



A SCIENTIFIC PAPER TITLED: THE IMPACT OF COMPREHENSIVE QUALITY STANDARDS ON ENHANCING THE PRODUCTIVITY EFFICIENCY OF HEALTHCARE PERSONNEL IN THE GOVERNMENT HEALTHCARE SECTOR IN RIYADH, SAUDI ARABIA

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Abstract:

The aim of the study was to investigate the impact of comprehensive quality standards on enhancing the productivity efficiency of healthcare staff in the Saudi government healthcare sector in Riyadh. The study employed a descriptive analytical approach to achieve its objectives. The study sample consisted of 265 healthcare personnel from Al-Iman General Hospital in the Saudi government healthcare sector in Riyadh. The study utilized a questionnaire as the data collection tool. In light of this, the study reached several key findings, including a statistically significant positive linear relationship at a significance level of (0.01) between comprehensive quality standards and productivity level. This relationship indicates that focusing on implementing comprehensive quality standards increases the productivity level of healthcare staff in the Saudi government healthcare sector in Riyadh. Based on the results, the study recommends the necessity of implementing comprehensive quality standards should be coupled with enhanced training programs for healthcare staff in government hospitals in Riyadh. These programs should focus on educating staff members about the importance of quality standards and how they can contribute to improving productivity levels. Establishing continuous quality improvement initiatives within government hospitals in Riyadh is essential. These initiatives should involve regular assessments of quality standards and productivity levels, with a focus on identifying areas for improvement and implementing appropriate measures to address them.

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Introduction:

Total Quality Management (TQM) is a modern approach in organizing and managing businesses, surpassing traditional management methods in understanding and implementation. This approach focuses on meeting the needs and expectations of all stakeholders, whether internal or external to the organization. By understanding their requirements and needs, these are met and implemented correctly, with a focus on continuous improvement and development to ensure the highest levels of quality, aiming to achieve desired excellence.

The application of Total Quality Management in the healthcare sector plays a significant role in identifying wasted resources, whether time, human, or material, and addressing them. This system is considered supportive, providing opportunities for healthcare workers to utilize their potentials, empowering them according to their individual capabilities, and encouraging them to achieve excellence and innovation. Adopting this concept in the healthcare sector entails several benefits, notably improving the quality of healthcare services (Al-Shammari et al., 2022).

Total Quality Management is considered one of the modern strategies in management processes, relying on principles that sectors should commit to, apply, and adopt to achieve excellence in performance and exceed the expectations of stakeholders. It is a modern administrative approach 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 in performing activities and tasks within the institution or administrative body correctly, with a keen focus on meeting the expectations, desires, and needs of beneficiaries by involving them in designing and delivering the services provided to them. Therefore, the implementation of Total Quality Management in the healthcare sectors in the Kingdom of Saudi Arabia is considered one of the most important success factors in those sectors. The adoption of Total Quality Management principles leads to continuous improvement in the performance of healthcare workers in the healthcare sector, thereby improving the performance of the healthcare sector and the quality of healthcare services through innovation and dissemination (Al-Tamimi & Issa, 2014).

Productivity has attracted the attention of many scholars and researchers because it is one of the important keys contributing to increasing economic growth rates and reducing waste of available resources. The pursuit of increasing productivity

levels in institutions requires studying and measuring these levels and also developing policies that enhance productivity levels and ensure their compatibility and alignment with the institution's strategic plans and objectives (Al-Omari & Hameedat, 2013).

Comprehensive quality standards are among the most important factors contributing to increasing productivity levels. The implementation of these standards through the commitment of healthcare staff to them contributes to increasing productivity levels among healthcare professionals. Therefore, it is essential for healthcare institutions to encourage achieving a high level of adherence to comprehensive quality standards to ensure the maintenance of high productivity levels and the provision of healthcare services with the highest possible efficiency. Hence, the importance of the study lies in understanding the impact of comprehensive quality standards on the productivity level of healthcare staff in the Saudi government healthcare sector in Riyadh.

Problem Statement:

The latter decades of the twentieth century witnessed modern developments focusing on the human dimension in organizational processes. Modern management thinking has emphasized the development of production processes and the improvement of service quality to achieve effective organizational efficiency. This is embodied in the concept of Total Quality Management (TQM), which seeks continuous improvement in services and products, along with a focus on organizational culture and the establishment of democratic foundations within the organization. The concept of TQM has begun to attract the interest of organizations, especially healthcare organizations seeking continuous development and improvement of healthcare services. The aim is to enhance the competitive advantage of hospitals in the region, facing significant and diverse challenges ranging from escalating costs in medical service production to improving the quality of these services. Healthcare institutions are among the most sensitive organizations to the application of quality concepts due to their dealing with human health.

Total Quality Management is an old concept that emerged in Japan after World War II, focusing on improving quality and using quality control tools in the manufacturing sector. This concept then spread to the United States, the United Kingdom, and other countries. Initially, the application of quality concepts was primarily in manufacturing, with both the United States and Japan focusing on Total Quality Management. Consequently, the

application of TQM in the service sector received secondary attention. Examining the readiness of manufacturing industries to implement TQM practices revealed twelve dimensions of Total Quality Service (TQS) (Mahdi & Al-Otaibi, 2017). Total Quality Management is among the key philosophies of modern management, focusing its efforts on comprehensive service quality improvement. This philosophy is based on a fundamental principle of achieving customer satisfaction through employee involvement and motivation, who are considered a key 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 healthcare sector. Through this joint effort, high-quality healthcare services can be provided, meeting global standards. Thus, Total Quality Management contributes to ensuring the safety and satisfaction of beneficiaries with the services provided (Kwadik, 2021).

In recent times, the healthcare sector has received significant attention at all levels to implement comprehensive quality management standards and procedures for continuous improvement and change to keep pace with the social, economic, political, and cultural needs of society and individuals. The healthcare sector is considered a "safety valve" for maintaining 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 improving work under the challenges and successive developments (Abbas, 2019).

Given that the healthcare sector deals with human health and life, high productivity levels are considered a commitment rather than a preference. Service quality is defined as an organization's ability to meet or exceed the expectations and needs of customers. Simply put, it is 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 prerequisite for its success. It is no longer a luxury but has become the standard governing the survival and growth of modern organizations in the face of the intense competition the world is experiencing today. This is witnessed in the scientific and technological progress that has helped in the existence of modern systems aiding in the application and monitoring of Total Quality (Abbas & Abdul, 2019).

Achieving a high level of production over the long term is difficult without comprehensive unified standards requiring healthcare professionals to maintain a high level of productivity. Combining increased production and the absence of comprehensive quality standards inevitably leads to the leakage of high-level elements within the organization, in addition to a decrease in the quality of its products. Therefore, there is an agreement that one of the clearest indicators of deteriorating working conditions in an organization is the low level of application of comprehensive quality standards (Basefar, 2018).

Moreover, a study by Sufian and Mustafa (2018) confirms a positive relationship between comprehensive quality standards and productivity improvement. However, the productivity improvement process must be planned and strategized according to the orientations and preparations of the workers themselves. This can only be achieved through an increase in the job satisfaction level of workers. A study by Sabl (2020), as well as studies by Tahrawi and Boufassa (2016) and Al-Shahri (2002), recommend the necessity of focusing on comprehensive quality standards for their effective role in improving productivity.

Therefore, the officials responsible for the healthcare sector in the Kingdom of Saudi Arabia must ensure the highest level of compliance with comprehensive quality standards in all healthcare institutions in the Kingdom. Comprehensive quality standards effectively and positively contribute to their productivity levels. Thus, the problem of the study can be summarized in the following main question:

What is the impact of comprehensive quality standards on enhancing the productivity efficiency of healthcare professionals in the Saudi government healthcare sector in Riyadh?

Study Questions:

1. What is the current status of comprehensive quality standards in the Saudi government healthcare sector in Riyadh?
2. What is the level of productivity efficiency among healthcare professionals in the Saudi government healthcare sector in Riyadh?
3. What is the impact of comprehensive quality standards on enhancing the productivity efficiency of healthcare professionals in the Saudi government healthcare sector in Riyadh?

Study Objectives:

1. To identify the current status of comprehensive quality standards in the Saudi government healthcare sector in Riyadh.
2. To determine the level of productivity efficiency among healthcare professionals in the Saudi government healthcare sector in Riyadh.
3. To assess the impact of comprehensive quality standards on enhancing the productivity efficiency of healthcare professionals in the Saudi government healthcare sector in Riyadh.

Study Limitations:

- Geographical Boundaries: The study is conducted in government healthcare hospitals in Riyadh, Saudi Arabia.
- Temporal Boundaries: The study is conducted in the year 2023.
- Human Boundaries: The study involves a sample of healthcare professionals working in government healthcare hospitals in Riyadh, Saudi Arabia.
- Subject Matter Boundaries: The study is focused on examining the "Impact of Comprehensive Quality Standards on Enhancing the Productivity Efficiency of Healthcare Professionals."

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.

The level of improvement in productivity efficiency in the governmental healthcare sector in Riyadh, Saudi Arabia.							
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**	4	0.776**	7	0.863**	10	0.764**
2	0.835**	5	0.859**	8	0.815**	11	0.763**
3	0.635**	6	0.871**	9	0.873**	12	0.782**

The table above, Table (2), displays the items of the second axis (The level of improvement in productivity efficiency in the governmental healthcare sector in Riyadh, Saudi Arabia.). 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 0.635 and 0.871 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

Survey Axes and Dimensions	Phrase No.	Axis stability
Axis 2: The level of improvement in productivity efficiency in the governmental healthcare sector in Riyadh, Saudi Arabia, from the perspective of healthcare personnel at Al-Iman General Hospital.	12	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).

Secondly: Answering the second question: What is the level of productivity among healthcare staff at Al-Iman General Hospital in Riyadh?

To determine the level of productivity among healthcare staff at Al-Iman General Hospital in Riyadh, frequencies, percentages, arithmetic means, standard deviations, and ranks were calculated for the study sample's responses to productivity level Phrases among healthcare staff at Al-Iman General Hospital in Riyadh. The results are as follows:

Table (8): Study Sample Responses to Phrases of the Third Axis Ranked in Descending Order According to Agreement Means

No	Phrases	Average	Standard deviation	Rank
1	I strive to provide healthcare services with the highest efficiency, productivity, and high quality.	4.57	0.74	1
4	I am ready and willing to work outside official working hours if necessary. I have sufficient experience to solve the problems encountered while working in the hospital.	4.52	0.72	2
5	I engage in self-improvement, acquire new experiences, and work on enhancing my performance to achieve the highest efficiency in completing my work tasks.	4.50	0.75	3
10	I perform my duties in the hospital according to the highest global quality standards. I can communicate effectively with patients, staff, and employees working in the hospital.	4.48	0.65	4
2	I have the ability and sufficient readiness to take on responsibility. I carry out my work duties in the hospital according to the national quality standards.	4.48	0.71	5
7	The performance indicator evaluation system contributes to determining the financial and morale-based incentive system.	4.43	0.82	6
6	A good incentive system contributes to my desire to accomplish more tasks with higher productivity.	4.41	0.84	7
3	I complete all assigned tasks within the specified time and with the highest efficiency in productivity.	4.40	0.83	8
12	I adhere to the rules, procedures, and policies applicable in the hospital.	4.39	0.85	9
11	I strive to provide healthcare services with the highest efficiency, productivity, and high quality.	4.37	0.79	10
9	I am ready and willing to work outside official working hours if necessary. I have sufficient experience to solve the problems encountered while working in the hospital.	4.31	0.77	11
8	I engage in self-improvement, acquire new experiences, and work on enhancing my performance to achieve the highest efficiency in completing my work tasks.	4.29	0.89	12
	Average Overall	4.43	0.78	

In Table (8), it is evident that the study participants strongly agree with the level of productivity among

healthcare staff at Al-Iman General Hospital in Riyadh, with an average score of 4.43 out of 5.00.

This average falls within the fifth category of the five-point scale (ranging from 4.21 to 5.00), indicating strong agreement with the study tool.

Furthermore, the results in Table (8) indicate that the study participants strongly agree with all Phrases in the axis of productivity among healthcare staff at Al-Iman General Hospital in Riyadh. These Phrases were arranged in descending order based on the participants' agreement as follows:

- Phrase number (1), "I strive to provide healthcare services with the highest efficiency, productivity, and quality," ranked first in terms of strong agreement from the study participants, with an average score of 4.57 out of 5.
- Phrase number (4), "I am ready and willing to work outside official working hours if necessary," ranked second in terms of strong agreement from the study participants, with an average score of 4.52 out of 5.
- Phrase number (9), "I complete all assigned tasks within the specified time and with the highest productivity," ranked second to last in terms of strong agreement from the study participants, with an average score of 4.31 out of 5.
- Phrase number (8), "I adhere to the rules, procedures, and policies in place at the hospital," ranked last in terms of strong agreement from the

study participants, with an average score of 4.29 out of 5.

Through the above results, it is evident that the most prominent level of productivity among healthcare staff at Al-Iman General Hospital in Riyadh lies in their commitment to providing healthcare services with the highest efficiency, productivity, and quality. Additionally, they exhibit readiness and willingness to work beyond official hours if required. They also possess sufficient experience to solve problems encountered during work at the hospital. Furthermore, healthcare staff at Al-Iman General Hospital engage in self-improvement, acquire new skills, and work towards enhancing their performance to achieve the highest efficiency in completing their tasks, adhering to the highest international quality standards.

Answering the third question: What is the impact of comprehensive quality standards on the productivity level of healthcare personnel in government hospitals in Riyadh, Saudi Arabia?

To answer this question, Pearson correlation coefficient will be used to determine the statistically significant relationship between electronic management and enhancing the efficiency of governmental healthcare institutions in Riyadh. The following table illustrates this:

Table (9): Pearson Correlation Coefficient

Comprehensive quality standards	"The productivity level of healthcare staff at Al-Iman Hospital in Riyadh city	
	correlation coefficient (R)	probability value
	0.889	**0.01

From Table (9), it is evident that the square of the Pearson correlation coefficient is 0.889, which is statistically significant at a significance level of 0.01. This result indicates a positive linear relationship between comprehensive quality

standards and productivity level. This relationship suggests that focusing on comprehensive quality standards increases the productivity level of healthcare personnel in government hospitals in Riyadh, Saudi Arabia.

Study Results:

1. Results of Question One: What is the current status of comprehensive quality in the Saudi government healthcare sector in Riyadh?

There is variation in the agreement of study participants regarding the dimensions of the current status of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare personnel at Al-Iman General Hospital. The averages of their agreement ranged between (3.72 to 4.01), falling within the fourth category of the five-point scale, indicating agreement with the study tool. This demonstrates consistency in the

agreement of study participants regarding the dimensions of comprehensive quality in government hospitals in Riyadh from the perspective of healthcare personnel at Al-Iman General Hospital compared to healthcare personnel in government hospitals in Riyadh.

2. Results of Question Two: What is the productivity level of healthcare personnel in the Saudi government healthcare sector in Riyadh?

The study sample strongly agrees on the productivity level of healthcare personnel in Al-Iman General Hospital in Riyadh with an average

of (4.43 out of 5.00), which falls within the fifth category of the five-point scale (from 4.21 to 5.00), indicating strong agreement with the study tool.

3. Results of Question Three: Is there a statistically significant relationship between comprehensive quality standards and productivity level of healthcare personnel in the Saudi government healthcare sector in Riyadh?

There is a statistically significant positive linear relationship at a significance level of (0.01) between comprehensive quality standards and productivity level. This relationship indicates that focusing on implementing comprehensive quality standards increases the productivity level of healthcare personnel in the Saudi government healthcare sector in Riyadh.

Recommendations

- Implementing comprehensive quality standards should be coupled with enhanced training programs for healthcare staff in government hospitals in Riyadh. These programs should focus on educating staff members about the importance of quality standards and how they can contribute to improving productivity levels.
- Establishing continuous quality improvement initiatives within government hospitals in Riyadh is essential. These initiatives should involve regular assessments of quality standards and productivity levels, with a focus on identifying areas for improvement and implementing appropriate measures to address them.
- Promoting interdisciplinary collaboration among healthcare staff members can further enhance the impact of comprehensive quality standards on productivity levels. Encouraging teamwork and communication across different departments can lead to more efficient workflows and better patient outcomes.
- Implementing a system for regular monitoring and evaluation of both quality standards and productivity levels is crucial. This system should involve collecting feedback from healthcare staff, patients, and other stakeholders, allowing for continuous refinement and optimization of processes.
- Recognizing and rewarding healthcare staff members who actively contribute to maintaining high-quality standards and improving productivity levels can help sustain motivation and engagement. Implementing incentive programs aligned with these objectives can encourage staff members to consistently perform at their best.

- Investing in advanced technology and digital tools can streamline processes and facilitate adherence to comprehensive quality standards. Electronic health record systems, data analytics platforms, and communication tools can help healthcare staff members work more efficiently and effectively.

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