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**Faculty of graduate Studies**

# Critical Performance Analysis of The Palestinian Hospitals

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# Critical Performance Analysis of the Palestinian Hospitals

## Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

Student Name : Waleed Ahmad Balbisi

Signature:

Date: 20/01/2021

# Dedication

To my beloved father and mother

To my lovely wife and sweet kids

To my wonderful brothers and sisters

# Acknowledgments

I would like to thank Dr. Khalid Rabayy'a and my other instructors and classmates at Arab American University for your tremendous support.

Your mentorship and guidance have significantly contributed to my success. In addition, I would like to thank all Arab American University members for your leadership in the Master of Strategic Planning and Fundraising program.

## Abstract

**Background:** The performance of healthcare managers and healthcare providers is a critical matter. Healthcare systems must meet patient needs by identifying the strategies necessary for performance improvement.

**Aims:** To investigate the influences of the three main players in the hospitals—healthcare managers, healthcare providers, and patients—on care quality, hospital performance, and patient satisfaction. Moreover, the study analyzes performance factors in the hospitals including the variation factors among healthcare managers and providers that contribute to improving healthcare system performance and patient satisfaction.

**Methods:** Healthcare managers and providers were surveyed about hospital performance, and admitted patients were surveyed about their level of satisfaction. Three questionnaires were designed and distributed: one for healthcare managers, another for healthcare providers, and a third for admitted patients. Three hospital types in West Bank were the target of the study: governmental hospitals, non-governmental organization (NGO) hospitals, and private hospitals.

**Results:** Factors relevant to healthcare providers, healthcare organizations, and patients affect the quality of healthcare services. The finding identifies ways to improve the performance of the healthcare system and enhance service quality includes: supportive management, effective planning, the availability of resources, education and training, information sharing, safety measures and standards, cooperation among providers, employee engagement, and receptivity to patients' feedback. In addition, patient-focused

healthcare which includes follow-up after discharge, hospital cleanliness, room services, and the relation between the services provided and their cost has been found to be the major impacts on quality care improvement.

**Significance of the study:** High-quality healthcare services are an outcome of collaboration between healthcare providers and patients within a supportive management system. This study contributes to the theory and practice of healthcare by developing a conceptual framework that delivers a practical understanding of healthcare performance factors and quality care improvement measures for policymakers, healthcare managers and providers. Hospitals and healthcare managers can use these findings to build strategies that improve hospital performance, patient satisfaction, and employee engagement.

**Keywords:** healthcare performance, healthcare organizations, patient satisfaction, quality care

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## List of Abbreviations

| | |
|---|---|
| **NGO** | Non-governmental organization |
| **MOH** | Ministry of Health |
| **WHO** | World Health Organization |
| **OECD** | Organization for Economic Cooperation and Development |
| **CFHI** | Canadian Foundation for Healthcare Improvement |
| **CFHO** | Canadian Foundation for Healthcare Organizations |
| **ACSQHC** | Australian Commission on Safety and Quality in Health Care |
| **PSQ** | Patient Satisfaction Questionnaire |
| **NCHSR** | National Center for Health Services Research |
| **CEO** | Chief Executive Officer |
| **CNO** | Chief Nursing Officer |
| **CAO** | Chief Administrative Officer |
| **HR** | Human Resources |
| **ICU** | Intensive Care Units |
| **SPSS** | Statistical Package for the Social Sciences |
| **KPIs** | Key performance indicators |
| **RAND** | Research and development |
| **Agreement** | Indicates that respondents rated the question from “somewhat agree” to “strongly agree.” |
| **Disagreement** | Indicates that respondents rated the question from “somewhat disagree” to “strongly disagree.” |

# Chapter 1: Introduction

The primary goals of any healthcare system at any level are improving services, performance, outcomes, and patient satisfaction while minimizing errors. These goals are considered the priorities of national health administrations throughout the world. Health is one of the most fundamental rights of any individual. As a consequence, it is of vital importance to consider how an effective and efficient national healthcare system affects people's lives and the sustainability of the economy. Therefore, healthcare organizations constantly pursue performance-improvement plans. If these plans are not well-designed, they can waste time and resources while yielding negligible results (Institute of Medicine, 2001).

It is in the interest of healthcare organizations worldwide to achieve better performance and quality. Therefore, it is essential to define healthcare performance, identify methods, and identify dimensions of quality improvement. Healthcare performance improvement includes the shared and continuous efforts of all stakeholders to initiate changes that improve system performance, professional development, and patient outcomes (Batalden, 2007). Numerous criteria and measurable features can describe healthcare performance and quality, including effectiveness, efficiency, safety, equity, availability, timeliness, and accessibility (Donabedian, 1990). Thus, organizations and healthcare providers need to consider patient preferences and social preferences in evaluating and assuring quality (Merlino, 2013).

The main reason that efforts to improve performance collapse is the use of incorrect conceptual approaches to organizational improvement. Thus, to be successful, effective,

and sustainable, the improvement of healthcare sector performance should be conceived and accomplished within the framework of a continuous performance agenda (Reiter et al., 2011).

Customer satisfaction is an important strategy to assess the success of any healthcare organization and to improve its performance. The purpose of this study is to survey the main healthcare sector pillars to evaluate their performance. Healthcare stakeholder feedback was collected in several secondary and tertiary hospitals in the West Bank. The population in this study included patients, healthcare providers, and healthcare managers in order to identify the factors that influence the quality of healthcare services.

## 1.1 Background

Studies of the healthcare sector have been conducted for decades in academic and clinical settings rather than in society. The importance of such studies stems from the crucial nature of health, which touches almost every human in the world. Any deterioration of the health system can threaten entire communities, leading to changes in human capital production. Therefore, investing in health is both a top priority and profitable. Consequently, disappointing healthcare sector performance, whether among health organizations or workers, poses a serious problem (WHO. 2007)

Service quality varies widely between hospitals and doctors in both primary care services and actual practice Gaps in care quality can cause serious health consequences, including medical error deaths, complications, medication errors, and many other problems that have high economic costs (Institute of Medicine, 2001).

Patient-reported outcome measures are an essential element for assessing the extent to which healthcare providers improve patients' health. Patient-reported outcomes address patient satisfaction and the quality of the care provided (Hostetter & Klein, 2012). Organizational performance can be improved by understanding patient satisfaction. The triple-aim strategy developed by the Institute for Health Care Improvement employs this concept to improve population health and the patient experience while reducing the cost per capita (Stiefel & Nolan, 2012).

Recently, incentives have been paid to hospitals according to their performance in the United States, which is reflected by patient satisfaction scoring (Guadagnino, 2012). Therefore, in order to succeed, hospitals may require strategies to improve healthcare sector performance, improve patient satisfaction, and have their fingerprint added to the healthcare sector.

## 1.2 Problem Statement

The private healthcare sector recognizes the importance of improving performance and patient satisfaction by modifying service quality, learning how to satisfy and attract customers, and meeting customers' needs so that they continue to use their services. On the other hand, public hospitals have not focused on quality performance and the health services offered to their patients. Many studies show that organizational performance may decline when there is insufficient information about patient satisfaction available to managers (Kleefstra et al., 2015). New measures and strategies can help to achieve high quality healthcare and improve health system performance (Shih, 2008). A

few studies have been done on patient satisfaction in Palestine. However, to the author's knowledge, none have investigated healthcare managers, healthcare providers, and patient satisfaction in the same study to explore factors that improve the performance of healthcare organizations and increase patient satisfaction. Thus, managers of the healthcare system may need strategies to achieve the aim. This study explored public and private hospitals to help narrow this gap and contribute to the improvement of the healthcare sector from the stakeholders' point of view.

## 1.3 Purpose Statement

The purpose of this quantitative study is to explore healthcare performance factors in the public, NGO and private healthcare sectors and to determine the factors necessary for improvement. The outcomes and recommendations from this study can be used and applied to healthcare settings to improve healthcare performance and patient satisfaction. While many studies have been done around the world regarding this topic, the Palestinian context may add to or be different from other countries. The research study may benefit the community and contribute to improving the national healthcare system.

## 1.4 Research question

### 1.4.1 Research question

The main research question for this study was the following:

**R1:** What strategies are needed to improve the Palestinian healthcare sector's performance?

The research sub-questions were the following:

**R2:** What strategies do hospitals need and how to employ these strategies to improve performance?

**R3:** What strategies do hospitals need to improve patient satisfaction?

## 1.5 Statement of significance

### 1.5.1 Contribution to Healthcare Business

The outcomes of this study will deliver strategies to improve hospital performance and patient satisfaction. The patient experience in hospitals will be improved by improving organizational performance and satisfaction measures, positively affecting organizational efficiency. One of the negative impacts on patient satisfaction in healthcare is that healthcare is provider-focused and disease-centered (British Columbia Ministry of Health, 2014). Patients view healthcare consumer services as any other industrial service (Merlino, 2013).

This study's results may prove important because the culture of healthcare in Palestine needs to shift from disease-centered and provider-focused to patient-centered. The results may also contribute to the body of knowledge about this focus. Hospitals' leadership, healthcare providers, and patients are the targets for implementing the findings of this study. The Palestinian Ministry of Health (MOH) is also a target audience, with the goal of creating a patient-centered system instead of a disease-centered and provider-focused environment.

### 1.5.2 Social Implications

Healthcare system performance and patient satisfaction may be improved by the outcomes of this study. Improving hospitals' performance and patient satisfaction positively contributes to the social well-being of people and communities. Moreover, improving hospital performance and patient satisfaction has the potential to improve the health of the population, decrease the rate of medical errors, and reduce morbidity and mortality. Guaranteeing efficient healthcare and patient-centered care for the population may improve human conditions and have a positive social impact.

## 1.6 Objectives of the study

The objects of this study are as follows:

1. To analyze the performance of the Palestinian hospitals.
2. To identify the factors that influence care quality.
3. To identify the factors that influence patient satisfaction.
4. To identify the factors that influence hospital performance.

## 1.7 Overview and structure of the thesis

This chapter presented the introduction, background, problem statement, purpose statement, research questions and hypotheses, statement of significance, and objectives of the study. Chapter 2 presents a literature review that shows the importance of understanding the healthcare system and its characteristics, the concept of organizations and their performance, the role of healthcare managers, the effect of employee

engagement, patient satisfaction, and the definition of quality, thus identifying the factors that influence improvement.

Chapter 3 deals with methodology and presents the research design, data collection method, instruments used, pilot testing, sampling, and measurements. Chapter 4 deals with data analysis and research findings, including demographic data analysis, descriptive analysis, and inferential analysis. Chapter 5 includes the discussion, conclusion, and recommendations. References and appendixes are given at the end of the study.

# Chapter 2: Literature review

Measuring the performance of healthcare delivery systems has become a central focus for policymakers (Shih et al., 2008). Since healthcare systems are composed of organizations, this chapter examines the three main players within healthcare organizations. A review of healthcare system components provides the foundation to understand and analyze healthcare sector performance. Analyzing feedback from healthcare managers, healthcare providers, and patients is essential to improve service quality. The remainder of this chapter includes an overview of healthcare systems, organizational and hospital performance, and quality care and patient satisfaction.

## 2.1 Healthcare system

While the world faces serious global health challenges, solutions exist for most current issues. However, progress is slow because the constraints of many healthcare systems prevent them from properly or fully operationalizing these solutions. One study (Jones et al., 2003) shows that three-quarters of maternal mortality and two-thirds of child mortality could be eliminated if the world knew how to effectively implement existing simple interventions. Biomedical innovations, health policies, and systems are necessary to achieve better health, and these require new knowledge (Travis et al., 2004).

Health systems are defined in different ways. The functional definition given by the World Health Organization (WHO) is the most common: “all the activities whose primary purpose is to promote, restore or maintain health” (World Health Organization, Report 2000). An alternative definition for “health system” is as follows:

> People, institutions and resources, arranged together in accordance with established policies to improve the health of the population they serve, while responding to people's legitimate expectations and protecting them against the cost of ill-health through a variety of activities whose primary intent is to improve health. (European Observatory for Health Systems and Policies, 2007)

Generally, definitions adopt three dimensions of performance measurement: "effectiveness," "efficiency," and "relevancy." These dimensions focus on the quality of healthcare, cost-effective delivery of services, and satisfying stakeholders, respectively.

There are universal characteristics that must be available in any health system. First, the right of all populations to have access to public or private healthcare services. The second relates to the cost of health services and the methods of coverage in the system. Third is the delivery of health services through employment, training, prices, regulation, and infrastructure. Fourth is the quality of professionals, staff, technology, consumer satisfaction, and more, while measurements of national and organizational outcomes continuously assess quality (OECD, 2016).

A study of the characteristics of low-performing health organizations investigated thirty-three articles from many countries and different settings, including acute care and outpatient care, with a wide range of interviewees including nurses, leadership, and staff (Vaughn et al., 2019). The authors identified five domains: poor organizational culture (limited ownership, not collaborative, hierarchical, with disconnected leadership), inadequate infrastructure (limitations in quality improvement, staffing, information technology or resources), lack of a cohesive mission (the mission conflicts with other

missions, is externally motivated, poorly defined or promotes mediocrity), system shocks (e.g., leadership turnover, a new electronic health record system, or organizational scandals that detract from daily operations), and dysfunctional external relations with other hospitals, stakeholders, or governing bodies.

Identifying healthcare system characteristics helps systems and organizations overcome problems, improve their performance, and achieve their goals. Understanding and recognizing these characteristics may allow healthcare systems and their organizations to improve performance and face challenges. Therefore, healthcare systems need to learn from poor performance and challenges to improve their performance through gained knowledge and care-delivery experience.

## 2.2 Organizational and hospital performance

Organizations are a key component of national development, and they can only grow and progress through performance. Thus, organizational performance is one of the most important variables in management research, with no single agreed-upon definition. Consequently, successful organizations represent successful nations. Definitions of organizational performance in the last decade have focused on the organization's ability to efficiently employ available resources to consistently fulfill organizational objectives, in addition to considering their relevance to users (Peterson et al., 2003). Accordingly, the elements of organizational performance are efficiency (organizational resources), effectiveness (the connection between organizational goal and performance), and relevancy (stakeholders' satisfaction).

Lebans and Euske (2006, p. 71) provide a set of definitions to clarify the organizational performance concept: "performance is a set of financial and non-financial indicators which offer information on the degree of the success of goals and results." The understanding of performance depends on the person involved in the organizational performance assessment. It is essential to be able to quantify the results in order to report the level of organizational performance. In this sense, it is difficult to define the concept of organizational performance rather than the complex means of achieving it, due to the many differences among organizations in aspects such as financial, operational, and cultural structure.

Organizational performance directly and significantly influenced by organizational learning and knowledge management capability. While indirectly impacted by human resource management through knowledge management and organizational learning (Lin & Kuo, 2007).

Performance raise can happen if the staff feel engaged. Study of more than 2000 doctors in Germany show that the one who more engaged is the one with less mistakes (West & Dawson, 2012). A similar study on nurses show that safer patient care back to the higher engagement, patient safety as a measure should be enough to make the staff engagement in the health organization a priority. Where a strong engagement found, there is a lower mortality and infection rates, higher inspection score, and improvement of patient experience (West & Dawson, 2012). Hence, employee engagement raises patient satisfaction and thus improve the health organization performance that improve the overall healthcare sector performance.

Healthcare managers have a clear and important responsibility concerning patient safety and quality of care, which is one of their highest-priority roles (Kizer, 2001). They have a legal and moral obligation to strive for care improvement and ensure a high quality of patient care, in addition to managing systems, policies, and procedures. Leadership is an important matter, as recognized in the literature on leadership and organizations. Leadership has the strongest effect through organizational and individual interactions, where the success of collaborative efforts depends on leadership competency and the ability of management. Lee (2009) describes leadership as individual behavior that guides a group to accomplish mutual goals. Outstanding leaders act to achieve organizational goals, satisfy their subordinates' needs, and inspire them to increase their efficiency. Therefore, healthcare performance is positively affected by strong management and leadership.

Evidence-based practice indicates that in order to implement quality improvement plans successfully, managers must try to understand and clarify problems, encompass key individuals in the process of developing plans, and continuously monitor progress (Hughes, 2008). The managers in an organization are the link between upper management and front-line workers, which makes them responsible for quality improvement plans and activities (Kjøs et al., 2010). Another major role for managers is providing primary support for staff and managing day-to-day activities (Zjadewicz et al., 2016). Since the staff interact daily with patients at hospitals, the role of managers in supporting and motivating staff is a critical element for implementing quality improvement measures.

Hospital performance can be improved by understanding patient satisfaction. Moreover, it is essential to develop a conceptual framework in order to develop a performance measurement scheme. One of the key elements of health organizational performance measures is patient satisfaction (Press & Fullam, 2011), which reflects organizational performance and can improve the health system.

Private hospitals aim to provide the best possible healthcare to patients, as is the patients' right. Delivering optimal services and satisfying patients is the responsibility of every staff member of a hospital. Assessing patient feedback can provide information about services and support future evaluation. The long-term survival of any hospital depends on faithful patients who return or recommend the hospital to others. Satisfied patients continue to use healthcare services and develop relationships with specific healthcare providers (Moore, 2008). Patient satisfaction requires healthy and engaged employees, an environment for building capacity, an organizational culture that values employees, a system that helps employees excel, and leadership that is committed to organizational goals (Lowe, 2010). Therefore, team engagement and patient feedback are crucial to success and improve the performance of any organization.

## 2.3 Quality care and patient satisfaction

Quality is a strategic tool for sustaining a competitive advantage, as people constantly seek quality services and products. This desire for quality drives organizations and firms worldwide to consider it an essential component of any production process or service. Improving structures and processes also improves quality, therefore reducing waste, delays, repeated work, and costs, while improving the company image and market share

(Lagrosen et al., 2005; Rahman, 2001). Evidence-based care, shared decision-making and team-based approaches, deliver more efficient care, and care to target patient and community needs, were critical to the organization to succeed in patient-centered care and high-quality care delivery (Cosgrove et al., 2012). As a result, quality improvements can also improve profitability and productivity (Alexander et al., 2006). Therefore, defining, measuring, and improving the quality of healthcare services is very important.

Defining quality is difficult and varies with perspective and context. Quality is more difficult to define in the healthcare sector than in any other due to its simultaneity, heterogeneity, and intangibility. Healthcare services are produced and consumed simultaneously. Thus, no judgment about quality can be made before consumption, which makes it difficult to control quality (Ladhari, 2009). It is the provision of healthcare through different providers (e.g., nurses, physicians, etc.), and the variation of patients' needs that makes healthcare services heterogenous, rather than the differences between places, procedures, and customers (Mosadeghrad, 2012). Finally, as a healthcare customer, it is impossible to feel, measure, or view the product like any other manufactured good; this intangibility of healthcare services means that they cannot be tested for quality before they are used (McLaughlin & Kaluzny, 2006). Therefore, healthcare outcomes are not definite.

Øvretveit (2009) defined quality care as the "provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available." The system he developed for quality healthcare improvement is based on three dimensions: quality of management (delivering the services in a resource-efficient way),

healthcare provider quality (professionals' perspective in regards to using the correct procedures and techniques to meet consumer needs professionally), and client quality (whether the consumers feel that they get the services they want). High-quality healthcare "provid[es] patients with appropriate services in a technically competent manner, with good communication, shared decision-making, and cultural sensitivity" (Schuster et al., 1988).

Patient satisfaction is a commonly used indicator for measuring healthcare quality and can affect clinical outcomes (Tabbish, 2001). The definition of patient satisfaction is still not clear and depends on individual experience and background (Ware et al., 1978). Asadi-Lari et al. (2004) define patient satisfaction as "the extent of an individual's experience compared with his or her expectations." Another definition from a study that reviewed the patient satisfaction literature was the "positive evaluation of distinct dimensions of the healthcare" (Linder-Pelz, 1982). Patient satisfaction is affected by the perception of care and reflects a high-quality organization (Gebhardt et al., 2013). Therefore, the continuous collection of patient feedback can help hospital management improve care quality and focus on aspects that need improvement (Jackson, 1997; Rubin et al., 1993).

Efforts to improve healthcare quality must consider the perspectives, priorities, and desires of the stakeholders. Many quality assessment studies have been carried out for healthcare organizations (Jun et al., 1998; Padma et al., 2009), and a few studies have identified the factors affecting the quality of healthcare services. There have been very few studies of the Palestinian healthcare system (Sultan & Crispim, 2018), and few

studies regarding patient satisfaction. Most studies have been limited to the perspective of one healthcare stakeholder. This study aims to fill this research gap by exploring the perspectives of healthcare managers, providers, and patients on factors that affect the quality of healthcare services in Palestinian healthcare organizations.

# Chapter 3: Research Methodology

This study aimed to identify strategies in public and private hospitals to improve healthcare performance and patient satisfaction in the Palestinian healthcare sector. Data was collected using a quantitative approach involving three different questionnaires for the three components of the study: patients, healthcare providers, and healthcare managers. The study was conducted in August and September 2019 in governmental, NGO and private hospitals in the West Bank, in the cities of Ramallah, Nablus, and Hebron.

## 3.1 Research design

A cross-sectional study was conducted on a sample of healthcare managers in public, NGO and private hospitals with Questionnaire I (see Appendix A). In the second sample, healthcare providers were surveyed with Questionnaire II (see Appendix B), and the responses were evaluated for variation between the two groups. Questionnaire III (see Appendix C) was used to survey a sample of inpatients who were attending hospitals in Ramallah, Nablus, and Hebron in August and September 2019.

## 3.2 Ethical considerations

Close adherent to ethical principles in this study applied as in the social sciences. Respecting confidentiality at all times and any information status classified as confidential, in addition to respondent anonymity protection. Healthcare managers, healthcare providers and patients were informed about the purpose of the study prior to conducting the questionnaire and informed that the participation will be voluntary.

## 3.3 Study Limitations

Limitations affected the case study. First, the study sample had small size for healthcare managers due to a limited number of hospitals managerial positions. Second, the population of the study limited to hospitals in west bank only due to in ability to reach Gaza strip, Palestine. Third, the study results may not be generalizable to other healthcare organizations. Forth, the study population limited to hospitals that decided to participate in this study.

## 3.4 Data collection method

As the purpose of this study was to investigate and recommend strategies to improve the healthcare sector and patient satisfaction in the West Bank, the self-administered survey methodology was found to be an appropriate instrument for data collection. This method was selected because it is effective when the investigator does not require control or has no control over the events (Yin, 2014). Secondly, if the sample information is assessed accurately, the researcher can draw conclusions about the generalization of the finding to the whole population (Creswell, 1997). Thirdly, the method is appropriate when it is necessary to determine the relationships and correlations between variables to answer the research questions (Sekaran, 2003, p. 126).

Moreover, the questionnaire is the most appropriate method for collecting patient satisfaction feedback, usually conducted after an inpatient is treated in a hospital. It is also appropriate for employee surveys because employees tend to be more honest when they are answering questionnaires rather than in face-to-face interviews. Questionnaires are inexpensive, can survey many people precisely, can be completed at the respondent's

convenience, are anonymous and confidential, and allow respondents to be honest and free of fear. The method's disadvantages include low response rates, the possibility of misinterpretation by respondents, and the misleading results of poorly designed surveys.

Formal letters from the master program coordinator at Arab American University was sent to all hospital directors as applicable to give permission for the researcher to conduct the study from managers and providers in the hospital in addition to the patients.

## 3.5 Instrument

Questionnaire I was designed by combining the Canadian Foundation for Healthcare Improvement's Assessment Tool (CFHI Assessment Tool, 2014) with another questionnaire (20 Questions to Ask Your Teams; Kuras & Moran, 1997). Both instruments were modified, and new constructs were added about strategic planning and its effectiveness. Twenty-six questions addressed skills, five addressed education, and nine addressed organizational performance. This questionnaire was used to help management analyze improvement frameworks that identify key attributes of high-performing healthcare organizations, capturing the management team's thoughts and expectations about their team and their organization. The goal of this survey was to improve the implementation process and achieve better organizational performance. The survey included 66 questions in eight categories, including hospital strategic planning, strategic planning effectiveness, team professionality, team engagement, team performance, information sharing, skills and education, and organizational performance. Sixty-six questions, excluding demographic data (see Appendix A), were approved. The questionnaire was translated into Arabic and then modified after pilot testing with five healthcare leaders.

Questionnaire II adopted the same items as Questionnaire I to assess team and hospital performance (excluding the strategic planning effectiveness construct) to compare the responses of the team with management's thoughts and expectations. The goal of this survey was to improve the implementation process and to achieve better organizational performance. The survey included 40 questions in six categories regarding team professionality, team engagement, team performance, information sharing, skills and education, and hospital performance. Finally, 40 questions, excluding demographic data (see Appendix B), were approved. The questionnaire was translated into Arabic and then modified after pilot testing with 10 healthcare providers.

Questionnaire III was designed by adopting the Patient Satisfaction Questionnaire PSQ-III as a reference, and 36 questions were developed. The National Center for Health Services Research (NCHSR) provided the foundation for PSQ-III. This tool surveys patient satisfaction using seven multi-indicator subscales: general satisfaction, interpersonal care, financial aspects, communication, technical quality, access and convenience, and time spent with the health provider. After studying the PSQ-III, the final patient satisfaction questionnaire includes different and mixed aspects related to admission information, patient room services level, communication skills, general satisfaction, and financial aspects. Finally, 40 questions, excluding the demographic data (see Appendix C), were approved after modifying the constructs. The questionnaire was translated into Arabic, and the test was modified after a pilot study was done on 15 patients (see Appendix C).

## 3.6 Pilot testing

A pilot test was performed to test the instruments. For Questionnaire I, five questionnaires were submitted to healthcare managers at one of Ramallah city hospitals. Ten questionnaires were submitted to healthcare providers at one of Ramallah city hospitals for Questionnaire II. Finally, 15 questionnaires were submitted to inpatients at two Ramallah city hospitals for Questionnaire III. The data were analyzed to clarify the questions. The pilot respondents were excluded from the study.

## 3.7 Sampling

A total of 37 healthcare managers were surveyed from six hospitals in the West Bank. Six positions were selected to be a part of the survey: Chief Executive Officer (CEO), Medical Director, Chief Nursing Officer (CNO), Chief Administrative Officer (CAO), Human Resources Officer (HR) and Hospital Supervisor. There are no available statistics regarding the total number of healthcare managers, but they are a small population compared to providers.

A total of 285 healthcare providers were surveyed, including nurses, physical therapists, radiology technicians, pharmacists, laboratory technicians, and medical doctors. While a total of 283 patients were surveyed. Our sample targeted six hospitals, including one governmental, three NGO and two private hospitals.

In regards to the patient questionnaire, patients over 18 years old who were admitted to the hospital were included in the study. For healthcare providers, medical doctors, nurses, laboratory technicians, physical therapists, pharmacists and radiology technicians were

included. Lastly, for healthcare managers, CEOs, CNOs, CAOs, HRs, medical directors, and hospital supervisors were included in the study.

Patients under 18 years old or those admitted in Intensive Care Units (ICUs) who could not communicate were excluded. Healthcare managers and providers within specialties not listed above were excluded.

The result of this study based upon the information conducted from a random sample of inpatients, healthcare providers and healthcare managers in targeted hospitals. The selection of sample based in a process of convenient sampling. Many morning and evening visits accomplished to each hospital involved in the study in order to conduct the sample. The surveyed population from the three groups based on the availability at the time of visit.

The selection of hospitals based first by convenient selection of the city, then fourteen major secondary and tertiary hospitals located within these cities listed to be included in the study sample. After contacting the listed hospitals, only six hospitals accepted to participate in this study.

## 3.8 Measurements:

Each indicator in the three questionnaires was measured on a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). The score for each domain was calculated by summing a respondent's answers to all of the indicators in each domain. The Likert scale was adopted because the questions can be answered quickly and easily

(Churchill, 1995). A seven-point scale was used because the human mind can hold about seven indicators using short-term memory and the attention span can encompass about six objects at a time (Miller, 1956). Moreover, an odd number is preferable in order to have a neutral mid-point (Neumann, 1981). A nominal scale was used in the questionnaires about hospital type and insurance type.

# Chapter 4: Data Analysis and Research Findings

## 4.1 Introduction

This study analyzes the performance of the Palestinian healthcare sector, including its governmental, NGO, and private components. It also investigates whether the effectiveness of strategic planning in hospitals correlates to hospital performance.

This chapter presents the analysis of the data collected from the six hospitals that participated in the study. The Statistical Package for the Social Sciences (SPSS) version 23.0 was employed for data analysis, including data screening, reliability analysis, validity, normality testing, descriptive data analysis, and inferential analysis.

The chapter begins with a discussion of the validity and reliability of the data collection tool, the constructs used in the study, and the collected data. The chapter then proceeds with a detailed description of the samples by describing their profiles. Next, the chapter presents the results of the descriptive analysis of the constructs included in the study. The core parts of the study to critically analyze healthcare sector performance through the three pillars were data collection for healthcare managers, healthcare providers, and patients, as well as distinguishing between the type of sectors that form the healthcare sector.

In addition, the chapter presents the data analysis for the healthcare manager questionnaire and healthcare provider questionnaire to compare the responses from both sides. As most of the constructs and indicators used in these surveys are the same, this

comparison aims to describe the variation between the two groups. Finally, the chapter presents the data analysis of the patient satisfaction questionnaire.

## 4.2 Data Screening and Reliability Analysis

This section presents tests of the credibility, validity, and suitability of the dataset for use in further analyses, including the detection of missing data and outliers as well as normality and homogeneity tests.

### 4.2.1 Missing data

We screened all questionnaires collected in the course of the study for missing data prior to data entry. Though this step is rather trivial, it is important for facilitating data entry. Hair et al. (2010) consider missing data a serious problem for data analysis, arguing that missing data can significantly affect study results. Indeed, some data analysis techniques, including chi-square and goodness-of-fit, cannot be computed if any data is missing from the dataset. Additionally, it is important to determine what type of values are missing and whether the missing values occur intentionally. If the missing values are randomly distributed within the dataset, they can be considered random and can be ignored. However, if the missing values are non-randomly distributed, it is necessary to question the phenomenon, and issues with the generalizability of the results may arise (Pallant, 2010). Schumacker and Lomax (2004) recommended that the percentage of missing data in any study should not exceed 5%; levels below this are tolerable in subsequent data analysis steps. Upon examining our dataset using SPSS, we determined that there is no missing data for the entire data set included in the study. This is likely due to the awareness of data collection personnel, who were trained before collecting the data. In

addition, the data collectors were registered nurses working in hospitals. Thus, concerning missing data, the dataset is complete and adequate for further analysis.

### 4.2.2 Outliers

An outlier is any observation with a unique characteristic that markedly distinguishes it from other observations (Hair et al., 2006). Hence, identifying and addressing outliers is important for any professional data analysis. Outliers inevitably affect the normality of data and thus affect the results of many data analysis techniques and tests. Tabachnick and Fidell (2007) recommended that extreme outliers should be detected and removed from the dataset.

Two kinds of outliers can be defined. The first is univariate outliers, which deal with single variables. Many scholars do not consider Likert-scale variables as having outliers unless the responses are incorrectly entered into the dataset. The dataset was tested using SPSS, and some values were found to be located outside the acceptable range. This range was defined by the maximum and minimum of a boxplot. These values were reviewed by referring to the questionnaire number and corrected. The dataset was examined again for univariate outliers, and none were found.

Multivariate outliers are the second kind of outlier. These refer to records that do not fit the standard set of correlations exhibited by the other records in the dataset with regards to our causal model. Upon examining the dataset for multivariate outliers, none were found.

### 4.2.3 Normality test

According to Hair et al. (2010), it is essential to test the presence of normality in multivariate analysis. In other words, a non-normal distribution may affect the validity and reliability of the results. We applied the Kolmogorov–Smirnov test for normality to the dataset, which confirmed that all the variables did not have a normal distribution since all p-values for the test were less than 0.05. As a result, we used nonparametric tests for data analysis. For further confirmation and validity, we calculated the skewness and kurtosis of the scale variables.

### 4.2.4 Reliability Test

Reliability refers to the fact that a scale should systematically reflect the construct it is measuring. Reliability analyses calculate several commonly used measures of scale reliability and provide information about the relationships between individual indicators in the scale. We tested the reliability of the constructs included in the study using Cronbach's alpha. Cronbach's alpha measures the internal consistency of any construct. In particular, it measures the closeness of a set of indicators (as measured by the questions used in the construct), determining whether they belong to the same construct and thus measure the same thing. SPSS was employed to explore the reliability of the constructs contained in the study. The tests showed that all constructs used in the study had a high level of reliability, ranging from 0.858 to 0.971, and a Cronbach's alpha value far above 0.7, which is the acceptable level of reliability.

## 4.3 Profile of respondents

In this section, the demographics of the study will be analyzed through a descriptive analysis of the dataset collected from the study sample. The respondent profile was measured by organization sector and location. These variables were selected to evaluate the strategic planning effectiveness of Questionnaire I through healthcare managers in Section 4.4.1. Section 4.4.2 presents a descriptive analysis for Questionnaires I and II to evaluate hospital performance through healthcare managers and healthcare providers. Finally, hospital performance through patient satisfaction for Questionnaire III is discussed in section 4.5. The respondent profile is discussed below.

The total sample of healthcare managers included 37 managers. 45.9% of the sample were from NGO hospitals, 32.4% of the sample were from private hospitals, and 21.6% were from governmental hospitals. The distribution of the sample by city was 51.4% from Ramallah, 32.4% from Nablus, and 16.2% from Hebron.

The total sample of healthcare providers included 285 providers. 30.9% of the sample were from governmental hospitals, 46.7% were from NGO hospitals, and 22.5% were from private hospitals. The sample distribution by city was 54.4% from Ramallah, 24.9% from Hebron, and 19.6% from Nablus.

## 4.4 Descriptive analysis of questionnaires for healthcare managers and providers

This section presents and discusses the results of the descriptive analysis conducted on the variables of the study regarding healthcare managers and healthcare providers. The discussion begins with strategic planning and its effectiveness, which was only measured for healthcare managers. Next, we discuss organizational performance for both healthcare managers and healthcare providers, whose questionnaires had the same questions to facilitate comparisons between the two groups' responses. The results include the constructs' means, standard deviations, and standard errors.

### 4.4.1 Descriptive analysis of the healthcare managers sample according to hospital strategic planning

The distribution of the strategic planning sample shows that 91.9% of the hospitals had a strategic plan. On the other hand, 8.1% of the managers, representing three managers from three different hospitals, responded that their hospitals did not have a strategic plan.

The sample distribution in regards to the hospital management experience with strategic planning shows that 83.7% of managers rate themselves from good to excellent in preparing strategic plans, while 13.5% consider themselves to be fairly experienced. 2.7% stated that they had no experience in preparing a strategic plan.

As indicated by Table 1, the average responses of the strategic planning sample are above 5.0 out of 7.0, with a standard deviation of approximately one. This generally indicates that the overall attitude toward this construct ranges from four (neutral) to six (agree).

**Table 1: Results of the descriptive analysis of strategic planning effectiveness**.

| Construct averaged over all indicators | Mean | Standard deviation | Standard error |
|---|---|---|---|
| **Effectiveness of strategic plan** | 5.157 | 1.150 | 0.197 |

The results indicate a positive attitude in regards to strategic planning effectiveness. There is a small variation in the response of healthcare managers. The last column reported in Table 1 is the standard error measured for the sample, which measures the representativeness of the sample to the whole population. A value of approximately 0.2 was estimated, which means that 68.2% of the responses of the total population range between the average values ±0.2 (standard error). This value can also be used to define the confidence interval of the study, where the 95% confidence interval for the construct is estimated by the mean ±2 (standard error). Therefore, the confidence interval of the effectiveness of strategic planning ranges from 4.75 and 5.55. This means that we are 95% confident that the true average of strategic planning effectiveness of the population is between 4.75 and 5.55. This relatively small range indicates that the sample has a high level of representativeness of the population.

**Figure 1: Responses of healthcare managers in all hospital types in relation to strategic planning effectiveness.**

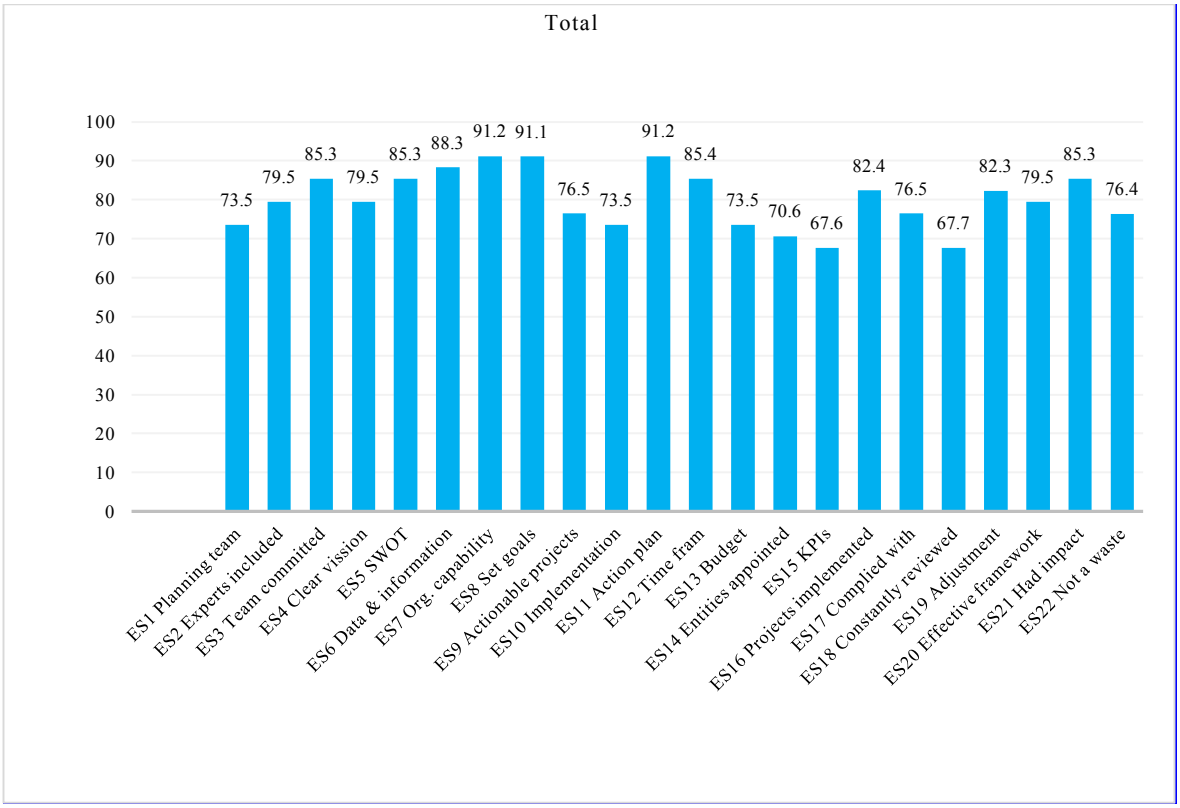



Figure 1 shows that strategic planning effectiveness was 80% in all hospital sectors. In governmental hospitals, managers reported the effectiveness of strategic planning as 77.8%. In NGO hospitals, the effectiveness was 82.7%, and in private hospitals, it was 78.1%. Most of the indicators evaluated were similar across the three types of hospitals, with some variations as described below.

In regards to key performance indicators (KPIs), 67.6% agreed ("somewhat agree" to "strongly agree") that KPIs were developed to measure compliance with the objectives of the plan. In the governmental sector, 37.5% of managers believed that KPIs were developed, compared to 73.3% in NGOs and 81.9% in the private sector.

The result also shows that only 67.7% of managers across all hospital types thought that the plan was constantly reviewed to adapt to changes ("somewhat agree" to "strongly agree"). The governmental hospital percentage drops to 37.5%, while NGO hospitals reported 86.7% and private hospitals 63.7%.

The budget is one of the key elements to succeed in applying a strategic plan. 73.5% of managers across all hospital types responded from "somewhat agree" to "strongly agree" to whether a budget was set for implementation. In the governmental sector, only 37.5% agreed, while 86.7% agreed in NGO hospitals and 81.9% in private hospitals.

100% of the managers in the governmental sector agreed that the planning team included experts. On the other hand, 86.7% of the managers in the NGOs sector and 54.6% in the private sector agreed that experts were included in the team.

Translating the strategic plan's goals into implementable bylaws, instructions, and actionable projects is one of the indicators of successful implementation. 75% of the managers in governmental hospitals agreed that this occurred, while 80% agreed in NGO hospitals and 63.7% in private hospitals.

The questionnaire also asked managers whether they thought the efforts and resources spent to prepare a plan were a waste. 37.5% of managers in governmental hospitals agreed that it was a waste of time and resources, while 19.9% of NGO hospital managers and 18.9% of managers in private hospitals believed it was a waste.

### 4.4.2 Descriptive analysis of study variables

This section presents and discusses the results of the descriptive analysis conducted on the study variables from healthcare managers and healthcare providers in the area of healthcare sector performance. The results include the constructs' means, standard deviations, and standard errors.

#### 4.4.2.1 Health sector performance

This subsection covers the results of the descriptive analysis of all constructs included in the area of healthcare sector performance. These dimensions of healthcare sector performance were adopted to have a clear idea about this aspect of the study. Six different constructs were investigated, and each assesses and quantifies a certain dimension of healthcare sector performance:

1. Team professionality
2. Team engagement
3. Team performance
4. Information sharing
5. Skills and education
6. Hospital performance

For each of the above-mentioned dimensions, a scale was developed, which consists of questions that measure some aspect of each of the aforementioned constructs. The table below shows the results of the descriptive analysis for each construct. Note that before performing the analysis on the constructs, we calculated the average by adding up all

indicators belonging to the same construct and divided by the number of indicators of each construct. Table 2 reports the results of the descriptive analysis of the aforementioned constructs for the area of healthcare sector performance.

**Table 2: Results of descriptive analysis of the dimensions of health sector performance.**

| Constructs averaged over all indicators | Mean | | Standard deviation | | Standard error | |
|---|---|---|---|---|---|---|
| | Managers | Providers | Managers | Providers | Managers | Providers |
| **Team professionality** | 5.168 | 5.160 | 1.338 | 1.423 | 0.220 | 0.084 |
| **Team engagement** | 5.350 | 4.814 | 1.260 | 1.392 | 0.207 | 0.082 |
| **Team performance** | 5.307 | 4.942 | 1.192 | 1.367 | 0.195 | 0.081 |
| **Information sharing** | 5.153 | 4.548 | 1.365 | 1.523 | 0.224 | 0.090 |
| **Skills and education** | 5.368 | 4.552 | 1.208 | 1.523 | 0.198 | 0.090 |
| **Hospital performance** | 5.356 | 4.711 | 1.362 | 1.514 | 0.224 | 0.089 |

**Healthcare managers**

As shown in Table 2, the average response of the healthcare managers sample in regards to healthcare sector performance was approximately 5.3 out of 7.0 with a standard deviation of approximately 1.25, which corresponds with “agree to a certain extent.” This generally indicates that the overall attitude toward these constructs ranges between four (neutral) and six (agree). The results indicate a positive attitude in regards to healthcare sector performance. There was a small variation in the response of healthcare managers. The standard error was also measured for the sample to determine how representative the sample is of the whole population. A standard error value of around 0.2 was estimated,

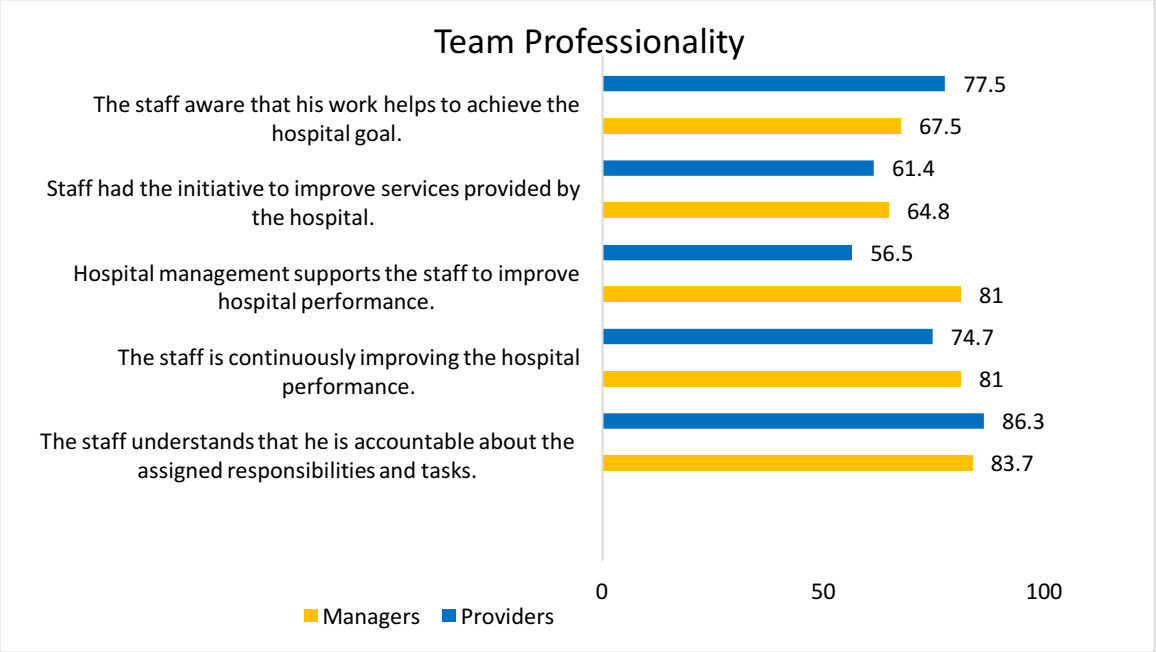
which means that 68.2% of the responses of the total population ranged between the average values ±0.2 (standard error). The standard error can also be used to define the confidence interval of the study. The 95% confidence interval for the construct was estimated as the mean plus or minus two standard errors. For example, the team engagement confidence interval ranges from 4.95 to 5.75. This means that we are 95% confident that the true average of team engagement for the population ranges between 4.95 and 5.75, which is a rather small range. This means that the sample is highly representative of the population.

**Healthcare providers**

As indicated by Table 2, the average response of healthcare providers in regards to healthcare sector performance is around 4.8 out of 7.0 with a standard deviation of approximately 1.45, which corresponds with "neutral" to "agree to certain extent." This generally indicates that the overall attitude toward these constructs ranges between three (somewhat disagree) to six (agree). The results indicate a neutral attitude in regards to healthcare sector performance. We observed a large variation in the response of healthcare providers. A standard error of 0.09 was estimated, which means that 68.2% of the responses of the total population fall between the mean value ±0.09 (standard error). As above, this value can also be used to define the confidence interval of the study, where the 95% confidence interval for the construct is estimated by the mean plus or minus two standard errors. For example, the team engagement confidence interval ranges between 4.62 and 4.98. This means that we are 95% confident that the true average team engagement of the population ranges between 4.62 and 4.98, which is a rather small range, indicating that the sample is highly representative of the population.

#### 4.4.2.2 Team professionality

**Figure 2: Healthcare managers' expectations versus healthcare providers' self-evaluation in regards to team professionality.**




**Healthcare managers**

Healthcare managers reported an overall level of team professionality of 75.6%, as shown in Figure 2. 83.7% of managers reported that team members were accountable for their responsibilities, 81% reported that their teams continuously improved hospital performance, and 81% claimed that they supported the staff to improve the hospital performance. These percentages reflect ratings from "somewhat agree" to "strongly agree" by managers.

64.8% of managers reported that the staff had the initiative to improve the provided services, and 67.5% responded that the staff were aware that they could achieve hospital goals. These responses show that hospital management believed that almost all the staff

had the initiative to improve services and were aware of the hospital goals, in addition to improving overall team professionality.

**Healthcare providers**

71.3% of healthcare providers evaluated themselves as a professional team across all indicators, as shown in Figure 2. 86.3% responded that they understood that they were accountable for their responsibilities and 74.4% reported that they continuously improved hospital performance. Only 56.5% agreed that hospital management supported the team to improve hospital performance, as rated from "somewhat agree" to "strongly agree." We observed a large gap between the responses of managers and providers in regard to the support of hospital management for the team in order to improve hospital performance. This gap is a critical point for improving team professionality and, thus, hospital performance and patient satisfaction.

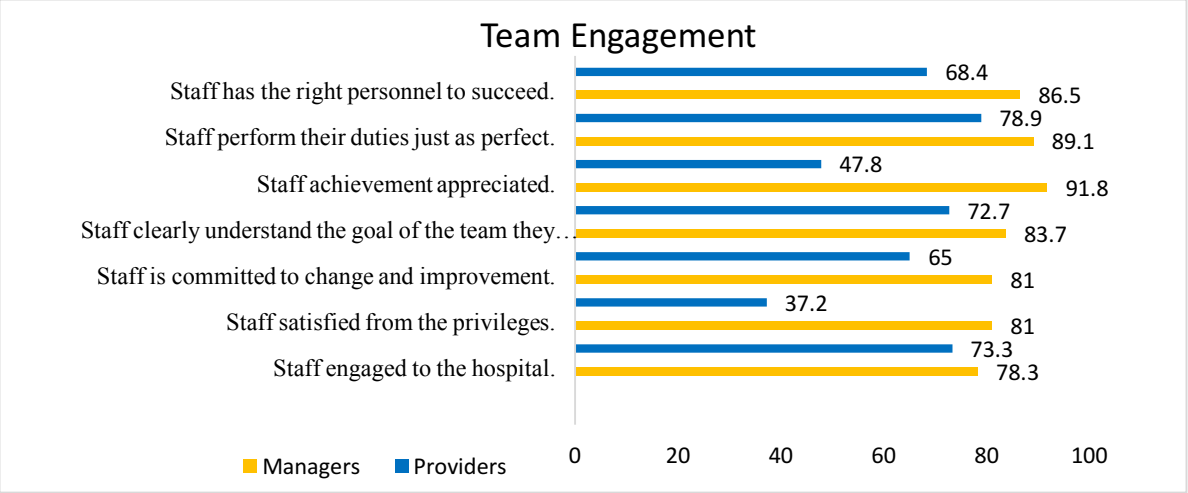
61.4% of healthcare providers evaluated themselves as having the initiative to improve the services provided, and 77.5% considered themselves to be aware that their work contributed to hospital goals.

We found a moderate positive correlation ($r^2 = 0.575$) between management support and team initiative (p-value = 0.000), with a significant correlation. Thus, increasing the support from managers will help the team to have more initiative. Also, staff who have initiative and who aim to improve hospital services will help to achieve hospital goals, and this was strongly and positively correlated ($r^2 = 0.668$) and significant (p-value = 0.000). On the other hand, being accountable for one's responsibilities was strongly and

significantly correlated ($r^2 = 0.691$; p-value = 0.000) with achieving hospital goals, and the same is true of improving hospital performance. In sum, all the team professionality indicators were positively and significantly correlated to each other, from moderate to strong correlation.

#### 4.4.2.3 Team engagement

**Figure 3: Healthcare managers' expectations versus healthcare providers' self-evaluation in regards to team engagement.**




**Healthcare managers**

Figure 3 shows that managers evaluate their employee engagement quite highly, with an average of 84.5% of managers responding from somewhat agree to strongly agree across all indicators. 78.3% reported that their staff was engaged with the hospital. The highest evaluation was given to staff appreciation, with 91.8% of managers claiming that they appreciated their team.

81% of managers claimed that the staff were satisfied with the privileges given to them and committed to change and improvement. Other beliefs from management about staff include the following: 83.7% reported that the staff understood the goal of their team, 89.1% said that the staff performed their duties perfectly, and 86.5% said that they had the right personnel to succeed. This level of team engagement leads to a high level of organizational performance, and management must continue to support and raise it.

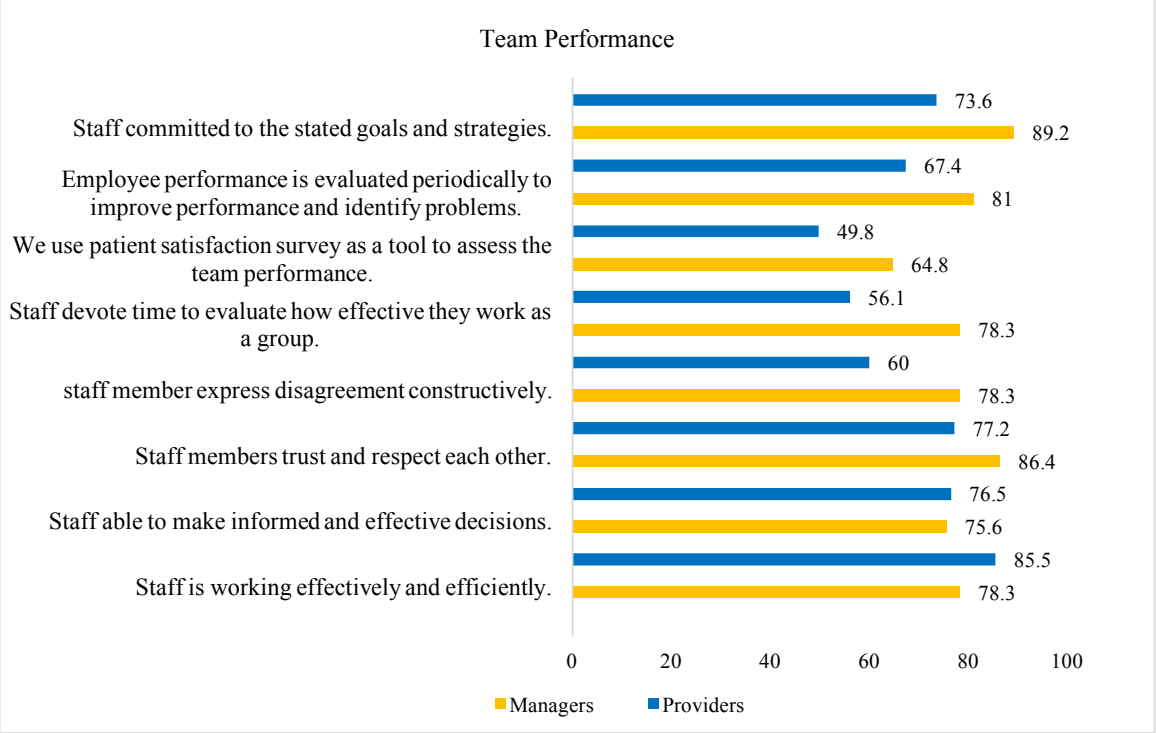
**Healthcare providers**

Only 63.3% of providers reported being engaged in their work (measured as those who responded "somewhat agree" to "strongly agree" for the engagement indicators), as shown in Figure 3. The lowest score was for providers' satisfaction regarding their privileges (37.2%), which varied widely from managers' expectations (81%). Similarly, a gap was found between providers (47.8%) and managers (91.8%) in regards to the appreciation of staff achievements.

65% of staff reported being committed to change and improvement, while managers expected 81%. This might be explained by the staff's dissatisfaction with their privileges. 68.4% of providers believed that they had the right personnel to succeed, while 78.9% claimed that they performed their duties perfectly.

#### 4.4.2.4 Team performance

**Figure 4: Healthcare managers' evaluation versus healthcare providers' self-evaluation in regards to team performance.**




**Healthcare managers**

The overall team performance evaluation by managers was 78.6%, as shown in Figure 4. The highest evaluation was given for staff commitment to the stated goals and strategies (89.2%), while the lowest evaluation was given to the use of patient satisfaction surveys as a tool to evaluate team performance (64.8%).

**Healthcare providers**

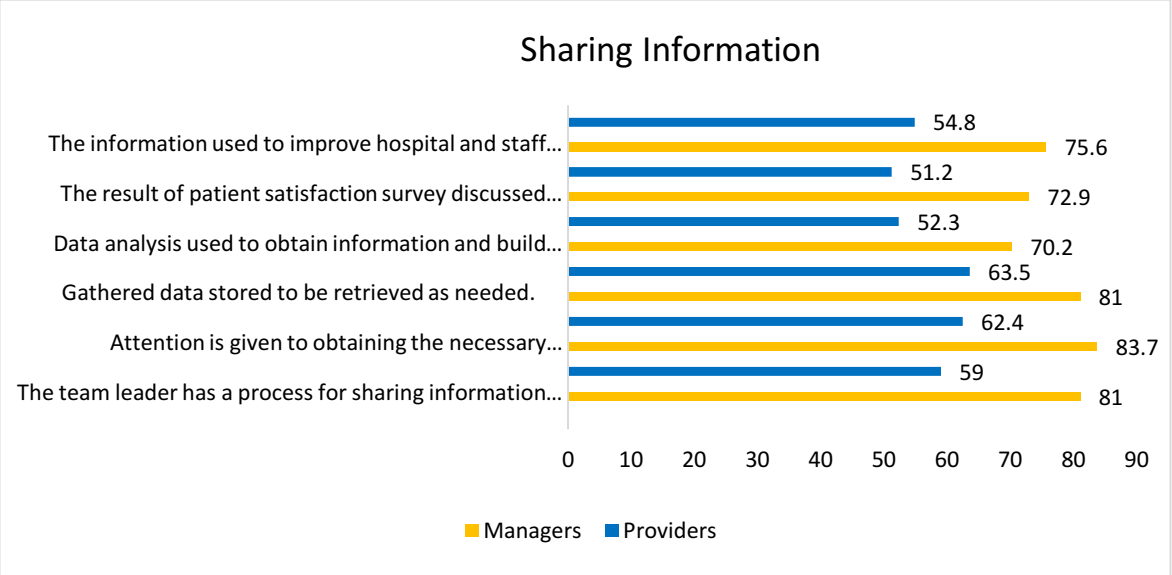
68.2% of healthcare providers rated their team performance between “somewhat agree” and “strongly agree.” The highest indicator was for staff working effectively and efficiently (85.5%). On the other hand, the lowest score was for using the patient satisfaction survey as a tool to evaluate team performance (49.8%).

60% of the providers reported constructive disagreement between team members as rated from “somewhat agree” to “strongly agree.” This could indicate the presence of conflict

between team members, heterogeneous teams, or the presence of injustice and unfairness in some aspects of the work environment. On the other hand, the managers' evaluation for constructive conflict was (78.3%), which might indicate that hospital management is not close to the team and their conflicts.

#### 4.4.2.5 Information sharing

**Figure 5: Healthcare managers versus healthcare providers vision in regards to information sharing.**




**Healthcare managers**

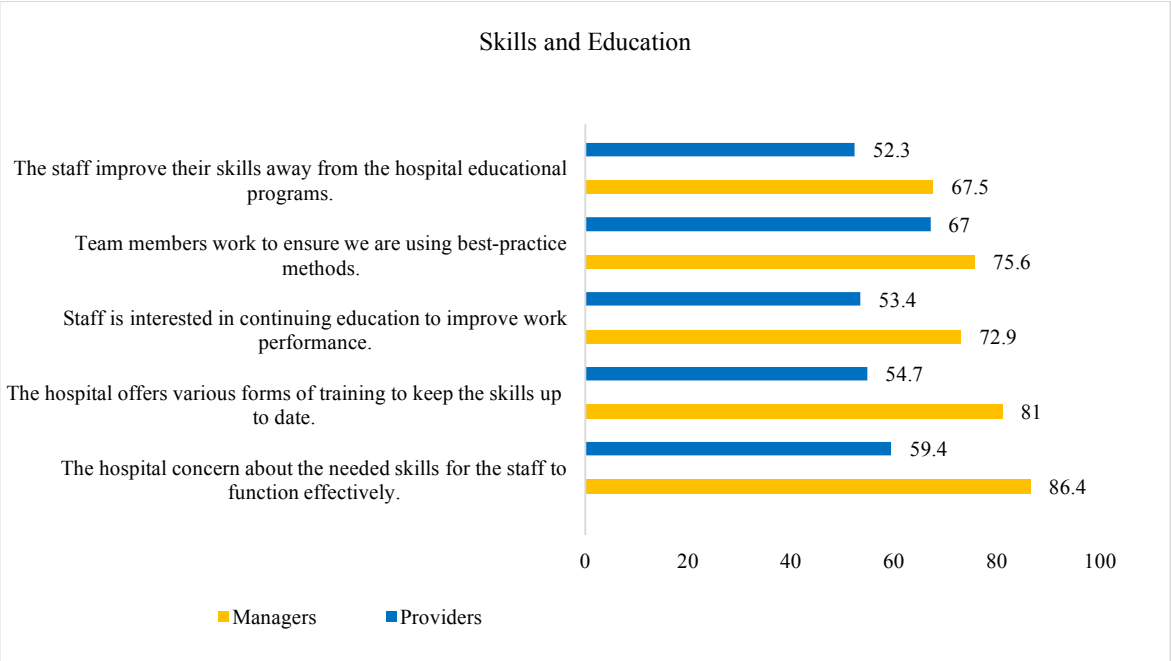
As Figure 5 shows, 77.4% of managers reported that they shared and used information, including responses from "somewhat agree" to "strongly agree." Including responses from "neutral" to "strongly disagree," 29.8% of managers reported that they did not use data analysis to build knowledge, 27.1% reported that they did not discuss the patient satisfaction survey result with staff, and 24.4% reported that they did not use the information to improve hospital performance.

**Healthcare providers**

Only 59.6% of healthcare providers rated the level of sharing and usage of information by hospital management from "somewhat agree" to "strongly agree." Moreover, 47.7% of providers reported that they did not benefit from data to build knowledge, as rated from neutral to strongly disagree. This result may reflect the low level of information sharing and the availability of information from management and responsible committees. 48.8% of providers stated that management did not share patients' satisfaction survey results with them. 45.2% of providers reported that they did not use the available information to improve organizational performance. Therefore, providers in the healthcare setting need to initiate the information sharing process in order to be an active part of improving hospital performance and patient satisfaction.

### 4.4.2.6 Skills and education

**Figure 6: Healthcare managers' versus healthcare providers' perspectives in regards to skills and education.**



**Healthcare managers**

76.6% of healthcare managers rated the hospital from somewhat agree to strongly agree in regards to skills and education indicators. Including responses from "neutral" to "strongly disagree," 32.5% believed that their staff did not seek educational programs away from the hospital, and 27.1% reported that their employees were not interested in continuous education, as shown in Figure 6.

86.4% of managers reported that their hospital was concerned about the skills necessary for their staff to function effectively. 24.4% claimed that their team did not use best-practice methods. 81% of managers agreed that their hospitals offered various forms of training to keep skills up to date. Healthcare managers should give greater attention to continuous education and improving the skills of their team in order to satisfy patients and improve hospital performance.

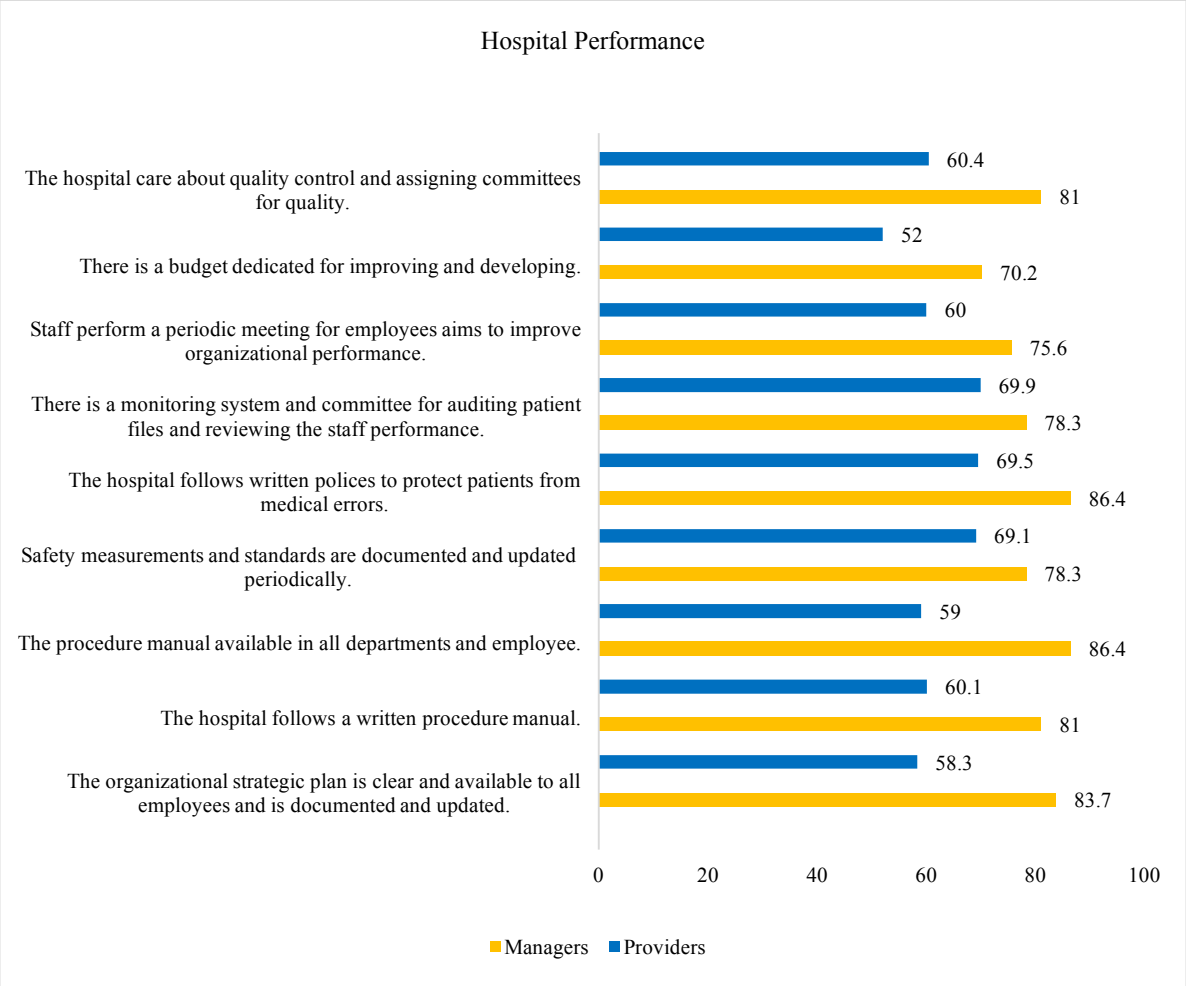
**Healthcare providers**

Only 58.5% of healthcare providers agreed on the importance of learning skills and continuous education in all aspects. 52.3% sought educational programs away from the hospital. 36.7% of all providers were not interested in continuous education, as rated from "neutral" to "strongly disagree," which is higher than managers' expectations. 59.4% of providers reported that their hospital was concerned about necessary staff skills, compared to 86.4% of managers. Best-practice methods were not used by 33% of the providers, which is higher than what managers expect. 50.7% of the employees agreed

that the hospital offered various forms of training, which is much lower than what the hospital management claimed.

#### 4.4.2.7 Hospital Performance

**Figure 7: Evaluation of hospital performance from perspective of healthcare managers and healthcare providers.**




**Healthcare managers**

Hospital performance was evaluated by hospital managers (80.1%) across all surveyed indicators, as shown in Figure 7. Here we note the same rating for the effectiveness of strategic planning (80%) as in Figure 1; thus, the two constructs were tested for an

existing relation in Table 5. 83.7% of managers responded “somewhat agree” to “strongly agree” on the clarity and availability of the strategic plan for their employees.

29.8% of the managers rated “neutral” to “strongly disagree” on the availability of a budget for improving and developing. This indicator could negatively affect hospital performance. 24.6% responded “neutral” or “disagree” in regards to periodic staff meetings aiming to improve performance. Regular staff meetings are essential to keep staff updated and could improve hospital performance.

Procedure manuals are important for staff to perform their jobs according to national or international standards, and for policies for patient safety and minimizing errors. 86.4% of managers claimed that manuals were available for all staff. Furthermore, 81% of managers claimed that the procedure manual was followed, as rated from “somewhat agree” to “strongly agree.”

Quality control is one of the most important departments in any hospital. 19% of managers rated “neutral” to “strongly disagree” on the availability or the effectiveness of this department. Therefore, healthcare managers need to focus more on quality control in order to improve overall organizational performance and satisfy their patients.

Monitoring and accountability is a core part of any organization. 78.3% of healthcare managers rated “somewhat agree” to “strongly agree” on having such a system. Given this percentage, managers should give more attention to this indicator to maximize staff performance and minimize any chance of medical errors.

21.7% of healthcare managers rated “neutral” to “strongly disagree” on documenting and updating safety measures and standards. This percentage may be considered quite high because it touches patients’ lives, leads to malpractice, and could increase the rate of medical errors.

**Healthcare providers**

Across all indicators, 62% of healthcare providers responded about the performance of the hospital they work for with “somewhat agree” to “strongly agree,” as shown in Figure 7. This is lower than what managers claim. 58.3% of the providers agreed on the clarity and availability of the strategic plan, which leads to a question: Are the other employees unaware of the plan, or is it absent? The question also arises of how a staff member could achieve organizational goals without knowing about the strategic plan, vision, mission, and values of their hospital.

48% of the providers stated that there is no budget for improving and developing, while 40% reported there is no periodic meeting aiming to improve performance, as rated from “neutral” to “strongly disagree.” Thus, the head of each department should initiate those meetings and target performance improvement.

As in other indicators, the percentage was found to be lower than what managers claim. 59% of providers stated that the procedure manual was available in all departments, suggesting that 41% of the staff were either unaware of or did not have access to a manual. 60.1% of healthcare providers reported that they followed the manual.

Quality control is one of the departments that all employees must interact with during employment, starting with orientation and continuing with reporting and instructions. However, 39.6% of the staff reported that hospitals did not care about quality control and quality committees, responding from "neutral" to "strongly disagree." The lack of quality control can lead to many issues inside hospitals, including infections and low-quality services.

Regarding the accountability and monitoring system, 69.9% of providers rated "somewhat agree" to "strongly agree." This relatively low percentage is lower than what management personnel claim. 30.9% of the providers rated from "neutral" to "strongly disagree" on documenting and updating safety measures and standards. This percentage is high, and much higher than what managers expect, which is a cause for alarm given the issue's importance.

## 4.5 Analysis of patient satisfaction questionnaire

### 4.5.1 Results of the demographic data analysis

The sample included 283 patients. 47.7% of the sample was from NGO hospitals, while 33.9% was from governmental hospitals, and 18.4% was from private hospitals. 51.6% was collected from Ramallah, 33.2% from Hebron, and 15.2% from Nablus.

58.3% of the sample were males and 41.7% were females. The majority of the study sample was insured with various types of insurance (85.5%). Most insured patients had governmental insurance (50.2%), while 14.5% had no insurance and thus paid for care themselves.

30.7% of the study sample held bachelor's degrees, while 26.9% had less than a high school education. 23% had completed high school, 17.3% held diplomas, 1.4% had a master's degree, and 0.7% held PhDs.

40.3% of the study sample rated their health as very good. 25.8% perceived their health as good, 21.6% as excellent. Unstable cases comprised 7.4%, while bad cases made up 3.5%, and 1.4% perceived their health as very bad. According to patients' hospital visits per year, the sample shows that 35% had one visit, 32.9% had from two to five visits per year, 17.7% had less than one visit, and 4.5% had more than five visits per year.

The distribution of the study sample according to patients' social status shows that 70.3% were married, 23.7% were single, and 6% were widowed or divorced. Concerning the clarity of the admission procedure, 44.9% of the sample reported that the admission procedure was clear, 33.9% stated that it was very clear, 14.8% that it was somewhat clear, and 6.4% that it was not clear.

46.6% of patients reported a high level of care at admission, while 24.4% rated the level of care as modest, 23.3% as very high, 4.9% as bad, and 0.7% as very bad. The distribution of the study sample according to medical intervention response level shows that 39.6% of the study sample rated the medical response as fast, 30% as very fast, 23.7% as modest, 4.6% as slow, and 2.1% as very slow.

The majority of the study sample had waited less than one hour before admission (62.2%). Others waited from one to two hours (17%), two to four hours (10.2%), four to six hours

(9.2%), or more than six hours (1.4%). The minimum waiting time was 0.1 hours and the maximum was 12 hours. The mean waiting time was 1.55 hours, with a standard deviation of 1.8 hours.

### 4.5.2 Descriptive analysis of patient satisfaction study variables

This section presents and discusses the results of the descriptive analysis conducted on the variables of the study from patients in the area of satisfaction to evaluate healthcare sector performance. The results include the constructs' means, standard deviations, and standard errors.

#### 4.5.2.1 Patient satisfaction

This subsection reports the results of the descriptive analysis of all constructs included in the area of patient satisfaction. Several dimensions of patient satisfaction were adopted to have a clear idea about this aspect of the study. Four different constructs were investigated. Each assesses and quantifies certain dimensions of patient satisfaction that reflect healthcare sector performance, as listed below:

1. Patient room services level;
2. Communication skills;
3. General satisfaction with the effectiveness of medical services; and
4. Financial aspects.

For each of these dimensions, a scale was developed consisting of questions measuring some aspect of each of the constructs. Table 3 reports the results of the descriptive analysis of each construct. Before analysing the constructs, the average was calculated by adding all the indicators within a construct and dividing by the number of indicators.

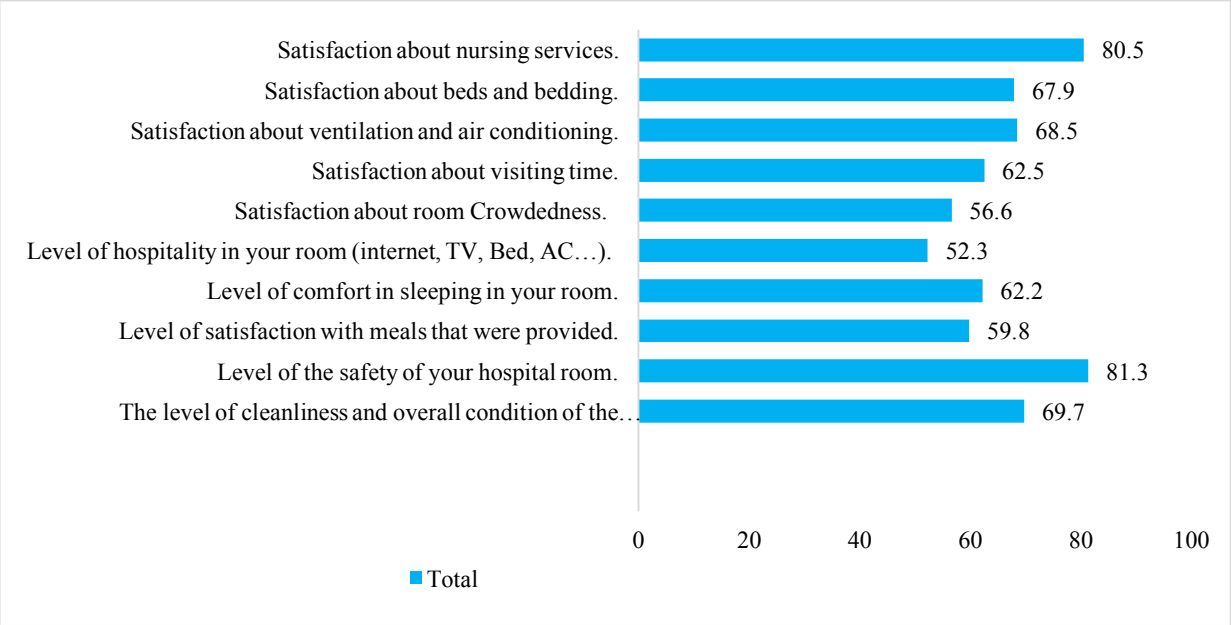
**Table 3: Results of descriptive analysis of the dimensions of patient satisfaction.**

| Constructs averaged over all indicators | Mean | Standard deviation | Standard error |
|---|---|---|---|
| **Patient room services level** | 5.13 | 1.389 | 0.082 |
| **Communication skills** | 5.69 | 1.152 | 0.066 |
| **General satisfaction about medical services level** | 5.61 | 1.148 | 0.068 |
| **Financial aspects** | 4.70 | 1.499 | 0.089 |

As indicated by Table 3, the average responses of the sample in regards to patient satisfaction is above 5.0 out of 7.0, which corresponds to "agree to certain extent," except the financial aspect above 4.0, with a standard deviation a round 1.3. This generally indicates that the overall attitude toward these constructs ranges between four (neutral) to seven (strongly agree), while the responses for financial aspects range between three (somewhat disagree) and six (agree). The results indicate patients' positive attitude towards healthcare sector performance. There was a large variation in the responses of patients. A standard error of approximately 0.08 was estimated. Accordingly, the confidence interval for patient room services ranges between 4.97 and 5.29. This means that we are 95% confident that the true average for patient room services is between 4.97 and 5.29, which is rather a small range. This means that the sample has a high level of representativeness of the population.

#### 4.5.2.2 Patient room services level

**Figure 8: Patient satisfaction with room services within the sector.**




Patients rated their satisfaction level for hospital room services (65.8%) for all indicators, from "somewhat high" to "very high," as in Figure 8. The highest was for the level of safety (81.3%), and the lowest satisfaction (52.3%) was with hospitality services like internet, TV, hospital beds, and air conditioning. Therefore, hospitals should improve the hospitality level to satisfy their patients and give them more comfort.

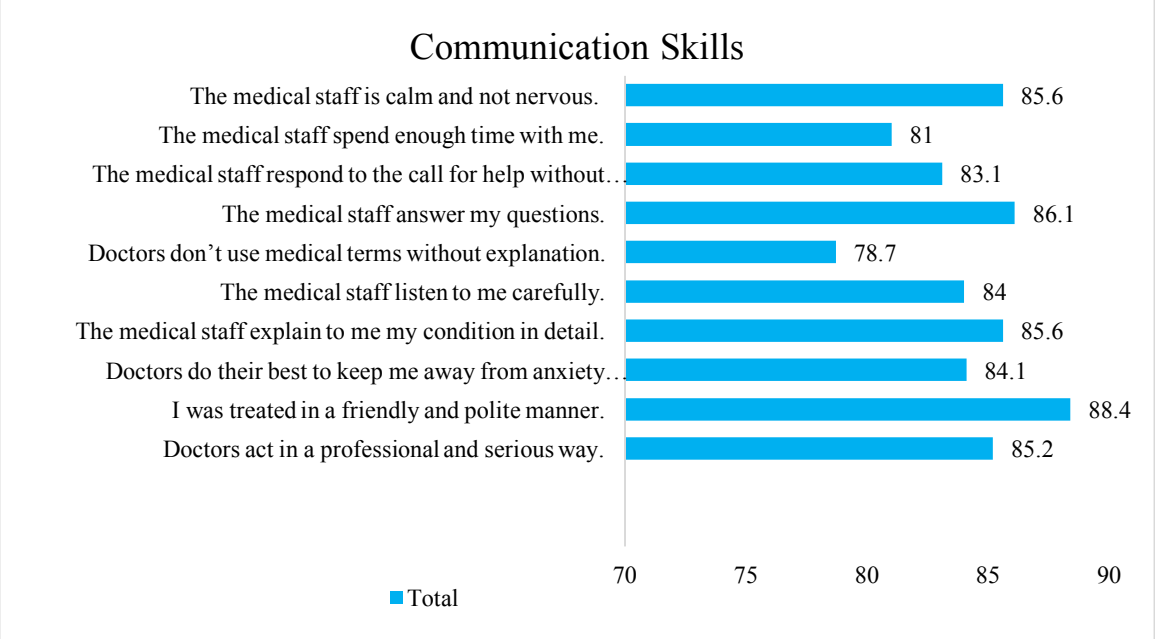
The level of satisfaction with the overall cleanliness of the rooms, including toilets and floors, was 69.7%, including responses from "somewhat high" to "very high." While meals are one of the most important services provided by hospitals, only 59.8% of patients were satisfied with the meals. Comfort while sleeping satisfied only 59.2% of the patients. This is related to patient satisfaction in regards to beds and bedding, which was rated from "somewhat high" to "high" by 67.9% of patients.

43.4% of patients were not satisfied with the room crowdedness, and 37.5% were not satisfied with visiting time, including responses from “neutral” to “strongly disagree.” Of the patients surveyed, 67.9% were satisfied with ventilation and air conditioning. This indicates that hospitals need to take care of maintenance and improving ventilation to improve infection control and minimize cross-infection between visitors, patients, and staff.

Nursing services are the backbone of any hospital. 80.5% of patients were satisfied with nursing services. Nursing and hospital management should increase this rate in order to increase hospital performance and give patients the best possible impression.

#### 4.5.2.3 Communication skills

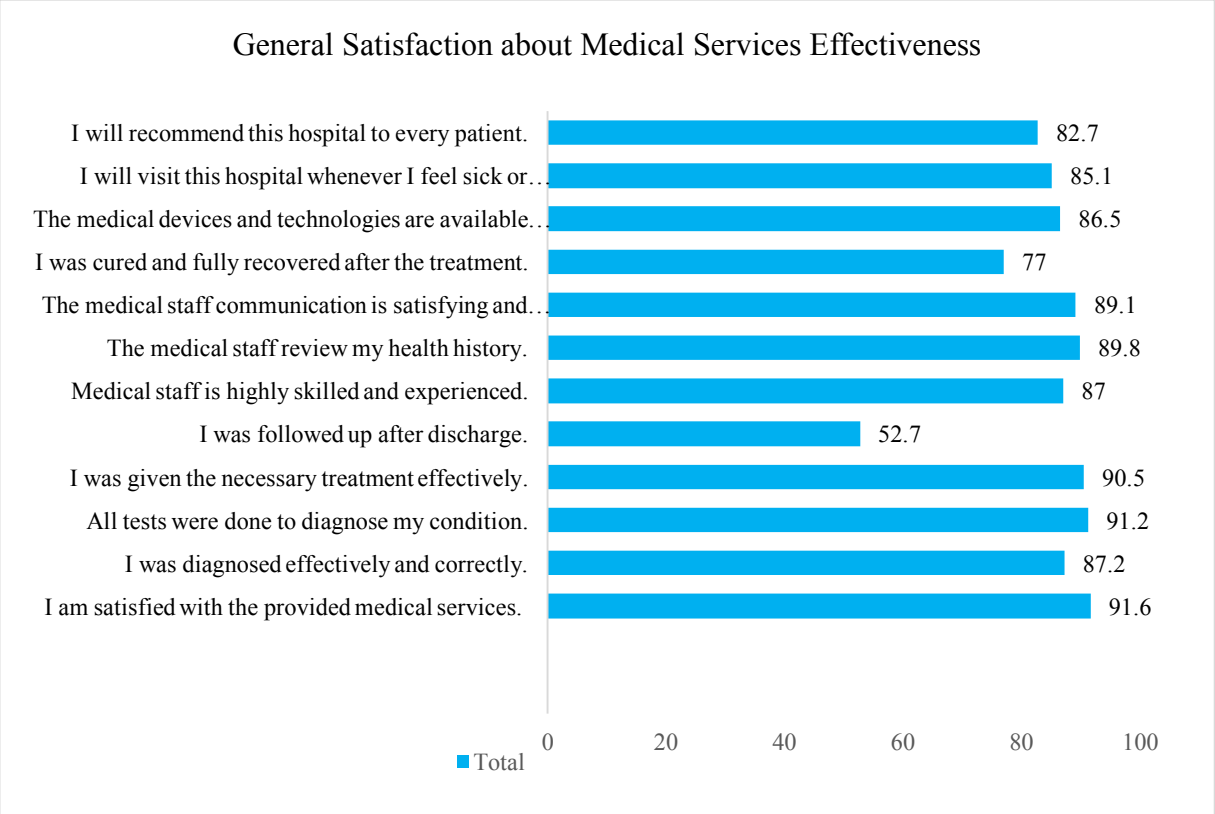
**Figure 9: Patient satisfaction with communication skills.**



Healthcare providers, including doctors, nurses, radiology and laboratory technicians, are an integral part of the healthcare system. 84.2% of patients rated the communication skills indicators as “somewhat agree” to “strongly agree.” 88.4% responded that they were treated in a friendly and polite manner, which is the highest score among the communication skills, as shown in Figure 9. 21.3% of patients were dissatisfied with the use of medical terminology without explanation from their doctors, and 19% stated that their doctors did not spend enough time with them, including responses from “neutral” to “strongly disagree.”

#### 4.5.2.4 General satisfaction with medical service effectiveness

**Figure 10: Patient satisfaction with general satisfaction in regards to medical service effectiveness.**



When patients were asked about their satisfaction in regards to medical services effectiveness, 84.2% were satisfied, rating these indicators from “somewhat agree” to “strongly agree.” The highest satisfaction from the provided medical services was 91.6%, which is excellent and seems to be unaffected by the aspects of hospital performance and the variation between managers and providers under this study.

Patients were least satisfied with follow-up after discharge. 47.3% of patients were not satisfied, rating the indicator from “neutral” to “strongly disagree,” as shown in Figure 10. Thus, hospitals need to initiate post-discharge follow-up programs by calling patients the day after discharge. This will satisfy patients and allow them to ask or clarify any concerns regarding their medical condition, improving treatment outcomes and hospital performance.

#### 4.5.2.5 Financial aspects

**Figure 11: Patient satisfaction with financial aspects.**

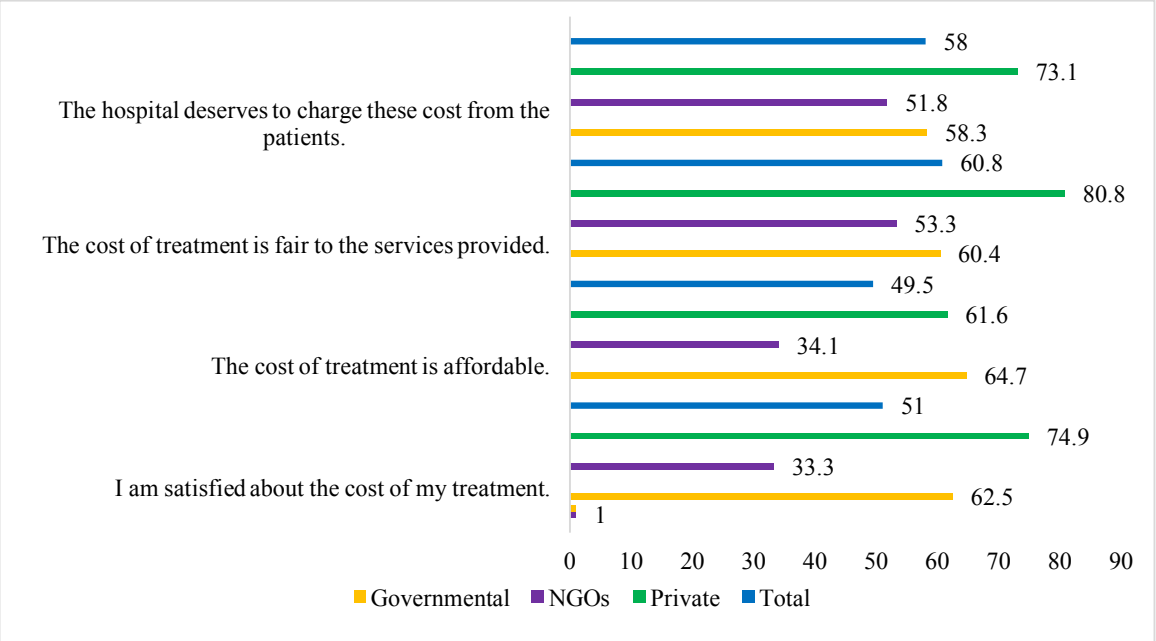


Figure 11 shows low patient satisfaction in regards to financial aspects, with a rating of 54.8% overall for all sectors. The highest satisfaction per sector was for private hospitals (72.6%), the second for governmental hospitals (60.7%), and the lowest for NGO hospitals (43.1%).

Across all sectors, there was a 51% satisfaction level about the cost of treatment. The highest satisfaction was for patients in private hospitals (74.9%). 49.5% of patients stated that the cost of treatment was affordable, and the highest satisfaction was within patients in governmental hospitals (64.7%). 60.8% of patients were satisfied with the fairness of the cost in relation to the provided services, with the highest satisfaction within the patients in private hospitals (80.8%). Only 58% of all patients agreed that hospitals deserve to charge their costs to patients, and the highest rating was for patients in the private sector (73.1%).

## 4.6 Inferential Analysis

The central aim of the study is to analyse Palestinian healthcare sector performance. This section discusses the performance level of the organizations, as expressed by the participants of this study: healthcare managers, healthcare providers, and patients. It also discusses whether and how these variables affect each other, including strategic planning, team engagement, team performance, hospital performance, and other variables.

Hospital performance was measured by six constructs: team professionality, team performance, team engagement, information sharing, skills and education, and hospital performance. In addition, hospital performance was evaluated by patient satisfaction,

consisting of four constructs: room services, communication skills, general satisfaction, and financial aspects; rather than waiting time, medical response, admission procedure, and level of care before admission. These constructs were added up and averaged to represent each organization's performance.

The section will proceed by exploring how hospital performance is impacted by all the other constructs. Next, it will analyze how performance is impacted by sector background variables and will discuss the correlations. The third part will discuss patient satisfaction variables.

### 4.6.1 Hospital performance according to managers

The object of this section is to determine the factors that affect hospital performance according to their managers. Hospital performance is estimated by the questionnaire of managers from questions (HP1–HP9). The other main variables are the effectiveness of strategic planning (ESP1–ESP22), team professionality (TPro1–TPro5), team engagement (TE1–TE7), team performance (TP1–TP8), information sharing (SI1–SI6), and skills and education (SE1–SE5).

Before performing the analysis, a normality test was applied to determine the appropriate statistical tests. Table 4 shows that all the variables except skills and education are not normally distributed, since the p-values of the Kolmogorova–Smirnova and Shapiro–Wilk tests for each variable is less than 0.05. For this reason, we used nonparametric tests to define the main variables that affect hospital performance.

**Table 4: Normality tests of hospital performance according to managers.**

| | Kolmogorov–Smirnov[a] | | | Shapiro–Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| **Strategicplanning effectiveness** | 0.207 | 34 | 0.001 | 0.761 | 34 | 0.000 |
| **Team professionality** | 0.114 | 34 | 0.200* | 0.893 | 34 | 0.003 |
| **Team engagement** | 0.196 | 34 | 0.002 | 0.727 | 34 | 0.000 |
| **Team performance** | 0.144 | 34 | 0.072 | 0.856 | 34 | 0.000 |
| **Information sharing** | 0.221 | 34 | 0.000 | 0.822 | 34 | 0.000 |
| **Skills and education** | 0.106 | 34 | 0.200* | 0.952 | 34 | 0.143 |
| **Hospital performance** | 0.139 | 34 | 0.092 | 0.833 | 34 | 0.000 |

#### 4.6.1.1 Main variables that affect hospital performance

We applied the Spearman test to determine whether a relationship exists between hospital performance and the effectiveness of strategic planning, team professionality, team engagement, team performance, information sharing, and skills and education. Table 5 shows that all the variables except strategic planning affect the hospital performance, since the p-value of the variables was less than 0.05. However, we found no relationship between hospital performance and strategic planning. The correlation coefficient explains that the relationship between the significant variables and hospital performance is positive. The nearest coefficient to one is the most effective variable. The arrangement of variables by strongest relation with hospital performance is skills education, information sharing, team performance, team professionality, and team engagement.

**Table 5: Results of Spearman rho hospital performance (managers).**

| | Correlation coefficient | Sig. (two-tailed) |
|---|---|---|
| **Strategic planning effectiveness** | 0.277 | 0.113 |
| **Team professionality** | 0.582** | 0.000 |
| **Team engagement** | 0.392* | 0.016 |
| **Team performance** | 0.656** | 0.000 |
| **Information sharing** | 0.731** | 0.000 |
| **Skills and education** | 0.739** | 0.000 |

#### 4.6.1.2 Main variables that affect strategic planning effectiveness

The Spearman test was applied to determine whether a relationship exists between strategic planning and team professionality, team performance, and information sharing. Table 6 shows that all these variables affect strategic planning effectiveness since their p-values are less than 0.05. The correlation coefficient shows that the relationship between the significant variables and hospital performance is positive. The nearest coefficient to one is the most effective variable, so that the arrangement of variables by strongest relation to the effectiveness of strategic planning is team professionality, team performance, and information sharing.

**Table 6: Results of Spearman rho for strategic planning effectiveness (managers).**

| | Correlation Coefficient | Sig. (2-tailed) |
|---|---|---|
| **Team professionality** | 0.479** | 0.004 |
| **Team performance** | 0.427* | 0.012 |
| **Information sharing** | 0.391* | 0.022 |

#### 4.6.1.3 Main variables that affect team performance

The Spearman test was applied to determine whether a relationship exists between team performance and team professionality, team engagement, skills and education, and information sharing. Table 7 shows that all these variables affect team performance since the p-value of these variables is less than 0.05. The correlation coefficient shows that the relationship between the significant variables and team performance is positive. The nearest coefficient to one is the most effective variable, so that the arrangement of variables by strongest relation with team performance is team professionality, information sharing, team engagement, and skills and education.

**Table 7: Results of Spearman rho for team performance (managers).**

| | Correlation coefficient | Sig. (two-tailed) |
|---|---|---|
| **Team professionality** | 0.842** | 0.000 |
| **Team engagement** | 0.720** | 0.000 |
| **Information sharing** | 0.754** | 0.000 |
| **Skills and education** | 0.678** | 0.000 |

#### 4.6.1.4 Main variables that affect team professionality

The Spearman test was applied to determine whether a relationship exists between team professionality and skills and education. Table 8 shows that skills and education affect team professionality since the p-value is less than (0.05).

**Table (8): Spearman rho result of team professionality (managers).**

| | Correlation Coefficient | Sig. (2-tailed) |
|---|---|---|
| **Skills and Education** | 0.687** | 0.000 |

### 4.6.2 Hospital performance according to providers

The object of this section is to determine the factors that affect hospital performance according to providers. Hospital performance was estimated by the manager questionnaire using questions HP1–HP9. The other main variables are team professionality (TPro1– TPro5), team engagement (TE1–TE7), team performance (TP1–TP8), information sharing (SI1–SI6), and skills and education (SE1–SE5).

Before analysis, the normality test was applied to determine the appropriate statistical tests. Table 9 shows that all the variables except skills and education were not normally distributed, since the p-values of the Kolmogorov–Smirnova and Shapiro–Wilk tests for each variable were less than 0.05. For this reason, we used nonparametric tests to define the main variables that affect hospital performance.

**Table 9: Normality tests of hospital performance according to providers.**

| | Kolmogorov–Smirnov[2] | | | Shapiro–Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | Df | Sig. | Statistic | Df | Sig. |
| **Team professionality** | 0.086 | 285 | 0.000 | 0.949 | 285 | 0.000 |
| **Team engagement** | 0.049 | 285 | 0.089 | 0.985 | 285 | 0.000 |
| **Team performance** | 0.080 | 285 | 0.000 | 0.975 | 285 | 0.000 |
| **Information sharing** | 0.102 | 285 | 0.000 | 0.965 | 285 | 0.000 |
| **Skills and education** | 0.106 | 285 | 0.000 | 0.964 | 285 | 0.000 |
| **Hospital performance** | 0.097 | 285 | 0.000 | 0.967 | 285 | 0.000 |

#### 4.6.2.1 Main variables that affect hospital performance

The Spearman test was applied to determine whether a relationship exists between hospital performance and team professionality, team engagement, team performance, information sharing, and skills and education. Table 10 shows that all these variables affect hospital performance since their p-values are less than 0.05. The correlation coefficient shows that the relationship between the significant variables and hospital performance is positive. The nearest coefficient to one is the most effective variable, so that the arrangement of variables by strongest relation with hospital performance is skills and education, sharing information, team performance, team engagement, and team professionality.

**Table 10: Results of Spearman rho for hospital performance (providers).**

| | Correlation coefficient | Sig. (two-tailed) |
|---|---|---|
| **Team professionality** | 0.420** | 0.000 |
| **Team engagement** | 0.535** | 0.000 |
| **Team performance** | 0.542** | 0.000 |
| **Information sharing** | 0.626** | 0.000 |
| **Skills and education** | 0.705** | 0.000 |

#### 4.6.2.2 Main variables that affect team performance

The Spearman test was applied to determine whether a relationship exists between team performance and team professionality, team engagement, skills and education, and information sharing. Table 11 shows that all these variables affect team performance since their p-values are less than 0.05. The correlation coefficient explains that the relationship between the significant variables and team performance is positive. The nearest coefficient to one is the most effective variable, so that the arrangement of variables by strongest relation with team performance is sharing information, team engagement, team professionality, and skills and education.

**Table 11: Results of Spearman rho for team performance (providers).**

| | Correlation coefficient | Sig. (two-tailed) |
|---|---|---|
| **Team proficiency** | 0.579** | 0.000 |
| **Team engagement** | 0.581** | 0.000 |
| **Information sharing** | 0.681** | 0.000 |
| **Skills and education** | 0.576** | 0.000 |

#### 4.6.2.3 Main variables that affect team professionality

The Spearman test was applied to determine whether a relationship exists between team professionality and skills and education. Table 12 shows that skills and education affect team professionality since the p-value is less than 0.05.

**Table 12: Results of Spearman rho for team professionality (providers).**

| | Correlation coefficient | Sig. (two-tailed) |
|---|---|---|
| **Skills and education** | 0.401** | 0.000 |

#### 4.6.2.4 Hospital performance indicators by hospital sector

The Kruskal–Wallis test was applied to check if the hospital performance indicators vary by hospital sector. The result in Table 13 shows that there is only a relationship between hospital sector and hospital performance, with a p-value less than (0.05). The mean rank shows that governmental hospitals had the highest performance, followed by NGO hospitals and then private hospitals.

**Table 13: Results of Kruskal–Wallis test for hospital performance indicators by hospital sector.**

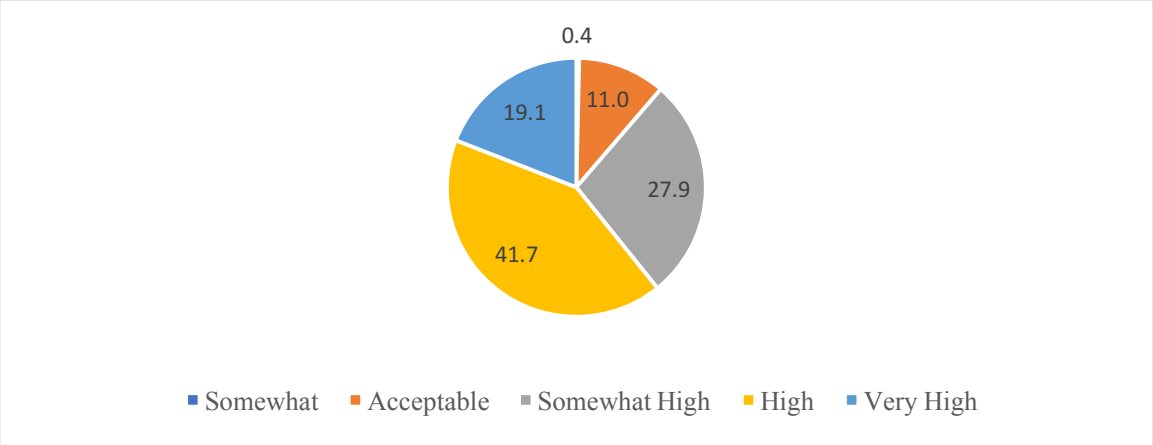
| | P-value |
|---|---|
| **Team professionality** | 0.144 |
| **Team engagement** | 0.950 |
| **Team performance** | 0.625 |
| **Information sharing** | 0.252 |
| **Skills and education** | 0.818 |
| **Hospital performance** | 0.023 |

| Sector | | Mean rank |
|---|---|---|
| **Hospital performance** | **Governmental hospitals** | 162.65 |
| | **NGO hospitals** | 136.60 |
| | **Private hospitals** | 129.28 |

### 4.6.3 Patient satisfaction

Patient satisfaction was measured by estimating the main variables of the patient questionnaire, including patient room services (Pr1–Pr10), communication skills (CS1–CS10), general satisfaction about medical service effectiveness (GS1–GS12), and financial aspects (FA1–FA4). Figure 12 shows that most of the respondents were satisfied. The satisfaction range varied from “acceptable” (11%) to “very high” (19%).

**Figure 12: Sample distribution by overall satisfaction with medical service in Palestine.**




### 4.6.3.1 Patient satisfaction analysis

In this section, the research used many statistical tests to determine the variables related to patient satisfaction. Also, it showed how satisfaction differs among social and demographic properties of respondents and hospital properties. Before analysis, the normality test was applied to determine the appropriate statistical tests. Table 14 shows that all the variables are not normally distributed since the p-values of the Kolmogorov–Smirnova and Shapiro–Wilk tests for each variable are less than 0.05. For this reason, we used nonparametric tests to define the main variables that affect patient satisfaction and how they differ by social and demographic properties of the respondents.

**Table (14): Normality tests of patient satisfaction variables.**

| | Kolmogorov–Smirnov[a] | | | Shapiro–Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| **Satisfaction** | 0.081 | 283 | 0.000 | 0.981 | 283 | 0.001 |
| **Patient room services** | 0.081 | 283 | 0.000 | 0.969 | 283 | 0.000 |
| **Communication Skills** | 0.114 | 283 | 0.000 | 0.946 | 283 | 0.000 |
| **General satisfaction about medical service effectiveness** | 0.100 | 283 | 0.000 | 0.965 | 283 | 0.000 |
| **Financial aspects** | 0.085 | 283 | 0.000 | 0.976 | 283 | 0.000 |

#### 4.6.3.1.1 Main variables that affect the patient satisfaction.

The Spearman test was applied to determine whether a relationship exists between overall satisfaction and patient room services, communication skills, medical services effectiveness and financial aspects. Table 15 shows that all these variables affect patient satisfaction since their p-values are less than 0.05. The correlation coefficient shows that the relationship between each variable and satisfaction is positive. The nearest coefficient to one is the most effective variable, so that the arrangement of variables by strongest relation with patient satisfaction is medical services effectiveness, patient room services, communication skills, and financial aspects.

**Table 15: Results of Spearman rho for patients.**

| Variables | Correlation Coefficient | Sig. (2-tailed) |
|---|---|---|
| **Patient room services** | 0.872** | 0.000 |
| **Communication skills** | 0.860** | 0.000 |
| **General satisfaction with medical service effectiveness** | 0.891** | 0.000 |
| **Financial aspects** | 0.290** | 0.000 |

#### 4.6.3.1.2 Patient satisfaction by patient and hospital characteristics

The object of this analysis is to measure how patient satisfaction varies with hospital location, hospital sector, respondent gender, respondent age, insurance type and patient health status. We performed Kruskal–Wallis and Mann–Whitney tests to explore this question.

1. **Patient satisfaction by hospital location**

A Kruskal–Wallis test was applied to determine whether patient satisfaction varies with hospital location. Table 16 shows that there is a relationship between hospital

location and patient satisfaction, since the p-value is less than 0.05. The mean rank shows that Nablus hospitals had the highest satisfaction, then Hebron hospitals, then Ramallah hospitals.

**Table 16: Results of Kruskal–Wallis test for patient satisfaction by hospital location.**

| Location | P-value | Mean rank |
|---|---|---|
| **Ramallah** | 0.000 | 110.49 |
| **Nablus** | | 206.77 |
| **Hebron** | | 161.31 |

**2. Patient satisfaction by hospital sector**

The Kruskal–Wallis test was applied to determine whether patient satisfaction differs among hospital sector. Table 17 shows that there is a relationship between hospital sector and patient satisfaction, since the p-value is less than (0.05). The mean rank shows that private hospitals had the highest satisfaction, then NGO hospitals, then governmental hospitals.

**Table 17: Results of Kruskal–Wallis for patient satisfaction by hospital sector.**

| Sector | P-value | Mean Rank |
|---|---|---|
| **Governmental hospitals** | 0.000 | 86.22 |
| **NGO hospitals** | | 158.86 |
| **Private hospitals** | | 201.22 |

**3. Patient satisfaction by gender**

We performed a Mann–Whitney test to determine whether patient satisfaction varies with patient gender. Table 18 shows that there is no relationship between patient gender and patient satisfaction since the p-value is more than 0.05.

**Table 18: Mann–Whitney test results of patient satisfaction by gender.**

| Gender | P-value |
|---|---|
| **Male** | 0.365 |
| **Female** | |

**4. Patient satisfaction by age**

A Kruskal–Wallis test was performed to check if patient satisfaction varies with patient age. Table 19 shows that there is no relationship between patient age and patient satisfaction since the p-value is more than 0.05.

**Table 19: Results of Kruskal–Wallis test for patient satisfaction by age.**

| Age groups | P-value |
|---|---|
| **15–29** | 0.807 |
| **30–39** | |
| **40–49** | |
| **50–59** | |
| **60+** | |

**5. Patient satisfaction by insurance type**

We performed a Kruskal–Wallis test to determine whether patient satisfaction varies with insurance type. Table 20 shows that there is a relationship between insurance type and patient satisfaction at the 10% significance level but not at 5%, since the p-value is less than 0.10. The mean rank shows that patients with military insurance are more satisfied than those who have UNRWA insurance. After these insurance types, the privately insured are the most satisfied, then the uninsured, then government-insured patients. The privately insured and uninsured patients usualy seek treatment in private and NGO hospitals and this might explain there satisfaction than the government-insured patients.

**Table 20: Kruskal–Wallis test results of patient satisfaction by insurance type.**

| Patient insurance type | P-value | Mean rank |
|---|---|---|
| **Governmental insurance** | 0.091 | 130.99 |
| **Private insurance** | | 150.97 |
| **Military insurance** | | 182.53 |
| **UNRWA insurance** | | 151.13 |
| **None** | | 144.28 |

## 6. Patient satisfaction by health status

A Kruskal–Wallis test was performed to check if patient satisfaction varies with patient health status. Table 21 shows that there is no relationship between patient health status and patient satisfaction, since the p-value is more than 0.05.

**Table 21: Results of Kruskal–Wallis test for patient satisfaction by health status.**

| Patient Health Status | P-value |
|---|---|
| **Excellent** | 0.595 |
| **Very Good** | |
| **Good** | |
| **Unstable** | |
| **Bad** | |
| **Very Bad** | |

# Chapter 5: Discussion, Conclusion, and Recommendations

## 5.1 Introduction

The purpose of this quantitative study was to analyse the Palestinian healthcare sector to identify what strategies are needed to improve healthcare sector performance and patient satisfaction. This chapter includes a discussion of the major findings related to hospital performance through healthcare managers and healthcare providers, in addition to patient satisfaction as measured by patient responses. We also discuss potentially valuable implications for healthcare managers, healthcare providers, and legislators who work in or plan to pursue the healthcare sector. The chapter concludes with a discussion of the limitations of the study, areas for future research, and a brief summary.

This chapter contains a discussion and future research possibilities to help answer the research questions:

R1: What strategies are needed to improve Palestinian healthcare sector performance?

R2: What strategies do hospitals need to improve performance?

R3: What strategies do hospitals need to improve patient satisfaction?

## 5.2 Discussion of the results

### 5.2.1 Variation between healthcare managers and healthcare providers

The study indicates that healthcare managers evaluate the healthcare sector performance at 78.8%, which is higher than healthcare providers' evaluation of 63.3%. These cumulative ratings for all the studied dimensions averaged 5.3 and 4.8 on the Likert scale,

respectively. This indicates that the performance of the Palestinian healthcare sector needs improvement, though the necessary changes will be discussed in more detail below.

We found a significant discrepancy (21%) between the expectations of healthcare managers and the reality of healthcare providers' engagement (Fig. 3). Therefore, performance must be improved by increasing healthcare provider engagement. Baumruk (2006) explains that increasing employee engagement is a critical managerial mission for improving performance and profitability. Providers need to work hard to improve the level of engagement to satisfy management as well as set roles for the appreciation of staff achievements, in addition to focusing more on job perfection. Healthcare providers desire better employment privileges, appreciation of their achievements, and better understanding of the hospital and team goals. These indicators are the responsibility of the administrative team and lead employees to perfect their job performance and become more involved in teamwork. Staff engagement raise the performance and improve patients' experience (West & Dawson, 2012).

Sharing information and employing available informational resources is an essential process for improving hospital performance. The results found a significant variation between healthcare managers and healthcare providers (17.8%), with more managers reporting information sharing (77.4%). Healthcare managers need to increase information sharing, specifically of patient survey results, in order to increase customer satisfaction and improve hospital performance. Also, they should use available information as much as possible for planning in order to improve organizational performance. To improve team performance, which will reflect positively on hospital performance, hospitals need

to establish a two-directional sharing process, collecting feedback through cooperation, discussion structures, and task demonstrability (Mesmer-Magnus & DeChurch, 2009).

Skills and education are another essential component of the healthcare system. The study result shows low attention toward continuous education and capacity-building within Palestinian hospitals, negatively affecting hospital performance. Only 58.5% of providers responded positively to this indicator. Given this result, providers need to give more attention and interest to continuous education. Moreover, they must greatly increase the use of best-practice methods in order to improve their performance, hospital performance, and patient satisfaction, while also minimizing errors, improving staff skills and knowledge, and advancing their careers. Likewise, managers must apply best-practice methods and initiate active and effective continuing education departments, given that 50% of providers denied that hospital management offered such programs. Employee capacity-building that increases job skills, satisfaction, and motivation also increases service quality, efficiency, effectiveness, and profitability (Kadian & Mutsotso, 2010).

### 5.2.2 Hospital performance and strategic planning

The study results show that there is no relationship between strategic planning and hospital performance (Table 5). Strategic planning is a valuable management tool, but there is limited evidence of its effect on healthcare organizational performance in low-income and middle-income countries. In their 2012 study of strategic planning and financial performance in Lebanese hospitals, Shadi et al. concluded that there was no statistical difference between hospitals that did or did not have a strategic plan from the perspective of occupancy rate and revenue-per-bed.

On the other hand, the study result in regards to strategic planning in Palestinian hospitals had varying responses from healthcare managers in the same hospital. Most surveyed managers in each hospital did not agree on the length of the strategic plan or the number of plans, and some even mentioned that their hospitals did not have any strategic plan. This variation might indicate the absence of any real strategic plan in the surveyed hospitals, given that the managers did not agree on the plan's length.

### 5.2.3 Hospital performance influences

Team professionality is essential in the provision of healthcare, and it is a part of a hospital's organizational culture. We found that hospital performance significantly correlated to team professionality, team engagement, team performance, information sharing, and skills and education ($p<0.05$). This correlation was supported by both healthcare managers and providers. Both surveyed groups also agreed that skills and education was the most important factor for improving hospital performance ($r=0.705$ for healthcare providers and $r=0.739$ for healthcare managers).

Therefore, hospital managers need to build a professional culture within their organization. Managers should enhance team engagement with multi-directional strategies, set rules that improve efficiency and effectiveness, share information such as feedback and reports with healthcare teams, and initiate an active educational and training program to enrich and support team professionality and performance.

Investing in fostering the organizational culture in different dimensions will support the high performance of hospitals and help improve clinical outcomes (Leslie et al., 2017).

Such investment requires good strategic planning and capacity-building supported by management and a learning environment.

### 5.2.4 Effectiveness of strategic planning

The results indicate that strategic planning effectiveness had a significant relationship with team professionality, team performance and information sharing (Table 6). Information sharing is a crucial element in building a strategic plan to prepare for the future. This can include sharing information that matters for service quality among team members, obtaining necessary information, analysing data to build knowledge, sharing and discussing patient satisfaction surveys to obtain feedback from the team, or retrieving and storing the needed data. Thus, information sharing can make a hospital's strategic plan more effective.

Team performance is enhanced by effective strategies that encourage teams to work effectively and efficiently, enable teams to make effective decisions, increase team commitment to hospital goals and strategies, and encourage the team to evaluate the effectiveness of its work as a group.

Furthermore, an effective plan leads to a professional team that is accountable and continuously improves hospital performance and the services provided, and thus will achieve hospital goals.

In healthcare organizations, strategic planning is common and valued. It contributes to organizational focus, fosters the participation and commitment of stakeholders, and leads to the achievement of strategic goals (Begun et al., 2005).

### 5.2.5 Team performance influences

The results indicate that the team performance level evaluated by healthcare managers was 78.6%, while healthcare providers evaluated performance at 68.2% for the studied indicators. This evaluation considered low team performance in healthcare when providers evaluate themselves by this percentage. Team performance is crucial for patient safety in the care provided, both clinically and interpersonally.

The results of the study also indicate a significant positive relationship between team performance and many indicators, including professionality, engagement, skills and education, and information sharing among team members and with leadership. The strongest relation was with information sharing (r=0.681), pointing to the importance of information sharing to improving team performance. Improving employee engagement, professionality level, continuing education and improving team skills through training will improve the performance of the healthcare team.

Managers in healthcare settings need to pay more attention to improving team performance and focus more on using patient satisfaction surveys to evaluate and improve team and organizational performance. This would give the hospital a chance to survive and retain employees and customers.

Devoting time to evaluate the effectiveness of the team's work is important for team performance. When evaluated by providers, the study found that 43.9% responded neutrally or disagreed about having such a time, while the managers' disagreement and neutrality was 21.7%. This variation and high disagreement percentage suggest that

hospitals may not devote this time or that the frequency is low and irregular. Patients' length of stay decreased and high level of patient satisfaction maintained when patient care team reconstructed (Friedman & Berger, 2004).

The delivery of healthcare services is approached via a team throughout all levels of the organization, from management to the clinical setting and organizational committees (Gloria & Antonette, 2002). Therefore, performance improvement of the team, performance assessment, and performance monitoring are required in order to improve overall hospital performance and healthcare sector performance.

### 5.2.6 Team professionality influences

The study found a positive and significant relationship between team professionality and skills and education (r=0.687) from healthcare managers' perspective. The same relationship was observed from healthcare providers, but with a lower value (r=0.401). Nonetheless, both showed a strong positive relationship. This indicates the importance of continuous education and training for healthcare providers, either in clinical training and skills or non-clinical training such as communication skills, leadership skills, and teaching skills, In addition to healthcare managers training and continuing education in management skills and leading healthcare settings.

Patient care and safety become more complex and high-priority in the healthcare sector. The health team is multi-disciplinary and effective collaboration is required between all specialties to improve outcomes. Training and education are needed to improve team professionality and patient care and safety. Continuous education in healthcare settings,

either in meeting spaces or online, can improve team professionality and patient outcomes, even when using audits and feedback will give the same result (Forsetlund et al., 2009).

### 5.2.7 Hospital performance according to hospital sector

Governmental hospitals had the highest performance between the three hospital types that were studied, with NGO hospitals second and private hospitals third. The mean rank for governmental hospitals was 162.65, while NGO hospital were 136.6 and private hospitals were 129.28. This result was found using a Kruskal–Wallis test to test the difference between hospital types in relation to hospital performance indicators, checking for relationships between hospital sector and team professionality, team engagement, team performance, information sharing, skills and education, and hospital performance as a construct. The only significant relationship found was between hospital sector and hospital performance ($p< 0.05$). This result held true from both the managers' and providers' perspective. From the patients' perspective, the satisfaction with the governmental hospitals had the lowest rank and private hospitals had the highest rank.

Palestinian healthcare system performance had no reference for performance measurement, as no previous study was found in the West Bank from 2010 to 2015 (Sultan & Crispim, 2018). Another study was found from outside of Palestine that was done by RAND corporation, suggesting a higher performance for private and NGO hospitals than governmental hospitals (Schoenbaum et al., 2005) which contradicts the results of this study. This referred to health insurance expansion by the government without increasing the capacity accordingly.

Private hospitals usually have a higher level of services for patients and had less occupancy than government hospitals. Therefore, the expected outcome is that private hospitals would have better performance than the public sector. In Palestine, we found the opposite result, and this might need more investigation to involve more governmental hospitals in the study in different governorates. This study includes only one hospital, which is the largest and the central hospital in Palestine. Its administration follows the health minister directly. The patient satisfaction level in the governmental hospital was much lower than private hospitals, indicating that the higher performance was not reflected in patient satisfaction. This leads to questions about the effectiveness of performance improvement measures such as continuing education, team engagement, and all other aspects of performance improvement applied in the governmental hospitals.

On the other hand, private and NGOs hospitals need to consider the results of this study to improve their performance in all the aspects that were studied.

### 5.2.8 Patient satisfaction and room services

We found a very strong positive and significant relationship (r=0.872) between patient satisfaction and room services provided by hospitals (p=0.000). Room services are the second-strongest relationship after medical services provided in regards to satisfying inpatients. Therefore, hospitals need to focus on these services to satisfy their patients. The data analysis shows that 65.8% is the overall satisfaction level from room services, meaning that 34% of the patients were not satisfied. 66% of patients were from private and NGO hospitals that are expected to present high-quality room services, but the study

found that (48%) of patients were not satisfied with hospitality services such as internet, TV, hospital beds, and air conditioning.

Many studies identify the dimensions of patient satisfaction, including food services, comfort utilities, amenities, and other factors (Rubin, 1990; Carey, 1993). Another study argued that physical environment, availability of resources, technical quality, interpersonal manner, accessibility, cost, and efficacy are the main satisfaction components (Ware at el., 1983).

Other important factors were room cleanliness, as 30% of patients were not satisfied with room cleaning, bathroom, and hospital floors. The hospital cleanliness rate should score higher than this rate to prevent contamination and cross infection, which might lead to more hospital stays and use more antibiotics. This issue refers not only to cleaning staff but also to patients and visitors attitudes in addition to other staff members.

Room crowdedness is another issue that patients were not highly satisfied with, as only 56.6% were satisfied with room crowdedness, indicating that half of the population was not satisfied. This leads to patient discomfort, which might affect their mental and physical health. Therefore, hospital management needs to organize visiting times and control the number of visitors inside the patients' rooms to give patients resting time and privacy. Management should also facilitate medical staff duties and the patient care process.

Hence, patient room services are of vital importance to consider in order to improve patient satisfaction and hospital performance.

### 5.2.9 Patient satisfaction influences

The results indicate that the strongest correlation to patient satisfaction was general satisfaction with medical services effectiveness (r=0.891). Patient satisfaction from medical services effectiveness was 84.2%, which is quite a good percentage and might explain the strong relationship with patient satisfaction. Also, this reflects the awareness of patients regarding the effectiveness of medical services and points toward the most important aspects of the healthcare sector. Lee et al. (2010) found that good patient satisfaction can be achieved by hospitals and creating positive customer value through a customer-oriented approach and high-quality services.

To effectively improve services, hospitals need to focus on post-discharge follow-up, as almost half of the patients were not satisfied with this aspect (47.3%). This is not only to boost the percentage but also to follow up on the patients' outcomes and to give medical advice or clarify patients' concerns, which might lead to decrease the rate of complications and readmission rates.

Data analysis shows the importance of communication and interpersonal skills of the healthcare providers on patient satisfaction. There is a very strong positive (r=0.861) and significant (p=0.000) relationship between them. Patients' satisfaction with communication reaches 84% in all indicators. To improve this aspect of satisfaction, hospitals need to focus on time spent with patients from healthcare providers, as 19% of

patients were not satisfied with that. Explaining the medical terms used by the healthcare team for the patient is an important part of communication skills and will improve satisfaction, as 21.3% of patients were not satisfied with this issue.

Therefore, doctors and other health team professionals need to spend more time with their patients. In addition, management should improve doctors and nurse's ratio to patients in order to have more time with them. Generally, satisfaction in regards to communication skills was highly rated but should be improved to a higher level because it is a part of building trust and confidence with patients. One study (Trumble et al., 2006) showed that complete patient satisfaction from their doctors in outpatient clinics was achieved when doctors had participated in a three-month communication skills workshop.

Financial aspects is another component of patient satisfaction. We found that there is a weak positive ($r=0.290$) and significant ($p=0.000$) correlation. This result indicates the importance of cost-effective healthcare services, and also may indicate that patients give more attention to other factors than the cost of treatment if they get the right care for their health.

The analysis of satisfaction with financial aspects indicates that patients were more satisfied in the private sector. This might reveal good customer services as compared to governmental hospitals that lag behind the private sector in this respect. Patients pay out of their pockets, insured via private insurance companies, or are referred by governmental hospitals for certain medical services that are not available or if there was no place to admit the patient. Even in the case of insurance or referral, some patients still pay up to

15% of the hospital invoice. Nonetheless, patients are still more satisfied with private hospitals due to the quality care they receive. Patients also respond that private hospitals deserve the cost they pay and that it is fair for the provided services.

The lowest satisfaction was in NGO hospitals regarding the financial aspects. NGOs in Palestine cost close to private hospitals, but patients might not be satisfied financially due to the crowdedness in NGO hospitals and the thought of charity behind the NGOs. While in the governmental sector patients might not be satisfied with financial aspects due to low overall patient satisfaction in this sector, patients in governmental hospitals usually pay a very small fee in addition to the insurance cost once per year.

The financial aspect in Palestine does contribute to patient satisfaction when they are looking for higher quality care. Wong (1990) predicted that consumers in healthcare will shop for the best value, and suggested that they have become much more cost-sensitive despite health insurance coverage.

### 5.2.10 Patient satisfaction and hospital type

The study found that there was a significant relationship between patient satisfaction and hospital type. Thus, hospital type contributes to patient satisfaction. We found the highest satisfaction within patients in private hospitals, then NGO hospitals, then governmental hospitals. This result can be explained that patients were more satisfied from the quality of provided services either medical or non-medical as room services. A study in Turkey indicated the same result: inpatients in private hospitals were more satisfied regarding the service quality than in public hospitals (Taner & Antony, 2006).

At the end, improving hospital performance and patient satisfaction depends first on hospitals and healthcare sector management. In summary, healthcare managers's should improve accountability processes, support the team's work, improve healthcare providers' engagement, focus on continuing education, share information, initiate effective quality committees, improve safety standards, encourage healthcare providers to follow evidence-based practice protocols, use patient satisfaction surveys in regular bases, set a budget for improvement and development, and focus on strategic planning and effectiveness of the plan.

Healthcare providers are the second line of improvement in cooperation with the management level by improving their skills through training, educational courses, evaluating work outcomes, giving feedback to management, devoting time for regular staff meetings, working effectively and efficiently, giving more respect to team members and resolving conflicts positively, and working jointly with hospital management to achieve the goals.

Furthermore, this study highlighted many inadequacies for healthcare managers and health sector policymakers to improve. Items for improvement include room services, hospitality services, general hospital cleanliness, controlling visiting time and crowdedness, follow-up after discharge, improving quality of meals, and improving patients' beds.

## Conclusion

Hospitals are a major part of the healthcare system, and their performance can affect that of the overall healthcare sector. Improving hospital performance is multi-dimensional and encompasses nine themes: (1) effective planning, (2) availability of resources, (3) hospital management support that is accountable and promotes teamwork, (4) improving healthcare providers engagement through appreciation and privileges, (5) patient satisfaction surveys, (6) regular evaluation of teamwork effectiveness, (7) continuous education and information sharing, (8) improving safety measures and standards, and (9) improving all aspects of patient services, including follow-up after discharge. Some factors relate primarily to the individual, some to the workplace environment, some to management, and some to policies. All of these factors help to improve the healthcare sector and patient satisfaction, which is the main challenge of the health system.

Improving the quality of healthcare is increasingly necessary. One of the key methods of evaluating care quality is the patient satisfaction survey. While other determinants were investigated, this study focused on healthcare leaders and providers, aiming to evaluate hospital performance and define the gap between the two groups. Finally, this study aimed to identify the strategies necessary for improving care quality.

Healthcare sector performance is an important issue that should be carried out through the three pillars of the sector: healthcare managers, healthcare providers, and patient satisfaction. Performance should be evaluated to improve healthcare performance and provide quality care and services.

Hospitals and healthcare sector performance need to be evaluated jointly with the patient satisfaction level. High hospital performance does not mean high patient satisfaction, and low performance does not mean low patient satisfaction. This study found that the highest patient satisfaction was in the lowest hospital performance rank, which is the private hospitals. Conversely, the governmental hospitals had the highest performance and the lowest patient satisfaction. The hospital performance that investigated in this study had the highest rank and applied theoriticaly in governmental hospitals more than NGO and private hospitals, but on the other hand its applied practicaly and was effective more in NGO and private hospitals through healthcare providers than in governmental hospitals. Thus, patients feel the difference in quality services which is reflected by there satisfaction.

The analysis of the healthcare sector is wide and needs more investigation in many aspects of the relationship between hospital performance and patient satisfaction. Some sectors had better employee engagement, training, privileges, meetings and more but did not focus on the level of provided services and staff-to-patient ratio. Healthcare providers' engagement and work efficiency related to hospital performance need to be studied in depth. Moreover, financial aspects' relationship to patient satisfaction should be investigated to determine why patients with military insurance were more satisfied than those with other types of insurance. It is also necessary to study the variation of patient satisfaction from city to another. This study gives an overview of multiple dimensions of healthcare sector performance to improve the quality of care and outline the need for future studies.

## Recommendations

## I- Hospital Management

1. Support strategies through hospital management for healthcare providers to build a collaborative culture and accountability system.
2. Apply strategies to improve healthcare providers' engagement by appreciation, improving privileges, work environment improvement, and more.
3. Regularly use patient satisfaction surveys as a tool to improve hospital performance.
4. Focus on continuing education programs to leverage the knowledge and skills for new employees and keep the team up to date.
5. Initiate channels for sharing information and feedback.
6. Improve and apply safety measures, standards, and medical and nursing protocols.
7. Set a budget for improvement and development.
8. Require training courses to support the management team's knowledge regarding strategic planning.
9. Implement a better information management system starting from data collection, analysing data, getting information and building knowledge.

## II- Healthcare Providers

10. A well-trained team is a key for effective and efficient work leading to the improvement of patient satisfaction and performance.
11. Patient follow-up after discharge is required to improve patient satisfaction and hospital reputation.
12. Improve patient room services and hospitality services to increase patient satisfaction.

13. Hospital cleanliness is a critical aspect of patient satisfaction and the healthcare sector's image.
14. Build cultural awareness regarding visiting time and control the visitors' crowdedness.
15. Improve hospital meals and dietary services, and all other aspects of patient services.

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**Appendix A**

## Questionnaire I
## Healthcare managers

The following questionnaire aims to explore the effectiveness of strategies used by hospitals to improve performance and achieve patient satisfaction.

Please read the questionnaire carefully considering your hospital. We are interested in your assessment of health sector strategies.

### 1- Information about the hospital:

| Code | Question |
|---|---|
| **Hosp.Type** | Sector: 1- Governmental 2- NGOs 3- Private |
| **Hosp.Name** | Hospital Name: |
| **Hosp.Address** | Hospital Address: 1- Ramallah 2- Nablus 3- Hebron |
| **Hosp.Size** | Beds: |
| **Hosp.Age** | Year of Hospital Establishment: |

### 2- Hospital Strategic Planning:

| Code | Question |
|---|---|
| **Strategic Plan** | Dose the hospital have a strategic plan? ☐ Yes ☐ No |
| **Period of SP** | If the hospital had a strategic plan, for how long? …… |
| **Number SP** | Number of strategic plans prepared by the hospital …… |
| **Experience SP** | Hospital management experience with strategic planning:<br>1- Excellent 2- Very good 3- Good 4- Poor 5- None |

### 3- If you have a strategic plan, please answer these questions below:

| Code | Effectiveness of strategic planning | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **ESP1** | The planning team was carefully selected and involve all needed members. | | | | | | | |
| **ESP2** | The planning team included experts in strategic planning. | | | | | | | |
| **ESP3** | The planning team is committed to the plan activities. | | | | | | | |
| **ESP4** | There was a clear vision for the team to build the plan. | | | | | | | |
| **ESP5** | The plan is based on factual SWOT (Strengths, Weaknesses, | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Opportunities, Threats) analysis. | | | | | | | |
| **ESP6** | The plan relied on data and information collected and analyzed to build an effective plan. | | | | | | | |
| **ESP7** | Capabilities of the organization were considered during the preparation for the plan. | | | | | | | |
| **ESP8** | Goal were set to be ambitious and achievable. | | | | | | | |
| **ESP9** | Some of the goals have been translated in to actionable projects. | | | | | | | |
| **ESP10** | Some of the goals translated in implementable to bylaws and systems. | | | | | | | |
| **ESP11** | Action plans established for the projects that have been emerged from the plan in detail. | | | | | | | |
| **ESP12** | A time frame has been set for the implementation of the projects proposed by the plan. | | | | | | | |
| **ESP13** | A budget has been set for the implementation of the projects proposed by the plan. | | | | | | | |
| **ESP14** | Specific entities were appointed to implement the projects that emerged from the plan. | | | | | | | |
| **ESP15** | Key performance indicators have been developed to measure compliance with the stated objectives of the plan. | | | | | | | |
| **ESP16** | The projects that emerged from the plan were implemented. | | | | | | | |
| **ESP17** | The instructions, laws and regulations that emerged from the plan were complied with. | | | | | | | |
| **ESP18** | The plan has been constantly reviewed for adaptation to variables. | | | | | | | |
| **ESP19** | Adjustments to the plan were made according to the variables. | | | | | | | |
| **ESP20** | The plan provided an effective framework and reference for the development of the institution. | | | | | | | |
| **ESP21** | The plan and the projects that emerged, had an impact on the | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | development of the institution. | | | | | | | |
| **ESP22** | The efforts and resources spent in preparing the plan have not been useless. | | | | | | | |

## 4- Hospital performance evaluation:

| Code | Team Professionality | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TPro1** | The staff understands that he is accountable about the assigned responsibilities and tasks. | | | | | | | |
| **TPro2** | The staff is continuously improving the hospital performance. | | | | | | | |
| **TPro3** | Hospital management supports the staff to improve hospital performance. | | | | | | | |
| **TPro4** | Staff had the initiative to improve services provided by the hospital. | | | | | | | |
| **TPro5** | The staff aware that his work helps to achieve the hospital goal. | | | | | | | |

| Code | Team Engagement | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TE1** | Staff engaged to the hospital. | | | | | | | |
| **TE2** | Staff satisfied from the privileges. | | | | | | | |
| **TE3** | Staff is committed to change and improvement. | | | | | | | |
| **TE4** | Staff clearly understand the goal of the team they work with. | | | | | | | |
| **TE5** | Staff achievement appreciated. | | | | | | | |
| **TE6** | Staff perform their duties just as perfect. | | | | | | | |
| **TE7** | Staff has the right personnel to succeed. | | | | | | | |

| Code | Team Performance | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TP1** | Staff is working effectively and efficiently. | | | | | | | |
| **TP2** | Staff able to make informed and effective decisions. | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TP3** | Staff members trust and respect each other. | | | | | | | |
| **TP4** | staff member express disagreement constructively. | | | | | | | |
| **TP5** | Staff devote time to evaluate how effective they work as a group. | | | | | | | |
| **TP6** | We use patient satisfaction survey as a tool to assess the team performance. | | | | | | | |
| **TP7** | Employee performance is evaluated periodically to improve performance and identify problems. | | | | | | | |
| **TP8** | Staff committed to the stated goals and strategies. | | | | | | | |

| Code | Sharing Information | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **SI1** | The team leader has a process for sharing information with all team members. | | | | | | | |
| **SI2** | Attention is given to obtaining the necessary information. | | | | | | | |
| **SI3** | Gathered data stored to be retrieved as needed. | | | | | | | |
| **SI4** | Data analysis used to obtain information and build knowledge. | | | | | | | |
| **SI5** | The result of patient satisfaction survey discussed with the staff. | | | | | | | |
| **SI6** | The information used to improve hospital and staff performance. | | | | | | | |

| Code | Skills and Education | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **SE1** | The hospital concern about the needed skills for the staff to function effectively. | | | | | | | |
| **SE2** | The hospital offers various forms of training to keep the skills up to date. | | | | | | | |
| **SE3** | Staff is interested in continuing education to improve work performance. | | | | | | | |
| **SE4** | Team members work to ensure we are using best-practice methods. | | | | | | | |
| **SE5** | The staff improve their skills away from the hospital educational programs. | | | | | | | |

| Code | Hospital Performance | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **HP1** | The organizational strategic plan is clear and available to all employees and is documented and updated. | | | | | | | |
| **HP2** | The hospital follows a written procedure manual. | | | | | | | |
| **HP3** | The procedure manual available in all departments and employee. | | | | | | | |
| **HP4** | Safety measurements and standards are documented and updated periodically. | | | | | | | |
| **HP5** | The hospital follows written polices to protect patients from medical errors. | | | | | | | |
| **HP6** | There is a monitoring system and committee for auditing patient files and reviewing the staff performance. | | | | | | | |
| **HP7** | Staff perform a periodic meeting for employees aims to improve organizational performance. | | | | | | | |
| **HP8** | There is a budget dedicated for improving and developing. | | | | | | | |
| **HP9** | The hospital care about quality control and assigning committees for quality. | | | | | | | |

**Appendix B**

Questionnaire II
Healthcare Providers

The following questionnaire aims to explore the effectiveness of strategies used by hospitals to improve performance and achieve patient satisfaction.

Please read the questionnaire carefully considering your hospital. We are interested in your assessment of health sector strategies.

**1- Information about the hospital:**

| Code | Question |
|---|---|
| **Hosp.Type** | Sector: 1- Governmental 2- NGOs 3- Private |
| **Hosp.Name** | Hospital Name: |
| **Hosp.Address** | Hospital Address: 1- Ramallah 2- Nablus 3- Hebron |
| **Hosp.Size** | Beds: |
| **Hosp.Age** | Year of Hospital Establishment: |

**2- Hospital performance evaluation:**

| Code | Team Professionality | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TPro1** | The staff understands that he is accountable about the assigned responsibilities and tasks. | | | | | | | |
| **TPro2** | The staff is continuously improving the hospital performance. | | | | | | | |
| **TPro3** | Hospital management supports the staff to improve hospital performance. | | | | | | | |
| **TPro4** | Staff had the initiative to improve services provided by the hospital. | | | | | | | |
| **TPro5** | The staff aware that his work helps to achieve the hospital goal. | | | | | | | |

| Code | Team Engagement | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TE1** | Staff engaged to the hospital. | | | | | | | |
| **TE2** | Staff satisfied from the privileges. | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TE3** | Staff is committed to change and improvement. | | | | | | | |
| **TE4** | Staff clearly understand the goal of the team they work with. | | | | | | | |
| **TE5** | Staff achievement appreciated. | | | | | | | |
| **TE6** | Staff perform their duties just as perfect. | | | | | | | |
| **TE7** | Staff has the right personnel to succeed. | | | | | | | |

| **Code** | **Team Performance** | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **TP1** | Staff is working effectively and efficiently. | | | | | | | |
| **TP2** | Staff able to make informed and effective decisions. | | | | | | | |
| **TP3** | Staff members trust and respect each other. | | | | | | | |
| **TP4** | staff member express disagreement constructively. | | | | | | | |
| **TP5** | Staff devote time to evaluate how effective they work as a group. | | | | | | | |
| **TP6** | We use patient satisfaction survey as a tool to assess the team performance. | | | | | | | |
| **TP7** | Employee performance is evaluated periodically to improve performance and identify problems. | | | | | | | |
| **TP8** | Staff committed to the stated goals and strategies. | | | | | | | |

| **Code** | **Sharing Information** | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **SI1** | The team leader has a process for sharing information with all team members. | | | | | | | |
| **SI2** | Attention is given to obtaining the necessary information. | | | | | | | |
| **SI3** | Gathered data stored to be retrieved as needed. | | | | | | | |
| **SI4** | Data analysis used to obtain information and build knowledge. | | | | | | | |
| **SI5** | The result of patient satisfaction survey discussed with the staff. | | | | | | | |
| **SI6** | The information used to improve hospital and staff performance. | | | | | | | |

| **Code** | **Skills and Education** | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **SE1** | The hospital concern about the needed skills for the staff to function effectively. | | | | | | | |
| **SE2** | The hospital offers various forms of training to keep the skills up to date. | | | | | | | |
| **SE3** | Staff is interested in continuing education to improve work performance. | | | | | | | |
| **SE4** | Team members work to ensure we are using best-practice methods. | | | | | | | |
| **SE5** | The staff improve their skills away from the hospital educational programs. | | | | | | | |

| **Code** | **Hospital Performance** | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **HP1** | The organizational strategic plan is clear and available to all employees and is documented and updated. | | | | | | | |
| **HP2** | The hospital follows a written procedure manual. | | | | | | | |
| **HP3** | The procedure manual available in all departments and employee. | | | | | | | |
| **HP4** | Safety measurements and standards are documented and updated periodically. | | | | | | | |
| **HP5** | The hospital follows written polices to protect patients from medical errors. | | | | | | | |
| **HP6** | There is a monitoring system and committee for auditing patient files and reviewing the staff performance. | | | | | | | |
| **HP7** | Staff perform a periodic meeting for employees aims to improve organizational performance. | | | | | | | |
| **HP8** | There is a budget dedicated for improving and developing. | | | | | | | |
| **HP9** | The hospital care about quality control and assigning committees for quality. | | | | | | | |

**Appendix C**

Questionnaire III
Patient Satisfaction

The following questions aim to measure how you feel about the medical care you receive.

Please read the questionnaire carefully considering your hospital. We are interested in your assessment of health sector strategies.

**1- Information about the hospital:**

| Code | Question |
|---|---|
| **Hosp.Type** | Sector: 1- Governmental 2- NGOs 3- Private |
| **Hosp.Name** | Hospital Name: |
| **Hosp.Address** | Hospital Address: 1- Ramallah 2- Nablus 3- Hebron |

2- Patient Information:

| Code | Question |
|---|---|
| **PAge** | Patient Age: ……. |
| **PGender** | Gender: 1- Male 2- Female |
| **Pincome** | Income: |
| **PInsurance** | Insurance Type: 1- Governmental 2- Private 3- Military 4- UN (for Refugees) 5- None |
| **PEducation** | Educational Level: 1- No high school 2- High school 3- Diploma 4- Bachelor degree 5- master degree 6- Doctoral degree |
| **PHealth** | Health status: 1- Excellent 2- very good 3- good 4- Somewhat 5- Bad 6- Very bad |
| **PHvisits** | Number of patient visits per year for treatment: 1- Less than one visit 2- One visit 3- Two to five visits 4- More than five visits. |
| **Psocial_Stat** | Social status: 1- Single 2- Married 3- Widow or divorced. |

**3- Admission Information:**

| Code | Question |
|---|---|
| **AI1** | Admission procedure: 1- Very clear 2- Clear 3- Somewhat clear 4- Not clear 5- Not clear at all |
| **AI2** | Waiting time before admission: …… |
| **AI3** | Level of care before admission: 1-Excellent 2- Good 3- Fair 4- Bad 5- Very Bad |
| **AI4** | Medical intervention response: 1- Very fast 2- Fast 3- Fair 4- Slow 5-Very slow |

**4- patient room services level:**

| Code | Indicator | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **PR1** | The level of cleanliness and overall condition of the toilets, showers, and floors of the hospital. | | | | | | | |
| **PR2** | Level of the safety of your hospital room. | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **PR3** | Level of satisfaction with meals that were provided. | | | | | | | |
| **PR4** | Level of comfort in sleeping in your room. | | | | | | | |
| **PR5** | Level of hospitality in your room (internet, TV, Bed, AC…). | | | | | | | |
| **PR6** | Satisfaction about room Crowdedness. | | | | | | | |
| **PR7** | Satisfaction about visiting time. | | | | | | | |
| **PR8** | Satisfaction about ventilation and air conditioning. | | | | | | | |
| **PR9** | Satisfaction about beds and bedding. | | | | | | | |
| **PR10** | Satisfaction about nursing services. | | | | | | | |

## 5- Communication Skills:

| Code | Indicator | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **CS1** | Doctors act in a professional and serious way. | | | | | | | |
| **CS2** | I was treated in a friendly and polite manner. | | | | | | | |
| **CS3** | Doctors do their best to keep me away from anxiety and stress. | | | | | | | |
| **CS4** | The medical staff explain to me my condition in detail. | | | | | | | |
| **CS5** | The medical staff listen to me carefully. | | | | | | | |
| **CS6** | Doctors don't use medical terms without explanation. | | | | | | | |
| **CS7** | The medical staff answer my questions. | | | | | | | |
| **CS8** | The medical staff respond to the call for help without delay. | | | | | | | |
| **CS9** | The medical staff spend enough time with me. | | | | | | | |
| **CS10** | The medical staff is calm and not nervous. | | | | | | | |

## 6- General Satisfaction about medical service effectiveness:

| Code | Indicator | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **GS1** | I am satisfied with the provided medical services. | | | | | | | |
| **GS2** | I was diagnosed effectively and correctly. | | | | | | | |
| **GS3** | All tests were done to diagnose my condition. | | | | | | | |
| **GS4** | I was given the necessary treatment effectively. | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **GS5** | I was followed up after discharge. | | | | | | | |
| **GS6** | Medical staff is highly skilled and experienced. | | | | | | | |
| **GS7** | The medical staff review my health history. | | | | | | | |
| **GS8** | The medical staff communication is satisfying and professional. | | | | | | | |
| **GS9** | I was cured and fully recovered after the treatment. | | | | | | | |
| **GS10** | The medical devices and technologies are available and effective. | | | | | | | |
| **GS11** | I will visit this hospital whenever I feel sick or need a hospital. | | | | | | | |
| **GS12** | I will recommend this hospital to every patient. | | | | | | | |

## 7- Financial Aspects:

| Code | Indicator | Strongly Agree | Agree | Agree somewhat | Neutral | Disagree Somewhat | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|---|---|
| **FA1** | I am satisfied about the cost of my treatment. | | | | | | | |
| **FA2** | The cost of treatment is affordable. | | | | | | | |
| **FA3** | The cost of treatment is fair to the services provided. | | | | | | | |
| **FA4** | The hospital deserves to charge these cost from the patients. | | | | | | | |

# الملخص

**خلفية الدراسة:** يعد أداء مديري الرعاية الصحية ومقدميها أمرًا بالغ الأهمية. لذلك يجب أن تلبي أنظمة الرعاية الصحية احتياجات المريض من خلال تحديد الاستراتيجيات اللازمة لتحسين الأداء.

**أهداف الدراسة:** للبحث في تأثير الأطراف الرئيسية الثلاث في المستشفيات (مديرو الرعاية الصحية، ومقدموها، والمرضى) على جودة الرعاية الصحية وأداء المستشفيات ورضا المرضى. بالإضافة الى تحليل عوامل الأداء في المستشفيات بما في ذلك عوامل التباين بين مديري ومقدمي الرعاية الصحية التي تساهم في تحسين أداء نظام الرعاية الصحية ورضا المرضى.

**منهج الدراسة:** تم عمل مسح لمديري ومقدمي الرعاية الصحية حول أداء المستشفيات، بالإضافة الى عمل مسح للمرضى المدخلين في المستشفيات حول مستوى رضاهم. وذلك من خلال تصميم وتوزيع ثلاثة استبيانات: واحد لمديري الرعاية الصحية، وآخر لمقدمي الخدمة، وثالث للمرضى المدخلين. استهدفت الدراسة ثلاثة أنواع من المستشفيات في الضفة الغربية: المستشفيات الحكومية، ومستشفيات المنظمات الاهلية غير الحكومية، والمستشفيات الخاصة.

**نتائج الدراسة:** تؤثر العوامل ذات الصلة بمقدمي الرعاية الصحية ومؤسسات الرعاية الصحية والمرضى على جودة الخدمات. حيث اظهرت النتائج عدة طرقً لتحسين أداء نظام الرعاية الصحية وتعزيز جودة الخدمة، بما في ذلك: الدعم الإداري، التخطيط الفعال، توافر الموارد،

التعليم والتدريب، مشاركة المعلومات، معايير السلامة، التعاون بين مقدمي الخدمة، إنتماء الموظفين، والاهتمام بملاحظات المرضى. بالإضافة إلى ذلك، الاهتمام بالرعاية الصحية التي محورها المريض وتتضمن المتابعة بعد الخروج، نظافة المستشفى، خدمات الغرف، والعلاقة بين الخدمات المقدمة وتكلفتها، والتي تبين أنها من المؤثرات الرئيسية لتحسين جودة الرعاية.

**أهمية الدراسة:** خدمات الرعاية الصحية عالية الجودة هي نتيجة للتعاون بين مقدمي الرعاية الصحية والمرضى ضمن نظام إدارة داعمة. تساهم هذه الدراسة نظريا وعمليا في الرعاية الصحية من خلال تطوير إطار مفاهيمي يوفر فهمًا عمليًا لعوامل أداء الرعاية الصحية وتدابير تحسين جودة الرعاية لواضعي السياسات ومديري الرعاية الصحية ومقدميها. حيث يمكن للمستشفيات ومديري الرعاية الصحية استخدام هذه النتائج لبناء استراتيجيات تعمل على تحسين أداء المستشفيات ورضا المرضى وإنتماء الموظفين.