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MAPPING HEALTHCARE SERVICE QUALITY MODELS: A BIBLIOMETRIC ANALYSIS AND SYSTEMATIC LITERATURE REVIEW

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Abstract
According to the latest clinical recommendations and standards, quality healthcare is described as "consistently pleasing the patient by offering efficacious, effective, and efficient healthcare services that meet the patient's demands and satisfy providers." The purpose of this study was to review existing literatures related with healthcare service quality models. The terms "healthcare," "service quality," "measurement models," "SERVQUAL," "SERVPERF, were used to search the literature review. These studies were chosen from the databases “web of science” "PubMed,”” Scopus” A comprehensive review of the literature looked on July 23 2023 at a variety of research that made up the healthcare quality-measurement model across the world .31 studies selected out of the 293 that were screened were chosen for analysis. The bibliometric analysis is performed by using AMOS software which helps to understand the documents production in this area, citation and most relevant county and author etc. The analysis reveals that Scholars have yet to come to an agreement on the definition, indices, and criteria that determine the quality of healthcare services. Moreover, the majority of the models in use today are Western in origin and are not appropriate for the cultural and economic circumstances of emerging nations. The scales used by earlier studies, which resemble universal measures of service quality, might not be entirely suitable for evaluating the perceived quality of healthcare services. Unfortunately, earlier research was too limited, concentrating only the functional component of the services and giving insufficient attention to the technical aspects, which drew on the expertise of healthcare professionals. There is a lot of potential for error in these findings. In light of this, healthcare institutions who must create their own models for evaluating the quality of their services are being advised.

Key words: service quality models, measurement models, healthcare service quality, literature review.

Introduction

Quality has been defined in a variety of ways by a variety of persons and organisations. Quality may be the characteristics of a product or service that bear on its ability to satisfy stated or implied needs or a product or service free of deficiencies (American Society for Quality). The definition and meaning of the idea of quality appear to vary. Even well-known authors have diverse definitions of quality. One of the most contentious issues in the literature on services is the concept of quality. This is due to a lack of agreement on its definition (Piligrimienė et al.,2011;Azam et al.,2012). Some of the key contributors and thinking leaders provided the following definition of quality: While (Walton,1988; Deming et al.,1988; Dotchin et al., 1992and Ishikawa,1996) defined quality as products and services that need to satisfy customers in accordance with their needs and expectations, (Deming et al.,1988) definition solely focused on quality as conformance to specification. (Suarez,1992) definition, however, combined customer satisfaction and specification at the same time. It is challenging to define and measure quality in healthcare because of the unique characteristics such as intangibility, heterogeneity, and simultaneity(Eiriz & António Figueiredo, 2005; Ladhari, 2009; Mason et al., 2016; Naveh & Stern, 2005) as well as the complexity of healthcare, the disparate interests of healthcare providers in providing healthcare services, and the need for ethical considerations when faced with a problem(Eiriz & António Figueiredo, 2005; Itumalla et al., n.d.; Wei et al., 2010; Zabada et al., 1998)

.Additionally, it was said that the level of care provided to a patient differs depending on the background, experience, skills, and personal qualities of the healthcare personnel (Ladhari, 2009; Naveh & Stern, 2005) .Healthcare services are produced immediately with their use, and they cannot be saved for later use. Quality of healthcare requires a multifaceted definition that takes into account the various perspectives held by healthcare stakeholders. The interactions between patients and healthcare providers, as well as the healthcare service process, determine how well services are provided Naveh and Stern (2005). There have been disputes on what constitutes high-quality healthcare among patients, medical professionals, and policymakers (Itumalla et al., n.d.). To improve healthcare services, the differences can be reduced by combining various functions and role-players' thinking and design (Longbottom & Hilton, 2011).Researchers like Crago(2010) and Hsieh(2012)have also argued for the creation of an integrated instrument to fix the shortcomings in healthcare services already in existence. In order to guarantee the achievement of organisational goals, they were interested in a model that methodically integrated and coordinated management and medical inputs, processes, and outputs. For all high-quality development, these should serve as the starting point(Brandrud et al., n.d.).this study will help to understand the importance of various quality measurement models with unorganised, uncountable variables in the field of healthcare.

Methodology

A qualitative research approach was applied in this study. In-depth literature review was used as the research tool. Initial research into the study involved a thorough analysis of the body of literature on models that included elements and metrics for healthcare services quality. The terms "healthcare," "service quality," "measurement models" were used to search the literature review of journals and articles anywhere in the article title, abstract and keywords. Various filtering criteria's were applied on this search in the subject area, document type, keywords , publication stage etc. final articles and finally reached to 293 English language papers for analysis. 31 studies selected out of the 293 that were screened were chosen for analysis. These studies were chosen from the databases web of science, PubMed and Scopus. A variety of studies till 23ed July 2023 had been incorporated into the model for measuring healthcare quality were reviewed.

Models for assessing quality of healthcare services

In this section, researcher discuss about how healthcare service quality has been measured and the models that have been employed. Five models have been identified for assessing the quality of healthcare services: Donabedian's, SERVQUAL, HospitalQual, PubHosQual, and HEALTHQUAL models.

Donabedian model: Donabedian, who created the Model of Care (Donabedian, 2002), is considered as the first individual to have researched healthcare quality. Donabedian (2002) said, specifically with reference to healthcare services, that the potential for progress in healthcare quality relies on both the technical and interpersonal quality of healthcare services. Technical care is concerned with the medical aspects of patient care, whereas interpersonal care is concerned with talking to the patient about their treatments. (Zarei et al., 2012)made a similar claim, stating that although functional or process quality focuses more on the ways in which services are provided to patients, technical quality places more of an emphasis on skills, the accuracy of practises and processes, and medical examinations. It is widely accepted that the value of healthcare services should be assessed using the perspectives of key stakeholders, including users, healthcare providers, payers, politicians, and managers of health, as well as against explicit criteria that reflect the values of a particular society (Donabedian, 2002; Padma et al., 2009). Structure, process, and outcome were the three variables (Donabedian, 2002) suggested using in combination to determine the quality of healthcare services. He defined structure as the settings, provider credentials, and administrative frameworks that allow for the delivery of healthcare. While the process is the action carried out in the delivery of healthcare, the outcome is the return to the starting state or the survival of the patients. As a tool for evaluating the quality of healthcare

services, Donabedian's model includes the following seven dimensions: efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy, and equity(Donabedian, 2002).
SERVQUAL model: A well-known model is SERVQUAL (Parasuraman et al., 1985). It is frequently used in healthcare services despite disagreements over the validity and dependability of this model (Newman et al., 2001; Teas, 1994)with or without modification. Despite SERVQUAL's popular application, some authors have created their own tool specifically for their research goals that measures the quality of services. In a research involving hospitals, Camilleri & O'Callaghan(1998) used the SERVQUAL model to measure various elements of the quality of healthcare services. There were discovered to be nine dimensions, including admission service, tangible accommodations, tangible food, tangible privacy, nursing care, treatment explanation, access and courtesy shown to visitors, discharge management, and patient accounting. Using a gap score, Brown & Swartz(1989)evaluated medical services from the viewpoints of the healthcare provider and patients, and they found that physician engagement was the key factor in patient satisfaction. In their study, Tucker& Adams(2001) employed four criteria (caring, empathy, dependability, and responsiveness) to evaluate the standard of hospital care in the USA. Patients' evaluations of the quality of care in public and private hospitals in the United Arab Emirates were compared by Jabnoun and Chaker (2003). The authors identified five criteria for assessing service-quality views in private and public hospitals: dependability, responsiveness, supportive skills, empathy, and tangibles. With the exception of the supporting skills dimension, they discovered a substantial difference between these hospitals in all other areas. The quality of health-maintenance organisations was the topic of Herstein and Gamliel's (2006) discussion. in addition to the five SERVQUAL dimensions, The perceptions included a sixth dimension namely the emergence of a private-branding dimension. Ramsaran-Fowdar (2008) identified three aspects as being the most crucial for evaluating the quality of healthcare services using a modified SERVQUAL scale: dependability, fairness, and equity. When Babakus and Mangold (1992) examined whether SERVQUAL was appropriate for the healthcare industry, they discovered that it was valid and trustworthy with regard to the functional quality of services in hospitals. however, Hospital management must take into account the technical quality components of hospital services if they want to achieve long-term success. Carman (1990) proposed specifications for the modification of SERVQUAL elements for each industry. Boshoff and Gray (2004) outlined the seven elements of communication, tangibles, assurance, nursing staff members' empathy, administrative staff members' responsiveness, security, and physician responsiveness. Iyer and Muncy (2004) compared patient trust in various groups using SERVQUAL(SERVPERF) measures. It was discovered that although the low-trust groups were more in favour of empathy and tangibles, the high-trust groups were more concerned with dependability and responsiveness. The quality of health-maintenance groups was the topic of Herstein and Gamliel's (2006) discussion. The SERVQUAL scale was altered in each of the above situations, and its use differed based on the situation. A new method with psychometric properties that would require context-based studies and incorporate both functional and technical quality aspects of healthcare organisations was suggested by (Brown & Swartz, 1989) after discovered some issues with SERVQUAL. On the other hand, Babakus and Boller (1992) emphasised the need for industry-specific dimensions for measuring the quality of healthcare services.
SERVPERF model: the prominent authors questioned conceptual basis of the SERVQUAL scale and found it confusing with service satisfaction and argued that the performance (P) component of SERVQUAL should be employed alone and that the expectation (E) component should be eliminated. They suggested a scale known as "SERVPERF." In addition to theoretical justifications, Cronin and Taylor (1992) provided actual evidence from four businesses (banking, pest control, dry cleaning, and fast food) to support the superiority of their "performance-only" instrument over the SERVQUAL scale. The SERVPERF scale has been found to be methodologically superior than the SERVQUAL scale .it has been empirically found to be superior to the SERVQUAL scale for being able to explain a larger proportion of the variation in the overall service quality, as determined by a single-item scale.

This explains the significant backing for the SERVPERF scale that has grown over time (Babakus and Boller, 1992; Bolton and Drew, 1991b; Boulding et al., 1993; Churchill and Surprenant, 1982; Gotlieb,

Grewal and Brown, 1994; Hartline and Ferrell, 1996; Mazis, Antola and Klippel, 1975; Woodruff, Cadotte and Jenkins, 1983).

HEALTHQUAL model. Despite the claim made by Parasuraman et al.(1985) that the SERVQUAL model could be used in most service-related businesses, researchers like (Camilleri & O'Callaghan, 1998; Juwaheer & Kassean, 2006; Lim et al., 2014) argued for and created a framework expressly for the healthcare industry. With regard to structure, procedure, and outcomes, the work of Donabedian (2002) was highly beneficial in this regard and served as the foundation for creating quality in healthcare dimensions. In a study of hospitals, a complete model for measuring the quality of healthcare services was developed using Donabedian's (2002) model for hospital services (Camilleri & O'Callaghan, 1998). Camilleri and O'Callaghan created the HEALTHQUAL model by drawing on the studies of (Donabedian, 2002; Parasuraman et al., 1985). A modification of SERVQUAL is HEALTHQUAL. Additionally, it applied the relevant characteristics of service quality identified in the literature to the delivery of healthcare services. it reveals about models six main dimensions like admission processes, attitudes of medical staff (doctors), attitudes of nursing officers, ward/hospital environment, patients' amenities/facilities and discharge planning and coordination.

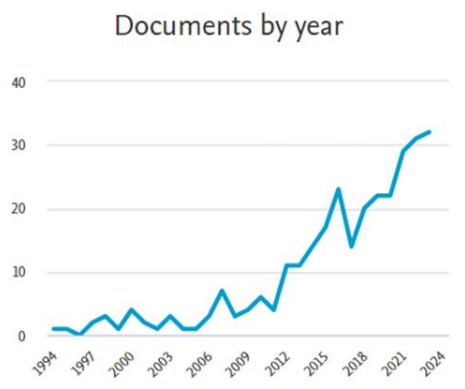
PubHosQual model: The patients' perspective was used to build the public-hospital service- quality (PubHosQual) model (Aagja & Garg, 2010). Using 24 variables arranged into five aspects of hospital service quality, the model was created to evaluate the effectiveness of India's public hospitals. The dimensions are social responsibility, medical service, total service, and admittance. The model was adjusted after being used to determine where specific changes were needed. The factor structure for the hospital sector varies from nation to nation (Kilbourne et al., 2004; Øvretveit, 2000). PubHosQual thus offered a theoretical contribution that was based on the public context of India. Sadly, that approach was missing the technical components of healthcare services.

HospitalQual model: Itumalla, et al. (2014) built the HospitalQual model using an unfulfilled scale and the SERVQUAL model's disconfirmation paradigm. The model was created specifically for tracking, regulating, and enhancing the standard of in-patient care at an Indian public hospital in Hyderabad. The HospitalQual approach helped hospital administrators track, manage, and enhance the quality of services provided to in-patients solely. This has several limitations.

Bibliometric Analysis of the Literatures

The bibliometric analysis is performed based on 293 Scopus documents collected by using the keywords service quality, measurement models and healthcare.

Figure 1



This figure shows the trend of number of article produce every year in the field of healthcare service quality.

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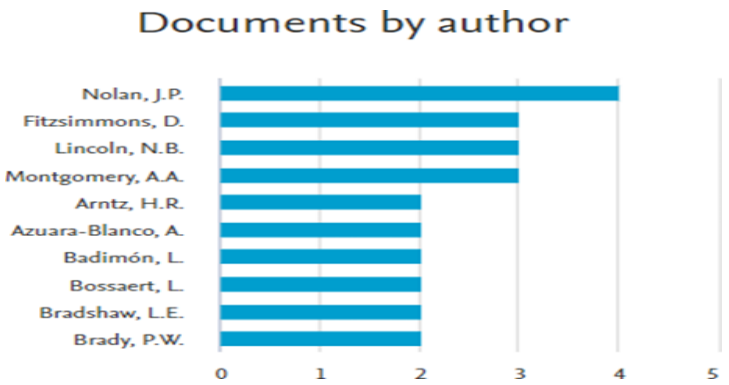
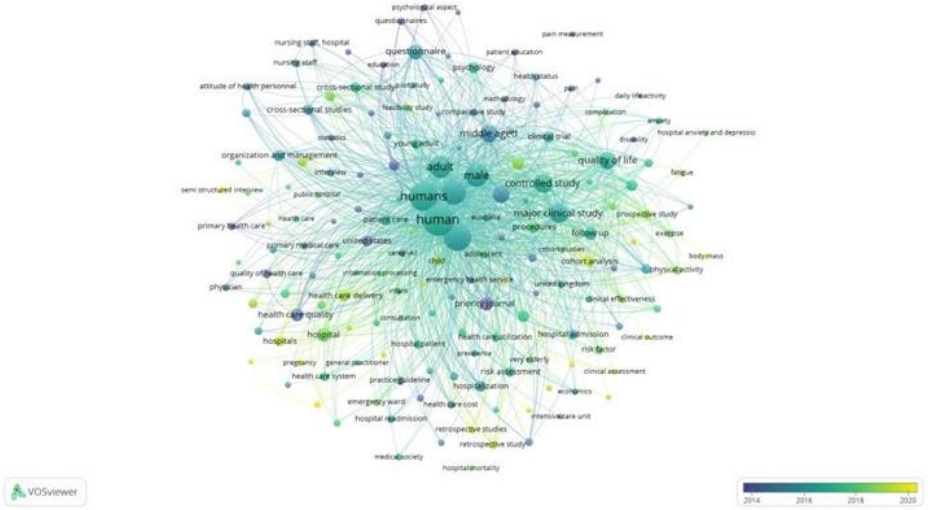
Figure 2



Most popular and contributing authors in the field of service quality revealed in figure 2. Nolan,J.P is the most relevant author with high citation.

Figure 3

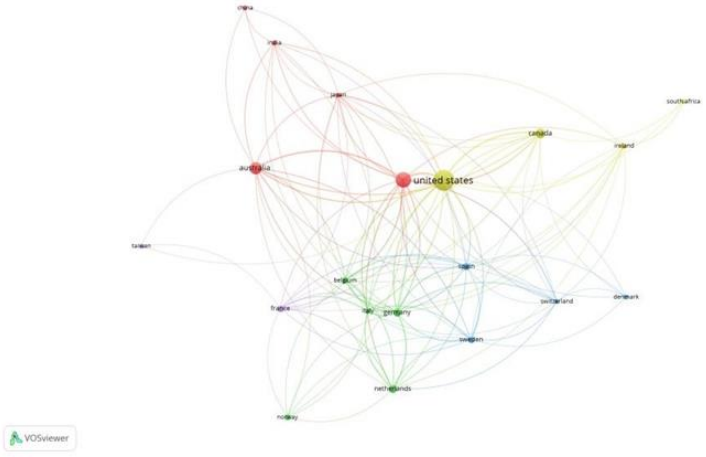
Co-occurrence analysis



Co-occurrence analysis is another analysis carried out using keywords. The study of keywords in the authors' publications provides insight into the integrated marketing communication principles that are being emphasised. Out of a total of 3960 keywords in the 293 articles, 435meet the threshold of being occurred for a minimum of 5 times, which is shown in figure 3

. The figure shows that service quality, healthcare etc have a greater impact on the network. Figure 4

Most relevant author counties



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Most popular and contributing authors county in the field of service quality models in healthcare revealed in figure 4. United States is most relevant country from the analysis of 293 documents.

Figure 5 Citation

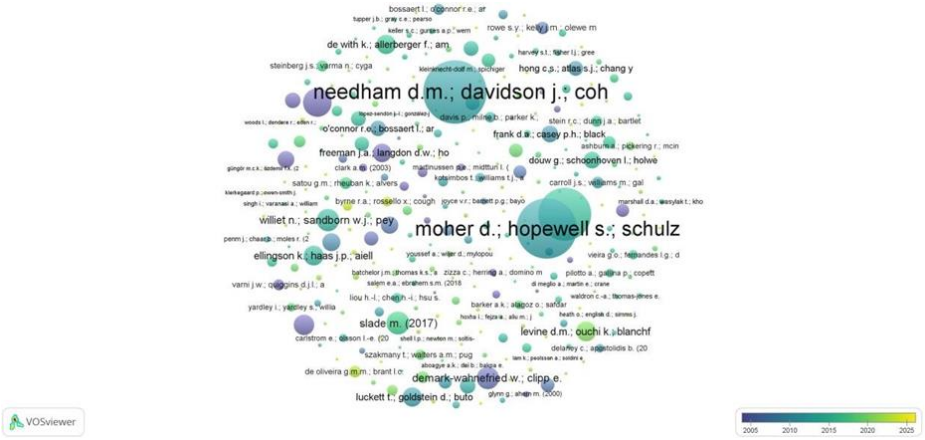
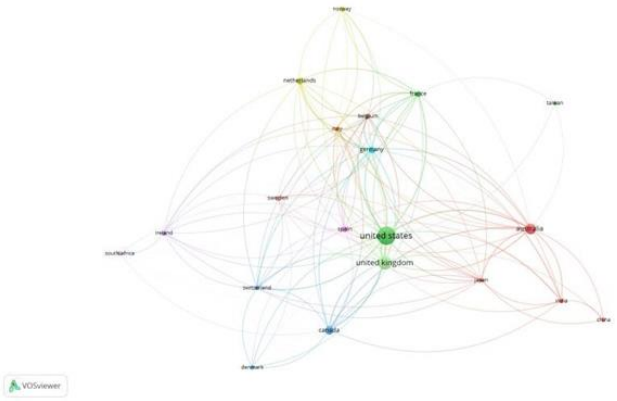


Figure 6
Bibliometric coupling



Citations from publications are used in bibliographic coupling to show the level of knowledge currently held in a field. Bibliographic coupling includes knowledge that is basic, specialised, and current (Goodell, 2021). When two works make reference to a third work that is common, it is coupling. It suggests that there is a chance that the two works address similar subjects. The documents with a minimum of 5 citations were considered for coupling which expressing in the figure 5 and 6.

Discussion and conclusion

The numerous definitions given to different variables show that there are various concepts of the dimensions of service quality in different sectors. This served to further support the idea that service quality often varied depending on the situation (Parasuraman et al., 1985). In short, the authors argued that the models they created depended on the particular service being provided. The three service-quality measuring models- HEALTHQUAL, SERVQUAL, and SERVPERF—could be used in the majority of service industries, including healthcare. Although their influence on how to gauge service quality was apparent, the generic measures of service quality (such as SERVQUAL and SERVPERF) may not be entirely sufficient tools to evaluate the quality of healthcare.

The earlier studies were too limited, concentrating only the functional side (external customers-patients) of the services and giving little attention to the technical components of healthcare (internal customers-employees). Consequently, the inputs produced by both groups were essential for developing a suitable framework for evaluating the quality of healthcare services. Due to the cultural and economic disparities, the existing Western concepts and methods are inappropriate for the healthcare environment of developing nations. The review was in favour of identifying a suitable instrument for assessing the quality of medical services that would be in line with the distinctive

features of the services in the nation. The literature has established that each nation, and even each healthcare service business, should have its own system for gauging the quality of healthcare provided. Additionally, there should be an ongoing effort to further define the quality measure and research the intricate problems of service quality in the healthcare environment. Generic models are generally no longer sufficient for assessing the quality of healthcare services. Therefore, it is advised that developing nations create their own models for gauging the quality of healthcare services.

Limitation and future implication

Despite of the paper's worthwhile contribution, it's important to note some study-elated shortcomings.one notable drawback are the articles collected by using various filtering criteria from 3 types of databases, which ignores the potential advantages of complaining data from various source ,future studies possible by gaining access to latest authentic databases which can improve the generalisability of the findings, express various perspectives of the study, reduce potential biases and boost overall authenticity and generalisability and dependability of the finding.

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