

REVIEW

by **Assoc. Prof. Maria Dimitrova Rohova-Yordanova, PhD**

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of PhD thesis for obtaining an educational and scientific degree "Doctor" in the higher education field 3. *Social, Economic and Legal Sciences*, professional subfield 3.7. *Administration and Management*, scientific specialty "*Organisation and Management outside the Sphere of Material Production (in Healthcare)*"

PhD candidate: **Ivan Rumenov Todorov**

PhD thesis: **Patient satisfaction as a prerequisite for improving the quality of medical care and administrative services in the hospital**

Scientific supervisor: Prof. Todorka Ignatova Kostadinova, PhD

The review is prepared, according to the Order № P-109-567/09.12.2021 of the Rector of the Medical University - Varna and Proceedings № 1/15.12.2021 of the scientific jury meeting for determining of reviewers on the procedure for awarding educational and scientific degree "Doctor" with candidate Ivan Rumenov Todorov.

1. General information about the procedure

Ivan Rumenov Todorov has completed a doctoral program "*Organisation and Management outside the Sphere of Material Production (in Healthcare)*" in the professional subfield 3.7. *Administration and Management*, higher education field 3. *Social, Economic and Legal Sciences*. The PhD candidate has been enrolled by Order № P-109-103/21.02.2019 of the Rector of MU-Varna at the Health Economics and Management Department under the scientific supervision of Prof. Todorka Kostadinova, PhD with the topic of the PhD thesis "*Patient satisfaction as a prerequisite for improving the quality of medical care and administrative services in the hospital*". The PhD candidate passed the exams of the doctoral program successfully, completed all the activities in the individual curriculum, collected the necessary ECTS credits and had positive attestation marks for all academic years of study. The doctoral program has been completed on time. Based on a decision of the Department Council of the Health Economics and Management Department (Proceedings № 12/12.11.2021) and a decision of the Faculty Council of the Faculty of Public Health (Proceedings № 174/30.11.2021), Ivan Todorov has granted the right of public PhD defence by Order № P-109-567/09.12.2021 of the Rector of MU-Varna.

The required documents in compliance with the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Application and the Regulations for the Development of the Academic Staff at MU-Varna have been submitted.

2. Brief information about the PhD candidate

Ivan Todorov graduated from the State Trade High School in Stara Zagora with a professional qualification in Accounting and Business Administration. He holds a bachelor degree in Political Science (2003) and a master degree in Political Management (2005) from Sofia University "St. Kliment Ohridski". In 2014, he obtained a master degree in Business Management - Health Management at the University "Prof. Dr Asen Zlatarov"- Burgas.

Ivan Todorov began his professional career in 2004 as an economic and political analyst in the NGO "Liberal Political Science Institute" in Sofia. From 2007 to 2010, he was a senior analyst and consultant at Political Capital Bulgaria Ltd. From 2010 to 2019, he worked as a marketing manager at the Specialised Hospital for Acute Treatment "Dr Shterev" Ltd., Sofia, and since 2019, he has held the position of Administrative Director in the same hospital. In addition, Ivan Todorov is the Executive Director of the Medical Complex "Dr Shterev" AD (since 2016) and Chairman of the Board of Directors of "DR Shterev" AD (since 2012). He is a member of the Management Board of the Bulgarian Hospital Association. He speaks English and Greek.

The PhD candidate has excellent professional training and many years of practical experience in the administration and management of health care establishments. The doctoral program and the choice of a research problem are a consistent continuation of his professional activity and are motivated by the chosen professional field. The PhD candidate has several participations in scientific forums, publications in scientific journals and analyses for the daily press, which show his competence, professional commitment and purposefulness in seeking solutions to problems and challenges significant for practice.

3. General characteristics of the PhD thesis

The PhD thesis embraces a total volume of 164 pages, of which 135 are the main text. All parts of the content are logically interconnected; the thesis includes an introduction, aim, tasks and research methods, review of theoretical statements on the research problem (first chapter), results of sociological surveys (second chapter), discussion and recommendations (third chapter) and conclusion. Three appendices present the main tools of the research - questionnaires for patients, medical professionals and health managers.

The results are well illustrated with two tables and 33 figures. A total of 132 publications are presented in the references list, of which 27 - in Bulgarian and 105 - in English. The cited publications correspond to the research problem and embrace an extended period - from 70 years of the 20th century to 2021. Most of the cited sources were published in the last ten years, demonstrating the author's awareness of the current views in the field. The sources used are appropriately indicated and provide reliable evidence of the proposed ideas and solutions.

4. Relevance and significance of the research problem

The topic of the dissertation has an organisational and managerial focus; however, it is essential for patients and their "experience" by the use of health services. Patient satisfaction and improving the quality of medical care are health system issues that have been relevant for several decades. The PhD thesis approaches these issues through a different and less studied in Bulgaria perspective: the non-medical aspects of providing health services in hospital care. Patients' assessment is becoming increasingly important in the current context of the Bulgarian health system, with current trends and changes affecting healthcare. This problem concerns not only the health care establishments and their positioning on the health services market but also the health system as a whole and its capacity to meet patients' needs. Since this issue does not only concern the national health system, it has been recognised internationally and is one of the goals of health systems worldwide: to increase the responsiveness of systems to the patients' non-medical needs. This stands out as one of the main highlights of international organisations policies, such as the World Health Organization, and their programming documents. All this proves the significance and relevance of the research problem.

The topic of patient satisfaction and the importance of the non-medical aspects of health services is not sufficiently explored in Bulgaria. The relevance is convincingly argued, both in theoretical and applied aspects. The professional experience of the PhD candidate also contributes to the research results. All this gives me a reason to appraise the researched issues as topical and dissertable.

5. Research design

The aim of the study is precisely defined and well-argued based on the literature review and the current problems in the context of the national health system performance. The aim is to develop comprehensive guidelines and measures to increase patient satisfaction based on diagnostic analysis and evaluation results. Achieving this goal results from the implementation of four research objectives, which cover in a logical sequence the main steps of the research. Three theses have been formulated, and there is a distinguished relation between them, the aim and objectives of the study. In the first and third of the theses, some statements are accepted *a priori* in most scientific studies. The theses are consistently proven during the study, but there is no detailed summary of the results confirming the theses in the conclusions.

According to the problem statement and the aim, the object and the subject of the research are properly defined. The objects of the sociological surveys are additionally determined.

The research methods include analysis of documents and scientific publications, sociological surveys - among three categories of respondents (patients, physicians and health managers) with specially developed tools (questionnaires) and statistical methods (mostly graphical method and one-dimensional distributions). A certain weakness of the research methods is the usage only of those in the field of descriptive statistics, without statistical methods for diagnostic analysis (hypothesis testing, dependency testing, etc.), which would be appropriate in measuring variations. The PhD candidate has also indicated the research limitations, which are mainly related to limitations concerning the sociological surveys.

The study is well constructed, including all the necessary details that determine its design. An indisputable advantage is the comprehensive sociological survey among three groups of respondents, which, despite the limitations, provides an opportunity to explore the problem from the perspectives of the main participants in the health services provision. This makes the results interesting and significant.

6. Evaluation of the structure and content of the study

The first chapter presents the theoretical statements on the research problem. The literature review is relatively thorough and purposeful and demonstrates the awareness of the PhD candidate on current issues of the research topic, as well as the ability to summarise, systematise and interpret scientific concepts and ideas.

The relation between the quality of medical care, administrative services and patient satisfaction is presented, including various opinions on the topic. The role of non-medical services is emphasised, and the role of management for quality improvement and providing comprehensive care. An important part of the PhD thesis is the summaries of patient satisfaction measurement and influencing factors, which are crucial for understanding the concept of patient satisfaction. By clarifying some basic concepts related to patient satisfaction, some inaccuracies are noticed: mixing essential characteristics or dimensions of satisfaction with prerequisites that determine its importance for hospital management and quality improvement.

An interesting point is the study of good practices in other countries, but it would gain a lot if it were accompanied by analysis and evaluation of managerial and organisational aspects that can be applied in the national context. The literature review ends with summaries and conclusions that correspond to the aim and objectives, and in general, the theoretical research provides a reliable basis for the following parts.

The results of the sociological surveys and their discussion are exhaustively presented in the second chapter of the PhD thesis with three separate parts. The first part presents the principles and characteristics of patients' satisfaction. Some dependencies between patients' demographic and socio-economic characteristics and their overall satisfaction with the health services are commented on (but without statistically proven). The sources of information for patients' choice of health care establishments are studied. This confirms the results of other studies (for example, Eurobarometer, 2014), which conclude that most patients in Bulgaria use mainly informal communication channels such as relatives and friends, unlike in many other countries in the European Union. The most important factors for the patients' choice and satisfaction with health services are also analysed, with particular attention paid to communication channels between medical and non-medical professionals and patients. The study includes questions about some non-medical care aspects and their impact on patient satisfaction. Useful analogies have been made with similar studies in other countries. However, when analysing the results, it should be taken into account that the survey was conducted in a specialised hospital focusing on assisted reproduction, so the results may not be representative for all "Bulgarian patients" (as indicated in the title of the paragraph). The results should be

instead interpreted for the target group of the patients (as the PhD candidate correctly notes in the analysis of the demographic characteristics).

The second and third parts of the chapter present the results from surveys conducted among physicians and hospital managers. They provide a valuable perspective, complementing the results of the study among patients and at the same time highlighting some differences in the perceptions of the respondents. This is a ground to make recommendations for improving the processes in hospitals and services to increase patient satisfaction ultimately. Based on the results of the three surveys, at the end of the second chapter, the main groups of factors for patient satisfaction are summarised and ranked in order of importance, according to each group of respondents covered. This allows identifying differences in patients' perceptions and the opinions and views of physicians and hospital managers. An interesting point would be the analysis of statistically significant differences, which would be observed between the ranges of these factors.

The third chapter presents summaries, conclusions and recommendations for increasing patient satisfaction. This part provides reasonable solutions to the research problem by systematising specific recommendations and guidelines for improvement at the organisational level. Beneficial for the practice are the guidelines for improving the administrative and non-medical services with recommendations for distribution of tasks, functions and roles of the staff involved, and measures to facilitate communication and relations with patients and improve the infrastructure in the health care establishment. They are proven in the course of research. However, some of these recommendations are very general and common when it comes to improving quality and patient satisfaction and hospital development in general or address only one aspect of the problem (e.g. motivating medical staff).

In general, the dissertation follows the logical sequence set by the aim and objectives of the study. Although terminological inaccuracies are noticeable in some parts, the scientific style is followed. The results give me a reason to conclude that the aim of the dissertation has been achieved.

7. Contributions and significance of the PhD thesis for the science and practice

The abstract of the PhD thesis points out five contributions. The predominant part of them has an applied character. The systematization of the main factors determining patient satisfaction and the approaches for its measurement is of scientific importance. The PhD candidate has developed and tested research tools to study the principles and factors influencing patient satisfaction in Bulgaria as a prerequisite for improving quality with a focus on non-medical care. Empirical evidence is presented by comparing the views of the three main groups of participants in the health services provision. The set of recommendations, measures and guidelines for increasing patients' satisfaction with a hospital deserves special attention. I have some remarks about the fourth contribution, which should focus on ranking the factors in order of importance, rather than assessing their weight for patient satisfaction ranking.

These contributions result from in-depth and focused research and reflect the achievements of the study. The significant issues to which the dissertation is dedicated provide an opportunity to expand and continue the research.

8. Publications on the PhD thesis

The author's abstract indicates eight publications on the dissertation topic, of which six are independent, and two are co-authored with the PhD candidate as the first author. Two of the publications are in English. The presented publications cover the minimum scientific requirements for obtaining the educational and scientific degree "Doctor" in the professional subfield 3.7. Administration and Management, according to the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Application and the Regulations for the Development of the Academic Staff at MU-Varna. They were published in 2020 and 2021 and reflect some highlights and results related to the different parts of the study. Some of the publications develop the idea of using artificial intelligence and digital marketing platforms to improve communication with patients and, therefore, increase their satisfaction.

9. Assessment of the PhD thesis abstract

The abstract of the PhD thesis is prepared in a volume of 48 pages, with reference to the contributions and a list of publications on the topic. It meets the requirements and, in a synthesized form, reflects the dissertation's content. In the abstract, the PhD candidate focuses on the research design, presents the main results and the author's solutions and recommendations on the research problem.

10. Critical remarks and questions to the PhD candidate

During the discussion of the dissertation's draft in the Department of Economics and Health Management, I made several critical remarks and recommendations to the PhD candidate, which he conscientiously has reflected in the final version presented to the internal defence. In the parts of the review presented above, I have indicated some additional remarks for improving the research and, most of all, for its continuation.

The PhD thesis is an author's product, demonstrating the professional competence and high commitment of the PhD candidate in the field, as well as competence for planning and conducting research. The mentioned notes and recommendations do not change the overall positive impression of the study and the skills demonstrated by the PhD candidate for theoretical generalizations and empirical analyses.

I would like to raise the following questions to the PhD candidate:

(1) In the third chapter, you point out that a significant part of the proposed recommendations and measures have been introduced in practice in the Medical Complex "Dr Shterev" and have led to a positive result. Could you give some examples in this regard? How

have been the results measured and evaluated - increase in the number of patients, positive feedback, increase in satisfaction, etc.?

(2) According to the study results, how would you define the effect of improving the quality of non-medical care compared to the effect of improving the quality of medical care - as immediate or long-term (with delayed impact)?

(3) Do you plan to continue these studies in the hospital where you work?

Conclusion

The PhD thesis examines a significant problem for the management of health care establishments, which is not sufficiently explored in Bulgaria. The research is planned and conducted precisely and reflects the sound theoretical knowledge of the PhD candidate and his skills for analysis of empirical results and on this basis to draw sound conclusions and recommendations. Specific scientific and applied contributions have been achieved, which outline opportunities for development.


The PhD thesis meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Application and the Regulations for the Development of the Academic Staff at Medical University – Varna.

The mentioned strengths of the PhD thesis are the reason to give a **positive assessment** and to offer the award of educational and scientific degree "Doctor" in the scientific specialty "*Organisation and Management outside the Sphere of Material Production (in Healthcare)*" in professional subfield 3.7. *Administration and Management* of **Ivan Rumenov Todorov**.

January 12, 2022

Varna

Reviewer:


/Assoc. Prof. Maria Rohova, PhD/