



Quality Assessment Methods of Hospital Services from the Viewpoint of Patients Based on Standard Assessment Models in Iran: A Narrative Review

Mehdi Rahimi ^{1,*} and Fateme Solymani ²

¹Department of Medical Surgical Nursing, Nursing and Midwifery School, Kermanshah University of Medical Sciences, Kermanshah, Iran

²Kermanshah University of Medical Sciences, Kermanshah, Iran

*Corresponding author: Department of Medical Surgical Nursing, Nursing and Midwifery School, Kermanshah University of Medical Sciences, Kermanshah, Iran. Email: mehdirahimi414@yahoo.com

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Abstract

Background: Controlling and measuring the quality of health services is the first necessary step in providing good services. Hospitals, as the most critical healthcare organization in various countries and communities, need assessment most.

Objectives: This study aimed to determine the quality assessment methods of hospital services from the patients' viewpoints based on standard assessment models in Iran.

Methods: A narrative literature review was conducted in IranDoc, SID, Magiran, IranMedex, PubMed, Google Scholar, CINAHL, and the World Health Organization (WHO) databases. The relevant English and Persian publications were selected between January 1994 and December 2020. The quality of studies was assessed using the STROBE checklist. A total of 212 articles were found, of which 48 articles related to the purpose of the study were selected according to the inclusion criteria. Quality assessment and data extraction and analysis were performed for all studies.

Results: One of the most widely used methods for assessing the quality of hospital services was the standard SERVQUAL model to assess customer expectations and perceptions of service quality.

Conclusions: The SERVQUAL tool appropriately assesses patients' satisfaction with hospital services. Therefore, it can be used along with other health system stakeholders' views to assess the quality of hospital services.

Keywords: Quality of Hospital Services, SERVQUAL Model, Patient Satisfaction

1. Background

The hospital's primary goal is to increase patient satisfaction by providing quality services (1). In other words, the primary task of hospitals is to provide quality care appropriate for the needs and expectations of patients (2). Providing services to patients according to their needs and expectations is essential for the success of an institution (hospital) to stay in the competitive market (3).

Quality of care is measured by care. In other words, quality in care means a degree of service delivery, which can increase satisfaction with the results of the requested health services (4). Various studies have indicated that achieving the patient's expectations with his/her high satisfaction with the service is significantly relevant, whereas expectations that are not fulfilled are associated with dissatisfaction (5). Hospitals are the most critical component of the care and treatment system. They attract a lot of fi-

nancial, human, and capital resources and are at the forefront of community health. Hospitals should provide good quality services to meet patient needs (6). In addition, improving the quality of service provision leads to increased productivity, lower costs, and, consequently, increased patient satisfaction (7).

Controlling and measuring the quality of health services is the first necessary step in providing the right services. Hospitals, as the most crucial healthcare organization in various countries and communities, are most in need of assessment (8). Also, evaluating service quality is necessary for improving quality (9). Therefore, considering the importance of service users' satisfaction in the effectiveness and quality of services provided, the satisfaction index of the visitors plays an essential role in increasing the organization's effectiveness. In addition, the most reliable way to assess health care quantitatively and qualitatively is to obtain patient feedback (10). Therefore, one of

the main ways to monitor and evaluate the quality of hospital services (health care) is to introduce standard protocols for satisfaction surveys from the viewpoint of the referred clients (4). On the other hand, due to differences in the sample and the type of questions and their scales, there may be differences in the quality assessment results of hospital services (11).

The findings of this research help us to understand standard methods used in assessing the quality of hospital services in Iran, and it can ultimately lead to more incredible information for health care providers and health policy-makers about the quality gap in hospital care services in Iran. Furthermore, due to the importance of the quality of hospital services and its effects on patient satisfaction, a question is always raised: What are the best methods of hospital services to be measured?

2. Objectives

The main objective of this study was to determine the quality assessment methods of hospital services from the viewpoint of patients based on standard assessment models in Iran.

3. Methods

This narrative literature review study was conducted in 2021. This study used electronic journals published between January 1994 and December 2021 to find articles in national (Iranian) and international databases. For this purpose, IranDoc, SID, Magiran, IranMedex, PubMed, Google Scholar, CINAHL, and the World Health Organization (WHO) databases were searched. The keywords in all databases (obtained in this research) are listed below. The search strategy used English/Persian keywords and Mesh terms in PubMed and Medline databases. The keywords included satisfaction, patients, hospital, quality of service, evaluation models, standard, and Iran, combined with the And/OR Boolean operator. The search resulted in 212 articles.

The inclusion criteria were studies presenting the mean and standard deviation (SD) of the expectation and perception scores of the total scale and its dimensions, studies published in English or Persian, and studies evaluating the quality of hospital care from patients' viewpoints. Letters to editors, brief reports, editorial working papers, commentaries, and studies with duplicated data were excluded from the study. The most relevant articles were selected according to the criteria for inclusion and exclusion. For this purpose, the titles of all papers were first examined, and 114 articles were excluded from the study

because of irrelevant titles to the research objectives and 36 articles due to their repeatability. In the second stage, the abstracts of 62 remaining articles from the previous stages were examined, and 14 other articles were excluded from the study due to a lack of reference to accreditation in treatment centers. The remaining papers were thoroughly examined in the third phase of this process. Finally, 48 related articles were studied, identified, and selected (Figure 1). These articles were carefully studied, and the most critical aspects of the study were extracted and summarized in Table 1. We also used the 22-item STROBE checklist (strobstatement.org) to evaluate the quality of studies in this research. A score between 0 and 7 was regarded as low quality, 8 and 17 as moderate quality, and 18 and 22 as high quality. All the selected Persian and English studies related to the subject of the study were reviewed in general or in terms of the dimensions of appropriate personnel exposure, hospital facilities, and care from the perspective of patients. Studies published before the given time or assessing the association of patients' satisfaction with a specific phenomenon, such as insurance or education level, were excluded.

Finally, articles containing models for evaluating and assessing the quality of hospital services from patients' viewpoints were selected based on standard assessment models. Regarding the repetition of research in various articles, duplicate resources were discarded from the paper. Quality assessment and data extraction and analysis were performed for all studies. The references were organized using EndNote X6 software.

4. Results

A literature review revealed various models in the United States and Europe for evaluating and assessing the quality of accreditation of organizations, which are the control mechanisms in health care systems (24). Each model is relatively independently administered and implemented on an optional or voluntary basis using agreed standards, applying self-assessment methods by the organization, and through external evaluation by homogeneous groups and surveys of health organizations.

Generally, there are different models and approaches to assess the quality of hospital services, each of which measures the direction of the services provided (1, 14, 19, 23). In addition, standard questionnaires with confirmed validity and reliability are used widely to assess the quality of hospital services (1, 16, 22). The Malcolm Baldrige model is one of the most prominent models in healthcare organizations (21), which can be used to measure the quality of hospital services from the viewpoint of hospital staff (20). Based on the synergy model, a study was conducted

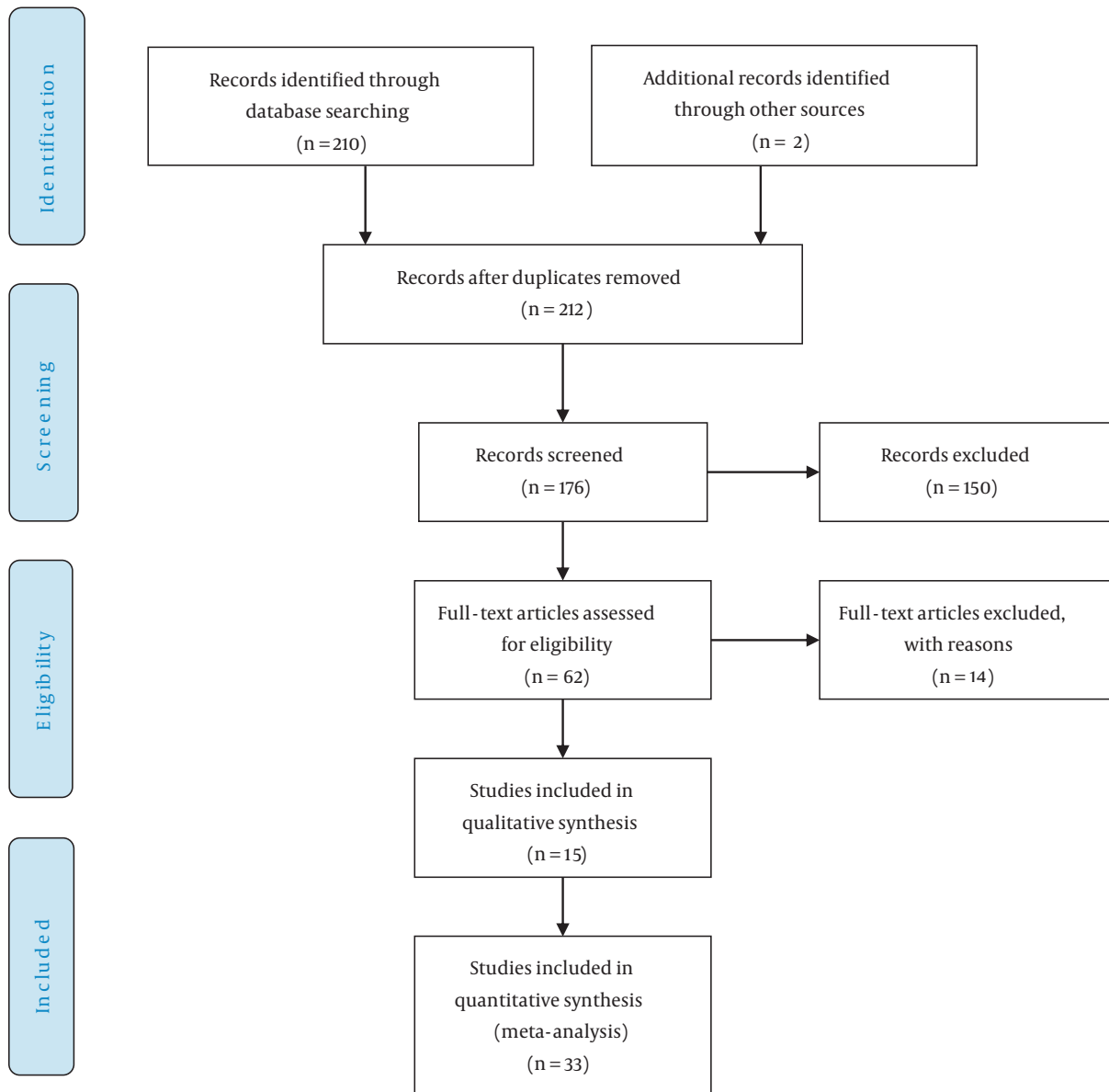


Figure 1. Process of article selection

to assess nurses' performance in intensive care units. In this study, nurses performed better in coordination and caring activities (19). A study based on the 5Es model designed the HEALTHQUAL questionnaire to measure the quality of health services. The questionnaire assesses the patients' viewpoints in four dimensions: Environment, interactions, effectiveness, and efficacy (1). Through the Patient Satisfaction Questionnaire (12), other studies examined the patients' satisfaction with services provided in Golestan Hospital in Tehran. In this study, most patients

(73.82%) reported moderate satisfaction with the services provided (13).

According to the literature, most studies (Table 1) in Iran used the SERVQUAL model (questionnaire) to measure the quality of hospital services (3, 4, 7, 14, 16). This model was designed by Parasuraman et al. cited in Zarei et al. and is one of the most widely used models for assessing customer expectations and perceptions of service quality (15). The translated questionnaire for quality assessment of health services has 28 questions from the stan-

dard SERVQUAL model questionnaire made by “Parasuraman and Zeithaml” (16). Its content validity was calculated according to the viewpoint of the professors, and its reliability was determined by calculating Cronbach’s alpha coefficient in two parts of expectations and perceptions (16). The SERVQUAL tool provides a method for the purposeful identification of the strengths and weaknesses of the quality of the organization’s services and measures and compares the perceptions and expectations of non-institutional customers (17).

This tool assesses customers’ perceptions in six dimensions of service quality, including physical dimension or tangibility (physical environment and conditions of the service delivery environment, including facilities, equipment, staff, and communication channels), reliability (ability to serve in a reliable and trustworthy way), responsiveness (the willingness to work with the customer), assurance (empowerment and ability of employees to inspire a sense of trust and confidence to the customer), empathy (special deal with each customer according to their morale so that the organization understands satisfied customers), and access (16). The quality of health services questionnaire has been formulated on a five-point Likert scale (15).

5. Discussion

This study aimed to evaluate the quality assessment methods of hospitals in Iran from the patients’ viewpoint. The results showed various tools and models for measuring the quality of hospital services in countries worldwide (e.g., Malcolm Baldrige, Synergy, HEALTHQUAL, and SERVQUAL Models). Also, our study showed that the most used model for assessing the quality of health services in Iran is the SERVQUAL model. One of the important ways is the use of patients’ viewpoints in these assessments. In recent years, studies have been conducted on patient satisfaction in Iran because the essential element of service delivery in a community is the degree of satisfaction of the service recipients (10, 26-28); therefore, this issue needs to be assessed (25).

The assessment of the quality of hospital services in this study was based on the SERVQUAL model developed by Parasuraman et al. cited in Zarei et al. which assesses the expectations and realities of the organization providing the service from the point of view of the clients (15). This model is also widely accepted globally (50). Along with these studies in Iran, Vafae-Najar et al. showed that the translated version of the SERVQUAL questionnaire is relatively reliable and valid in assessing the quality of hospital services (29). Ajam et al. confirmed the validity and reliability of the SERVQUAL questionnaire in their study (16).

Moosazadeh et al. estimated the satisfaction rate of more than 70% in hospitalized patients in Iranian hospitals concerning the heterogeneity of studies based on existing models (10). Along with these results, Ajam et al. stated that from the viewpoint of service recipients, in general, what they provided in the form of services and facilities was beyond what they expected (16). Therefore, the freedom to provide services and, most importantly, the deprivation of the population receiving the service can be important reasons for such a result. Rostami Borujeni et al. showed a significant difference between the perception and expectation of patients about the five dimensions of service quality (tangibility, reliability, assurance, empathy, and responsiveness) in the studied hospitals (30). Contrary to these findings, Aghamolaei et al. reported that the assurance dimension was the most important and the responsiveness dimension was the least important dimension from the patients’ viewpoints (31).

Gholami et al. assessed the quality gap of the services provided by the hospital and reported a negative gap in all aspects of the quality of services provided so that patients’ expectations were met in none of the dimensions (3). In addition, Shokohyar et al. described the gap between the perceptions and expectations of respondents about the quality of health care in the studied hospital with an average score of -0.19 (32). On the other hand, Rouhafza et al. stated that patients were fully satisfied with the hospital services offered at the hospitals affiliated with the Islamic Azad University, Tehran Medical Science Branch. In other words, there was a significant relationship between satisfaction and the quality of hospital services in hospitals affiliated with the Islamic Azad University, Tehran Medical Science Branch. Researchers considered the appropriate physical environment for the hospital and honest attention to address the problems as the leading causes of this satisfaction (7).

In various studies, the SERVQUAL model has been used to assess the quality of services in many organizations, industries, and hospital environments. It has been shown as a reliable tool (34). Studies have shown that SERVQUAL has high reliability and validity in evaluating the quality of medical services and is an appropriate tool for assessing the quality of hospital services (51). The limitations of the SERVQUAL model are the difficulty in measuring services and the inability to store, exhibit, or perfectly imitate outputs. The customers can only perceive them. Thus, the service quality measurement depends on customer perceptions (33). Also, the conversion of qualities to quantity (questionnaire options) usually constrains the generalization of fieldwork results (14). In addition, this study showed that recent studies conducted across the country regarding patient satisfaction with hospital services have

not been comprehensive.

The limitation of our study was that there were few studies on using other tools and models to measure the quality of hospital services in Iran. As a result, the possibility of comparing different methods in Iran was difficult.

5.1. Conclusions

The current study showed that the translated version of the SERVQUAL questionnaire is reliable and valid in assessing the quality of hospital services. Also, the SERVQUAL model is the most important and popular method to evaluate the quality of health services in Iran. Furthermore, two scales of perceptions and expectations of patients as suitable tools for quality assessment of hospital services will be usable from patients' viewpoint. Therefore, it can measure the distance between patient expectations and what is observed in practice.

Generally, SERVQUAL is an appropriate tool for assessing patients' satisfaction with hospital services. Therefore, it can be used alongside the views of other stakeholders, such as doctors, managers, nurses, and other service providers, to assess the quality of hospital services.

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Footnotes

Authors' Contribution: M. R. developed the original idea and the protocol, abstracted and analyzed data, wrote the manuscript, and is a guarantor. M. R. and F. S. contributed to developing the protocol, abstracting data, and preparing the manuscript.

Conflict of Interests: There are no conflicts of interest.

Data Reproducibility: The data presented in this study are openly available in one of the repositories or will be available on request from the corresponding author by this journal representative at any time during submission or after publication. Otherwise, all consequences of possible withdrawal or future retraction will be with the corresponding author.

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Table 1. Reviewed Research Articles

Authors	Design	Methods/Materials/Aims	Main Findings
Mohebbifar et al. (9)	Cross-sectional descriptive-analytic study	Evaluating the quality of service in teaching hospitals, 360 patients contributed to the study, random sampling, SERVQUAL model	"Assurance" (2.24) and "reliability" (2.36) dimensions had the highest quality gap, and the lowest gap was in "responsiveness" (1.97). The negative gap shows that quality improvement is necessary.
Dabaghian et al. (12)	Cross-sectional study	Assessing the level of satisfaction in patients, 260 patients, convenient sampling, patient satisfaction questionnaire (PSQ-18)	63.1% of patients were satisfied, 3.4% were completely satisfied, and 25.8% were dissatisfied with the services.
Pirooz et al. (13)	Cross-sectional, descriptive-analytical study	Evaluating patient satisfaction, 426 patients were selected from hospitalized patients, convenience sampling method, the standard checklist for patients' satisfaction	73.82% of the patients were satisfied with the services provided, and 12.65% were dissatisfied. Education level and age were related to the degree of satisfaction
Omidi et al. (14)	Analytical descriptive	Using the Morgan table, 381 patients were referred to the hospital, determine the quality of hospital services, random sampling, SERVQUAL model	A direct relationship between perceived service quality and patient satisfaction. To increase the satisfaction of patients, greater attention must be given to the dimensions of the quality of services, such as reliability, accountability, assurance, empathy, and physical factors.
Zarei et al. (15)	Cross-sectional study	Evaluation of the quality of services in the hospital, 983 patients admitted, random sampling, SERVQUAL questionnaire	The average perception of quality was 4.02, and the average quality expectation was 4.91. Significant differences between patients' perceptions and expectations ($P < 0.001$), SERVQUAL is a reliable, valid, and flexible instrument to measure and follow up on the quality of the services.
Rouhafza et al. (7)	Descriptive correlation	Relationship between patients' satisfaction and quality of services, 405 patients admitted, convenience sampling, SERVQUAL model	A significant relationship between satisfaction and perceived service quality by patients
Nadi et al. (2)	Analytical descriptive	Assessing the patients' perceptions and expectations, 600 patients, simple random sampling, the standard SERVQUAL questionnaire	The highest and lowest priority was related to empathy and reliability, respectively; patients' expectations were not met in any of the examined dimensions
Gholami et al. (3)	Cross-sectional study	Evaluating health care services quality, 100 patients evaluated, simple random sampling, SERVQUAL model	The quality gap in all dimensions was significant ($P < 0.001$). The largest and lowest quality gap was related to responsiveness (-1.08) and assurance (-0.8), respectively; to provide appropriate facilities, we need to reduce waiting time and improve the behavior of health care personnel toward patients
Motaghed et al. (4)	Analytical descriptive	Assessment of the quality of service delivery in health centers, 100 people admitted, SERVQUAL method	A significant difference between expectations and existing facts, the biggest difference between expectations and reality within empathy ($P = 0.001$), and significant differences between the current situation and the ideal of health services in health centers
Ajam et al. (16)	Cross-sectional descriptive	Evaluation of service quality gap, 100 patients admitted, simple random sampling, SERVQUAL model	The highest average negative gap score was related to the responsiveness dimension (-0.02), and the highest average positive gap was related to the access point dimension (-0.035); the delivered services were higher than the expectations of patients
Moqbel Baarz and Mohammadi (17)	Analytical descriptive	Designing a tool for evaluation of service quality, 200 patients and 126 completed questionnaires, SERVQUAL model	An appropriate tool for measuring service quality
Mardanshahi et al. (18)	Descriptive survey	Investigating the quality of performance, 225 of the staff of Shahid Rajaei Hospital, simple random sampling, Malcolm Baldrige model	The performance quality was above average.
Mosadeghrad and Sokhanvar (1)	Descriptive and cross-sectional study	Measuring service quality, 296 patients, random sampling, HEALTHQUAL questionnaire	The mean scores of patient perception and expectation were 3.49 and 4.10 out of 5, respectively; patients were most and least satisfied with hospital staff competencies and hospital amenities, respectively.
Khalifehzadel et al. (19)	Quasi-experimental study	Evaluating the satisfaction of the patients with the acute coronary syndrome, 22 nurses and 64 patients, the synergy model	The synergy model as a foundation for receiving nursing care helps improve patient satisfaction
Manjunath et al. (20)	Cross-sectional study	Quality management using the Malcolm Baldrige national quality award criteria (MBNQA) criteria, 300-bed hospital	The total points scored were 753 out of 1,000 points; the quality performance of the case hospital is higher; MBNQA criteria act as a powerful tool to analyze the quality performance of the hospital
Lazaros et al. (21)	Empirical research	Evaluating the Malcolm Baldrige national quality award (MBNQA) in Greek tertiary education system, 123 Greek students, Malcolm Baldrige national quality award (MBNQA)	The institution established the main factors affecting prosperity personnel, satisfaction and teaching employees' motivation

Bolarinwa et al. (22)	Review article	Explaining and evaluating the validity and reliability of a research instrument, literature review	Importance of validity and reliability tests in research; giving both literary and technical meanings to these tests
Endeshaw et al. (23)	Qualitative research design	Review of existing healthcare service quality-measurement models, 74 studies were selected for analysis, literature review	Developing countries should improve their models and methods for measuring and evaluating the quality of health care services
Raeisi et al. (24)	Comparative-review study	Comparing accreditation models of health care organizations	Four models of health care accreditation were used in European countries
Asadi-Lari et al. (11)	Comprehensive model	Satisfaction, patients' needs, and health-related quality of life, Towards a comprehensive model	Satisfaction of patients is associated with the extent to which general healthcare needs and conditions-special needs are met
Moosazadeh et al. (10)	Systematic review	Patient satisfaction in Iran, 14,058 cases were surveyed in these 26 studies, meta-analysis	The patient satisfaction scale in Iran is at a reasonable level compared to other countries
Abbasi-Moghaddam et al. (25)	Cross-sectional study	Evaluating service quality of clinics from the viewpoint of patients, 400 patients, random sampling	Patient satisfaction was more from services costs, physician consultation, and admission process
Derisi et al. (26)	Cross-sectional study	Evaluating the gap between the perceptions and expectations of service recipients, the sample size was 118; 104 patients completed the questionnaires, random sampling, SERVQUAL model	Patient expectations were higher than their satisfaction in all dimensions of service quality reliability and responsiveness showed the most prominent gaps
Mehrabian et al. (27)	Analytical study with cross-sectional design	Determining the level of patient satisfaction, 250 patients, convenience sampling, SERVQUAL-KANO model	The highest and lowest mean quality scores were related to assurance and tangibility dimensions, respectively ($P < 0.05$)
Zarei et al. (28)	Cross-sectional study	Evaluating the quality of hospital care services from patients' perspective, 400 patients, multistage sampling	The quality level of hospital care services did not meet patients' expectations
Vafaee-Najar et al. (29)	Cross-sectional study	Evaluating the gap between patients' expectations and perceptions of the quality of services, 480 patients, random sampling	A significant difference between perception and expectation among the five dimensions of the SERVQUAL model; In both tangible and responsive dimensions, the gap was more significant than in the other dimensions
Rostami Borujeni et al. (30)	Descriptive-analytical and cross-sectional study	Assessing the quality of services in health centers; the sample included 291 people, random sampling, SERVQUAL standard questionnaire	A significant relationship between each of the dimensions of expectations and the corresponding dimension in the perceptions section ($P < 0.001$); Some measures should be taken to increase the quality
Aghamolaei et al. (31)	Cross-sectional study	Determining the service quality gap, 96 participants; the sample was selected using the multistage cluster method, SERVQUAL technique	Negative quality gaps in all five service quality dimensions, more than 56% of patients defined the quality of services as average
Shokohyar et al. (32)	Practical and descriptive survey research	Examining services quality of a military hospital, 181 patients, SERVQUAL model	The negative gap in all aspects of the quality of services has been shown to cause dissatisfaction in patients
Özkan (33)	Qualitative Study	Evaluating the weaknesses of SERVQUAL	Due to the cultural diversities, comparison between different regions by using the SERVQUAL model may be deceptive, SERVQUAL model concentrates on expectations as a base of perceptions, but expectations are affected by the cognitive structures of people
El-Haddad et al. (5)	Semi-structured interviews, qualitative research	Evaluating how patients express and conceptualize their expectations of services, 26 participants, sampling continued until thematic saturation, interpretive phenomenological analysis (IPA)	Clinical specialists and health caregivers could be empowered to provide and supervise patient-centered care with outcomes tailored to what patient's desire
Bangoli et al. (6)	Descriptive and applied	A framework for measuring the hospital service quality, 185 participants, stratified random sampling, analytical hierarchy process (AHP)	The framework provided may be used for the hospitals to assess the quality of their services to the clients and their families from various aspects in order to improve service quality and prioritize the service quality practices, and thus satisfy patients
Tan and Pawitra (34)	Case study	Evaluating customer satisfaction, SERVQUAL and Kano's model	Proposing a comprehensive approach involving Kano's model, SERVQUAL, and quality function expansion
Yavari et al. (35)	Descriptive research	Evaluating the quality of service of specialized clinics; the sample size was 201, stratified sampling, SERVQUAL model	The managers using SERVQUAL will be able to assess the quality of service, specify its effect on service recipients' responses, and create a program for improvement of weaknesses
Bastani et al. (36)	Descriptive study	Assessing the quality of services in outpatient wards, 200 clients, convenience sampling, SERVQUAL model	Significant differences between patients' perceptions and expectations in all SERVQUAL dimensions ($P < 0.05$)
Majlesi et al. (37)	Descriptive-analytical and cross-sectional study	Assessing the quality of care services, 210 patients, convenience sampling, SERVQUAL model	Employees and health care providers should pay more attention to the opinions of patients
Mohebbifar et al. (38)	Cross-sectional study	Examining students' perceptions and expectations contents gaps (to evaluate educational services quality), 256 students, stratified random sampling, SERVQUAL model	A negative gap exists in all five aspects of educational services; the need to modify or reduce the shortcomings of existing planning, evaluate and review processes, and gain a competitive advantage in providing educational services

Sina et al. (39)	Descriptive-analytical study	Evaluating the level of inpatients satisfaction, 331 patients, cluster sampling, SERVQUL model	A significant difference between quality dimensions indicates that inpatients were not satisfied with the health services provided
Esteki and Attafar (40)	Descriptive and cross-sectional	Evaluating the nursing services quality, 94 nurses, simple sampling, SERVQUL model	A significant difference between the expectations from and perception of the quality of services in the nurses ($P < 0.05$)
Mohammadi et al. (41)	Descriptive-analytic study	Studying the service quality of speech therapy services, 59 patients, convenience sampling, SERVQUL model	A service gap in all five dimensions of quality, the need to improve the quality of services
Teshnizi et al. (42)	Systematic review	Assessing the quality of health services, 315 studies, meta-analysis, SERVQUL model	Negative quality gaps in all dimensions, which indicates that the quality of health care services in Iran has not been satisfying to patients and needs to be improved
Karami Matin et al. (43)	Cross-sectional and descriptive study	Evaluating the quality of health services, 400 individuals who received primary healthcare services, multi-cluster random sampling, SERVQUL model	The managers of health centers should improve the timeliness of the delivery of care and employees' communication skills
Nemati et al. (44)	Comparative cross-sectional study	Comparing hospital service quality based on the HEALTHQUAL model, 990 patients, stratified random sampling method, HEALTHQUAL model	Focus on patients to reduce gaps in service quality, improve service quality, and provide better healthcare services
Jebraeily et al. (45)	Descriptive analysis	Assessing hospital information system (HIS) service quality by the SERVQUAL model, 270 users, multi-stage cluster sampling, SERVQUAL model	Significant differences between perceptions and expectations of the users in all dimensions ($P < 0.001$). The quality of the delivered services was lower than what the users expected
Haghshenas et al. (46)	Descriptive- analytics and cross-sectional study	Evaluating the quality of provided and expected services to outpatients, 225 participants, convenience sampling, SERVQUAL model	Negative gap (higher expectations than perception) in all aspects of quality improvement is required in all dimensions
Isfahani and Shamsaie (47)	Systematic review	The quality of services in the hospitals of Iran, 15 articles were selected, meta-analysis	The total mean score of patients' expectations of the quality of hospital services was higher in teaching hospitals and central provinces
Arab Ameri and Hasani (48)	Descriptive-analytical study	Developing a comprehensive model, 384 patients, convenience sampling, researcher-made questionnaire	Paying attention to the dimensions of patient satisfaction is vital in achieving appropriate service provision, desirable performance, and improving the effectiveness of healthcare services.
Rezaei et al. (49)	Descriptive study	Evaluating the satisfaction rate of clients, 385 people referring to healthcare centers, multi-stage sampling, SERVQUAL model	77.4% of the clients were very satisfied with the services provided in health centers.