



A SCIENTIFIC PAPER TITLED: THE IMPACT OF TOTAL QUALITY MANAGEMENT ON IMPROVING THE QUALITY OF HEALTHCARE SERVICES IN GOVERNMENT HOSPITALS IN RIYADH CITY.

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Summary

The aim of the study was to investigate the impact of total quality management on improving healthcare services in government hospitals in Riyadh. The study used a descriptive-analytical method, targeting all healthcare professionals in these hospitals. The sample consisted of 265 healthcare professionals from Al-Iman General Hospital in Riyadh. The study employed a questionnaire as a data collection tool. In light of the results, the study found a significant positive correlation (0.683) at a significance level of 0.01 between the overall level of total quality management and the improvement of healthcare services in government hospitals in Riyadh. Based on these findings, the study recommends that the general management of government hospitals in Riyadh, along with the Saudi healthcare sector as a whole, should enhance programs aimed at developing and promoting total quality management in healthcare services. Attention should be paid to providing continuous training and development opportunities for employees to enhance the quality level in government hospitals.

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Introduction

The recent decades of the twentieth century have witnessed modern developments focusing on the human dimension in organizational operations. Modern management thinking has focused on the development of production processes and improving service quality to achieve effective organizational efficiency. This is implemented through the concept of Total Quality Management (TQM), which seeks continuous improvement in services and products, in addition to focusing on organizational culture and establishing democratic foundations within the organization. The concept of Total Quality Management has begun to attract the interest of organizations, especially healthcare organizations seeking continuous development and improvement of healthcare services. This aims to enhance the competitive advantage of hospitals in the region, facing significant and multiple challenges, from increasing costs in producing medical services to improving the quality of these services. Healthcare institutions are among the most sensitive organizations to the application of quality concepts, as they deal with human health. The concept of quality management is an old concept that emerged in Japan after World War II to focus on improving quality and using quality control tools in the manufacturing sector. Then, the concept of quality management moved to the United States, the United Kingdom, and other countries. The application of quality concepts began in the manufacturing sector first, where both the United States and Japan focused on Total Quality Management, primarily directed towards manufacturing. Therefore, the application of Total Quality Management in the service sector received secondary attention, and by examining the readiness of manufacturing industries to implement Total Quality Management practices, it was found that there are twelve dimensions of Total Quality Service (TQS) (Mahdi & Alotaibi, 2017). Total Quality Management is among the main philosophies of modern management, focusing its efforts on comprehensively improving service quality. This philosophy is based on a fundamental principle of achieving customer satisfaction through the involvement and motivation of employees, who are considered a fundamental axis in the success of the organization. The importance of Total Quality Management comes to the forefront in the healthcare context, where it plays a vital role in improving and developing the quality of healthcare services in the health sector. Through this joint effort, high-quality healthcare services can be provided that meet global standards. Thus, Total Quality Management contributes to ensuring

the safety and satisfaction of beneficiaries towards the services provided (Kwadieck, 2021).

Total Quality Management is a new approach to performing and managing business in a modern way, exceeding all traditional management methods. It focuses on meeting the requirements and expectations of consumers, whether internal or external, by understanding their requirements and needs, and then meeting them and performing them correctly through continuous improvement and development to reach the highest levels of performance, which is the desired mastery (Al-Tamimi & Issa, 2014).

The healthcare sector has recently witnessed significant attention at all levels to apply Total Quality Management standards and procedures to achieve continuous change and improvement, in order to keep pace with the evolving social, economic, political, and cultural needs of society and individuals. The healthcare sector is considered a "safety valve" for preserving the health of all healthcare service users, necessitating the application of quality systems as an important means of organizational change and gaining the trust of healthcare service beneficiaries. It is one of the foundations of modern management that contributes to enhancing work in the face of successive challenges and developments (Abbas, 2019).

As the field of interest in the health sector relates to human health and life, quality in healthcare services is considered a commitment rather than a preference. Service quality is defined as the organization's ability to meet or exceed the expectations and needs of customers. Simply put, it's about providing the best service to meet customer expectations (Erkan & Unal, 2022). Total Quality has become one of the most important requirements of modern management and a condition for its success. It is no longer a luxury but has become the standard that governs the survival and growth of modern organizations, in the face of the intense competition experienced by the world at this time, and amidst the scientific and technological advancements that have led to the existence of modern systems aiding in the application and monitoring of Total Quality (Abbas & Abdul, 2019).

Ensuring and improving quality in the field of healthcare is not a new concept; it is a direct result of the principles of healthcare, such as justice, accessibility, integration, sustainability, and partnership between the community and other partners. Achieving this requires that quality assurance and improvement be an integral part of

healthcare components and not seen as a complex and costly task (Fattahine & Nalamn, 2016).

Total Quality Management is a necessity of life to achieve high levels of quality in medical care provided by hospitals and optimal utilization of their material and human resources. Initiating expenditures, evaluating productive quality represented in healthcare, and continuous work and improvement to achieve Total Quality Management in hospitals help identify wasted material and human potential and therefore address ways to manage and utilize them better. Thus, Total Quality Management is one of the best modern management methods that encourage service providers to contribute to the success of institutions (Al-Awn et al., 2022). Therefore, the importance of the study lies in understanding the role of Total Quality Management in improving healthcare services.

Study Problem:

Total Quality Management (TQM) is a modern approach in organizing and managing businesses, surpassing traditional management methods in understanding and implementation. The focus of this approach revolves around meeting the needs and expectations of all stakeholders, whether internal or external to the organization. By understanding their requirements and needs, fulfilling and executing them correctly, with a focus on continuous improvement and development to ensure the highest levels of quality are achieved, aiming for the desired perfection.

Implementing Total Quality Management (TQM) in the healthcare sector plays a crucial role in identifying wasteful resources, whether time, human, or material, and addressing them. This system is considered supportive, granting opportunities for healthcare workers to utilize their potential and empowering them according to their individual capabilities, encouraging them to achieve excellence and innovation. Adopting this concept in the healthcare sector entails a range of benefits, with one of the most significant being the improvement of healthcare service quality (Al Shammari et al., 2022).

Total Quality Management (TQM) is considered one of the modern strategies for management processes, based on several principles that healthcare sectors must commit to, apply, and adopt to achieve excellence in performance and exceed stakeholder expectations. It is a modern managerial style that achieves continuous development and improvement in the quality of healthcare services provided in those sectors, through the collaboration and cooperation of both management and

employees to perform activities and tasks within the organization or administrative structure correctly, with a diligent effort and focus on meeting the expectations, desires, and needs of beneficiaries by involving them in designing and delivering the services provided to them. Therefore, the application of Total Quality Management (TQM) in the healthcare sectors in the Kingdom of Saudi Arabia is considered one of the most important success factors in those sectors. Embracing the principles of Total Quality Management (TQM) leads to continuous improvement in the performance of healthcare workers, thus improving the performance of the healthcare sector and the quality of healthcare services through renewal, innovation, and dissemination (Al Tamimi & Issa, 2014).

Additionally, Awad's study (2018) affirms that applying Total Quality Management (TQM) positively affects the quality of healthcare services in healthcare institutions. Total Quality Management (TQM) is an ongoing process that does not stop over time, so the application of this concept must be comprehensive, starting with applying the basic principles and foundations and continuing with ongoing work to develop and improve this system and find new means and methods. The performance of workers reflects the performance of the institution as a whole, and there is a close relationship between Total Quality Management (TQM) and improving the quality of healthcare services. Khiyokah's study (2014) also recommends the necessity of applying Total Quality Management (TQM) in hospitals. Furthermore, Khroubi et al. (2021) affirm that hospitals seek to adopt Total Quality Management (TQM) as a management philosophy to enhance the level of performance in healthcare and achieve patient satisfaction. However, hospitals face several challenges when implementing Total Quality Management (TQM), such as a lack of knowledge of the concepts and philosophy of Total Quality Management (TQM), insufficient motivation of employees, and a lack of necessary training. Additionally, Grossu-Leibovica and Kalkis's study (2023) confirms that practicing Total Quality Management (TQM) contributes to improving the quality of healthcare services and recommends that managers implement Total Quality Management (TQM) to improve the quality of healthcare services.

Given the above, it is evident that Total Quality Management (TQM) plays a significant and vital role in healthcare institutions, contributing to improving the quality of healthcare services provided. Consequently, it helps achieve the goals

of the healthcare system in the Kingdom of Saudi Arabia. The results of the survey study confirm that there is a statistically significant positive relationship between the role of Total Quality Management (TQM) in improving the quality of healthcare services. Based on my practical experience in the Saudi healthcare sector, despite the progress made in improving the quality of healthcare services by fulfilling the latest technological advancements and adopting them in hospital management in the Saudi healthcare sector, there are still criticisms from healthcare service beneficiaries in hospitals regarding deficiencies in the quality of services provided. With the intense competition in providing the best services witnessed by healthcare institutions in the Kingdom of Saudi Arabia, where the kingdom focused in its vision 2030 on developing healthcare services provided by hospitals and medical centers, this has forced healthcare institutions to learn and implement managerial strategies that would improve their performance and the quality of their services. Therefore, this study focuses on revealing the impact of Total Quality Management (TQM) on the quality of healthcare services from the perspective of healthcare workers at Al Iman General Hospital in Riyadh. Thus, the study problem is summarized in the following main question:

What is the impact of Total Quality Management (TQM) on improving the quality of healthcare services in government hospitals in Riyadh?

Study Sub-questions:

1. What is the current status of Total Quality Management (TQM) in government hospitals in Riyadh from the perspective of healthcare staff at Al Iman General Hospital?
2. What is the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al Iman General Hospital?
3. What is the impact of Total Quality Management (TQM) on improving the quality of healthcare services from the perspective of healthcare staff at Al Iman General Hospital?

Study Objectives:

1. To identify the current status of Total Quality Management (TQM) in government hospitals in Riyadh from the perspective of healthcare staff at Al Iman General Hospital.
2. To determine the level of improvement in the quality of healthcare services in government

hospitals in Riyadh from the perspective of healthcare staff at Al Iman General Hospital.

3. To assess the impact of Total Quality Management (TQM) on improving the quality of healthcare services from the perspective of healthcare staff at Al Iman General Hospital.

Study Limitations:

- Geographical boundaries: The study was conducted at Al Iman General Hospital in Riyadh.
- Time boundaries: The study was conducted in 2023.
- Human boundaries: The study was conducted on a sample of healthcare staff at Al Iman General Hospital in Riyadh.
- Subject boundaries: It focused on studying "The impact of Total Quality Management (TQM) on improving the quality of healthcare services in government hospitals in Riyadh."

Literature Review

The study by Al-Awn et al. (2022) aimed to determine the role of Total Quality Management (TQM) in improving healthcare services at the Saudi German Hospital in Asir. The research methodology used was descriptive analytical, with a sample size of 256 employees from the hospital selected randomly. A questionnaire was used to collect data, and the study found that there was consensus among the respondents regarding the involvement of executive management in enhancing the quality of healthcare services. The hospital management dealt with patient complaints seriously, ensuring that the required service matched what was provided. There were no statistically significant differences at the 0.05 significance level in respondents' perceptions of the role of TQM in improving healthcare services at the Saudi German Hospital in Asir, attributed to variables such as education level, years of experience, and job type. The study recommended greater emphasis on preventive measures within the hospital to maximize the public health benefits for patients. Additionally, it emphasized the importance of developing hospital staff towards meeting patient satisfaction and achieving the highest levels of quality and perfection in hospital services.

Another study by Al-Shammari et al. (2022) aimed to assess the impact of implementing a Total Quality Management system on healthcare service quality from the perspective of employees at King Khalid Hospital in Hafar Al-Batin. The study used a descriptive survey methodology with a sample size of 869 healthcare workers, out of which 174

responded. The study revealed that training programs for healthcare workers would enhance their capabilities and contribute to improving the quality of healthcare services at the hospital. It also highlighted the importance of raising awareness among managerial leaders about the significance of healthcare service quality and viewing it as a developmental approach rather than merely for control and monitoring purposes. The study recommended further research on the impact of TQM implementation from different perspectives and in other hospitals, as well as studies focusing on the challenges of TQM implementation and proposed ideas for TQM application.

The study by Al-Ayashi and Yakhda (2020) aimed to highlight the role of implementing Total Quality Management in improving healthcare service quality in public hospital institutions. Using a descriptive analytical approach, the study included healthcare workers at Abdelkarim Bourdagouma Public Hospital. The sample comprised 364 doctors, paramedics, and 251 inpatient residents. The study concluded that the hospital under study did not fully apply TQM principles, indicating a need for senior management to adopt this modern approach to management. While there was perceived quality in healthcare services, there was still room for improvement, particularly regarding the reliability of healthcare services. The study recommended Algerian hospitals adopt TQM principles as a contemporary managerial approach to healthcare service quality and focus on improving patient services by convincing senior management to support TQM and establish dedicated units for its implementation.

The study by Akhorshaideha et al. (2023) aimed to examine the impact of Total Quality Management on healthcare service quality in Jordan. Using a descriptive analytical approach, the study surveyed 220 employees from various Jordanian hospitals. The study found a significant positive correlation between all dimensions of TQM (customer focus, top management support, fact-based decision-making, employee involvement, and continuous improvement) and healthcare service quality in Jordan. The study emphasized the importance of TQM in enhancing healthcare service quality and recommended that hospital management and policymakers in Jordan adopt and integrate various TQM practices into the Jordanian healthcare sector.

Study Methodology:

Researchers in this study relied on the descriptive-analytical methodology through surveying the opinions of the study community, comprising all healthcare professionals at Al-Iman General

Hospital in Riyadh, using a questionnaire tool. This methodology was chosen because it aligns with the nature of the study and is one of the most suitable methods for descriptive studies due to its flexibility and ease of application, allowing the researcher to achieve the study's objectives.

Study Participants:

The study participants consist of all healthcare professionals at Al-Iman General Hospital in Riyadh. The questionnaire was distributed to all members of the community in the year 2023.

Study Sample:

The researchers took a simple random sample from the study community, distributing the questionnaire to a sample of healthcare professionals at Al-Iman General Hospital, estimated at 265 individuals.

Study Tool and Design Stages:

In this study, researchers relied on a questionnaire tool, considering it suitable for achieving the objectives of survey studies. A questionnaire is defined as a method of collecting information from individuals within the research community through their responses to posed questions on a subject without assistance from the researchers.

External Validity (Content Validity) of the Study Tool:

Validity of the tool refers to ensuring that it measures what it is intended to measure. The researchers designed the questionnaire based on the feedback and suggestions received from experts in the field. Adjustments were made according to their input to ensure the questionnaire's content validity. After finalizing the Comprehensive Quality Impact Questionnaire on the performance of healthcare workers in Riyadh's government hospitals, it was distributed to a group of doctors and specialists experienced in the field. Reviewers provided significant feedback, guiding necessary adjustments that were carefully considered. Based on their feedback and suggestions, the questionnaire was divided into two parts:

1. The first part contains primary data about the respondents, including personal and professional characteristics represented by five variables: gender, marital status, educational level, job title, years of experience, and number of training courses attended.
2. The second part comprises the study's axes, with each axis having a set of choices (strongly agree, agree, neutral, disagree, strongly disagree). Researchers used a five-point Likert scale for

this part, which consists of three axes to ensure high agreement rates among reviewers.

- The first axis involves understanding the reality of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital. It consists of 22 Phrases distributed across six dimensions.
- The second axis evaluates the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital. It includes 20 Phrases distributed across five dimensions.

Most reviewers agreed that these axes and Phrases have a strong connection to the study's topics,

establishing content validity for the tool after adjustments were made based on reviewers' opinions. The tool was deemed ready for distribution.

Validity and Reliability Tests:

Internal Consistency Reliability Calculation:

To ensure internal consistency, Pearson correlation coefficients were calculated between the score of each Phrase and the total score of the dimension it belongs to. The questionnaire was administered to a pilot sample of 30 healthcare staff to confirm internal reliability, with researchers calculating correlation coefficients to assess the internal validity of the study tool, as shown in the table below:

Table (1): Correlation coefficients of items in the first axis with the total score for each dimension in the axis.

Management Commitment		Employee Involvement		Customer Satisfaction		Teamwork Spirit		Processes		Continuous Improvement	
Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis
1	0.858**	1	0.776**	1	0.863**	1	0.764**	1	0.564**	1	0.812**
2	0.835**	2	0.859**	2	0.815**	2	0.763**	2	0.897**	2	0.810**
3	0.535**	3	0.871**	3	0.873**					3	0.583**
4	0.847**			4	0.872**					4	0.847**
5	0.836**			5	0.823**					5	0.901**

The table above, Table (1), illustrates the items of the first axis (the reality of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital). It shows the correlation of all

Phrases with the axis they belong to, indicating that all Phrases exhibit high reliability. The corrected correlation coefficients ranged between 0.535 and 0.901.

Table (2): Correlation coefficients of items in the second axis with the total score for the axis.

Tangible		Reliability		Responsiveness		Assurance		Empathy	
Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis	Phrase No..	Correlation coefficient with the axis
1	0.858**	1	0.776**	1	0.863**	1	0.764**	1	0.513**
2	0.835**	2	0.859**	2	0.815**	2	0.763**	2	0.897**
3	0.535**	3	0.871**	3	0.873**	3	0.782**	3	0.583**
		4	0.847**			4	0.801**	4	0.647**
						5	0.791**	5	0.912**

The table above, Table (2), displays the items of the second axis (the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital). It shows the correlation of all Phrases with the axis

they belong to, indicating that all Phrases exhibit high reliability. The corrected correlation coefficients ranged between 0.513 and 0.912, meaning that the axis demonstrates a high level of internal consistency.

Reliability:

To measure the reliability of the study tool (the questionnaire), the Cronbach's alpha coefficient

was utilized. Table (3) demonstrates the reliability coefficient for the dimensions of the study tool.

Table (3): Cronbach's Alpha coefficient for measuring the reliability of the study tool.

Survey Axes and Dimensions	Phrase No.	Axis stability
Axis 1: The current status of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital.	22	0.956
Axis 2: The level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital.	20	0.948
Overall Reliability	42	0.960

Table (3) indicates that the study tool exhibits statistically acceptable reliability. The overall reliability of the study was 0.960, while the reliability coefficients for the study tool ranged between 0.956 and 0.856. These are high reliability coefficients that can be relied upon for the application of the study tool.

Application Method of the Study Tool:

After collecting the study data, the researchers reviewed it in preparation for inputting it into the computer for statistical analysis. Subsequently, they transcribed it onto appropriate tables, provided

commentary, and linked it to previous studies. Responses were given five levels: strongly agree (5 points), agree (4 points), neutral (3 points), disagree (2 points), and strongly disagree (1 point). To determine the length of the pentavalent scale cells used in the study Phrases, the range (5-1=4) was calculated and divided by the number of questionnaire cells to obtain the correct cell length (4/5=0.80). This value was then added to the lowest value on the scale (or the beginning of the scale, which is one) to determine the upper limit of the cell. The following table illustrates the method for correcting the Likert pentavalent scale.

Table (4): Method for correcting the scale.

scale	The weight	The average arithmetic mean value ranges
Strongly Disagree	1	From 1 to less than 1.80
Disagree	2	From 1.81 to less than 2.60
Neutral	3	From 2.61 to less than 3.40
Agree	4	From 3.41 to 4.20
Strongly Agree	5	From 4.21 to 5.

The questionnaire consisted of two axes, with each axis and each Phrase containing five levels according to the pentavalent Likert scale. The ratings on this scale represent varying degrees of agreement starting from strongly agree, agree-neutral, then disagree, to strongly disagree. The scale ratings range from 1 to 5, where 5 represents

the highest positive ratings (strongly agree) and 1 represents the highest negative ratings (strongly disagree). This scale was used to assess the impact of comprehensive quality on improving the quality of healthcare services in government hospitals in Riyadh.

Study Results

First: Primary Data:

Table (6) Distribution of the study community according to primary variables.

		Frequency	Percentage
Gender	Male	137	51.7
	Female	128	48.3
Educational Level	Diploma	44	16.6
	Bachelor's Degree	183	69.1
	Postgraduate Studies (Master's, PhD)	38	14.4
Training Courses	None	76	28.7
	3-1 training courses	65	24.5
	7-4 training courses	38	14.3

	10-8 training courses	86	32.5
Occupation	Administrative	42	15.8
	Doctor	64	24.1
	Nurse	87	32.8
	Technician	72	27.2
Years of Experience	Less than five years	43	16.3
	From 5 years to less than 6 years	108	40.8
	11 years to less than 15 years	54	20.4
	16-25 years	60	22.6

Secondly: Results Related to the Axes of the Questionnaire:

Answering the first question: What is the reality of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital? Through the dimensions of comprehensive quality (commitment of top management, employee involvement, customer satisfaction, teamwork spirit, operations, continuous improvements)?

To identify the reality of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital through the dimensions of comprehensive quality from their viewpoint, the arithmetic means, standard deviations, and ranks were calculated for the responses of the study participants on the dimensions of comprehensive quality among the healthcare professionals at Al-Iman General Hospital. The results are as follows, as illustrated in the following table:

Table (6): Study participants' responses to Phrases of the first axis according to agreement means.

No.	Phrases	Average	Standard deviation	Rank
1	Quality considered as main strategic priority by top management	4.04	0.90	1
2	Top management and major department heads are hired based on quality performance	3.83	1.07	3
3	Top management and departments managers are promoted & evaluated based on quality standard outputs	3.72	1.16	4
4	Management interested in employing high competence employees	3.66	1.23	5
5	Commitment of top management to obtain quality training	4.00	0.89	2
Management Commitment		3.85	1.05	
1	Employees encouraged to be involved in quality decision-making	4.03	1.01	1
2	Employees often work in teams with other members from different departments	3.89	1.03	2
3	Employees committed to the success of organization	3.82	1.16	3
Employee Involvement		3.91	1.07	
1	Hospital interested in knowing patients' needs and expectations	4.04	0.90	1
2	Hospital uses patients' requirements and expectations as the base for quality	3.88	1.05	2
3	Organization makes quick responses upon patients' inquiries	3.80	1.15	3
4	Organizational processes designed/improved based on patients' requirements	3	1.42	5
5	Organization invents new service delivery ways to satisfy patients	3.83	1.07	4
Customer Satisfaction		3.71	1.12	
1	Employees work closely as a team to coordinate work and enhance quality	4.06	0.99	1
2	Team recognition rather than individual recognition by management	3.96	1	2
Teamwork Spirit		4.01	1.00	
1	Organization has a program in finding costs and wasted time in all its internal processes	4.21	0.97	1
2	All organization processes were designed to meet the quality standards	3.23	1.27	2
Processes		3.72	1.12	
1	Top management supports long-term quality improvements processes	4.1	0.97	1
2	Top management provides essential resources for continual improvements	4	1.03	2

3	Continual improvements of processes handled by teamwork	3	1.42	5
4	Employees encouraged to experience new approaches	3.75	1.16	4
5	Explicit works policies were existing to assist employees to improve processes continually	3.88	1.05	3
Continuous Improvement		3.75	1.13	

From the results shown in Table (6), it is evident that there is variation in the agreement among the study participants regarding the dimensions of the reality of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital. The participants' agreement averages ranged from (3.72 to 4.01), falling into the fourth category of the Likert scale, indicating agreement with the study tool. This demonstrates consistency in agreement among the study participants regarding the dimensions of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital.

These dimensions are ranked in descending order according to the average agreement as follows:

First: Commitment of top management:

- Phrase (1), "Quality is considered a top strategic priority by top management," ranked first with an average agreement of (4.04).
- Phrase (5), "Top management is committed to obtaining high-quality training," ranked second with an average agreement of (4.00).
- Phrase (2), "Top management is committed to obtaining high-quality training," ranked third with an average agreement of (3.83).
- Phrase (3), "Top management and department managers are promoted and evaluated based on quality standards outputs," ranked fourth with an average agreement of (3.72).
- Phrase (4), "Management is interested in hiring highly qualified employees," ranked last with an average agreement of (3.66).

Second: Employee involvement:

- Phrase (1), "Encouraging employees to participate in making good decisions," ranked first with an average agreement of (4.03).
- Phrase (2), "Employees often work in teams with members from other departments," ranked second with an average agreement of (3.89).
- Phrase (3), "Healthcare professionals are committed to the hospital's success," ranked last with a somewhat agreeable average of (3.82).

Third: Customer satisfaction:

- Phrase (1), "The hospital is interested in knowing patients' needs and expectations,"

ranked first with an average agreement of (4.04).

- Phrase (2), "The hospital uses patient requirements and expectations as a basis for quality," ranked second with an average agreement of (3.88).
- Phrase (3), "Patient inquiries are promptly responded to," ranked third with an average agreement of (3.80).
- Phrase (5), "The hospital innovates new ways to deliver services to satisfy patients," ranked fourth with an average agreement of (3.83).
- Phrase (4), "Organizational processes are designed/improved to meet patient requirements," ranked last with a somewhat agreeable average of (3.00).

Fourth: Teamwork spirit:

- Phrase (1), "Employees work closely as one team to coordinate work and improve quality," ranked first with an average agreement of (4.06).
- Phrase (2), "Recognition of the team rather than individual recognition by management," ranked last with an average agreement of (3.96).

Fifth: Operations:

- Phrase (3), "The organization has a program to identify costs and waste in all its internal operations," ranked first with a strong agreement average of (4.21).
- Phrase (1), "All organizational processes are designed to meet quality standards," ranked last with a somewhat agreeable average of (3.23).

Sixth: Continuous improvements:

- Phrase (1), "Senior management supports long-term quality improvement processes," ranked first with an average agreement of (4.10).
- Phrase (2), "Senior management provides essential resources for continuous improvements," ranked second with an average agreement of (4.00).
- Phrase (5), "Explicit work policies exist to help employees continuously improve processes," ranked third with an average agreement of (3.88).
- Phrase (4), "Employees are encouraged to try new approaches," ranked fourth with an average agreement of (3.75).

- Phrase (3), "Process improvements are dealt with in collaboration with relevant parties," ranked last with an agreeable average of (3.00).

Results of the second question: What is the level of improvement in healthcare service quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital:

To determine the level of improvement in healthcare service quality in government hospitals in Riyadh from the perspective of healthcare professionals at Al-Iman General Hospital, frequencies, percentages, arithmetic means, standard deviations, and ranks were calculated for the responses of the study participants to the Phrases of the second axis. The results are as follows, as illustrated in the following table:

Table (7): Participants' responses to Phrases of the second axis ranked in descending order according to agreement means.

No	Phrases:	Average	Standard deviation	Rank
1	The transportation facilities provided for patients are of high quality.	3.66	1.23	3
2	The physical conditions within the hospital are designed to be appealing and comfortable for patients.	3.83	1.07	2
3	The hospital is equipped with modern medical equipment to ensure effective treatment.	4.04	0.90	1
Tangible		3.84	1.07	
1	Healthcare services are consistently delivered on time as per scheduled appointments.	4.03	1.01	2
2	Procedures are meticulously followed according to established guidelines.	3.89	1.03	3
3	Hospital employees demonstrate confidence and competence in their roles.	3.82	1.16	4
4	Patient records are meticulously maintained with accuracy, ensuring confidentiality.	4.04	0.90	1
Reliability		3.95	1.03	
1	Services are promptly executed, emphasizing efficiency and timeliness.	4.04	0.90	1
2	Service durations are clearly communicated and adhered to.	3.88	1.05	3
3	Employees display a willingness to assist patients and safeguard their rights.	3.89	1.03	2
Responsiveness		3.94	0.99	
1	Patients are reassured of receiving quality care.	4.06	0.99	2
2	Patients are treated with courtesy and respect at all times.	4.00	0.89	4
3	Patients are provided with comprehensive information about their treatment and condition.	4.21	0.97	1
4	Patient inquiries are addressed satisfactorily, instilling confidence.	4.04	0.90	3
5	Empathy is demonstrated towards patients' concerns and needs.	3.23	1.27	5
Assurance		3.91	1.00	
1	The hospital's scheduling accommodates patients' preferences whenever possible.	4.1	0.97	3
2	Individualized care is provided to each patient, addressing their unique needs.	3.42	1.27	5
3	Patients receive thorough consultation and support as expected.	4.04	0.90	2
4	Patient complaints are taken seriously and addressed promptly.	4.21	0.97	1
5	Individual requests and preferences are understood and respected.	3.88	1.05	4
Empathy		3.89	1.03	

Through the results presented in Table (7), it becomes evident that there is variation in the agreement of the study participants regarding the dimensions of the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents. The averages of their agreement ranged between (3.42 to 4.21), which fall within the fourth and fifth categories of the pentadic scale, indicating (agree and strongly agree) with the study tool, illustrating the homogeneity in the agreement of the study participants regarding the dimensions of the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents, compared to healthcare staff in government hospitals in Riyadh, which were arranged in descending order according to the averages of agreement by the study participants as follows:

First: Tangibility:

- Phrase (3) "Modern medical equipment is available in the hospital" ranked first among tangibility and in terms of agreement by the study participants with an average of (4.04).
- Phrase (2) "Physical conditions are suitable and attractive for patients" ranked second among tangibility and in terms of agreement by the study participants with an average of (3.83).
- Phrase (1) "Transportation facilities for patients are available in good condition" ranked last among tangibility and in terms of agreement by the study participants with an average of (3.66).

Second: Credibility:

- Phrase (4) "Patient records are maintained with extreme accuracy, ensuring the confidentiality of information" ranked first among credibility in terms of agreement by the study participants with an average of (4.04).
- Phrase (1) "Healthcare services are provided on time" ranked second among credibility in terms of agreement by the study participants with an average of (4.03).
- Phrase (2) "Required procedures are strictly followed according to specified instructions" ranked third among credibility in terms of agreement by the study participants with an average of (3.89).
- Phrase (3) "Hospital staff demonstrate confidence and efficiency in their work" ranked last among credibility phrases and in terms of agreement by the study participants with a somewhat agreeable average of (3.82).

Third: Responsiveness:

- Phrase (1) "Services are executed promptly, with emphasis on efficiency and scheduling" ranked first among responsiveness in terms of agreement by the study participants with an average of (4.04).
- Phrase (3) "Employees show willingness to assist patients and protect their rights" ranked second among responsiveness in terms of agreement by the study participants with an average of (3.89).
- Phrase (2) "Service duration is accurately explained and adhered to" ranked last among responsiveness in terms of agreement by the study participants with a somewhat agreeable average of (3.88).

Fourth: Assurance:

- Phrase (3) "Patients are provided with comprehensive information about their treatment and condition" ranked first among assurance in terms of agreement by the study participants with an average of (4.21).
- Phrase (1) "Patients are assured of receiving high-quality care" ranked second among assurance in terms of agreement by the study participants with an average of (4.06).
- Phrase (4) "Patients' inquiries are responded to promptly, increasing their confidence" ranked third among assurance in terms of agreement by the study participants with an average of (4.04).
- Phrase (2) "Patients are treated with kindness and respect at all times" ranked fourth among assurance in terms of agreement by the study participants with an average of (4.00).
- Phrase (5) "Expression of empathy towards patients' fears and needs" ranked last among assurance in terms of agreement by the study participants with a somewhat agreeable average of (3.23).

Fifth: Empathy:

- Phrase (4) "Patient complaints are handled seriously and promptly" ranked first among empathy in terms of agreement by the study participants with a strongly agreeable average of (4.21).
- Phrase (3) "Patients receive comprehensive consultation and support as expected" ranked second among empathy in terms of agreement by the study participants with a strongly agreeable average of (4.21).
- Phrase (1) "Hospital schedule is adjusted to accommodate patient preferences if possible" ranked third among empathy in terms of

- agreement by the study participants with a strongly agreeable average of (4.21).
- Phrase (5) "Individual requests and preferences are understood and respected" ranked fourth among empathy in terms of agreement by the study participants with a strongly agreeable average of (4.21).
 - Phrase (2) "Individual care is provided to each patient, considering their unique needs" ranked last among empathy in terms of agreement by the study participants with a somewhat agreeable average of (3.23).

Answer to Question Three: What is the relationship between comprehensive quality and improving the quality of healthcare services in government hospitals in Riyadh?

To answer the question regarding the relationship between comprehensive quality and improving the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital in Riyadh, the researchers used Pearson correlation coefficient to clarify the significance of the relationship between the variables. The results are as follows, as illustrated in the following table:

Table (8): Pearson correlation coefficient results to clarify the relationship between comprehensive quality and improving the quality of healthcare services in government hospitals in Riyadh.

Quality Management	Improving the quality of healthcare services in government hospitals in Riyadh.	
Overall degree of Quality Management	Pearson correlation value	Level of significance
	0.683**	0.00

**At a significance level of (0.01).

Through the results presented in the table above, it is evident that there is a positive correlation with a coefficient of (0.683) and statistical significance at a significance level of (0.01), between the overall degree of comprehensive quality and the improvement of healthcare services quality in government hospitals in Riyadh.

This result interprets the effect of comprehensive quality on improving the quality of healthcare services in government hospitals in Riyadh.

Study Results:

Results of Question One: What is the current status of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital?

There is variation in the agreement of the study participants regarding the dimensions of the current status of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents. The averages of their agreement ranged between (3.72 to 4.01), falling within the fourth category of the pentadic scale, indicating (agree) with the study tool, illustrating the homogeneity in the agreement of the study participants regarding the dimensions of the current status of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents compared to healthcare staff in government hospitals in Riyadh.

Results of Question Two: What is the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital?

There is variation in the agreement of the study participants regarding the dimensions of the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents. The averages of their agreement ranged between (3.42 to 4.21), falling within the fourth and fifth categories of the pentadic scale, indicating (agree and strongly agree) with the study tool, illustrating the homogeneity in the agreement of the study participants regarding the dimensions of the level of improvement in the quality of healthcare services in government hospitals in Riyadh from the perspective of healthcare staff at Al-Iman General Hospital among the respondents compared to healthcare staff in government hospitals in Riyadh.

Results of Question Three: What is the relationship between comprehensive quality and improving the quality of healthcare services in government hospitals in Riyadh?

There is a positive correlation with a coefficient of (0.683) and statistical significance at a significance level of (0.01), between the overall degree of comprehensive quality and the improvement of healthcare services quality in government hospitals in Riyadh.

Recommendations:

Based on the results obtained in the study, the following recommendations can be made:

1. The General Administration of Government Hospitals in Riyadh and the Saudi healthcare sector in general should enhance programs aimed at developing and promoting comprehensive quality in healthcare services provided.
2. Senior management in Riyadh hospitals should adopt a Total Quality Management system as a framework for performance improvement and continuous improvement in all hospital operations, both external and internal.
3. Attention should be given to providing continuous training and development opportunities for employees to enhance the quality level in government hospitals.
4. There is a need to enhance transparency in operations and improve communication with healthcare staff to foster trust and effective participation in improving healthcare service quality.
5. Management should reinforce motivating factors for employees, such as recognizing individual and collective efforts, and providing appropriate incentives to motivate them to improve healthcare service quality.
6. Future studies are recommended to analyze the factors affecting comprehensive quality and improving the quality of healthcare services in government hospitals in Riyadh, aiming to develop effective strategies for future healthcare service improvement.
7. Strategic plans for comprehensive quality should be developed in collaboration between all healthcare institutions and the Saudi Ministry of Health, based on beneficiaries' needs.
8. Laws and regulations should be enacted to overcome obstacles that may hinder the implementation of Total Quality Management, and an effective accountability system should be provided for all healthcare sector institutions.

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