

Mapping Determinants of Healthcare Service Quality: A Systematic Literature Review

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Abstract:- This study aims to identify and generalize the variety of determinants of healthcare service quality and their influence based on the analyzed papers published in journals of the two most cited databases, Scopus and Web of Science, within the time frame 2020-2023. To achieve the aim of this study, a systematic review methodology was applied following the requirements of PRISMA. Based on the research and content analysis of the identified papers, 45 publications were selected as the dataset for this study. This analysis allowed us to identify the main determinants of healthcare service quality from various perspectives, including hospital management and efficiency, service encounters, trust, loyalty, satisfaction and gratitude, patient citizenship behavior, social capital, and value chain creation.

Keywords:- Healthcare Service Quality; Trust; Loyalty; Satisfaction; Gratitude; Social Capital.

I. INTRODUCTION

As it is known, the healthcare sector plays a crucial role in the economy as it directly determines the quality of the population and its health status. Moreover, the health care sector is partly financed by the state, which requires additional attention to resource allocation efficiency. It should be mentioned that the efficiency and performance of each healthcare organization can be measured through the quality of services provided, as this will ensure the continuous revisit of patients in the long run. Thus, one of the main questions in the efficient allocation of resources is determining the key factors that determine the quality of healthcare services.

According to the literature, the basic understanding of the quality of healthcare services is grounded in the comparison of the patients' or consumers' expectations before the service and the obtained experience after the service [1]. In this context, it should be stated that the quality of healthcare services is determined by the conditions of providing the service, as well as by the result obtained after the treatment. The perception of the quality of healthcare services can be determined by patients differently.

The healthcare service quality (HCSQ) model was suggested by Myers [2], which estimates the quality of healthcare services based on accessibility, effectiveness, improvement of care quality, and continuity. Later, the predictors of healthcare service quality were revised and expanded upon by other scholars. For instance, Donabedian

determined the healthcare service quality based on efficacy, effectiveness, efficiency, legitimacy, optimality, acceptability, and equity. Thus, according to Donabedian, service quality is viewed from both general and individual perspectives [3]. At the same time, Vuori added quality improvements in scientific-technical competence, highlighting the essence of technical support in ensuring the adequacy of healthcare [4]. Other remarkable improvements were made by Parasuraman et al., who expanded the model and suggested five dimensions of healthcare service quality: (1) tangible external factors such as physical facilities, equipment, and employee appearance; (2) reliability as a level of fulfillment of promises to patients; (3) responsiveness as an attitude of healthcare providers to patients; (4) assurance that is seen as trust and faith of patients regarding the ability, qualification, and attitude of employees; and (5) empathy determined by the attention and consideration for each patient as a person [5].

Later, Carmen suggested six quality determinants: tangibles, reliability, safety, empathy, convenience, and cost [6]. Bowers et al. identified the following determinants: reliability, responsiveness, communication, accessibility, understanding, and consideration of patients [7]. Jun et al. suggested 11 dimensions: tangibles, reliability, responsiveness, technology, competence, courtesy, communication, collaboration, caring, accessibility, consumer understanding, and patient outcomes [8].

Another outbreak in measuring the quality of healthcare services was conducted by Evans and Lindsay, who determined six dimensions as follows: (1) the disease-centered aspect (qualitative improvement of a disease or conditions based on medical procedure or operation); (2) patient-centered aspect; (3) treatment types-centered aspect (intensive care unit, doctor's office, emergency room, operating room, support room); (4) function-centered aspect (efficient structure and support); (5) comprehensive aspect centered (diverse tangibles and the physical environment to delivery); and (6) expert-centered aspect (professional knowledge, ability, and specialists) [9].

Thus, based on the above, the dimensions of healthcare service quality have been proposed and revised differently by scholars based on the purpose of the research and depending on the type of disease, patient's conditions, or the healthcare system in particular.

In general, healthcare service quality can be determined as doing the right thing and making continuous improvements, obtaining the best possible clinical outcome, satisfying all consumers, retaining talented staff, and maintaining sound financial performance [10]. This means that healthcare services are oriented toward the satisfaction of the patient's needs and expectations, and the improvement of the care provision in particular. At the same time, it should be mentioned that the process of measuring the quality of healthcare services is challenging, as it depends on personal expectations, the provided process and interactions, as well as ethical issues. Additionally, it was proven that the quality of healthcare services depends on employee satisfaction [11–13]. Later, to expand the model, Budiwan and Efendi added new predictors such as responsiveness, value, technical, access, interpersonal, tangibles, and outcomes [14].

Another well-known and commonly used model, HEALTHQUAL, was designed by Lee and Kim using structural equation modeling to assess the quality of healthcare services from various perspectives, such as patients, accreditation organizations, and healthcare organizations. The model identifies empathy, tangibility, safety, efficiency, and improvements in care services and the links between them. Thus, the HEALTHQUAL model measures quality from different perspectives as the authors integrated the healthcare service quality items used by certificate authorities with items previously used by other scholars. It should be mentioned that items used by certification and accreditation institutions are focused on certain quality aspects of the healthcare organization and are considered from the perspective of external stakeholders [1,15].

The HEALTHQUAL model includes the following measurement items [1]: Processes, including 1) Empathy, which describes the attitude of care providers to serve better and have similar emotions to patients during care services. Thus, empathy is seen through commitment to understanding and assisting patients, paying attention, and sharing emotions with patients. 2) The tangible aspect, which shows the efficiency of equipment and physical environment usage in providing care services, including the level of cleanliness of employees and the hospital in general. It has been proven that highly skilled and professional healthcare workers and advanced medical equipment and technologies have a positive impact on patient treatment and consumer satisfaction [11,13]. 3) Safety that shows the degree of comfort and safety of the environment for patients, consumers, and employees. It also includes the reliability that illustrates the skills and knowledge of staff and confidence in the provided services. 4) Efficiency related to the operational activities of the organization, departments, and improvement programs, such as education and training, accessibility, and availability of related information to ensure more convenient interaction.

Moreover, this aspect includes waste management, paper-work-related procedures, and other practices aimed at improving healthcare services and increasing the level of patient satisfaction. Results seen as the degree of improvement in the care services aspect refer to the efforts of medical staff to achieve effective treatments and to improve the results, and the advances in the sustainability of care service and communication with patients are the results of staff and patients' efforts.

Based on the above, there are a variety of different factors and approaches toward measuring healthcare service quality, but there is some uncertainty for managers and other stakeholders regarding which approach to follow and which factors to control and monitor to maintain a high level of an organization's performance. Thus, this study aims to fill in the gap in the literature previously identified [16,17] by studying the latest relevant literature to determine the main determinants of the quality and to highlight the trend in the related field, and to provide practical recommendations to managers and other shareholders regarding improvements in the quality of healthcare services and better satisfaction of patients' expectations to ensure the overall organization's performance.

II. MATERIALS AND METHODS

The research was completed with the implementation of the main principles of the systematic literature review methodology to achieve the aim of the study [18]. The literature analysis allowed us to identify the need to build a comprehensive model of factors that positively and negatively affect healthcare service quality and fill in the relevant gap in the literature.

Thus, the review was planned, organized, and completed according to the main stages suggested by Fisch and Block [19]:

Stage 1. Benchmark selection: Papers published in English in different peer-reviewed journals

Stage 2. Published papers were collected from the two most cited databases: Scopus and Web of Science. The research was conducted using the keywords "healthcare service quality", "quality of medical services", "health service quality", "hospital care quality", "quality of health care", and "hospital service quality". As the aim is to illustrate the current state and trend in the related field, the time frame was limited to 2020-2023. A total of 411 studies were identified.

Stage 3. To avoid subjectivity, manual content analysis of the obtained papers was performed following the requirements of PRISMA [20]. A PRISMA flow diagram is shown in Figure 1.

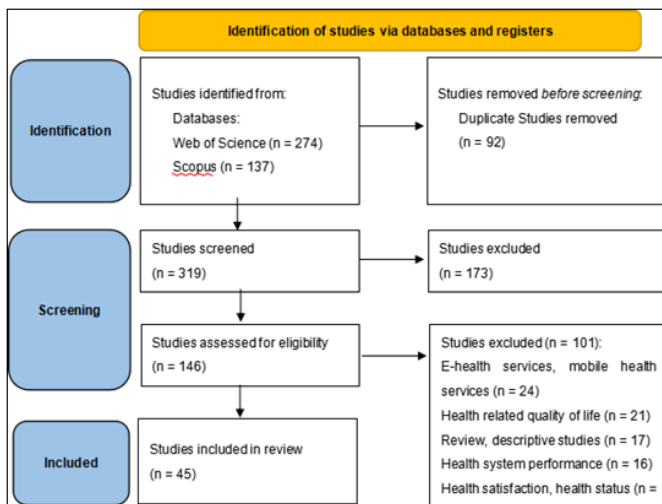


Fig. 1. PRISMA flow diagram. Source: own illustration based on [21].

Next, title screening allowed us to exclude all duplicates, after which content analysis was performed to exclude papers that did not contain the required information regarding the factors that influence healthcare service quality. Thus, papers studying e-health services and mobile health services, health-related quality of life, health system performance, health satisfaction and health status, mental healthcare services, review papers, and descriptive studies were excluded because they did not capture the latest ideas on healthcare service quality determinants. Consequently, 45 papers were identified as a dataset and included in the systematic literature review. The complete information on the selected papers is provided in Appendix A. The geographical location of studies included in the dataset shows that papers originate from various countries and regions, which allows us to capture the determinants that are common and generalize the findings (Figure 2).

Stage 4. Based on the analysis of secondary data obtained from the included papers, the main factors that positively or negatively affect healthcare service quality were determined, and their impact was discussed.

Stage 5. The results are discussed and controlled, and practical recommendations and suggestions for future studies are provided.

III. RESULTS AND DISCUSSION

We began the study by analyzing all factors related to healthcare service quality, including dependent and explanatory variables. Thus, the most commonly used explanatory variable is patient satisfaction. At the same time, it should be mentioned that among the explanatory variables that capture healthcare quality from a patient's perspective are patient loyalty, perceptions, expectations, experience, involvement, and value. Additionally, some identify service quality from the provider's perspective as professional quality, administrative control, communication skills, employee responsiveness, hospital quality, organization of health services, service innovation, technical quality, and value chain. In addition, few of them represent the interaction between service providers and receivers as trust, attitude, and

doctor-patient relationships. Finally, there are external factors that determine quality, such as health policies and accessibility.

Regarding the conceptual models used by the authors, it should be mentioned that based on the completed analysis since the HEALTHQUAL model was developed and adapted, the majority of scholars apply this model as it includes items measuring the quality of healthcare services from different perspectives. Furthermore, the adequacy of the model has been proven by various authors who completed studies within different time frames and countries [22–34].

A. Hospital Management

Previous studies have concluded that service quality constraints have an impact on healthcare organizations/hospitals' efficiency levels, meaning that healthcare service quality is related to the efficiency and adequacy of hospital management and human resources [35]. Therefore, improvements in management and medical treatment abilities lead to an increase in healthcare service quality, which in turn ensures improvements in hospital efficiency. It should be stated that the expansion of medical services should be based on the amount of available resources to maintain long-term economic and technological efficiency [36–39]. Thus, to improve healthcare service quality, technologies should be accumulated and managerial principles should be improved.

B. Hospital Efficiency

Furthermore, according to existing literature, healthcare service quality and hospital efficiency are interrelated. These studies allowed us to identify six main predictors of healthcare service quality and hospital efficiency. (1) disposable income per capita. A higher level of disposable income leads to a health-oriented lifestyle; thus, people demonstrate higher requirements for the quality of medical services and overall efficiency of the hospital. (2) population size. The demand for medical services is higher in highly populated regions; thus, to satisfy the increased demand, hospitals should continuously improve their facilities and increase their technological efficiency. (3) Government expenditure in the health care sector. High financial investments in healthcare allow hospitals to introduce high-tech equipment and improve healthcare infrastructure construction capacity, thereby increasing the efficiency of resource allocation in general. Therefore, increased government expenditure leads to an improvement in healthcare service quality and efficiency in hospitals. (4) Average length of hospitalization. Thus, a longer stay at the hospital reduces the efficiency of the hospital and the healthcare service quality. Under these conditions, patients consider that the hospital is not treating them with appropriate efficiency, thus leading to their long stay at the hospital. (5) Bed usage rate. The higher the number of vacant beds, the higher the capacity and efficiency level of the hospital, and the higher the quality of delivered healthcare services in general. (6) Proportion of health technicians. Accordingly, the higher the number of technicians the better the service quality and efficiency of the hospital [40–46].

C. Service Encounters

The current literature determines service encounters as the most important way for patients to assess the quality of healthcare services, based on which patients form their expectations about the professional competence of the healthcare provider. Thus, according to the latest studies, physical infrastructure quality, which includes physical services, equipment, employees, and printed materials, affects patients' perception of service quality and creates positive impressions [47–51]. In addition, the quality of provider-patient interactions during service delivery is seen as a predictor of service quality, as better interaction and communication regarding their health status, delivered procedures, and possible outcomes between the staff and patients positively influence the healing process and service quality [52–54].

Furthermore, administrative quality which is seen through administrative procedures, clinical meetings, and waiting time, that are considered a sign of an effective institution in general and creates a feeling of protection and safety among patients, which positively affect the service quality [50,55–57]. Medical care quality is a technical aspect of healthcare services that illustrates the expertise and performance, behaviors, activities, and procedures of care provision. Thus, higher medical care quality is associated with a higher level of service quality [48,50,56,58,59]. In addition, nursing care quality as a way of ensuring the safety of care based on standards positively influences service quality because most of the time patients interact and communicate with nurses [60–62].

Additionally, to determine healthcare service quality, the theory of transformational behavior was applied, as suggested by Stock et al., where service encounters involve human contact as the interface [63]. According to this theory, consumers form their behavior based on interpersonal, technological, and professional service encounters. Thus, a positive experience leads to a more trustful attitude toward the healthcare service providers, and, an unpleasant experience results in “switching behavior”, when consumers start to search for trustworthy providers [64–73]. Consequently, the experience of the first interaction with the staff, technological, and professional capacities greatly influences trust in the service provider, patient satisfaction, loyalty, and the quality of healthcare services; at the same time, it determines the future behavior of consumers.

D. Patient Trust

Patients' trust can be seen as the real feelings and attitudes that they experience from the honesty and reliability of healthcare providers after encountering healthcare services [74,75]. In addition, trust illustrates the belief of patients that their health needs will be adequately satisfied by the healthcare service provider, and thus, under those conditions, patients aim to build long-term relationships with the provider [76]. Moreover, from a psychological perspective, trust can be considered a case in which a patient's actual service perceptions exceed expectations [77,78]. As a result, trust in healthcare service providers increases the patients'

confidence, service quality, satisfaction, and loyalty [68,70,79–82].

Additionally, it should be mentioned that patients' trust can be determined by age, as older people, as a rule, require healthcare services more often, meaning that they have multiple interactions with the healthcare service provider, which increases their trust in that institution [83–85]. In addition, the perceived attitude of the care provider toward the patient affects the level of trust. Thus, experiencing neutral, rule, and unfavorable attitudes, discrimination in treating patients, and demanding bribes leads to a lower level of trust, meaning that the patient would not return to this healthcare service provider in the future [71,83,86–90].

E. Patient Loyalty and Satisfaction

According to recent studies, patient loyalty directly affects patients' behavior, while patient satisfaction demonstrates patients' attitude toward healthcare service providers [91,92]. Moreover, patient loyalty is seen through attitudinal and behavioral loyalty. Attitudinal loyalty demonstrates the patient's willingness to visit a particular hospital, the willingness to revisit later, and the willingness to recommend the healthcare provider to other people, while behavioral loyalty concerns the frequency of visits and the total number of visits [93]. It should be mentioned that the patient's impression of the facilities and environment in a service encounter directly influences patient satisfaction and loyalty, which determine the overall quality of healthcare services [68,78,79,94,95]. Furthermore, the level of patient trust directly affects loyalty and satisfaction with received healthcare services [74,77,96–100].

F. Patient Citizenship Behaviour

Additionally, the interdependence between healthcare service quality and established patient citizenship behavior has been proven empirically. According to this approach, when patient citizenship behavior is formed, an increasing number of people will adopt this pattern of behavior and continuously use the same healthcare providers. Specifically, it should be mentioned that consumers' trust, loyalty, and satisfaction are seen as a foundation for building patient citizenship behavior as well as the outcome of such formation, thus, there is a two-way relationship between them [97,101–108]. This relationship can be explained by the use of social exchange theory, according to which, when one party benefits from another, the other party will feel responsible for returning the favor in the future [109–117]. Thus, when consumers are satisfied with the healthcare service quality, they decide to return to the same provider and share that experience with other people; in this case, both consumers and providers are better off.

G. Patient Gratitude

Patient gratitude describes the creation of long-term relationships between patients and healthcare providers [118,119]. Gratitude can be seen as a pleasant mood and a positive experience of patients who receive the benefits of healthcare services and, in turn, illustrate their feedback [120,121]. Thus, patient gratitude determines the quality of healthcare services and ensures that the evaluation of an

organization’s behavior is advantageous. Under those conditions, patients feel that they should maintain the relationship and express their thankfulness by building their loyalty [121–128]. Furthermore, patient gratitude can be expressed through words, recommendations, sharing of their experiences with others, or behavioral patterns. According to reciprocity theory, when a patient feels gratitude, the person wants to repay the benefactor, a healthcare provider [93,120,121]. Thus, patients consider healthcare services as the medical staff’s efforts to maintain the relationship, and as a result, they want to maintain a mutually beneficial cycle of giving and taking.

H. Social Capital

It has been proven that the psychosocial environment, an overall range of positive and negative factors, and processes that employees experience at work affect employees’ health, behavior, well-being, and attitude toward their responsibilities [129–133]. Moreover, recent studies have shown a link between the general psychosocial work environment and quality of healthcare services [134–136]. Consequently, the working environment affects both employees and patients through their interactions.

In this context, it should be stated that, according to the theory of social capital, the term “social capital” refers to the existing and potential resources in social relations in the networks between employees in a workplace, which enables the conduct of collective actions that positively or negatively affect work results [137,138]. Furthermore, the concept of social capital was recently revised and three subtypes of social capital were identified: bonding, bridging, and linking [139,140]. Bonding social capital can be seen as a potential resource within close networks such as workgroups or work teams of a few members through direct meetings and interactions. Bridging social capital concerns potential resources formed between less tied networks as social units through fewer direct meetings and interactions; sometimes, interactions are done between representatives (network builders) of social units. Lastly, linking social capital identifies potential resources within social relations between employees and managers of an organization [140,141]. Thus, all three levels of social capital have a potential positive or negative impact on the behavior, well-being, and productivity of employees.

Based on the above, the creation and accumulation of social capital at different levels leads to improvements in labor productivity and the efficiency of an organization in general. These changes can be achieved by using networks for better communication and sharing of knowledge, previous successful and faulty experiences, and new ideas within separate teams, social units, and the whole organization. Furthermore, in large organizations and hospitals, tasks are performed by multiple units, where their efficient communication and proper sharing of knowledge leads to better performance and provision of higher-quality healthcare services [135,139,141–144]. Additionally, recent analytical studies concluded that social capital is positively associated with healthcare service quality, specifically,

bonding and bridging networks, which have a strong and positive effect on service quality [139,140].

I. Value Chain Creation

According to the value chain theory, all activities performed by an organization form a valuable good or service to the end consumer [145]. The main idea of the theory is based on the organizational perspective, meaning that an organization is seen as a system that includes all stages of creating final goods or services from inputs through interactions with other institutions. It should be noted that at each stage of producing goods or services, an organization interacts with numerous external institutions, such as suppliers, policymakers, and stakeholders, as well as with internal units within an organization; thus, the quality of the final good or service depends on the efficiency of the mentioned interactions in particular [145–149]. From the patient’s perspective, value chain creation starts with the first communication with a healthcare provider. Thereafter, healthcare providers should make the correct diagnosis and develop a treatment plan based on the information received from the patient. In the next stage, suppliers (pharmacies, medical equipment providers/producers, etc.) are added to the value chain creation. Furthermore, other healthcare provider units are included in the chain as laboratories, diagnostic providers, and other healthcare professionals [146,150–153]. In this regard, it should be mentioned that all organizations function and interact with others under the rules regulated by the government, and are influenced by the needs and requirements of stakeholders. Consequently, healthcare service quality is heavily influenced by the value chain and efficiency of information sharing among all links.

To reach the main aim of the study and to develop a conceptual model of predictors of healthcare services, the latest relevant literature was studied in detail. The systematic literature review of papers published in peer-reviewed journals from to 2020-2023 allowed us to present a model that includes the most common determinants of healthcare service quality from various perspectives (Figure 2).

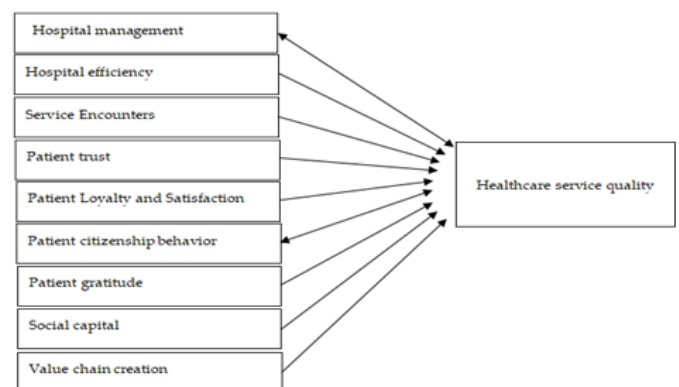


Fig. 2. Conceptual model of main determinants of the healthcare service quality.

The determinants presented in Figure 4 summarize those from different perspectives suggested and tested by various authors in different countries and regions. Thus, the following factors determine the quality of the healthcare

services: improvements in hospital management and hospital efficiency, including the implementation of innovations, staff training, and other advanced methods of providing services; improving the physical, technical, and interpersonal characteristics of the interaction between service providers and patients; building trustful relationships between caregivers and patients; ensuring a high level of satisfaction and loyalty by providing appropriate, fair, and supportive care and maintaining emotional and empathic connections with patients; promoting the formation of patient citizenship behavior, which increases the frequency of visits and sharing positive opinions with other people; earning patients gratitude by ensuring the best effort of staff to satisfy the needs and expectations of patients; building up social capital within an organization by improving the communication and interactions between various units and departments; establishing reliable connections with other institutions as providers and producers of equipment; and other items needed for providing healthcare services.

IV. CONCLUSIONS

The results of the completed systematic literature review of the latest papers published in peer-reviewed journals can be applied to various spheres such as theoretical, managerial, and policy-making. First, theoretical implementation is seen through the introduction of the generalized conceptual model of factors determining the quality of healthcare services, as it can be used for further empirical tests, studying the impact of each of the suggested factors and their combined impact under various conditions, and analyzing the constraints of controlling the mentioned factors, which will enrich the existing literature and highlight directions for future studies in the relevant field. Moreover, the suggested model and information regarding the identified and described influence of each factor can be used by lecturers while instructing business courses and business consultants to provide business advice to public and private healthcare service providers.

Second, the findings are specifically useful for managers as most of the suggested factors can be controlled and improved by the management of an organization through appropriate management practices, investing in innovative technologies, training, and educating staff, training and improving the communication between employees, units and departments, employees and management, employees and patients, ensuring the maintenance of trustful and emotionally supportive attitudes, interaction and communication between healthcare providers and patients, and working with reliable other organizations as providers and producers of medical equipment and other required items.

Third, the results of the analysis can be applied by policymakers, specifically regarding the development and reformation of the state's healthcare policy. Thus, active governmental support of the healthcare sector leads to more frequent visits to healthcare organizations and ensures equal access to healthcare organizations, which in turn increases competition between healthcare providers. Under these

conditions, healthcare providers will continuously improve their performance and quality of healthcare services provided to satisfy the expectations of patients, build trustful relationships with patients, and encourage the formation of patient citizenship behavior.

V. RECOMMENDATIONS AND LIMITATIONS

This systematic review had several limitations. This study included published papers in journals from two databases, Scopus and Web of Science; therefore, the expansion of secondary data sources and including journals from other international databases would add to the current knowledge regarding the determinants of healthcare service quality. In addition, as the main aim of this study is to develop a conceptual model of healthcare service quality determinants by generalizing the results of previous studies, the national, cultural, economic, demographic, and political conditions of each country or region were not included. Consequently, future research can focus on studying the impact of suggested determinants under different country-related external conditions. Finally, this study did not analyze the impact of the COVID-19 pandemic on healthcare service quality and its determinants, which is a potential direction for further research.

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