

Review

by Prof. Stefka Koeva, Ph.D., D.Sc.(Ec.)

Department of Economics and Management of Healthcare

Faculty of Public Health

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

Subject: Open procedure for the defense of a dissertation for the acquisition of the scientific and educational degree

" DOCTOR (PhD)"

in the field of higher education 3. Social, economic and legal sciences,
professional field 3.7. Administration and Management,
scientific specialty **"Organization and management outside the field of material
production (in healthcare)"**

by PhD Candidate Svetlana Krasteva Panayotova

PhD Thesis:

"FACTORS INFLUENCING THE UTILIZATION OF HEALTH SERVICES IN BULGARIA"

Thesis advisor

Associate professor Elka Atanasova, PhD

Legal basis for preparing the review:

1. Decision of the Faculty Council of the Faculty of Public Health at the Medical University - Varna (protocol No 213 of 8.11.2023); Order of the Rector of the Medical University of Varna No P-109-480 / 16.11.2023 on the appointment of a Scientific Jury and Protocol No 1/27.11.2023 of the first meeting of the Scientific Jury;
2. Law on the Development of the Academic Staff of the Republic of Bulgaria; Rules of the Implementation of the Law on the Development of the Academic Staff of the Republic of Bulgaria and Rules for the Development of the Academic Staff of the Medical University - Varna;
3. Documents submitted under the procedure.

1. Summary presentation of the PhD candidate

Svetlana Panayotova was born on October 3, 1977 in Haskovo She holds a Master's degree in Health Management from the Medical University of Varna. Her grade point average (GPA) from studying at MU is excellent 5.94 and the one from the defended thesis is excellent 5.75. She has worked in a Medical Center, as a sales agent in Sting AD, Varna Branch. For eight years she has been an expert in the international cooperation office at MU-Varna. During the academic year 2019-2020 she was a part-time professor assistant, and in 2020

she was appointed a full-time professor assistant at the Department of Health Economics and Management, Faculty of Public Health at MU-Varna. For several years, Svetlana Panayotova has been instructing students at both undergraduate and graduate levels in 9 economic disciplines (Principles of Economics; Health Economics; Applied Aspects of Health Economics; Comparative Health Systems; Macroeconomics and Health, etc.). She has been teaching students from 7 undergraduate and graduate (master's) majors: Health Management - Bachelor's and Master's degree; Health Management and Medical and Social Care - Master's degree; Health Care Management - Bachelor's and Master's degree; Pharmaceutical Management and Care - Master's degree; Protection and Control of Public Health - Master's degree; Optometrics - Master's degree; Rehabilitation, sea treatment, wellness and spa - Master's degree; Information Technologies in Health and Health Care - Master's Degree and Speech Therapy - Bachelor's Degree. Based on students' feedback and my personal impressions, I can characterize her teaching performance as excellent.

Svetlana Panayotova has a specialization in Health Economics. She has participated in a number of courses and seminars on pedagogical competence, research design, statistical analysis, etc. Since 2012 she has been an administrative coordinator of mobility projects in the field of higher education under the Erasmus + program at MU-Varna. The PhD candidate is a member of the program councils of the "Health Management" and "Pharmaceutical Management and Care" specialties and supervises the 1st and 2nd year of the bachelor's program in "Health Management". She is a member of the Bulgarian Scientific Society of Public Health. Svetlana Panayotova is fluent in English and German.

II. Evaluation of the submitted materials and documents for opening a public defense procedure

The review of the submitted materials and documents related to the proceeding shows that they meet the requirements of the Law on the Development of Academic Staff of the Republic of Bulgaria; the Rules of its Implementation and the Rules for the Development of Academic Staff of the Medical University – Varna, the primary among them being:

1. *Dissertation* titled "**Factors influencing the utilization of health services in Bulgaria**" with a total volume of 207 pages, structured as follows: introduction (12 pages), main text in four chapters (142 pages), conclusion (2 pages), list of literature used (12 pages) and annexes (30 pages). The main text contains 29 tables and 27 figures. One hundred and fifty-nine titles are cited, of which 117 in English and 42 in Bulgarian.
2. *Dissertation summary (in Bulgarian and English)* of the doctoral work with a volume of 45 pages. It reflects correctly and precisely the structure, logic, content, evaluations and conclusions of the conducted research. The summary also contains a reference to the research accomplishments and contributions in the dissertation.
3. *List and copies of publications related to the dissertation*
4. *Declaration of originality, etc.*

III. Main findings and evaluations concerning the dissertation

1. Topicality of the problem

The problem of the best utilization of resources given their scarcity is central to any society, but the last few years, marked by the COVID pandemic and the global crisis it

triggered, have brought to the forefront the vital importance of this problem as a whole and specifically as it relates to the health system and healthcare. The efficient use of limited resources and the selection of appropriate macroeconomic policy tools requires the most accurate assessment of the utilization of health services and the identification of the factors influencing this utilization. This determines the exceptional topicality of the dissertation theme chosen by the author of the reviewed work. We should bear in mind the lack of theoretical studies on utilization in Bulgaria and the significant practical implications of the management of health services utilization in the last few years. Given these two plans, the theoretical and the practical ones, the choice of the topic is undoubtedly successful and deserves praise.

2. Formulation of the topic

The title: "***Factors influencing the utilization of health services in Bulgaria***" reflects the content and structure of the dissertation and synthesizes the main aspects of the research problem.

3. Logic, scope and structure of the study

The structure and layout of a scientific study are determined by its logic. It is based on several important premises: (1) the chosen research approach (2) the objectives of the study and the analytical tools (3) the accessibility of the study subject, and (4) the intellectual potential of the researcher.

Given the chosen research problem, the set goal and the formulated title, the organization of the thesis requires:

- *An evaluation of the theoretical foundations of the problem of utilization in healthcare: basic concepts, definitions, approaches and models, an analysis of the existing theoretical frameworks for utilization and a derivation of a model that sufficiently incorporates the multidimensional nature of utilization and is appropriate for the Bulgarian health system. The discussion of existing scholarly work provided in Chapter One is comprehensive, in-depth and well structured.*
- *Identification of the main factor components that influence the utilization of health services, considering the selected model, the Anderson Behavioral Model. The presentation and analysis of the contextual characteristics: predisposing, enabling and related to the need, that form the environment in which the utilization of health services takes place, is done very extensively and systematically in Chapter Two.*
- *An analysis and evaluation of the impact of individual sample characteristics (demographic, social, economic, organizational) of the conducted sociological survey and their influence on health behavior and utilization of three main types of health services: examination by a general practitioner (GP), examination by a specialist (with health insurance referral or self-paid), and hospital treatment. This requires a statistical analysis of the empirical data collected through the conducted sociological survey. The PhD candidate manages to develop her analysis in a detailed, well-structured and thorough manner in Chapter Three.*
- *Delivery of the highlights of the empirical data analysis and formulation of key features characterizing the utilization of health services in our country. These highlights and features represent the ultimate purpose of the overall study and make possible the*

formulation of appropriate recommendations for the application of the *Behavioral Model* to our conditions. They are successfully formulated in *Chapter Four*.

4. Scientific accomplishments

The scientific accomplishments of the PhD candidate can be outlined as follows:

- The dissertation paper offers a *thorough, comprehensive review, analysis and scientific commentary* on the different theoretical points of view, the diverse approaches and models of research on utilization and its determinants and the evolution of the theory in this regard. The *conceptual analysis* of the previous studies and trends of theoretical thought on the utilization of health services is *detailed, multi-layered and multifaceted*. This provides a broad methodological basis of the dissertation and allows the author to apply her knowledge, competence and intellectual potential in strict compliance with the requirements for scientific integrity. On this basis, the choice of the *Anderson Behavioral Model* is justified as the most relevant for the study of health services utilization in Bulgaria.
- The *analysis and assessment* of the contextual factors influencing utilization is competent and thorough, and an additional factor has been added, reflecting, albeit partially, the pandemic situation caused by COVID.
- An *appropriate methodological toolkit* for the analysis and evaluation of the individual factors influencing utilization *has been developed*, adapted for its application to the *Anderson Behavioral Model*.
- *The network of individual characteristics and health behavior, determining the use of health services, based on the sociological survey, conducted* by the candidate is carefully and thoroughly structured and analyzed.
- *The applied statistical analyses* show the direction and quantify the degree of influence of individual factors on the utilization of medical services, both in terms of the contact with the health system and use of services, as well as the volume of medical care received.
- The conclusions drawn and the recommendations made are *sufficiently substantiated and warrant* the application of the conceptual framework of the *Behavioral Model* in Bulgaria.

In summary:

- A) The dissertation demonstrates an in-depth knowledge of the field under study, a well-constructed goal and research tasks that are clearly and reasonably developed.
- B) The study is based on extensive literature on the subject. The literature review covers an impressive volume of publications that have been critically evaluated. The candidate demonstrates excellent knowledge and interpretation of existing sources and a successful integration of her original work into a wider range of theoretical issues. The result is a well-founded conceptual study framework.
- C) The chosen study methodology, which combines different qualitative and quantitative research methods applied by socio-economic and health sciences, demonstrates a good judgment of the merits and limitations of individual methods and is well founded. The overall research design is clearly described and fully consistent with the chosen objective and questions.

D) The general discussion of the contextual factors influence of utilization and the applied statistical data analyses from the independent empirical study of the population characteristics and the use of health services are thorough, precise and well organized. The main results are presented in the form of summarized conclusions that successfully bring out the author's findings.

(E) The general layout – language and style of writing – is clear and of excellent quality.

IV. Evaluation of scientific and applied scientific contributions

I fully accept the contributions (theoretical and applied) formulated by the PhD candidate. They reflect in a synthesized form the dissertation itself, as well as the thorough research efforts of the candidate. In my view, the contributions can be summarized as follows:

- This is the first comprehensive study of the utilization of health services in Bulgaria. Based on the existing theoretical knowledge and international experience, a successful attempt has been made to choose an appropriate model (*Anderson's Behavioral Model*) and a comprehensive conceptual framework for studying the determinants of health services utilization in this country.
- The contextual factors that determine utilization, additionally enriched by a factor related to the COVID pandemic, and based on the selected model, have been analyzed and presented.
- *The focus is placed on the individual factors that determine the demand and consumption of health services. An appropriate toolkit for tracking these factors has been developed for the needs of the study. The survey conducted by the author is the basis for analyzing the statistical impact of the individual factors on utilization. The applicability of the Anderson model in our practice is confirmed and evaluated. In my opinion, the operationalization of the model and its application to the Bulgarian conditions is a significant scientific and applied contribution of the doctoral candidate.*
- The choice of such a popular model, repeatedly tested abroad, the availability of numerous empirical studies conducted in different countries and under different conditions, and its adaptation by the author to Bulgarian conditions, make possible the comparability of the author's findings internationally, *which is an undisputedly significant contribution.* In further use of the model, especially in national representative surveys, the results would be interesting not only from a scientific standpoint, but also as a source of evidence-based decisions by the competent authorities responsible for public health, health resource planning and health policy in general.

V. Publications and participation in scientific forums

The four publications presented by the author sufficiently reflect her research performance, as well as the results achieved.

VI. Questions for the PhD candidate

- 1) How does the concept of utilization and its study relate to concepts such as access (accessibility), demand for health services, health outcomes, health inequalities?
- 2) As stated in the dissertation, during the COVID pandemic many services, outpatient and inpatient, were delayed or cancelled altogether, resulting in a sharp decline in utilization. The expectations have been that a rebound will compensate for the accumulated missed

care demand, i.e. for increased utilization. What are the observations and assessment of the PhD candidate of post-COVID trends of utilization?

VII. General conclusion and proposal

The dissertation analysis of the doctoral student Svetlana Panayotova characterizes her as a serious, strong and thorough researcher. She demonstrates competence in the field under study, good sense in the selection of important topics and appropriate tools, excellent knowledge and interpretation of existing literary sources, good intuition for identifying a relevant angle in problem solving, successful integration of her own ideas into a wider range of theoretical questions, precision and professional dedication, excellent language and style, undoubted potential for further intensive publication activity. In general, this is a guarantee of *real added value* to the existing knowledge.

Based on this, *I strongly support with a positive vote the candidacy* of Svetlana Krasteva Panayotova for the award of the educational and scientific degree "Doctor" in the scientific specialty "*Organization and management outside the sphere of material production (in healthcare)*", professional field 3.7. Administration and Management and field of higher education 3. *Social, Economic and Legal Sciences*.

5 January 2024

Signature:

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679
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/Prof. Stefka M. Koeva, PhD, D.Sc.(Econ.)