

REVIEW

by

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Faculty of Public Health

Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

of a dissertation for awarding the educational and scientific degree "Doctor"

field of higher education: 7. Healthcare and Sport

professional field: 7.4 Public health

specialty „Health Care Management"

Topic: Modern approaches in the care of patients with early radiation reactions

Author: Kalina Stoyanova Katrandzhieva

Scientific supervisor: Assoc. Prof. Katya Genova Eguruze, PhD

This review has been prepared in accordance with the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria (RILDASRB) and the Regulations for the Development of the Academic Staff at the Medical University "Prof. Dr. P. Stoyanov" - Varna.

The scientific jury for the procedure for acquiring the educational and scientific degree "Doctor" is determined by Order No. R-109-118/15.02.2023. of the Rector of the Medical University - Varna.

1.Procedure data

By order of the Rector of the Medical University "Prof. Dr. P. Stoyanov" - Varna No. R-109-69 dated February 1, 2019. Kalina Stoyanova Katrandzhieva has been enrolled as a doctoral student in an independent form of study in a doctoral program in "Health Care Management". A protocol for successfully passing the doctoral exam has been submitted. Based on the decision of the departmental council of the Department of Health Care, regarding the readiness for defense and proposal for the Scientific Jury, Kalina Katranjieva was dismissed with the right of defense, according to the Order of the Rector of MU-Varna No. R-109-118 of 15.02.2023.

In connection with the procedure, a set of materials including the required documents is presented:

- - dissertation work
- - abstract
- - declarations of originality and authenticity of the submitted documents for protection
- - copies of scientific publications
- - author's reference for compliance with the minimum national requirements
- - curriculum vitae, protocols, orders, etc.

The presented set of materials on paper and electronic media is in accordance with the procedure for acquiring the educational and scientific degree "Doctor" and the Regulations for the development of the academic staff at the Medical University "Prof. Dr. P. Stoyanov" - Varna.

2. Brief biographical data of the doctoral student

Kalina Stoyanova Katrandzhieva graduated from the "Dr. N. Nikolaev" Institute of Medical Sciences - Varna, specialty "Nurse - general profile" in 1988, and later, semi-higher education in the same specialty, at the Medical College - Varna (1995). Graduated successively in the bachelor and master program, respectively "Psychology" and "Applied Psychology", at Varna Free University "Chernorizets Hrabar". In 2010, he obtained a master's degree from the Medical University of Varna, majoring in "Health Care Management"..

The professional realization and experience of Kalina Katranjjeva began in 1988 as a nurse in the "Sveta Marina" UMHAT - Varna. In the period 1988 - 2015, she worked in the Cardiology Clinic with ICD, and later in the Nuclear Medicine Clinic and Radiotherapy Clinic, where she is currently a senior nurse.

He has more than 6 years of teaching experience. Participates in the training of students in the "Nurse" specialty by conducting practical exercises and teaching practice classes. He has participated in national and international scientific events. He has language qualifications in Russian and English, as well as team work skills.

Kalina Katrandzhieva has scientific and research interests in the field of management and administration of oncology nursing care.

In connection with the dissertation, the doctoral student presents 3 publications in specialized publications. The publications adequately reflect the propositions of the dissertation research.

3. Descriptive characteristics of the dissertation work

The dissertation work submitted for review, developed by Kalina Stoyanova Katranjjeva, is in a volume of 158 pages, of which: Title page - 1 page (page 1); Contents – 2 pages (pp. 2-3); Abbreviations used – 1 page (page 4); Introduction - 2 pages (pp. 5-6); First chapter. Literature review – 40 pages (pp. 7-46); Chapter two. Purpose, tasks, methods and organization of the study - 10 pages (pp. 47-56); Chapter Three. Results and discussion - 58 pages (pp.57-114); Conclusion - 2 pages (pp. 115-116); Conclusions, contributions and recommendations – 3 pages (pp. 117-119); Bibliography – 22 pages (pp. 120-141); Appendices – 17 pages (pp. 142-158).

The text is illustrated with 46 figures and 5 tables. There are 5 appendices and they contain a questionnaire for surveying the opinion of nurses working in radiotherapy clinics/wards; a questionnaire to assess the quality of life in patients with head and neck cancer and mammary gland cancer undergoing radiation therapy; early radiation reaction tracking sheet; a questionnaire for conducting a semi-structured interview to survey the opinion of experts from specialized radiation treatment centers; informed consent statement.

4. Relevance of the topic

The topic of the dissertation work "Modern approaches in the care of patients with early reactions to radiation therapy" is modern and dissertable. The problem of assessment of functional

status and management of effective care in patients who have undergone radiation is extremely important in a scientific and practical aspect. The enormous burden on society of oncological diseases necessitates the search for new ways to address the problems of these patients and to expand activities to minimize, control and prevent radiation-related reactions.

Caring for patients with malignant diseases is key in planning and conducting patient treatment. The doctoral student studied the medical and social significance of oncological diseases, as well as the specifics of providing adequate and timely nursing care. Kalina Katrandzhieva's professional competence allows her to assess the challenges of healthcare management for patients with early reactions to radiation therapy. Optimal nursing support can provide patients with safety and confidence in the successful delivery of radiotherapy, coordination of care, education and management of early reactions.

The formulation of practical advice for ensuring the comfort of radiation therapy patients can serve as a basis for developing rules of good nursing care and validating models of care in modern oncology practice.

5. Characterization and evaluation of the dissertation work

The literature review is comprehensive and well structured. Presented in nine parts:

- Radiotherapy – essence and development;
- Epidemiological characteristics of cancer of the mammary gland and cancer in the head and neck region;
- The role of radiotherapy in the treatment of mammary gland cancer and head and neck cancer;
- Frequency of early radiation reactions in patients undergoing radiation therapy;
- Quality of life in patients with oncological diseases undergoing radiotherapy;
- Good practices in health care;
- Role of the nurse in radiation therapy for oncological diseases;
- Modern approaches and multidisciplinary care for treatment and follow-up of patients with oncological diseases;
- Summary of the literature review.

The used literary sources are sufficient in number, they represent scientific publications of Bulgarian and foreign researchers, as well as official national and international legislative, normative documents and analyses, conscientiously cited by the doctoral student. The presentation is thorough, written in precise and understandable language. The specificity of nursing care for oncological patients was studied. A study was conducted of the role and participation of nurses in planning, organizing and coordinating direct and indirect care for patients undergoing or having undergone radiation treatment, as well as the readiness of relatives to cope with difficulties during the treatment period. A study and analysis of the specific characteristics of the nurse's role in radiation therapy for oncological diseases was carried out.

Normative documents guaranteeing the quality of nursing care have been analyzed. Facts about the author's good awareness and his approach to the problems posed to meet the tasks set are demonstrated. The analysis of the review shows that the author knows the issue in its entirety and can creatively and freely discuss the cited data and facts from the literature.

Aim, tasks, methods and organization of the study. The aim of the dissertation work is formulated precisely, clearly and summarizes the main strategy of the doctoral student - to study the early radiation reactions in patients undergoing radiotherapy and to propose a model of health care, guaranteeing an increase in the quality of life of oncological patients.

In accordance with the set goal, 7 tasks were formulated, for the implementation of which documentary and sociological methods were used. The obtained results were processed using statistical methods - variation, dispersion, correlation and comparative analyses, risk assessment analysis..

The studies were conducted in the period from October 2021 to December 2022 at UMHAT - "St. Marina - Varna, SBATOD "Dr. Marko A. Markov - Varna", Complex Oncology Center - Burgas, Complex Oncology Center - Ruse.

3 hypotheses are formulated, a starting point in the dissertation work taking into account the stage of individualization of nursing care and the assumption of new, higher responsibilities by the nurse in the implementation of care for patients with radiation therapy.

In this part of the dissertation, the organization and conduct of the scientific research are described in detail and in good faith. The opinion of three groups of respondents was studied. Criteria for inclusion/exclusion in the study were determined for each of the groups. The scope of the study includes nurses working in radiotherapy structures in the cities of Varna, Burgas and Ruse (n=30); patients undergoing radiation therapy at the Radiation Therapy Clinic of the UMHAT "St. Marina" Ltd - Varna (n=63); Doctors working in radiotherapy structures in the cities of Varna, Burgas and Ruse (n= 15).

To achieve the aim of the study, a survey card, a tracking sheet and a questionnaire to assess the quality of life were used.

The documentary method was used to gather information about radiotherapy in the treatment of oncological diseases and the organization of health care in patients with early reactions to radiotherapy. In order to organize the information, a special questionnaire was prepared for the study, through which the necessary information was systematized.

The materials and methods are presented for each task, and objective methods are justified, providing an opportunity to obtain real and reproducible results. The methods are described in detail so that they can be carried out by other researchers, and the study was carried out conscientiously and consistently structured and documented. The material presented is credible, convincing and sufficient for logically presented results and general conclusions. Modern statistical methods were used. The obtained results are presented graphically, through various figures - volume, sector and column charts.

The results of the own studies are presented in chapter three and are the most extensive part of the dissertation work. They fully cover the set tasks and are correctly interpreted.

Chapter three is developed in accordance with the research aims and objectives:

- Evaluation and follow-up of the quality of life in patients with early radiation reactions;
- Readiness of nurses to participate in monitoring early radiation reactions and need for additional qualification;
- Opinion of the experts regarding the inclusion of the nurse in the multidisciplinary team providing care for patients with early radiation reactions;
- An algorithm was developed and tested for the assessment of early radiation reactions in patients undergoing radiation therapy;

- Model of nursing care for patients with early radiation reactions.

The results of the first task outline radiation therapy as one of the main methods of treatment for patients with malignant diseases. A significant contribution was the study of the epidemiological characteristics of cancer of the mammary gland and cancer of the head and neck region. Attention is focused on the occurrence and management of early radiation reactions during treatment.

In fulfillment of the second task, the problem areas in the manifestation of the side effects of radiation therapy are presented. The PhD student skillfully characterizes skin reactions as an adverse effect encountered; brings out the factors provoking the appearance of skin reactions during radiotherapy; skin care planning.

Outcomes for a third task delineate the relationship of quality of life to survival, treatment modality decisions, and patient assessment and treatment compliance. The developed algorithm for evaluation and follow-up (monitoring) of early radiation reactions favorably affects the quality of life of patients undergoing radiation treatment.

In the assessment and follow-up of the studied patients with mammary gland cancer, the influence of the individual characteristics of the patient on the development of the skin reaction was established. The analysis of the main stages in carrying out the treatment shows the need to evaluate the skin - at the beginning, before starting the treatment and at least once a week. The evaluation of early radiation reactions was skillfully performed in two directions - evaluation of symptoms and evaluation of skin and mucosal reactions. A strong correlation was found between pain and the type of cancer in the studied patients.

The FACT-H&N and FACT-B questionnaires were used to assess the quality of life in patients with head and neck cancer and breast cancer undergoing radiotherapy. The results establish a negative impact of radiotherapy on the patients' quality of life. The relationship between pain and different aspects of quality of life correlated negatively with patients' scores in different domains. A moderate dependence was found in subjects with breast cancer, whereas a strong dependence was observed in subjects with head and neck cancer.

The results of the fourth and fifth tasks represent readiness to monitor early radiation reactions in nursing management. Health care professionals have knowledge and skills to provide care, but the established uncertainty in their planning creates prerequisites for continuing education for the formation of additional competence.

The forms of professionalization in the field of oncology practice have been studied. The doctoral student establishes a positive attitude and readiness to apply modern trends and innovative practices in professional activity. The majority of surveyed nurses have a positive view of continuing education.

The need for teamwork in monitoring the condition of patients undergoing radiation treatment has been established. The results reached by the doctoral student in the study support the need to implement a multidisciplinary approach in the treatment and care of patients.

We found an interesting author's approach when researching the opinion of the respondents regarding the possibility of the nurse participating in the follow-up of patients undergoing radiation treatment. According to the opinion polled, this will help to personalize health care in a positive direction.

On the basis of thoroughly researched experience, the doctoral student establishes the need for specialization for the nurse in the field of oncology and radiation therapy.

In fulfillment of the sixth task of the study and based on the results of the previous tasks, an algorithm was developed and tested for the assessment of early radiation reactions in patients undergoing radiation therapy.

In order to establish the patient's condition and quality of life during treatment, a specialized questionnaire for determining the quality of life and a sheet for tracking early radiation reactions (skin and mucous membrane) are attached. The results of the sixth task prove the need to increase the level of awareness of stroke survivors and their relatives. In this direction, practical advice has been developed and offered to patients with skin and mucosal reactions.

The proven need for change in the organization of care and support for patients with early radiation reactions leads to the need to develop and propose a Nursing Care Model for patients with early radiation reactions. Patients and their relatives, during the hospital stay, synchronized with the activities of the multidisciplinary team for treatment and care, would help restore self-service and independence in daily activities, improve the quality of life, reduce the costs of the patient and his family.

The PhD student brings the key role of the radiation clinic nurse into the interdisciplinary radiation therapy team.

To ensure the provision of patient-centered care in patients with early radiation reactions, the focus is placed on each of the activities and care that the nurse performs as a coordinator, executor of assigned activities, monitoring and follow-up of patients, interaction in the team.

Based on the established need to assess the patient's condition and apply a holistic approach, the doctoral student offers in the Nursing Care Model activities aimed at analyzing the physical and emotional state of patients with breast cancer and head and neck cancer, training of the patient and his family, planning direct and supportive care.

With high commitment, Kalina Katranjieva seeks a solution for the full and maximum return of the patient's well-being, by providing practical advice for patients undergoing radiation therapy.

The results reached by the doctoral student in the overall study make it possible to make a number of generalizations and conclusions on each of the tasks set.

Kalina Katrandzhieva formulates 7 conclusions related to the follow-up of the condition and the care of patients with early radiation reactions. Based on the analyzes and personal experience, the doctoral student makes recommendations for increasing the professional competence of nurses, for the assessment and follow-up of patients undergoing radiation treatment, as well as for active nursing participation in the follow-up and assessment of early radiation reactions.

The recommendations are addressed to the Medical Universities in the country, to the heads of medical facilities and the Bulgarian Association of Healthcare Professionals.

6. Contributions and significance of the development for science and practice

The contributions are the personal work of Kalina Katrandzhieva, the result of her scientific and practical activity. I accept the contributions formulated in this way, reflecting and at the same time maximally synthesizing the essence of the dissertation submitted for evaluation.

Contributions of a theoretical nature:

- For the first time in Bulgaria, a study of early radiation reactions in patients with head and neck carcinoma and mammary gland carcinoma was conducted with the participation of nurses;
- The role and contribution of nurses in the assessment and follow-up of early radiation reactions in patients with head and neck carcinoma and mammary gland carcinoma is outlined;
- The need for additional qualification of nurses has been proven, in connection with their active participation in the follow-up and assessment of patients undergoing radiation therapy;
- An Algorithm and Model of nursing care for assessment and follow-up of early radiation reactions in patients undergoing radiation treatment are theoretically justified and proposed.

Contributions of a practical and applied nature:

- A Sheet for evaluation and follow-up of early radiation reactions of the skin and mucous membrane was developed and proposed by the nurse, in order to improve the effectiveness of the treatment process;
- A model of nursing care for patients with early radiation reactions has been developed with precise and clear guidelines for behavior and activities;
- A Questionnaire was implemented to assess the quality of life of patients undergoing radiation treatment by the nurse, based on which an individual approach to patient care is created.

7. Abstract and publications on the dissertation work

The abstract meets the requirements and reflects the main results achieved in the dissertation. It is developed in a volume of 70 pages, illustrated with figures and tables. Correctly structured, written in clear and precise language fully reflects the issues and conclusions developed.

In connection with the dissertation, doctoral student Kalina Katrandzhieva presents 3 publications in which she is the lead author and co-author. Publications have been published in specialized publications - "Management and Education" journal, "Health Care" journal, "Varna Medical Forum" journal.

8. Recommendations for future use of dissertation contributions and results

In order to popularize the results of the research, I allow myself to recommend the doctoral student to expand the review of the literature on the problem of good nursing care with Bulgarian authors by developing and presenting, to a wider audience, a Protocol for the care of patients with early radiation reactions. In the eventual publication of the study, the work can be enriched with an analysis of the results of a researched opinion among experts in the field of nursing.

The dissertation work will benefit if it is structured even better (in a separate chapter to present the practical advice to patients, as well as in a separate chapter - conclusions, contributions and recommendations).

The results of the study can be used in the practical work of the nurse in radiation therapy clinics, as well as for the development of scientific research projects of doctoral students, students and teachers.

9. Conclusion


The dissertation work presented by Kalina Stoyanova Katrandzhieva on the topic "Modern approaches in the care of patients with early reactions to radiation therapy" for the acquisition of the educational and scientific degree "Doctor" was developed on a current topic, well presented and executed as a scientific study, it has contributions with cognitive and methodical character. It contains scientific and scientific-applied results, which represent an original contribution and comply with the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) and the Regulations for the Development of the Academic Staff at the Medical University "Prof. Dr. P. Stoyanov" - Varna.

The presented materials and dissertation results fully comply with the requirements of the LDASRB. Written in correct scientific language, the work shows in-depth theoretical knowledge and practical skills of the doctoral student in the specialty, demonstrating qualities and skills for independent conduct of scientific research.

The goal and tasks are clearly formulated and developed. The research and scientific judgments are correct based on the statistical evidence. Significant contributions and conclusions for practice have been made.

Therefore, I consider that the dissertation meets all the requirements for obtaining the educational and scientific degree "Doctor" in the specialty Health care management, professional direction 7.4 Public health in the field of higher education 7. Health care and sports and I give a positive assessment, as convinced I offer the Scientific Jury a positive vote for awarding the ESD "Doctor" to Kalina Stoyanova Katrandzhieva

05.04.2023
Varna

Prepared the review: 
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