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# THE IMPACT OF ORGANIZATIONAL EXCELLENCE ON THE QUALITY OF HEALTH SERVICES IN YEMENI PRIVATE HOSPITALS

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#### Abstract

This article aimed to identify the impact of organizational excellence (OE) on the quality of health services (QHS) in Yemeni private hospitals. To achieve the objectives of the study, a quantitative approach was used, using both descriptive and analytical methods. The study population consisted of employees at the administrative and medical levels in three private hospitals (Azal Hospital, Modern European Hospital and University of Science and Technology Hospital). Due to the large size of the study population, a stratified random sampling method was used according to the Krejcie and Morgan table model, and questionnaires were the primary tool for collecting data. 420 questionnaires were distributed, and 390 valid questionnaires (response rate 93.5%) were collected for analysis. Data was analyzed using appropriate statistical methods within the SPSS v26 software, and structural equation modeling (SEM) was applied using Amos v26. The study concluded that there is a statistically significant positive effect of OE in its dimensions on the QHS in its dimensions in Yemeni private hospitals. The study showed that the level of OE was high with the participation of all its dimensions, while the level of QHS in Yemeni private hospitals was somewhat high with the participation of all its dimensions. The study presented a number of recommendations, including that private hospital leaders must maintain the level of OE and conduct further studies to develop their methodology and methods. Preparing training plans and programs for OE and implementing them in hospitals on an ongoing basis. Workers in Yemeni private hospitals must pay attention to the QHS provided in hospitals to increase excellence and achieve patient satisfaction and desires.

Keywords: Organizational Excellence, Quality of Health Services.

# 1. INTRODUCTION AND THEORETICAL FRAMEWORK

# 1.1 Introduction

As a result of the ongoing complexities and changes experienced by health organizations, which play a prominent and major role in supporting the national economy and contributing to achieving sustainable development, these organizations therefore face many variables that affect them through the requirements of the beneficiaries of the quality of modern health services and advanced medical technology to satisfy their clients and achieve their desires. Therefore, it is necessary that the health sector in general and private hospitals in particular adopt the application of modern administrative methods to confront these variables, and in view of the important role that organizational excellence plays as one of the modern administrative methods that enhance the ability of organizations to make strategic contributions and excel in their performance, solve problems and achieve their goals appropriately. Effective, which distinguishes it from other organizations, to provide high quality of health services that meet the needs and desires of its beneficiaries and creates a competitive advantage among private





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hospitals (Al-Azzawi & Mohsen, 2017: 277). Organizational excellence is considered one of the most important and modern topics, as it has become clear that excellence standards are at the forefront of the goals that organizations seek to achieve to support greater excellence and uniqueness in their organizational performance, which requires administrative leaders to make efforts to achieve success to achieve progress by relying on speed and flexibility, and it also contributes effectively to organizations continue to keep pace with the best global practices in performing their tasks and understanding the effects of the environment by analyzing the strengths and weaknesses of the internal environment, seizing opportunities and avoiding threats from the external environment (Al-Buhaisi, 2014).

Organizational excellence is also an important factor in enhancing the organization's competitiveness and making it innovative, achieving its mission and facing the accelerating rates of change and intense competition in its environment. Organizational excellence is considered a weapon to confront market challenges, and this is by increasing its capabilities to meet the needs of customers, present and future, so it is considered a criterion for the organization's success and its superiority over others by creating unique models that are difficult to imitate by competitors, as well as creating a culture of orientation towards the internal customer and the external customer by satisfying them and developing their sense of loyalty and belonging to the organization (Al-Anazi, 2016: 419).

The application of the quality of health services represents an important input for continuous improvement and development in all activities and processes of performance through the optimal use of human and material resources available in the organization, where the desire to apply quality programs in the field of health services has become a global goal that expands year after year, quality is the key to success in a world that today depends mainly on competition and requires service and profitability facilities to search for ways to improve their performance and enhance their survival and maintain their position and market share, so it has become necessary to adopt quality as a basic criterion for differentiation between establishments in light of the organizations' endeavor to provide distinguished services of high quality through the application of quality programs by modern scientific methods, setting appropriate standards, evaluating performance levels and maintaining high levels of quality of services (Abu Haliqa, 2013).

Reports indicate that health services in hospitals in Yemen face many health imbalances and problems, and this is evident in the low level of health services provided to beneficiaries and their dissatisfaction with the level of their quality, and this appears in the frequent visits to hospitals by the same patients due to the weak level of efficiency in diagnosing and treating these cases (Daily Patient Statistics, World Bank, 2016), and the weak response to cases received in public and private emergency departments is evident in the large number of patients' complaints about the slow response and lack of compassion shown by service providers to beneficiaries (Hospital Emergencies, World Bank, 2017).

Therefore, senior management and decision makers in hospitals must adopt a new philosophy aimed at improving the performance and quality of health services provided, ensuring that the efforts and activities made are consistent with the requirements of patients and their desires for





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recovery and achieving their satisfaction. The Ministry of Public Health and Population in Yemen has realized the importance of developing the quality of services Health, where a special department was established for the quality of health services within the framework of achieving the national health strategic goals. The project faced many difficulties, the most prominent of which was the limited number of local experts, the lack of financial support, and the unequal distribution of qualified human resources and modern technical equipment. Despite these difficulties and problems, there are positive indicators that there are possible opportunities for the success of the experience of implementing health service quality programs in improving the performance of facilities and hospitals and the possibility of applying them in other health organizations and facilities, especially with the growing awareness of relevant parties of the necessity of the need for optimal and efficient exploitation of financial and human resources (National Health Strategy, 2010-2025).

Based on the above, organizational excellence is one of the modern administrative concepts that contributes to achieving quality services in general and achieving the quality of health services in particular, as it is an important method for achieving continuous improvement and raising the level of hospitals. Therefore, senior management and decision makers in private hospitals are required to take serious and scientific steps to improve the level of quality of services provided in private hospitals with the aim of achieving beneficiaries' satisfaction and meeting all their needs and requirements, ensuring the sustainability of this quality and reaching the level of luxury in providing health services, and in this context this came. The study sheds light on the level of organizational excellence (OE) and its impact on the quality of health services in Yemeni private hospitals.

# 1.2 Statement of the Problem

Yemen is considered one of the developing countries. Like poor countries, it suffers from many problems and obstacles related to providing various services to its citizens in a less efficient and effective manner and in a limited manner, especially in the field of health services, as the state does not have sufficient resources (financial or human) to enable it to provide its health services. To its citizens adequately and with acceptable quality as a result of the scarcity of resources in general and the lack of allocations allocated to cutting health services in the general budget, which amounted to (68,455) billion Yemeni riyals in the year (2016), representing (2.4%) of the general budget according to the financial budget documents, estimated at (2,870) trillion Yemeni riyals, according to the documents of the Ministry of Finance for the year (2014-2016), which represents a small percentage that does not cover the needs of this important sector (Summary of the Ministry of Finance of estimates of the cash deficit and sources of financing for the fiscal year 2014).

Reports (World Bank, 2021), also show that Yemen is suffering from a deterioration in the health services provided, which has led to high levels of disease outbreaks, greatly affecting maternal and child health, and the death of one mother and six newborns every two hours due to preventable diseases. In the same context, the report explained that the causes of deaths are the decline in the quality of health services provided to beneficiaries in the districts. This is due to the number of health personnel, as for every 10,000 people there are only 10 health workers,





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i.e. less than the minimum standard of the World Health Organization, as a result of the leakage of many health personnel are qualified to work abroad, and there is a lack of specialist doctors in about 67 out of 333 districts in Yemen.

To confirm the above, a number of local studies, including the study Al-Wasabi (2012), showed that the health sector in Yemen suffers from a major deficiency in the quality of health services provided by hospitals, and the results of the study indicated that the level of quality of health services provided by the Yemeni health sector is still low, due to the lack of interest of its leadership in implementing quality system programs, and the lack of interest in developing and applying measurement standards that can be used to detect weaknesses related to the quality of health services, which made many patients decide to travel to Arab and foreign countries to search for health services that they could not find in the facilities. Health and Yemeni hospitals, as (Abbas, 2014), explained in his study conducted on some Yemeni hospitals, that hospitals lack the availability of modern medical supplies and devices that meet the needs of patients and beneficiaries of those services, as well as the lack of specialized and experienced medical staff, which reflects the feeling of dissatisfaction and reassurance among the patient, as well as the lack of clinics for rare medical specialties, which forces patients to travel abroad. The results of Belhaj and Al-Jabri's study (2019), on hospitals operating in Hadhramaut governorate in the republic of Yemen indicated from the point of view of the beneficiaries that the quality levels of health services were low.

Based on the above, organizational excellence is considered an important method and one of the basic pillars for making sound decisions that provide hospitals with data and information related to improving the quality of services provided to beneficiaries. It has become necessary for private hospitals to adopt these modern methods to ensure their survival and continuity. Due to the importance of the issue of organizational excellence, it was recommended many previous studies and research call for the necessity of conducting more studies on organizational excellence and the factors affecting it, while the study Khaleda (2021), addressed the impact of organizational excellence on the quality of health services in Sudanese hospitals, and the study Al-Ghamdi (2018), addressed the impact of organizational excellence on the quality of health services in Sudanese hospitals. Identifying the degree of organizational excellence among school leaders in the Al-Baha region from the point of view of teachers, while the study Al-Abed and Mansour (2013), addressed the relationship of organizational excellence to comprehensive quality in food industry organizations in the northern west bank.

Based on the previous studies above, it was noted that there is a research gap between what should be a positive impact of organizational excellence as an independent variable in improving the quality of health services and what exists in weak quality of health services provided by the private hospitals under study in Yemen. The knowledge gap also becomes clear in the lack of. There are previous studies showing the impact of study variables on the quality of health services, except for the study Khaleda (2021). Therefore, the two researchers adopted a study of the impact between organizational excellence and the quality of health services in Yemeni private hospitals, to provide possible recommendations and proposals according to the results of the analysis.





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# 1.3 Questions of the study

Based on from the above, the problem of the study can be crystallized in the main question this paper aimed to address the following:

Is there an impact of organizational excellence in its dimensions (Leadership, Organizational culture, Organizational structure, Customer focus) on the quality of health services in its dimensions (Response, Reliability, Tangibility, Safety, Empathy) in Yemeni private hospitals?

# The following sub-questions emerge from the main question:

- a) What is the level of organizational excellence in Yemeni Private Hospitals?
- b) What is the level of quality of health services in Yemeni Private Hospitals?

# 1.4 Objectives of the study

The study aimed to measure the level of organizational excellence in its dimensions (Leadership, Organizational culture, Organizational structure, Customer focus) and its impact on the quality of health services in its dimensions (Response, Reliability, Tangibility, Safety, Empathy) in Yemeni private hospitals, and to determine the level of organizational excellence in Yemeni private hospitals. And identifying the level of quality of health services provided in Yemeni private hospitals.

# 1.5 Significance of the study

Quality in the field of health services is considered an urgent necessity required by hospitals and health facilities to develop and improve the quality of health services provided. The importance of the study is as follows:

# 1.5.1 From a theoretical standpoint:

- a) The study addressed an important topic (organizational excellence and quality of health services, which is considered one of the modern administrative concepts that needs more research and study, which will contribute to enriching Arab and international libraries in this aspect.
- b) The study will contribute to building a clear and understandable scientific theoretical framework that will help build knowledge and bridge the scientific and knowledge gap in the field of study variables.
- c) This study will be added as a scientific reference that stakeholders and researchers will benefit from to conduct further studies in this field.

# 1.5.2 From the practical perspective:

a) The results and recommendations that the study will produce contribute to raising, improving and developing the level of quality of health services through paying attention to applying the dimensions of organizational excellence in enhancing and improving the quality of health services. Provided in private hospitals, which makes them able to meet



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- the requirements and needs of patients and achieve their satisfaction.
- b) This study is applied in a vital and very important sector that will contribute to improving and developing the quality of health services provided by hospitals to a large segment of beneficiaries throughout Yemen.

# 1.6 Conceptual model of the study

The most appropriate dimensions for the current study were selected as follows:

- **1.6.1 Independent variable:** Organizational excellence is represented by its dimensions (leadership, organizational culture, organizational structure, customer focus), which were selected based on references from previous studies that dealt with organizational excellence such as: Khalida (2021), Al-Homoud (2021), Al-Azmi (2021), Al-Akkad (2021), Yaghoubi (2014).
- **1.6.2 Dependent variable:** The dimensions of the quality of health services (Response, Reliability, Tangibility, Safety, Empathy) were determined after reviewing a number of studies, represented in the following: Hammad (2022), Quraida and Qassima (2020), Othman (2020), Al-Hajj and Al-Jabri (2019), Abbas (2014), Al-Wasabi (2012), Aduo-Adjei (2015), Bedi (2014), Efuteba (2013), Victor & Others (2013).

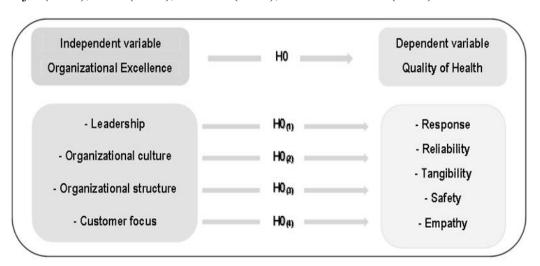


Figure 1: Conceptual model of the study

# 1.7 Hypotheses of the study

Based on the above, it is hypothesized that

(H0): There is a statistically significant impact of organizational excellence in its dimensions (leadership, organizational culture, organizational structure, customer focus) on the quality of health services in its dimensions (responsiveness, reliability, tangibility, safety, empathy) in Yemeni private hospitals.





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- (H0<sub>(1)</sub>): There is a statistically significant impact of the leadership dimension on the quality of health services in Yemeni private hospitals.
- (H0<sub>(2)</sub>): There is a statistically significant impact of the organizational culture dimension on the quality of health services in Yemeni private hospitals.
- (H0<sub>(3)</sub>): There is a statistically significant impact of the organizational structure dimension on the quality of health services in Yemeni private hospitals.
- (H0<sub>(4)</sub>): There is a statistically significant impact of the customer focus dimension on the quality of health services in Yemeni private hospitals.

# 1.8 Definitions of Terms

**1.8.1 Organizational Excellence:** It is a state of administrative creativity and organizational excellence through which the organization achieves extraordinary levels of performance and implementation of the organization's production, marketing, financial and other processes, resulting in results and achievements that exceed those achieved by competitors and with which the organization's stakeholders are satisfied (Al-Salami, 2001: 80).

**Operational Definition (OE):** It is the implementation of hospitals for the application of procedures and principles aimed at achieving the highest levels of performance and efficiency in the work, by organizing operations, improving the use of available resources, developing capabilities and skills for workers to achieve patient satisfaction, providing distinguished health services, building a prestigious reputation for the hospital and increasing their competitiveness in the field of health care.

**1.8.2 Quality of Health Services:** It is the provision of a set of activities and businesses, whether diagnostic or treatment and health measures that allow meeting health services according to specific criteria to ensure the best results in the field of health at the lowest cost "(Zamoura, 2022, 43).

**Operational Definition (QHS):** It is the continuous improvement of the services provided by private hospitals to their patients by avoiding medical errors and keeping pace with modern developments so that their services are efficient, effective and cost-effective.

# 1.9 Literature review

# 1.9.1 Organizational Excellence (OE)

An organization can achieve OE if it has the infrastructure for integrated and harmonious administrative requirements of appropriate human, material and moral resources. There are those who focused on customers as the focus and a basic requirement for excellence (Al-Haddad, 2008), while others focused on innovative activity as a basic requirement for OE (Al-Sayrafi, 2003), while there are those who link OE to two basic requirements: employees' satisfaction and customer satisfaction (Tanner, 2005).





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Harrington has suggested the following requirements for OE (Harrington, 2008):

- a) Leadership and consistency of purpose: It expresses the behavior of leaders and supports all methodologies of excellence, as the direction of the organization's values and purpose is clarified through their behavior and encouragement of their employees in the pursuit of excellence.
- b) Excellence derived from customers: All approaches to excellence ensure that the customer is the final source of judgment on the excellence of services and the quality of products, and understanding the current and future needs of current and potential customers is the best way to achieve customer loyalty and retain them, as the customer's voice is decisive in designing operations or offering services that effect on customers.
- c) Strategic direction: All excellence methodologies emphasize the importance of strategic direction, adopting strategic development plans in the organization, and achieving coordination and strategic integration in all parts of the organization (Blaze, 2001).
- d) Continuous learning and improvement: Continuous learning and improvement are crucial elements in excellence methodologies. Stimulating learning and improvement contributes to providing an appropriate environment for creativity and innovation by achieving effective knowledge sharing.
- e) Focus on individuals: The level of employees is an important element in the framework of excellence. The success of the organization depends heavily on developing the level of knowledge, skills and creativity of its employees, and the ability of these employees is better through shared values supported by a culture of trust and empowerment in the organization.
- f) Developing partnerships: Excellence methodologies confirm that the organization needs to develop a mutual strategy of long-term mutual benefit with a group of external partners, including customers, suppliers, and education organizations. Providing sustainable value to partners achieves long-term partnership success.
- g) Management by facts: All approaches to excellence focus on managing operations based on actual facts to design operations that meet customer requirements, and improving operations is based on feedback from the customer and feedback from the operations themselves, and the ability of operations is measured by their ability to meet customer requirements.
- h) Directing results: By balancing the needs of all key stakeholders, this is an important and pivotal part of developing successful strategies. Excellence is concerned with creating value for all key stakeholders, including customers, employees, suppliers, partners, the public, and society as a whole (Dick, 2002).
- i) Social responsibility: Excellence curricula emphasize responsibility towards the public, as ethical behavior and good citizenship are important in the long term for the interests of the organization (Porter & Tanner, 2004).





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# 1.9.2 Quality of Health Services (QHS):

As for the QHS, the increasing interest in quality in health services in recent times is an indication of its importance in the health sector, which is considered one of the sectors most in need of using such methods due to the importance of this sector and its large numbers. Beneficiaries, and work to satisfy them.

Therefore, the World Health Organization explained that the concept of quality health services is adherence to standards and correct performance in a safe and acceptable manner by society and at reasonable costs, which leads to a positive impact on patient, mortality and malnutrition rates (Niaz, 2004). QHS also achieves the best result for each patient by avoiding complications that may be caused by the treating physician, and then cares for the patient in a way that achieves a balance between what the patient spent and the benefits he obtained, in addition to the necessity of effective documentation of the diagnostic and therapeutic process (Deboun, 2012).

# 1.9.3 The relationship of influence between organizational excellence and the quality of health services:

From the above, it was found that there is a positive impact relationship between organizational excellence and quality of health services, OE is one of the most important and modern topics, as it has become clear that excellence standards are at the forefront of the goals that organizations seek to achieve to support more excellence and uniqueness in their organizational performance, which requires administrative leaders to make efforts to achieve success that helps achieve progress by relying on speed and flexibility. It also helps organizations in keeping pace with the best international practices, performing their tasks and understanding the effects of the environment by analyzing the strengths and weaknesses of the internal environment, seizing the opportunities, and avoiding external environmental threats. This was confirmed Khaleda study (2021), which is the first Arab study that discusses the impact of organizational excellence on the quality of health services. It examines that OE in its dimensions (administration, planning, human resources, customer focus) has a positive and moral impact on the QHS in the hospital, and that whenever the administration working in the hospital is fully aware of the importance of developing and improving services, it will be reflected on the customers who benefit from the service. In addition to that, planning and human resources working in the hospital, hospital's focus on customer satisfaction, and the need to pay more attention to activating administrative excellence to ensure the improvement of health services hospitals, and that hospitals must strive to keep pace with development and excellence by following modern methods that enable them to achieve their goals.

Regarding the quality of health services, Hammad's study (2022) explained, which aimed to know the level of QHS in all its dimensions (tangibility, responsiveness, reliability, assurance, and empathy) in private Jordanian hospitals in the capital, Amman, through the influence of strategic vigilance in its dimensions (technological vigilance). (Competitive vigilance, environmental vigilance, commercial vigilance). The researcher used a random sample of administrative employees (senior management and middle management), where the study





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population reached (1425) employees, while the study sample consisted of (299) individuals. The researcher used the quantitative descriptive approach, and one of the most important results of the study was: The results of the study showed an increase in the level of relative importance of the dimensions of service quality in Jordanian private hospitals in Amman from the point of view of the study sample members. It was (high) and the general index of health services quality reached (4.35) with a percentage of (87%), While the study showed a statistically significant impact of the level (0.05) of strategic vigilance in its dimensions on the QHS in all its dimensions combined in Jordanian private hospitals in Amman.

# 2. METHODOLOGY

# 2.1 Study design

The purpose of this study is to investigate the importance of the impact of OE (leadership organizational structure - organizational culture - customer focus) on the QHS (responsiveness - reliability - tangibility - safety - empathy) in Yemeni private hospitals, with a focus on the interaction between exogenous and endogenous variables. Therefore, quantitative research is the best technique to explain the connections between measurably different variables and the most widely used in studying social and human phenomena, and through it the objectives of this study can be achieved. It also describes the situation and reveals and determines the characteristics and nature of the relationship between the variables of the study. This approach was relied upon according to its descriptive method, which includes literature related to the study variables and access to them in the library. Contemporary scientific research and provides a theoretical framework based on documented scientific writings and references, and according to its analytical approach, which includes analyzing data to determine the impact of OE on QHS to achieve the objectives of the study (Al-Sayaghi, 2018).

# 2.2 Population and sample of the study

The target respondents are employees working in private hospitals in Sana'a, Sana'a, which includes 7 hospitals and the study population reached (3539) workers. These hospitals are as shown in the following table.

Table 1: Names of private hospitals in Yemen

Hospital's Name	Establishment	Number of	Bed
1105pital 5 fitalite	Date	Employees	Capacity
University of Science and Technology Hospital	2005	1129	182
Modern German Hospital	2003	375	70
Modern European Hospital	2017	400	90
Yemeni German Hospital	2000	315	60
Azal Modern Hospital	1996	800	130
Al.Ahly Modern Hospital	1995	170	60
AbdulQader Al-Mutawakkil Modern Hospital	1992	350	85
Total		3539	677

Source: Ministry of Public Health and Population: https://moh.gov.ye





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The probability (random) statistical sampling method was used to choose a relative stratified sample from the study population, where from the first layer of the study population, (3) hospitals were selected, which included the largest number of workers and clinical capacity, with a total of (2329) workers, representing (65.8%) of the total study population, and the second layer included the study sample that the questionnaire will be distributed, the size of which was determined using the Krejcie and Morgan table, estimated at (330) individuals, and the researchers added (27%), bringing the total sample to (420) individuals, increasing the level of accuracy. The following table shows the number of the study sample:

Table 2: number of workers in Yemen's private hospitals

Hospital's Name	Employees Number	Percentage %	Sample Volume
University of Science and Technology Hospital	1129	48.5%	200
Azal Model Hospital	800	34.3%	130
Modern European Hospital	400	17.2%	90
Total	2329	100%	420

After determining the number of workers in private hospitals in Yemen, a pilot survey (pilot study) was conducted for the study tool to test the validity of the content by distributing 20 questionnaires to a number of members of the study sample. The paragraphs of the questionnaire were modified according to the results of the content validity of the test, and it was formulated in its final form and distributed. The study sample numbered (420). Individually. After that, the questionnaires distributed to the study sample were collected and sorted to determine the number of acceptable and unacceptable questionnaires for analysis. The number of questionnaires accepted for analysis after verification was 390 questionnaires, and the response rate was (93.5%).

# 2.3 Instrument of the study

A survey questionnaire was conducted to collect data. A questionnaire is a refined set of queries that participants must answer in writing, often from a limited range of possibilities. Questionnaires are usually designed to collect a lot of quantitative information. It may be delivered to respondents via mail, email, or physical delivery. Compared to surveys, interviews and observations are often more expensive and time-consuming, but they also have a much greater chance of non-response and inaccuracy of response (Belkacem & Al-Jilani, 2012). The researchers designed the questionnaire and identified the main topics included in the questionnaire, as well as the dimensions and paragraphs it included. They were designed in accordance with the objectives of the study. The theoretical aspect related to the study was reviewed from literature and previous studies, and the dimensions and paragraphs of the questionnaire were formulated in its initial form, which included (9) dimensions and (42) paragraphs distributed over two axes in addition to the two axes. Personal data for the study sample, organizational excellence (OE) axes (4) dimensions and (20) items, and health services quality (5) dimensions and (22) items. The study relied on the research questionnaire that was used to collect data for the purpose of completing the field framework according to the sevenpoint Likert scale to evaluate these questions in the study questionnaire.





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# 3. FINDINGS AND DISCUSSION

# 3.1 Respondent profile

According to the data of the respondents, most of the sample of the employees of private hospitals under study were male (61.5%), and the lowest members of the sample were female (38.5%). This is in line with the nature of Yemeni society, the social conditions, customs and prevailing traditions that encourage male employment more than females. The study community included individuals from different age groups, where most of the sample members of the age group (31 to less than 40 years) were at rates (52.8%), while the second -year category (less than 30 years) came in second place, with a rate of (25.1%).

The third place included the age group (41 to 49 years) by (19.7%), and the smallest members of the sample in the age group (50 years or more) were (2.3%) of the total members of the sample community. Most members of the sample from the study community have a bachelor's degree, of whom (200) individuals represent (51.3%), while the number of those holding a diploma qualification (90) individuals represent (23.1%) of the study community, while the number of those holding a degree reached Master (65) individuals and represented (16.7%) of the study community, while the number of people with a doctorate degree reached (14) individuals, or (3.6%) of the study community, while the number of those holding the qualification of the Arab Board (12) Individual and represented (3.1%) of the study community. The Yemeni Board (5) included and represented (1.3%) of the study community, while the youngest members of the study community with other qualifications (4) individuals and represented for (1.0%).

The study community according to the job title, where the other name obtained (175) individuals out of the total sample at the rate of (44.9%), and the smallest community to study included members of the general manager category where (3) individuals represented a percentage of (0.8%), while the number of the study community ranged Between (10 to 65) individuals, with a percentage of (2.6% to 16.7%), with different job names in the three hospitals under study.

While most of the study community was from the nursing specialization and included (106) individuals representing (27.2%), and the youngest member of the study community was from another specialty, as it included (22) individuals representing (5.6%), while the number of the study community ranged between (23 to 100) individuals and the percentage ranged between (5.9% to 25.6%) of individuals in the various job specializations in the three hospitals under study.

The study sample included years of service from 5 to less than 10 years (194) individuals, or a percentage of (49.7%), while the smaller sample of service years of less than 5 years (69) included individuals, or a percentage of (17.7%). While the percentage reached (32.6%) of members of the study sample community, which has years of service for more than 10 years of experience and included (127) individuals.



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Table 3: Demographic characteristics of the study sample

Variables	Items	Frequency	Percentage
Gender	Male	240	61.5
Gender	Female	150	38.5
	Less than 30 years	98	25.1
Ago	31 to 40 years	206	52.8
Age	41 to 49 years	77	19.7
	50 years and over	9	2.3
	Ph.D.	14	3.6
	Yemeni board	5	1.3
Academic	Arabic board	12	3.1
qualification	Master's	65	16.7
quanneation	Bachelor's	200	51.3
	diploma	90	23.1
	Other	4	1.0
	General Manager	3	0.8
	Director of Administration	25	6.4
	Consultant	10	2.6
Job title	specialist	48	12.3
	Head of Department	64	16.4
	supervisor	65	16.7
	Other	175	44.9
	Doctor	29	7.4
	Nurse	106	27.2
	Midwife	24	6.2
Academic	Pharmacist	23	5.9
specialization	Laboratory	38	9.7
specialization	Radiologist	24	6.2
	Technician	24	6.2
	Administrative	100	25.6
	Other	22	5.6
	Less than 5 years	69	17.7
Years of service	From 5 to 10 years	194	49.7
	More than 10 years	127	32.6

# 3.2 Confirmatory factor analysis (CFA) for the study tool (Questionnaire):

Confirmatory factor analysis (CFA): which is a form of factor analysis that is used to test whether the measures of a variable are consistent with the researcher's understanding of the nature of this variable before using structural equation modeling (Awang, 2015: 100).

To begin factor analysis, the following must be done:

- 3.2.1 Coding the questionnaire items.
- 3.2.2 Follow the following steps, (Awang 2015: 101-102):
  - a) Run confirmatory factor analysis of the overall standard model for all variables.
  - b) Examining the indicators of the quality of fit of the model obtained from the





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measurement model, then comparing the resulting values with the required level and minimum limits. If the required values of the indicators are not achieved, the saturation of the factors must be examined, then the element with low factor saturation is identified and the factor saturation is confirmed. For all items.

- c) We delete one item with a factor saturation less than (0.60), start with the item with the lowest factor saturation, then verify the matching indicators after removing the items with the lowest factor saturation.
- d) If the matching indicators are not achieved after removing items with low factor saturation, we review the modification indices (MI), where a high value of the modification index higher than (15) indicates the presence of redundant items that are similar in measurement as they measure the same concept.

The following table shows the quality test indicators of the assertive factor analysis for the variable dimensions:

Table 4: The indicators of testing the quality and suitability of the confirmatory factor analysis model for the dimensions of the variable

Measurement indicators	Level of Excellence	Level of Acceptable
chi squared (Chi-Square)	≤0.05	< 3
Ramsi indicator (RMSEA)	≤ 0.08	0.05 to 0.08
Suitable matching index (GFI)	≥ 0.90	0 to 1
Adjusted Goodness of Fit Index (AGFI)	≥ 0.80	0 to 1
Comparative conformity index (CFI)	≥ 0.90	0 to 1
Tucker Lewis indicator (TLI)	≥ 0.90	0 to 1
Normal fit index (NFI)	≥ 0.90	0 to 1
Incremental Fit Index (IFI)	≥ 0.90	0 to 1
Chi square/degree of freedom Chi-square/df	< 2	< 5

# A) The independent variable: organizational excellence:

To measure the construct validity of the organizational excellence variable scale, confirmatory factor analysis was conducted (CFA) using the (AMOS 26) program, and it contains (20) items distributed over (4) dimensions, with (5) paragraphs for the leadership dimension, (5) paragraphs for the organizational structure dimension, (5) paragraphs for the organizational culture dimension, and (5) items for the organizational structure dimension.

Paragraphs for the customer focus dimension and the following figure and table illustrate this:





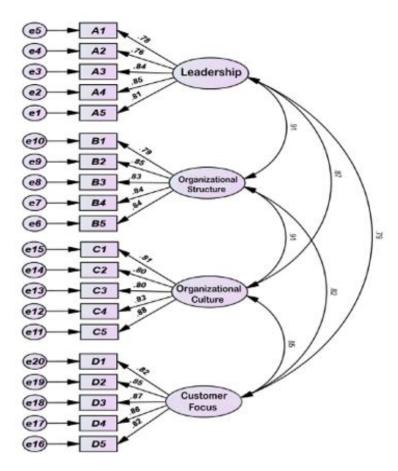


Figure 2: Confirmatory factor analysis of the organizational excellence variable before improving

Table 5: results of the model fit test for goodness-of-fit indicators before improving for the organizational excellence variable

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	3.65	0.083	0.87	0.83	0.94	0.92	0.94	0.93

It is clear from Figure (2) and Table (5) that the results of the confirmatory factor analysis showed indicators of the quality of conformity to the dimensions of the independent variable, organizational excellence, that the degree of their achievement falls within the values of excellent conformity for all indicators (AGFI), (CFI), (NFI), (IFI), (TLI), while the degree of achievement of the two indicators (CMIN/df) reached (3.65) and (GFI) had a value of (0.87) and they fall within the acceptable conformity values, except for the (RMSEA) indicators,





where its value was (0.083) and the conformity quality index was not achieved. Therefore, the model fit quality was re-improved, the modification indices (MI) were revised, and some measurement errors were restricted, and the following figure and table illustrate this:

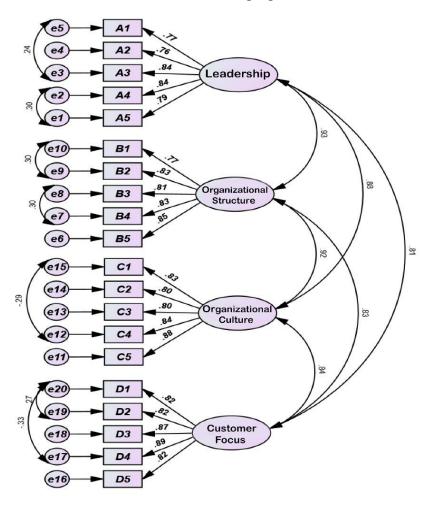


Figure 3: Confirmatory factor analysis of the organizational excellence variable after improving

Table 6: Results of the model fit test for the quality of fit indicators after improving for the organizational excellence variable

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.64	0.061	0.91	0.87	0.96	0.94	0.96	0.96





It is clear from the figure (3) and table (6) that the results of the confirmatory factor analysis showed that the indicators of the quality of conformity to the dimensions of the independent variable organizational excellence, that the degree of their achievement falls within the values of excellent conformity for all indicators (AGFI), (CFI), (NFI), (IFI), (TLI and GFI, except for the two indicators (CMIN/df) and (RMSEA), reached values of (2.64) and (0.061) and fall within the acceptable conformity values. The following table shows the standard saturations of the expressions on the dimensions:

# B) Dependent variable: Quality of health services:

To measure the construct validity of the health services quality variable scale, confirmatory factor analysis was conducted (CFA) using the (AMOS 26) program, and it contains (23) items distributed over (5) dimensions, with (3) items for the responsiveness dimension, (5) items for the dependability dimension, (5) items for the tangibility dimension, and (5) items for the tangibility dimension. For the safety dimension, and (5) paragraphs for the empathy dimension, and the following figure explains this:

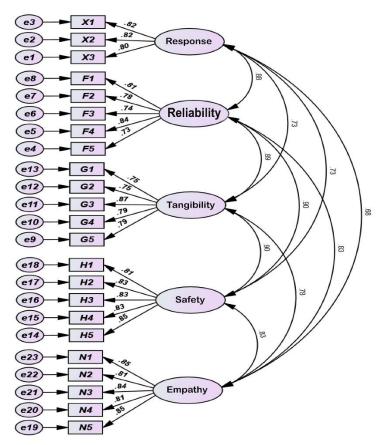


Figure 4: Confirmatory factor analysis of the health services quality variable before improving



Table 7: Results of the model fit test for the goodness of fit indicators before improving the fit for the health services quality variable

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	3.96	0.087	0.83	0.79	0.91	0.89	0.91	0.90

It is clear from the form (4) and the table (7) that the results of the empirical global analysis showed indicators of the quality of conformity of the dimensions of the variable, the quality of health services, that the degree of its achievement falls within the values of the excellent matching of the indicators (CFI), (IFI), (TLI), while the degree of verification of the indicators is located (NFI), (AGFI), (CMIN/df), (GFI) within the values of accepted matching, except for RMSEA indicators, with a value (0.087) did not achieve the quality of match quality, so the quality of the form of the form of the form was re-deleted and the paragraph was deleted and the paragraph was deleted Which has the value of saturation at the lowest level of the variable indicators as a whole, and thus the paragraph (F5) was deleted and the amendment indicators (MI) have been reviewed and some measuring errors, and the following shape and table show this:

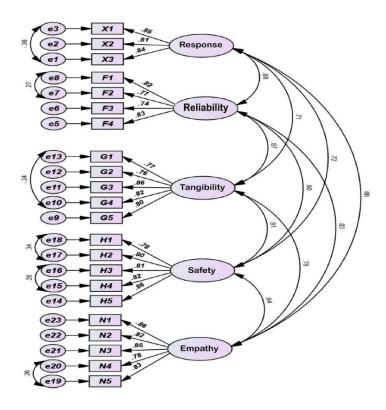


Figure 5: Confirmatory factor analysis of the health services quality variable after improving fit







Table 8: Results of the model fit test for the goodness of fit indicators after improving the fit for the health services quality variable

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.90	0.068	0.90	085	0.95	0.92	0.95	0.94

It is clear from Figure (5) and Table (8) that the results of the confirmatory factor analysis showed indicators of goodness of fit to the dimensions of the dependent variable, quality of health services, that the degree of their achievement falls within the values of excellent fit for all indicators (AGFI), (CFI), (NFI), (IFI), (TLI) and (GFI), except for the two indicators (CMIN/df) and (RMSEA), reached values of (2.90) and (0.068) and fall within the acceptable conformity values. The following table shows the standard saturations of the expressions on the dimension.

# 3.3 Normality assessment

Table 9 presents the skewness and kurtosis values for several constructs used to assess normality and to satisfy the conditions of confirmatory factor analysis (CFA), skewness values should be below an absolute value of 2 and kurtosis values should be below an absolute value of 8 to consider the data distribution as approximately normal. The analysis indicates that most constructs have skewness and Kurtosis values within the acceptable range, meeting the normality criteria.

**Table 9: Normality Assessment** 

No.	Study Variables	Dimensions of the Study Variables	Skewness	Kurtosis
1.		Leadership	-1.080	1.436
2.	Organizational	Organizational Chart	-0.984	1.085
3.	Excellence	Organizational Culture	-0.432	-0.553
4.		Customer Focus	-0.397	-1.274
5.		Response	-1.176	1.448
6.	O1'4£11141-	Reliability	-1.206	1.698
7.	Quality of Health Services	Tangibility	-1.140	1.363
8.	Services	Safety	-1.162	1.371
9.		Empathy	-1.115	1.442

The analysis in Table 9, indicates that most of the fittings have skewness and kurtosis values within the acceptable range, meeting the criteria for normality. Therefore, there is no correlation between the variables based on the data of the normal distribution test for the variables, as the value of the skewness coefficient for the variables (Skewness) was between (-0.379) and (-1.206), while the value of the kurtosis coefficient for the two variables (kurtosis) was about Between (-0.553) and (1.698), and therefore it can be said that the data follows a normal distribution (George & Mallery, 2018).



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# 3.4 Alpha Cronbach's (Reliability analysis) for Questionnaire Items:

The reliability of the questionnaire is intended to give the same results if it were redistributed more than once under the same circumstances and conditions. The researchers verified the stability of the research questionnaire by using the Cronbach's alpha coefficient (Nasser, 2019), It should be noted that the reliability coefficients of the standardized scales are not less than (0.70) (Sekaran, 2003) and others accept the reliability coefficients of the standardized measures at (0.05) as an indicator of the stability of the study tool (Bowling, 2014) and the results were as in the following table:

**Table 10: Summary Statistics of Reliability Analysis** 

Study Variables	Paragraph number	Cronbach's Alpha	Self-honesty
Leadership	5	0.891	0.891
Organizational Chart	5	0.897	0.897
Organizational culture	5	0.864	0.864
Customer focus	5	0.930	0.930
Organizational Excellence (OE)	20	20	0.960
Response	3	0.814	0.902
Reliability	4	0.835	0.914
Tangibility	5	0.878	0.937
Safety	5	0.931	0.965
Empathy	5	0.885	0.941
<b>Quality of Health Services (QHS)</b>	22	0.956	0.978

As shown above in Table 10, all reliability coefficients are greater than the minimum specified to accept the reliability of the instrument at the level of each dimension. This means that the reliability property is available in all areas of the variables of the current study to a high degree, and the value of the reliability coefficient for the dimensions of the variables ranged between (0.814, 0.937), which are high values and confirm the validity of the tool for research purposes, while the results of Cronbach's alpha and self-validity for the independent variable, organizational excellence, and the dependent variable were The quality of health services ranged between (0.960, 0.956), which is within the recommended reliability value, according to (Bowling, 2014). The study also used correlation coefficients between variables and dimensions, and between each paragraph of the questionnaire and its variable. For more information, the following Table 6 shows the results of the correlation coefficients between the variables and dimensions.

Table 11: Pearson correlation coefficients between variables and dimensions

Correlation of Organizational Excellence (OE)										
Dimensions	Paragraph number	Leadership	Chart	Organizational culture	Customer focus					
Leadership	5	1	.789**	.755**	.792**					
Organizational Chart	5	.789**	1	.863**	.763**					
Organizational culture	5	.755**	.863**	1	.796**					
Customer focus	5	.792**	.763**	.796**	1					





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	Correlation of Organizational Excellence (OE)									
Dimensions	Paragraph number	Leadership	Organizational Chart	Organizational culture	<b>Customer focus</b>					
	Co	orrelation of (	Quality of Health	Services (QHS)						
Dimensions		Response	Reliability	Tangibility	Safety	Empathy				
Response	3	1	.742**	.800**	.836**	.701**				
Reliability	4	.742**	1	.752**	.730**	.794**				
Tangibility	5	.800**	.752**	1	.778**	.790**				
Safety	5	.836**	.730**	.778**	1	.706**				
Empathy	5	.701**	.794**	.790**	.706**	1				
** correlation is s	significant at	the 0.01 leve	ıl.							

As explained above in table 11, the correlation values between variables and dimensions were at high values, and all the correlation coefficients of each dimension with its variable are statistically significant at the level of significance (0.01\*\*). This indicates that there is an internal consistency of the study tool and its validity to measure what it was prepared for.

# 3.5 Descriptive Analysis

The researcher can get a comprehensive concept of the respondents' responses to the questionnaire items through the use of descriptive statistics, such as the arithmetic mean and standard deviation of variables, in which the values of the arithmetic mean and standard deviation remain within the expected range. These descriptive statistics provide the researcher with a clear vision of how the targets answered the questionnaire questions by analyzing the values of the arithmetic averages and the associated standard deviations. Descriptive statistics were used to verify that the arithmetic mean and standard deviation of the data generally corresponded to the usual expectations, and to ensure that there were no overlaps beyond the expected range. To determine this, the seven-point Likert scale was used to indicate the lower and upper limits used in the data collection tool (questionnaire), and the range was calculated based on the following:

Range = the difference between the largest value and the smallest value = (7 - 1 = 6), and then divide the range into counted categories to get the length of each category = 6/7 = 0.86.

After that, this value of 0.86 is added to the smallest value of the scale (Integer value) to determine the upper limit of this category. Accordingly, the lengths of the categories are adjusted accordingly, as shown in the following table.

Table 12: Limits of verbal estimation of the arithmetic mean values of the dimensions and paragraphs of the study tool

Alternative value	Verbal indication	The lower limits	The upper limits
1	I Don't Agree Strongly (Very Low)	1	1.86
2	I Don't Agree (Low)	1.87	2.72
3	Kind Of Disagree (Fairly Low)	2.73	3.58
4	Neutral (Medium)	3.59	4.44
5	Kind Of Agree (Fairly High)	4.45	5.3
6	Agree (High)	5.31	6.16
7	Strongly Agree (Very High)	6.17	7.00





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After determining the upper and lower limits of the arithmetic mean for this category and adjusting the length of the categories accordingly, the following Table 13 shows the results of descriptive statistics based on the answers to the sub-study questions, which states:

- a) What is the level of organizational excellence in private Yemeni hospitals?
- b) What is the level of quality of health services in private Yemeni hospitals?

Table 13:		-		
			2	-

No.	Dimensions of the Variable	Rank	N	Mean	SD	Percentage	Semantics
1	Leadership	1	390	5.34	1.06	76.3%	High
2	Organizational Chart	2	390	5.32	1.01	76.0%	High
3	Organizational culture	3	390	5.30	0.99	75.7%	High
4	Customer focus	4	390	5.29	1.00	75.6%	Fairly High
Organ	nizational Excellence (OE)		390	5.31	1.02	75.9%	High
No.	<b>Dimensions of the Variable</b>	Rank	390	Mean	SD	Percentage	Semantics
1	Response	5	390	5.11	0.93	73.0%	Fairly High
2	Reliability	2	390	5.34	0.82	76.3%	High
3	Tangibility	1	390	5.40	0.85	77.1%	High
4	Safety	3	390	5.29	0.82	75.6%	Fairly High
5	Empathy	4	390	5.28	0.90	75.4%	Fairly High
Qualit	y of Health Services (QHS)		390	5.28	0.86	75.5%	Fairly High

a) As explained above in table 13, the results of analyzing the answers of the study sample members to the study data collection tool showed that the level of organizational excellence in the Yemeni private hospitals under study was (high) with a mean (5.31) and a standard deviation (1.02). This indicates that the dispersion in the answers to the arithmetic mean of the sample members was relatively small, with a significance level of (75.9%), which indicates the agreement of the sample members and a high level of organizational excellence in the private hospitals under study with the participation of all its dimensions. The leadership dimension ranked first with a score of (high) with a mean of (5.34), a standard deviation of (1.06), and a significance level of (76.3%), which indicates that the sample members agree on the level of leadership in the private hospitals under study more than the rest of the dimensions of organizational excellence. This variable indicates the high agreement and interest of specialists in the leadership dimension and the importance it represents in preparing, implementing and following up on all administrative and medical activities. Focus on customers came in fourth place with a degree (fairly high) with a mean (5.29) and a standard deviation (1.06) with a significance level of (75.6%), which is lower than the rest of the dimensions of the variable. This indicates that there is fairly large agreement among sample members that customer focus has reached a certain extent in the private hospitals under study. Therefore, specialists and departments in hospitals must redouble their efforts to focus their attention on the client, as this constitutes a goal that hospitals seek to provide them with the best services and achieve their satisfaction.





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b) The results of analyzing the answers of the study sample members to the study data collection tool for the quality of health services were (fairly high) for the arithmetic mean (5.28) and with a standard deviation (0.86), which indicates that the dispersion in the answers of the sample members regarding the arithmetic mean was relatively small and at a significant level (75.5%). This indicates that the sample members agree on a (fairly high) level of the quality of health services in the private hospitals under study, with the participation of all its dimensions. The tangible dimension also ranked first with a score of (high) with an arithmetic mean (5.40) and a standard deviation (0.85) and at a level of significance (77.1%), which indicates that the sample members agree on the high level of quality of health services in the private hospitals under study, and this indicates the high level reached through the tangibility of the various services and equipment in all departments in the private hospitals under study. To ensure the provision of the best services to the beneficiaries and achieve their satisfaction, the response dimension was ranked fifth with a degree (fairly high) with an arithmetic mean of (5.11), a standard deviation of (0.93), and a significance level of (73.0%), which indicates that the sample members agree that the level of response in the private hospitals under study is lower than the rest of the dimensions of the variable, and it is necessary for specialists to pay attention to the response dimension and train all employees to quickly respond to patients' needs in an immediate and continuous manner.

In conclusion, the results indicated that the participants' evaluation of the variables of the current study was above average, indicating positive perceptions of the measures being examined.

Furthermore, the outcome demonstrated that all the standard deviation values for the variables were adequate. The sample data is more reliable, in particular, if the standard deviation is smaller than the mean values (Sekaran & Bougie, 2016: 96-101). The sample data is therefore significant for achieving the objectives of the current investigation.

# 3.6 Structural Equation Modeling (SEM)

SEM is not a single statistical method, but rather a group of statistical methods that integrate with each other to form a framework. As it is a statistical methodology based on the use of more than one model in a single study to find the effect of relationships between variables, while the goal of the study remains the same, which is to test the hypotheses or theory used or created by the same researcher.

In addition, and more precisely, it enables the researcher to test more than one theory in different situations. For the relationships between variables, it shows how a group of factors affect each other by finding who is the independent or influential factor and who is the dependent or affected factor in the study.

(SEM) is considered a general method of statistical modeling that is widespread in the field of behavioral sciences, as it can be viewed as combining confirmatory factor analysis and regression, or what is known as path analysis.





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Structural equations are used in interpreting complex phenomena to obtain a more accurate interpretation or for the purpose of prediction. More precisely, the variables of the phenomenon or behavior studied, take into account the direct and indirect effect of the causal (independent) variables on the outcome (dependent) variable, as it is designed to be used by researchers interested in understanding complex patterns of mutual relationships between variables and analyzing the relationships between groups of variables. Internal and external. (Awang, 2015: 6, 7)

As for confirmatory factor analysis (CFA), it is an approach that has the ability to evaluate the dimensions of latent variables, their validity, and reliability (Awang, 2015: 88), as well as to identify latent variables that are not observed or measured directly, but can be observed and measured indirectly, as they are inferred by A set of variables or indicators that are prepared to measure them using tests, questionnaires, and other data collection tools (Al-Mahdi, 2007: 12).

To test the main hypothesis and the previous sub-hypotheses, analysis was used to calculate the influence relationships between the variables of the current study, which include both the independent variable Organizational Excellence (OE) and the dependent variable Quality of Health Services (QHS).

To ensure the existence of a positive influence relationship between the independent and dependent variables, a model was created. Constructive relationship between organizational excellence in its dimensions (Leadership, Organizational Culture, Organizational Structure, and Customer Focus) and the quality of health services in its dimensions (Response, Reliability, Tangibility, Safety, Empathy) in private Yemeni hospitals. This will be clarified later in testing the validity of the hypothesis.

# 3.7 Testing the validity of the hypothesis

To answer the main question of the study, which states:

Is there an impact of organizational excellence in its dimensions (leadership, organizational culture, organizational structure, customer focus) on the quality of health services in its dimensions (response, reliability, tangibility, safety, empathy) in Yemeni private hospitals?

The main hypothesis and the sub-hypotheses emerging from it were tested, to demonstrate the impact of organizational excellence in all its dimensions on the quality of health services. Therefore, a structural model was created that explains this according to the following:

**3.7.1 States that (H0):** There is a statistically significant impact of organizational excellence (OE) in its dimensions (leadership, organizational culture, organizational structure, and customer focus) on the quality of health services (QHS) in its dimensions (responsiveness, reliability, tangibility, safety, empathy) in Yemeni private hospitals.





To verify the validity of the hypothesis, a structural model was made for the relationship between OE and QHS, as shown in the following figure:

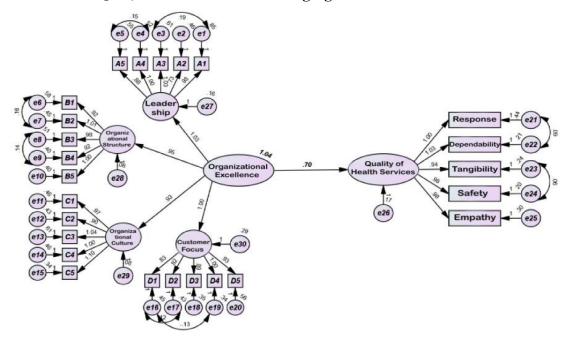


Figure 6: The relationship model between OE and QHS

Table 14: The fit result of the relationship between OE and QHS

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.63	0.065	0.88	085	0.95	0.93	0.95	0.95

Table 15: Pathways testing the impact of OE on QHS

IDV	Track	D.V	Estimate β	SE	CR	Sig.	Result
OE	>	QHS	.705	.047	15.052	***	Strong

(\*\*\*) Statistically significant at the level less than (0.001).

# From the above figure 6 and tables (14, 15), it is clear that:

1) The conformity quality indicators came from excellent value, except for the value (CMIN/df, RMSEA, GFI) came within the acceptable value and this suggests acceptance of the model of the relationship between organizational excellence and quality of health services.





- There is a positive impact between organizational excellence and the quality of health services, where the value of (Estimate β) reached (0.70), and the critical ratio (CR) shown in Table (15) reached a value of (15.052), which is a significant value at a significance level less than (0.001). This confirms that the impact of statistically significant in the direction of the path arrow, and therefore the organizational excellence coefficient, reached (.705). This means that an increase (100) units in organizational excellence, its impact contributes to an increase of (70.5) units in the quality of health services.
- 3) From the above, we confirm the hypothesis that states: There is a statistically significant impact of organizational excellence (OE) in its dimensions (leadership, organizational culture, organizational structure, customer focus) on the quality of health services (QHS) in its dimensions (responsiveness, reliability, tangibility, safety, empathy) in Yemeni private hospitals. The hypothesis has four sub-hypotheses, which are:
- A) ( $H0_{(1)}$ ): There is a statistically significant impact of the leadership dimension on the quality of health services (QHS) in Yemeni private hospitals.

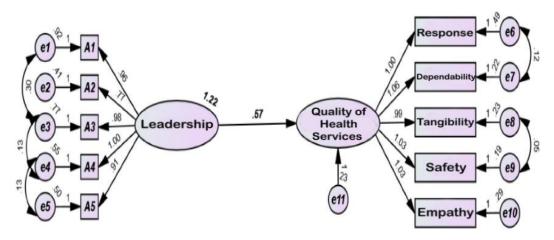


Figure 7: The relationship model between leadership and QHS

Table 16: The fit result of the relationship between leadership and QHS

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.15	0.054	0.97	084	0.99	0.98	0.99	0.98

Table 17: Pathways testing the impact of leadership on QHS

IDV	Track	D.V	Estimate β	SE	CR	Sig.	Result
leadership	>	QHS	.573	.044	13.096	***	Strong

(\*\*\*) Statistically significant at the level less than (0.001).





# It is clear from Figure (7) and Tables (16) and (17) that:

- The conformity quality indicators were close to the excellent value except for the value (CMIN/df, RMSEA) came within the acceptable value, and this suggests acceptance of the model of the relationship between the leadership dimension and the quality of health services.
- 2) There is a positive effect between the leadership dimension and the quality of health services, where the value of (β) reached (0.57) and the critical ratio (CR) shown in Table (17) reached a value of (13.096), which is a significant value at a significance level less than (0.001). This confirms that the effect is statistically significant in terms of the direction of the path arrow, and therefore the coefficient on the leadership dimension reached (.573). This means that an increase of (100) units in the leadership dimension, its effect contributes to an increase of (57.3) units in the quality of health services.
- 3) From the above, we confirm the hypothesis that states: There is statistically significant effect of the leadership dimension on the quality of health services in private hospitals.
- **B)** (H0<sub>(2)</sub>): There is a statistically significant impact of the organizational culture dimension on the quality of health services (QHS) in Yemeni private hospitals.

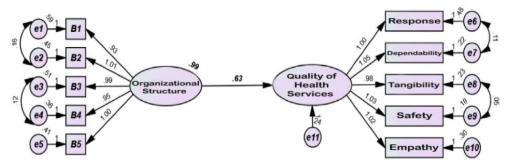


Figure 8: The relationship model between organizational structure and QHS

Table 18: The fit result of the relationship between organizational structure and QHS

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.95	0.071	0.96	092	0.98	0.97	0.98	0.97

Table 19: Pathways testing the impact of organizational structure on QHS

IDV	Track	D.V	Estimate β	SE	CR	Sig.	Result
organizational structure	>	QHS	.631	.047	13.522	***	Strong

(\*\*\*) Statistically significant at the level less than (0.001).





# It is clear from Figure (8) and Tables (18) and (19) that:

- 1) The conformity quality indicators were close to the excellent value except for the value (CMIN/df, RMSEA) came within the acceptable value, and this suggests acceptance of the relationship model between the organizational structure dimension and the quality of health services.
- 2) There is a positive effect between the organizational structure dimension and the quality of health services, where the value of (β) reached (0.63), and the critical ratio (CR) shown in Table (19) reached (3.5221), which is a significant value at a significance level less than (0.001), and this confirms that the effect is statistically significant in terms of the direction of the path arrow, and therefore the coefficient of the organizational structure dimension reached (.631), which means An increase of (100) units in the organizational structure dimension contributes to an increase of (63.1) units in the quality of health services.
- 3) From the above, we confirm the hypothesis that states: There is statistically significant effect of the organizational structure dimension on the quality of health services in private hospitals.
- C) (H0 $_{(3)}$ ): There is a statistically significant impact of the organizational structure dimension on the quality of health services (QHS) in Yemeni private hospitals.

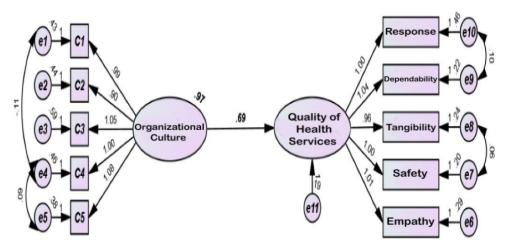


Figure 9: The relationship model between organizational culture and QHS

Table 20: The fit result of the relationship between organizational culture and QHS

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	3.00	0.072	0.96	092	0.98	0.97	0.98	0.97





Table 21: Pathways testing the impact of organizational culture on QHS

IDV	Track	D.V	Estimate β	SE	CR	Sig.	Result
organizational culture	>	QHS	.695	.049	14.267	***	Strong

(\*\*\*) Statistically significant at the level less than (0.001).

# It is clear from Figure (9) and Tables (20) and (21) that:

- The conformity quality indicators were close to the excellent value except for the value (CMIN/df, RMSEA) came within the acceptable value, and this suggests acceptance of the model of the relationship between the organizational culture dimension and the quality of health services.
- 2) There is a positive effect between the organizational culture dimension and the quality of health services, where the value of (β) reached (0.69), and the critical ratio (CR) shown in Table (21) reached a value of (14.267), which is a significant value at a significance level less than (0.001), and this confirms that the effect is statistically significant in terms of the direction of the path arrow, and therefore the coefficient of the organizational culture dimension reached (.695), which means An increase of (100) units in the organizational culture dimension, its effect contributes to an increase of (69.5) units in the quality of health services.
- 3) From the above, we confirm the hypothesis that states: There is statistically significant effect of the organizational culture dimension on the quality of health services in private hospitals.
- **D)** ( $H0_{(4)}$ ): There is a statistically significant impact of the customer focus dimension on the quality of health services (QHS) in Yemeni private hospitals.

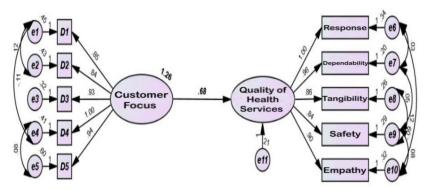


Figure 10: The relationship model between customer focus and QHS

Table 22: The fit result of the relationship between customer focus and QHS

Measurement indicators	CMIN/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Level of Acceptable	< 5	0.05 to 0.08	0 to 1					
Level of Excellence	< 2	≤ 0.05	≥ 0.90	≥ 0.80	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Index Value	2.88	0.070	0.97	093	0.98\9	0.98	0.99	0.98





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Table 23: Pathways testing the impact of customer focus on QHS

IDV	Track	D.V	Estimate β	SE	CR	Sig.	Result
Customer Focus	>	QHS	.677	.040	17.021	***	Strong

(\*\*\*) Statistically significant at the level less than (0.001).

# It is clear from Figure (10) and Tables (22) and (23) that:

- 1) The conformity quality indicators were close to the excellent value except for the value (CMIN/df, RMSEA) came within the acceptable value, and this suggests acceptance of the relationship model between the customer focus dimension and the quality of health services.
- 2) There is a positive effect between the customer focus dimension and the quality of health services, where the value of (β) reached (0.68), and the critical ratio (CR) shown in Table (23) reached (17.021), which is a significant value at a significance level less than (0.001). This confirms that the effect is statistically significant in terms of the direction of the path arrow, and therefore the coefficient on the customer focus dimension reached (.677). This This means that an increase of (100) units in the customer focus dimension contributes to an increase of (67.7) units in the quality of health services.
- 3) From the above, we confirm the hypothesis that states: There is statistically significant effect of the customer focus dimension on the quality of health services in private hospitals

The results of the current study indicated that there is a statistically significant impact of organizational excellence in its dimensions on the quality of health services in its dimensions in the private hospitals under study. This result is consistent with the study Khaleda (2021), in which the results of the study indicated that all dimensions of organizational excellence (leadership, planning, human resources, customer focus) have a positive and significant impact on the quality of health service in Al-Alia hospitals in Sudan. The study concluded that the more the leaders working in the hospital realize the importance of development, the better the quality of services will be reflected in customer satisfaction.

The result that obtained through applying SEM using Amos v26, illustrated that organizational excellence in leadership, organizational culture, organizational structure, and customer focus had a significant impact on the quality of health services in its dimensions (responsiveness, reliability, tangibility, safety, empathy) in Yemeni private hospitals, according to the results shown in the previous tables (From 14 to 23), and thus the first goal was achieved.

The results of the study showed that the level of organizational excellence in the private hospitals under study was (high), with an arithmetic mean of (5.31) and a standard deviation of (1.02), and indicates that the respondents agree on the high level of organizational excellence in the private hospitals under study by sharing all its dimensions. The results of the current study differed from the study Khaleda (2021), as it indicated that the level of organizational excellence in Al-Alia Specialized Hospital in Sudan was at an importance level of (47.31%) and with a standard deviation of (0.79). In general, it obtained an arithmetic mean of (2.37) and a rating of (weak). This result reflects the extent of the decline in administrative performance





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and thus reflects negatively on the quality of health services provided. The results of the current study showed that the level of quality of health services in the Yemeni private hospitals under study was (fairly high) with a mean of (5.28) and a standard deviation of (0.86). The current study is consistent with the study (Hammad, 2022), the results of which indicated a high level of relative importance of service quality dimensions in private Jordanian hospitals in Amman, from the point of view of the study sample members, as it was (high), and the general index of health services quality reached (4.35), and a percentage of (87.0%). The current study also agrees with the studies (Quraida and Qasima, 2020), which indicated that there is a high level of quality of health services in the Diaa Clinic - Ouargla, through the arithmetic meaning of each dimension of the quality of health services, which reached (2.84) and at a (high) level. The current study differed from the study (Khaleda, 2021), as the level of quality of health services at Al-Alia Specialized Hospital in Sudan was (weak) with a significance level of (42.10%), arithmetic mean (2.10), and standard deviation (0.79).

# 4. RECOMMENDATIONS AND SUGGESTIONS

All the objectives of the current paper have been successfully achieved. Several recommendations of this study are explained below.

# 4.1 Recommendations:

- 4.1.1 Hospital leadership must maintain the level of organizational excellence and conduct further studies to develop its methodology and methods.
- 4.1.2 Preparing training plans and programs for the concept of organizational excellence and implementing them on hospital workers.
- 4.1.3 Hospital leaders' interest in improving the quality of health services in the hospital to increase excellence.
- 4.1.4 Quality specialists in hospitals must evaluate the implemented quality programs and improve them in a way that contributes to increasing the health services provided.
- 4.1.5 Exploiting the nature of influence and the relationship between organizational excellence and the quality of health services to bring about positive changes to enhance the quality provided in hospitals.
- 4.1.6 The need for the hospital administration to pay attention to carefully organizing the dates of reviews and visits and responding to the inquiries and complaints of the visitors by establishing hotlines and paying attention to the complaints of the visitors.
- 4.1.7 Providing hospitals with all the capabilities and material and human facilities to develop and qualify individuals and create the appropriate environment by holding training courses.
- 4.1.8 Hospitals' interest in monitoring information related to current and potential competitors to make appropriate decisions that enable hospitals to achieve competitive advantage by verifying competitors' performance and closely following their activities.
- 4.1.9 Hospitals must enhance the level of health care, especially patient care, pay attention to their problems, and work to find solutions to them in humane ways by holding courses and seminars on the protocol for dealing with service recipients.





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- 4.1.10 Increase the development of the medical staff through scientific courses that keep pace with modern scientific developments by establishing relationships with relevant local community institutions to provide advanced and competitive health services.
- 4.1.11 Enhancing the spirit of cooperation between the medical and administrative staff in hospitals.
- 4.1.12 Consolidating the concept of comprehensive and integrated health care that includes psychological and spiritual treatment for the patient and is not limited to the treatment plan and physical therapy.
- 4.1.13 Improving the tangible aspects within hospitals, such as (the cafeteria clean restrooms a comfortable waiting hall that takes care of patients and their companions parking lots gardens), enhances the psychological satisfaction of patients.
- 4.1.14 Setting standards to measure the performance of the quality of health services in the hospital and constantly working to evaluate the service provided and expected to be provided by medical personnel to improve the quality of health services.
- 4.1.15 Providing all specialties, medical services, highly qualified medical personnel, and providing modern and advanced medical devices.

# 4.2 Suggestions:

The researcher recommends future studies and proposals to enrich the topic of organizational excellence and quality of health services in a way that contributes to achieving various benefits for hospitals and patients and improves the general health of society. The proposed studies are as follows:

- 4.2.1 Study the impact of organizational excellence on the quality of health services from the point of view of service beneficiaries.
- 4.2.2 Study the role of organizational excellence in improving primary health care in the Yemeni health sector.
- 4.2.3 Study the impact of the quality of health services on organizational excellence from the point of view of workers in health centers.
- 4.2.4 Total quality management and its impact on achieving organizational excellence in the health sector.
- 4.2.5 The importance of achieving organizational excellence in public and private hospitals through quality health services.

# **Conflicts of Interest Statement**

The authors certify that they have NO affiliation with or involvement in any organization or entity with any financial interest.





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