was elected as a member of the Scientific Jury and according to Protocol No1 / 08.02.2024 I was appointed to prepare an opinion on the procedure for acquiring the educational and scientific degree "Doctor" under the doctoral program "Health Care Management", field of higher education 7. Health and sports, professional field 7.4 "Public Health", with a candidate Kichka Dimitrova Trendafilova, PhD student in full-time education at the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna.

Brief biographical data and career development of the PhD student

Kichka Dimitrova Trendafilova was born on 07.05.1974 in Dobrich. She has gone through all stages of academic education for health professionals: semi-higher education in nursing (1992-1996); "Bachelor degree" (1998-2001) and "Master degree" (2010-2012) in the specialty "Health Care Management"; Master of Public Health (2002-2004) at the Medical University of Varna. Since January 2020 she has been enrolled in a full-time PhD at the Health Care Department, Faculty of Public Health at the Medical University of Varna. In 2023, she acquired the specialty "Hospital Hygiene (Infection Prevention and Control)".

The PhD student Kichka Dimitrova has extensive professional experience as a nurse and senior nurse in various treatment structures in Varna. He worked for the longest time in the Clinic of Burn Trauma, Plastic, Reconstructive and Aesthetic Surgery at the Multiprofile Hospital for Active Treatment - Varna at the Military Medical Academy - Sofia (2003-2022). From 2022 to the present he holds the position of "senior nurse" in the Gastroenterology Clinic at the Specialized Hospital for Active Treatment of Oncological Diseases "Dr. M.A. Markov – Varna".

Her teaching experience includes conducting practical classes and mentoring a pre-graduate internship for the students of the specialty "Nurse" at the Faculty of Public Health at MU-Varna. She has participated in a number of scientific events with her own studies and as a co-author. She has an intermediate command in English and Russian and good computer skills.

General characteristics of the dissertation and its relevance to the topic

The dissertation paper contains a total of 207 pages, of which 160 main text and 40 pages of bibliography and 5 attached questionnaires for collecting the primary data. The main text is structured

in five chapters: 1. Literature review – relevance to the problem; 2. Purpose, tasks, material and methodology of the study; 3. Results and discussion; 4. Practical approaches to optimize nursing care in children who have suffered burn trauma; 5. Conclusions, suggestions and contributions. The bibliographic list includes 200 literary sources, of which 78 in Cyrillic and 122 in Latin.

Relevance of the dissertation. The PhD student has directed her scientific interest to an important problem in practical terms, the relevance of which is well justified in her short introduction. Particularly serious are the health and psychological problems of severe burn injuries, which are the most significant in children. Nurses are in the closest relationship with the injured child and the family and have a variety of functions and responsibilities during inpatient treatment and at the recovery process. Therefore, the development of science-based practical behavioural approaches of the nurse is of utmost importance for improving the quality of life of children who have suffered burn trauma.

Evaluation of the structural parts of the dissertation

1. Evaluation of the literature review. In four successive structural parts the following aspects are considered: the historical aspects of scientific knowledge in the field of burn trauma and the development of plastic surgery; the main aspects of burn trauma; the characteristics of burn trauma in children and nursing activities and care in burn trauma. Sufficient attention has been paid to the section on the competences and activities of nurses in burn trauma by presenting examples of good practice in a number of countries (Israel, USA, UK, France, India, etc.). On this background, the PhD student critically evaluates the normative framework in Bulgaria, concerning the regulation of care for burns in Bulgaria. The review consists of 70 standard pages (over 40% of the main text), and although it is exceeding the recommendations for such kind of scientific work, it provides good information and a complex approach to the various aspects of the development of scientific knowledge and practices related to burns, which are completely valid for study of burn injuries in children, too.

2. Evaluation of the survey methodology. The aim of the study is formulated clearly and precisely: *"To analyze the organization of health care in children who have suffered burn trauma and to identify challenges to current practice and potential areas of change to improve the quality of life in the recovery period."*

To achieve this goal, **seven tasks have been formulated**, two of which have a specific applied focus: to explore the possibilities of implementing innovative models and to propose approaches to improve nursing care in the recovery period in order to optimize the quality of life in children who have suffered burn trauma.

Five working hypotheses have been formulated, two of them as null hypotheses.

The detailed presentation of the methodology of the study makes a good impression. The research design provides a complex medico-sociological approach to the studied problem by

combining **theoretical study and empirical research in the form of in-depth interview and quantitative sociological approaches**. A total of 314 individuals in 5 groups were included in the study: **in-depth interview among 10 parents** of children who suffered burn trauma with involvement of more than 20% of skin surface; **self-administered questionnaires** were distributed among 172 parents of children who have suffered burn trauma, 61 medical specialists from specialized hospital structures for the treatment of burns and 57 educators and nurses from kindergartens; and **standardized interview** with 14 experts-medical specialists, managers of hospital structures for the treatment of burns.

The criteria for inclusion and exclusion of persons in the respective groups are well formulated. The collection of the primary data was carried out with specially prepared author's questionnaires (attached as appendix at the dissertation).

The survey took place within the period of March 2020 to January 2024 in 5 consecutive stages.

The only remark to this chapter concerns the indication of some statistical methods which are practically not used in the dissertation due to the specifics of the primary data, including only qualitative nominal and ordinal variables because some quantitative variables such as age and length of service were expressed on ordinal scales and Pearson correlation coefficient cannot be calculated.

3. Evaluation of Chapter III "Results and discussion". This chapter has a volume of 52 pages and occupies a central place in the dissertation. The results are presented by appropriate tables and well-crafted graphs. The interpretation of the data shows the impact of the long nearly 20-year experience of the doctoral student in a clinic where many children with burn injuries have been treated. This allows her to thoroughly analyze the responses in the study groups and to formulate relevant conclusions.

The most valuable part in this chapter is the analysis of the results of the in-depth interview, which are supported by well-chosen quotations from the unscripted records of the responses of the 10 respondents.

The discussion of the results has been mainly presented through the conclusions of the PhD student herself. There is a lack of comparisons with results from other studies. No statistical evidence was provided of the presence or absence of reliable differences of opinion between groups of persons (e.g. parents, nurses, educators). There is a discrepancy between the statistical methods that were actually applied and those indicated in the survey methodology.

Evaluation of Chapter IV. This chapter reflects practical approaches to optimizing nursing care in children who have suffered burn trauma. A special instrument called "Organizational Framework" has been developed by the PhD student that presents in a logical sequence 15 basic steps

in monitoring, treatment and necessary support for affected children during the recovery period with a focus on the opportunities for optimizing nursing care. This allows the personalization of care according to the specific needs of each child.

On the basis of the developed organizational framework, the doctoral student presents basic guidelines for improving the organization and effectiveness of health care in children with burn trauma. The generally recognized **Donabedian conceptual model of quality improvement** has been used, which provides a working framework for the study of health services and the assessment of the quality of health care. According to this model, information on the quality of health care can be derived from three categories: **structure, process and outcomes**.

The structure describes the context in which health care is provided, the physical and organisational characteristics of the organisation and the infrastructure in which health care is provided. **The process** describes what is done in providing and receiving health care (the activities of patients in seeking and receiving health care and the activities of health care providers). **The results** reflect the effects of health care on the health status of patients in specific situation, which means the effects on improving the quality of life of children with burn trauma.

In three comprehensive tables, the PhD student presents her views on the activities and components that can contribute to optimizing the structure, process and results in providing quality care to children with thermal trauma during the recovery period. This is the most significant contribution of the dissertation. The developed **SWOT analysis** is also an important step that contributes and outlines the strengths and weaknesses, opportunities and threats in terms of optimizing health care and structures for the treatment of burn injuries in Bulgaria. A model of a Checklist for assessment and monitoring of the recovery period of children after burn injury has been also proposed.

5. Evaluation of Chapter V. On the basis of the conducted study, the PhD student has formulated 10 conclusions. It is advisable to explicitly emphasize in the conclusions which of the formulated hypotheses were confirmed or which should be rejected.

As for as **the contributions** of the study, I agree with the proposed theoretical and practical contributions indicated by the PhD student herself, but their number could be reduced by consolidating some formulations.

The abstract of the study does not reflect well the content of the main chapters in the dissertation where the results and practical measures for optimizing the nursing activities have been described. There are also some differences between the dissertation and the abstract in the way the data have been arranged and presented. In the abstract the results were presented only as percentages without showing some statistical evidence of relationships and significance in the differences between the responses in different groups of respondents. The most essential part of Chapter IV concerning the activities and components for optimizing the structure, the process and results was not presented.

I would like to recommend the PhD student to pay more attention in her future scientific studies and publications to such issues as spelling, punctuation and style of expression. This dissertation would seem much more respectable without such gaps.

CONCLUSION

The dissertation is devoted to important topical problem. It is characterized by a complex approach and striving to implement innovative practices in the care of children who suffer burn trauma. The thesis contains theoretical and applied practical contributions. The organization and conduct of the study is the PhD student own contribution. In general, the dissertation "Improving the quality of life in children with burn trauma" meets the basic requirements of the Law and the Regulations for the Development of Academic Staff in the Republic of Bulgaria and the Rules for the Development of Academic Staff at the Medical University of Varna. I positively appreciate the work of PhD student devoted to find out the ways to optimize health care for children who have suffered burn trauma. I support this work and declare to vote positively for awarding the educational and scientific degree "Doctor" to Kichka Dimitrova Trendafilova in the scientific specialty "Health Care Management".

10.05.2024

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Prepared by:

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

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