

**Arab American University
Faculty of Graduate Studies
Department of Administrative and Financial Sciences
Master Program in Quality Management
in Health Institutions**



**“Assessing Perceived Service Quality by Patients at the
National Center for Dermatology Using SERVQUAL Model”**

**Waed Awwad Salem
202216380**

**Supervision Committee:
Dr. Sami Sader
Dr. Emad Abu Khader
Dr. Rand Salman**

**This Thesis Was Submitted in Partial Fulfillment of the
Requirements for the Master Degree in
Quality Management in Health Institutions.**

Palestine, January/2025

© Arab American University. All rights reserved.

Arab American University
Faculty of Graduate Studies
Department of Administrative and Financial Sciences
Master Program in Quality Management
in Health Institutions



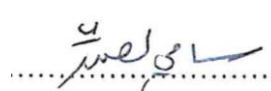

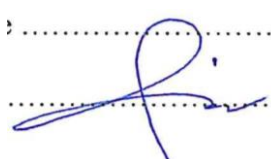
Thesis Approval

“Assessing Perceived Service Quality by Patients at the National Centre for Dermatology Using SERVQUAL Model”

Waed Awwad Salem
202216380

This thesis was defended successfully on.28/01/2025. and approved by:

Thesis Committee Members:

Name	Title	Signature
1. Dr.Sami Sader	Main Supervisor	
2. Dr.Emad Abu Khader	Member of Supervision Committee	
3. Dr.Rand Salman	Member of Supervision Committee	

Palestine, January/2025

Declaration

I declare that, except where explicit reference is made to the contribution of others, this thesis is substantially my work and has not been submitted for any other degree at the Arab American University or any other institution.

Student Name: Waed Awwad Salem

Student ID: 202216380

Signature:.....

Date of Submitting the Final Version of the Thesis: 24/04/2025

Dedication

To the most important person, to my lovely husband, my inspiration, who always curled me with love and support, who helped me to skip all the challenges along my journey

To my lovely children, Mahmoud, Murad, Yamen, and Adam, who are my real life, who encourage me and believe in my abilities to succeed

To my mother and father, who gave me life and were the driving force for my success

To all my family and friends who always give me trust and help

To my beloved homeland, Palestine, where we suffer to grow and improve

I hold a special dedication to my thesis for my supervisor, Dr. Sami Sader, who guides me and whose mentorship and support keep me more enthusiastic and motivated during my thesis journey

At the end, a graceful heartfelt appreciation to the Arab American University family and his honored lecturers.

I dedicate my thesis to them with heart-filled gratitude and utmost sincerity.

Waad Awwad Salim

Acknowledgements

In the beginning, all praise and thanks to Allah, the greatest of all, and who I am always depending on and seeking more guidance and sustenance. Continuous grace and mercy have always been with me throughout my life and even during my thesis.

All sincere gratitude to the Palestinian Ministry of Health, represented by the general directors, who gave me this chance and eased my way to complete my thesis

Special appreciation to the National Centre for Chronic Disease and Dermatology, represented by the general director, Department Managers, and my department friends, who always believed in my capabilities and gave me trust and support

I wish to express my heartfelt appreciation to my supervisor, Dr. Sami Sader, who gave me his time and guided me with his impeccable knowledge, ethics, and exceptional attendance.

I wish to express my sincere gratitude to the two discussion committees who bring me their insightful comments.

I am grateful to all the staff of Arab American University for giving me this chance to graduate from this great institution.

Special gratitude to my husband, children, parents, family, and friends whose presence has had a great effect on my thesis,

All my appreciation to all the people whose help and assistance were the milestones for the completion of this work

Thanks to my classmates, I have enjoyed studying for two years with them

No words can express how grateful I feel for all

Waad Awwad Salim

“Assessing Perceived Service Quality by Patients at the National Centre for Dermatology Using SERVQUAL Model”

Waed Awwad Salem

Dissertations Committee:

Dr.Sami Sader

Dr.Emad Abu Khader

Dr.Rand Salman

Abstract

Background: The SERVQUAL (SERV-service, QUAL-quality) model is utilized to evaluate the quality of a healthcare center in Palestine. The evaluation is based on the SERVQUAL model’s five dimensions (Tangibility, Responsiveness, Reliability, Assurance, and Empathy). This study was conducted at the National Centre for Dermatology in Ramallah, which is considered the only public specialized centre.

Aim of the study: The work assesses the discrepancies between the patient's expectation of services and their perception based on the five SERVQUAL dimensions and their relations with sociodemographic factors (age, gender, residency, education level, social status, employment status, and the frequency of visits) in addition to the main predictors for patient satisfactions.

Method: The researcher employed a cross-sectional study design by using an Arabic version of the SERVQUAL questionnaire. Data was collected over 25 days during July to August 2024. 350 questionnaires were distributed, but the total number of returned and valid ones was 320. The analysis of data was performed by SPSS 29th edition.

Result: The study's main findings showed a gap between patients’ expectations and perceptions for all SERVQUAL dimensions where expectations are higher than those perceptions. Tangible dimension has the highest mean score for all the perceptions and expectations (6.03 and 5.28, respectively). On the other hand, Responsiveness has the lowest mean score for both perceptions and expectations (5.77 and 4.89, respectively). The highest negative quality gap was for responsiveness (-0.88), followed by Assurance (-0.85). Empathy was the most satisfied dimension with the lowest negative quality gap (-0.68), followed by Reliability (-0.73).

Conclusion: It was scored negative for all SERVQUAL dimensions, meaning there are significant differences between the expectations and perceptions of services. According to socioeconomic factors, the study revealed a significant association between the level of education and the frequency of visits, where higher education resulted in more dissatisfaction among patients. In contrast, frequent visits lead to the center improving the satisfaction of patients. The remaining socioeconomic factors didn’t have any significant effect. As a main result, less than one quarter (22.8%) of the patients were satisfied with the NCD’s dermatological services, so implementing a quality management program, training on quality improvement techniques, and an effective monitoring system. The study also highlighted the weak points for managers and policymakers in

their efforts either to set new standards or change policies to make more changes that are important for ensuring the delivery of high-quality services that meet results. Also, this research could be a base for more research into quality achievements in the future.

Keywords: SERVQUAL model, patient satisfaction, quality, perception, expectation

Table of Contents

#	Title	Page
	Declaration	I
	Dedication	II
	Acknowledgements	III
	Abstract	IV
	List of Tables	IX
	List of Figures	X
	Lists of Appendices	XI
	List of Definitions and Abbreviations	XII
	Chapter One: Introduction.....	1
1.1	Introduction	1
1.2	The National Centre for Dermatology in Palestine	2
1.3	SERVQUAL Model.....	3
1.4	Problem Statement	5
1.5	Research Objectives	6
1.6	Questions of the Study	7
1.7	Research Propositions	8
1.8	Significance of the study	9
1.9	Conceptual Definition	9
1.9.1	SERVQUAL.....	10
1.9.2	Quality in Healthcare	10
1.9.3	Patient Satisfaction.....	10
1.9.4	Perceived Service Quality	10
1.10	Operational Definition.....	10
	Chapter Two: Literature Review	12

2.1 Introduction	12
2.2 SERVQUAL	12
2.3 Quality	18
2.4 Patient Satisfaction	22
2.5 SERVQUAL in Healthcare.....	26
2.6 Previous Studies	27
2.6.1 Previous Studies in the Palestinian Context:.....	27
2.6.2 Studies for the Application of SERVQUAL in the Regional and International Contexts:.....	35
2.7 Summary	49
Chapter Three: Methodology	52
3.1 Introduction	52
3.2 Study Design	52
3.3 Survey Questionnaire	52
3.4 Questionnaire Validation	53
3.5 Sampling and Sample Size	53
3.6 Data Collection.....	54
3.7 Study Variables.....	56
3.8 Data Analysis.....	56
Chapter Four :Results.....	58
4.1 Introduction	58
4.2 General Characteristics of the Respondents	58
4.3 Patients' Expectations, Perceptions, and Quality Gaps	59
4.4 The Relation Between the Sociodemographic Factors and Patients' Expectations ..	63
4.5 The Relation Between the Sociodemographic Factors and Patients' Perceptions	65
4.6 Impact of Sociodemographic Factors on Quality Gap	66
4.7 Predictors Associated with Patient Satisfaction	67

4.8 Summary	70
Chapter Five: Discussion and Recommendations	73
5.1 Introduction	73
5.2 Discussion of Results	73
5.3 Limitations and Strengths.....	79
5.4 Conclusion.....	80
5.5 Recommendations	81
5.6 Implications for Further Research.....	82
References	83
Appendices	89
ملخص.....	98

List of Tables

Table#	Title of Table	Page
Table 2.1:	The Ten Dimensions of SERVQUAL, (Parasuraman et al., 1985)	13
Table (2.2):	Correspondence between the five Dimensions of SERVQUAL and the Original ten dimensions for the assessment of Service Quality (Zeithaml et al., 1990) .	16
Table 2.3:	Definition of the Five Dimensions of SERVQUAL (Teshnizi et al. 2018)....	17
Table 2.4:	Dimensions of Quality According to IOM (Ajmi & Aase, 2021).	19
Table 3.1:	The Internal Consistency of the SERVQUAL Scale (N = 320).	54
Table 4.1:	Sociodemographic Characteristics Among Participants (N = 320)......	59
Table 4.2:	Patients Expectations, Perceptions, and Gap Scores Based on SERVQUAL Dimensions (N = 320).	60
Table 4.3:	Relationship Between Patients' Expectations and Sociodemographic Variables (N = 320).	64
Table 4.4:	Relationship Between Patients' Perceptions and Sociodemographic Variables (N = 320).	65
Table 4.5:	Relationship between quality gap and sociodemographic variables (N = 320).	66
Table 4.6:	Relationship Between Patient Satisfaction and Sociodemographic Characteristics Among Respondents (N = 320)	69
Table 4.7:	Predictors Associated with Patient Satisfaction Using Multiple Logistic Regression Analysis (N = 320).....	70

List of Figures

Figure#	Title of Figures	Page
Figure 1.1:	Conceptual Framework of SERVQUAL (Self-developed).....	5
Figure 4.1:	Mean Score for Patients' Expectations and Perception Based on the SERVQUAL Dimensions.....	62
Figure 4.2:	Overall Absolute Mean Score for Service Quality Gap Based on the SERVQUAL Dimensions.....	63
Figure 4.3:	Absolute Mean Score for Service Quality Gap Based on the SERVQUAL Individual Items.....	63
Figure 4.4:	The level of patient satisfaction based on the SERVQUAL scale	69
Figure 5.1:	Mean Score for Patients' Expectations and Perceptions Based on the SERVQUAL Dimensions.....	76
Figure 5.2:	Mean Score for Patients' Expectations and Perceptions According to Education Level.....	77
Figure 5.3:	Mean Score for Patients' Expectations and Perceptions According to Frequency of Visits.....	78

Lists of Appendices

Appendix #	Title of Appendix	Page
Appendix 1:	The Questionnaire	89
Appendix 2:	AAUP-IRB-R Consent -Arabic Version.....	95
Appendix 3:	Approval Letter.....	96
Appendix 4:	تسهيل مهمة البحث في وزارة الصحة الفلسطينية.....	97

List of Definitions and Abbreviations

Abbreviation	Title of the Abbreviation
AHRQ	Agency for Healthcare Research and Quality
ANOVA	Analysis of Variance
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HMC	Hamad Medical Cooperation
IOM	Institute of Medicine
JCI	Joint Commission International
JRMS	Jordanian Royal Medical Services
MOH	Ministry of Health
NCD	National Centre for Dermatology
OHS	Occupational Health Safety
POR	Patient Online Review
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
QFD	Quality Function Deployment
SERVQUAL	Service Quality
TQM	Total Quality Management
UNRWA	United Nations Relief and Works Agency
VTC	Vocational Training Centre
WB	West Bank

Chapter One: Introduction

1.1 Introduction

Mohammad Mosadeghrad, (2013) Considered quality as an important issue to a good healthcare service because it competently provides patients with their needs and requirements, ensuring good communication and involving shared decision-making and cultural sensitivity. Quality in healthcare is considered an ethical and right thing. In other words, quality means “doing the right things right and making continuous improvements, obtaining the best possible clinical outcomes, satisfying all customers, retaining talented staff, and maintaining financial performance”.

SERVQUAL is an acronym from the words “service” and “quality,” generally used as a model to assess and measure the quality of services by determining the gap between the expectation of customers and their real perception (Jonkisz et al., 2022a). SERVQUAL was developed by Parasuraman, Zeithaml, and Berry in 1985 (Parasuraman, Zeithaml, & Berry, 1985). The model can be used in many different sectors that introduce various kinds of services to customers, and how people can see them (Gulzar, n.d.) Customer satisfaction can be achieved by achieving a high level of service quality. Customer Satisfaction is a key factor for success at many levels; it enhances loyalty, word-of-mouth, and the overall profitability and reputation of the organization.

Moreover, SERVQUAL can help improve customer satisfaction by identifying and understanding their needs. The model can help highlight and prioritize areas that need improvement and implement the needed strategies to bridge the gaps. Additionally, SERVQUAL can be used to monitor and evaluate the results, providing feedback and thus making needed adjustments as indicated in (Jonkisz et al., 2021) .

SERVQUAL model is based on five dimensions where discrepancies between the expected service quality and the perceived one can be evaluated. These dimensions are (Tangibility, Reliability, Responsiveness, Assurance, and Empathy). Hasan & Karim (2023) suggested that achieving the quality suggested in the healthcare sector plays an important role in achieving patient satisfaction. Both service quality and patient satisfaction are considered indicators of the efficiency and effectiveness of the healthcare system.

The setting of the research is The National Centre for Dermatology, which was established in 2010, and is considered the only specialized center that provides healthcare services for dermatological patients, and it is the only one affiliated with the government

(Palestinian Ministry of Health). The center is located in Ramallah at the Palestinian medical complex. It introduces different services such as the treatment with phototherapy, laser, nitrogen, cautery, and allergy tests, which is named a Prick Test. (Alwatan Voice, 2020)

This research uses the SERVQUAL model to measure the gaps between the perceived service quality and the expected one from the perspective of patients who visited this center and received their service. This study is based on distributing a questionnaire to assess and identify the improvement gaps in the quality of service within the center and make efforts to put strategies in place with managers and policymakers to do their best and improve the service quality.

Dermatological problems have a major impact on patients' lives. Patients deserve to have an outstanding level of healthcare service quality. (Duran & Yürekli, 2023) Dermatological disease has an important effect on people's financial status. Due to its high cost, people can't receive care from the private sector, and therefore, demanding government-supported care is the most effective. (Patel et al., 2020).

Accordingly, this research work identified the gaps between the perceived and expected service quality within the five dimensions of SERVQUAL (Tangibility, Reliability, Responsiveness, Assurance, and Empathy) from the perspective of Dermatological patients to enhance the improvements in the weak area of service quality and sustainably keep them.

1.2 The National Centre for Dermatology in Palestine

According to (Ma'an News, 2020), the National Centre for Dermatology is considered the only specialized center that provides specialized services for dermatological patients in Palestine and the only one affiliated with the Palestinian Ministry of Health. It was established in 2010, and funded by Austria, as a National Center for Chronic Diseases (NCD), but later became specialized in dermatology and changed its name to the National Center for Dermatology. The center is located in Ramallah in the Palestinian Medical Complex. The center provides a wide range of healthcare services. The center provides unique services that are not available at any other center. Some of the services are the treatment with phototherapy, laser, nitrogen, and cautery. In addition, patients can do allergy tests (Prick Tests), which are very expensive in private centers (Alwatan Voice, 2020).

The center has many different departments that are responsible for introducing different services, e.g.) The management department, which involves the accounting part, the Management part, and the HR one. The other one is the medical part that has five specialized doctors in addition to six other doctors on the residency program. There is also a pharmaceutical department that serves the center with many medications that are special for dermatological patients, biological treatments, and other chronic medications for different chronic diseases. Another department is the laboratory department, in which the Prick test, Leishmania test, KOH, and many other tests can be conducted. Also, there are nutrition and radiology departments. The approximate number of patients who received different services by the center during 2024 was 30310 patients with 10354 different tests. The number of patients who receive PUV (phototherapy) in the center was 1550. This center provides services to people from different governorates in the WB rather than Ramallah. (Annual report of the Ministry of Health,2024)

Moreover, the Center is considered a training center for new doctors who want to become specialists in the Dermatological field, as the Palestinian Medical Council accepted this center to be a center for Dermatology Specialization at the beginning of 2024. This can add more focus to this center to be able to introduce the service most efficiently with high quality to the dermatological patient. (Palestinian Medical Council, 2025)

In this research, the researcher focuses on assessing patients' overall satisfaction with the quality of the center's services based on the SERVQUAL model, as the center is a service center, and the model is widely used for service quality evaluation.

1.3 SERVQUAL Model

SERVQUAL Model was developed by famous American experts (Parasuraman, Zeithaml, and Berry) in 1985 (Parasuraman, Zeithaml, & Berry, 1985) for the non-medical sectors (Jonkisz et al., 2021). Shi & Shang (2020) Suggested that Parasuraman, Zeithaml, and Berry developed SERVQUAL by the test of the retail case and then revised and improved it so it can be utilized by multiple sectors, such as the retail industry, e-commerce industry, medical service, and tourism industry, in addition to many others.

The developers of the SERVQUAL method assumed the presence of gaps among the quality levels between the expected service and the real perceived one. When the customer's expectation exceeds the real perceived experience, this leads to gaps in the level of quality (Jonkisz et al., 2021). When the gaps are identified, this can help eliminate

the dissonance between the level of expectation of the customer and their perception of the provided services. This can play an important role in enhancing customer satisfaction and improving service quality. Parasuraman et al., (1985) Assumed that the expected level of service quality depends mainly on experience, word-of-mouth, and personal needs.

SERVQUAL model is based on five main dimensions (Tangibility, Responsiveness, Assurance, Reliability, and Empathy). Jonkisz et al., (2021) Indicated that when the service provided is higher than the expected one, this indicates a high level of service quality. On the other hand, when the provided service is lower or doesn't meet the expected level, this means a lower level of service quality and an unsatisfactory perception. Thus, it is needed for the improvement process.

Faeni, (2023) Suggested designing and implementing a questionnaire based on the SERVQUAL model, asking customers about their opinion on the services introduced to them. This questionnaire can be tailored according to the service that is to be evaluated. From the perspective of the customers, they can answer the questions that can be rated about their expectations for the services and the services that were perceived.

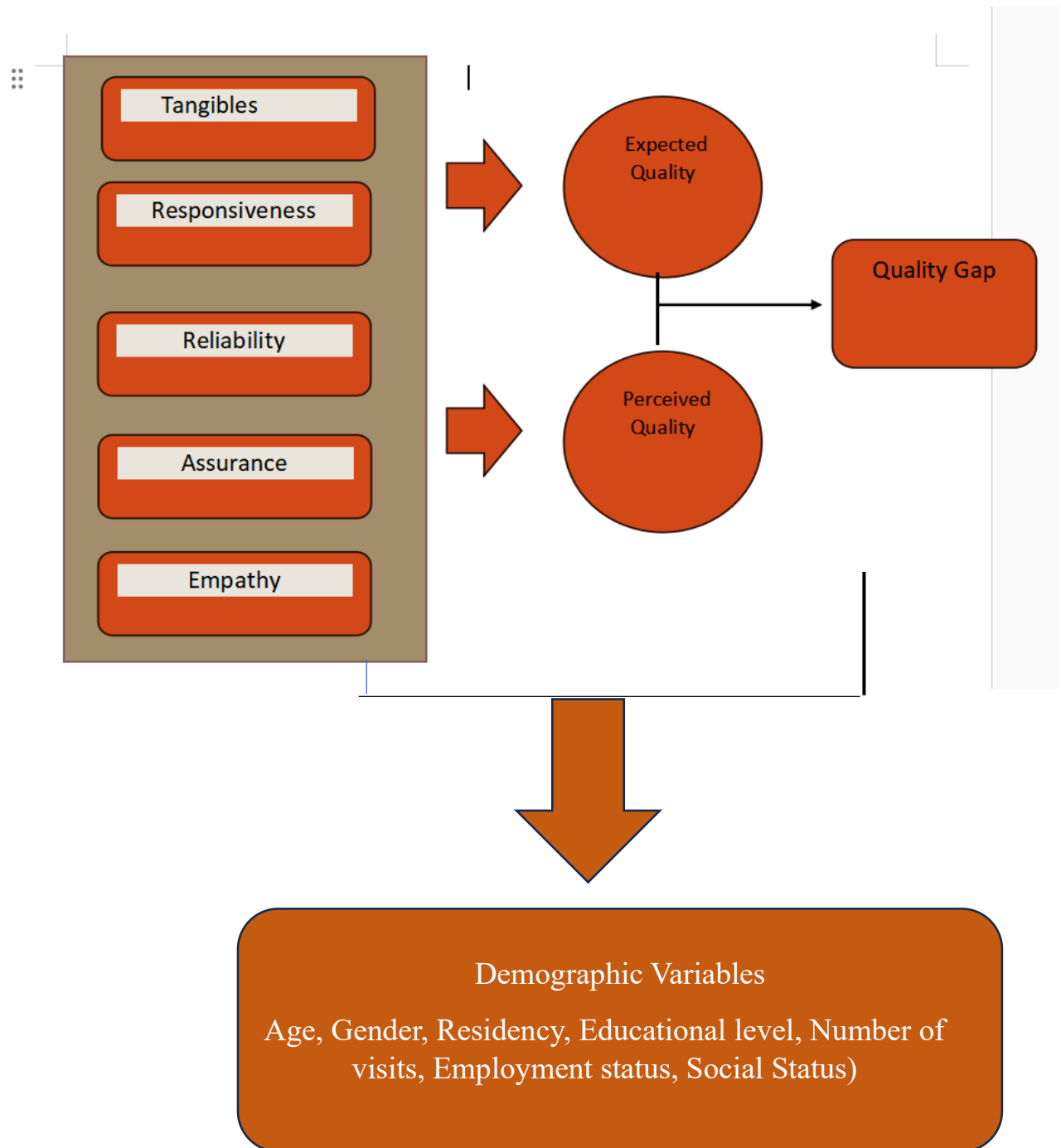


Figure 1.1: Conceptual Framework of SERVQUAL (Self-developed)

1.4 Problem Statement

Dermatological conditions are very prevalent in Palestine since Palestinians are living under occupation, which results in significant psychological and social challenges. Many of these conditions can be triggered or exacerbated by stress or any stressful situation anyone may encounter, like the psoriasis disease. According to the Palestinian Psoriasis Association, which was established in 2023, the percentage of this disease reached 4-6 % of Palestinian people due to the previously listed reasons (Palestine TV, 2023).

Only treatments can lessen the symptoms of these chronic dermatological diseases, which occasionally have no known cure, even though skin disease mortality is very low. (Unissa et al., 2019).

Dermatological patients can live for many years with their current conditions, and flare-ups can return when patients stop receiving their prescribed medications. Additionally, dermatologist visits are required for the treatment of dermatological diseases, which interferes with the patient's resources and activities. The disease cannot be completely cured, but treatments must be given regularly and in sufficient amounts to be effective. Thus, having dermatological diseases will have an impact on a patient's well-being, lower their quality of life, and occasionally even trigger the onset of depressive or anxious symptoms. (Jankowiak et al., 2020 & Talamonti et al., 2021).

Duran & Yürekli (2023) assumed that dermatological conditions affect patients' appearance, behavior, and overall health. Since patient satisfaction is crucial for encouraging continued visits and treatment, this study focuses on assessing the quality of services at the National Centre for Dermatology.

Patients with dermatological conditions deserve to receive high-quality care that aligns with their expectations. When services are delivered efficiently, patients are likely to be very satisfied. Conversely, dissatisfaction can result in patients discontinuing treatment, potentially worsening the progression of their condition. Continuing treatment is crucial not only for the patient's recovery but also because dermatological medications can be quite costly. (Palestine TV, 2023)

There may be a relation between the perceived service and the continuity of the treatment because any failure within the treatment, or any service introduced to dermatological patients, could lead to many side effects that will affect patients' lives. The goal of the study is to assess the quality gap between the perceived service quality provided by the National Centre of Dermatology and the expected one. By using the SERVQUAL model, this research can determine the influence of five dimensions, which are: tangibility, reliability, responsibility, assurance, and Empathy.

1.5 Research Objectives

The main goal of this study is to evaluate the extent to which the services offered by the National Centre for Dermatology meet the specific needs of patients, as measured by the SERVQUAL dimensions of reliability, responsiveness, assurance, empathy, and tangibles. Accordingly, the study aims to realize the following objectives:

1. To assess the reliability of services at the National Centre for Dermatology by analyzing the consistency and accuracy of service delivery, as perceived by patients.
2. To measure the responsiveness of the National Centre for Dermatology by evaluating the promptness and willingness of staff to address patients' needs and concerns.
3. To evaluate the assurance provided by the National Centre for Dermatology, focusing on the staff's knowledge, courtesy, and ability to instill confidence and trust among patients.
4. To gauge the empathy demonstrated by healthcare providers at the National Centre for Dermatology, assessing their ability to understand, care for, and empathize with patients' emotional and physical states.
5. To assess the tangibles of services at the National Centre for Dermatology by examining the physical facilities, equipment, and communication materials, ensuring they meet the standards expected by patients.
6. To ascertain any significant differences in the patients' perceptions based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics (i.e., gender, age, social status, level of education, residency, employment status, and the frequency of visit).
7. To evaluate any significant differences in the quality gap based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah, according to their sociodemographic characteristics.
8. To assess the level of patient satisfaction based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah and the factors associated with it.

1.6 Questions of the Study

In this study, the following questions were examined:

- 1) What is the most critical SERVQUAL dimension among adult patients attending the National Centre for Dermatology in Ramallah?
- 2) Are there any significant differences between patients' expectations and perceptions in the five SERVQUAL scale individual items and dimensions among patients attending the National Centre for Dermatology in Ramallah?
- 3) Are there any significant differences in the patient's expectations based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics?
- 4) Are there any significant differences in the patients' perceptions based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics (i.e., gender, age, social status, level of education, residency, employment status, and the frequency of visit)?
- 5) Are there any significant differences in the quality gap based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics?
- 6) What is the level of patient satisfaction based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah?
- 7) What are the factors associated with patient satisfaction based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah?

1.7 Research Propositions

In this study, the following null hypotheses are tested.

- 1) Hypothesis 1 (H1): There are no significant differences between patients' expectations and perceptions in the five SERVQUAL scale individual items and dimensions (i.e., tangibles, reliability, responsiveness, assurance, and empathy) among patients attending the National Centre for dermatology in Ramallah at a 5% level of significance.
- 2) Hypothesis 2 (H2): There are no significant differences in the patients' expectations based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics at a 5% level of significance.

- 3) Hypothesis 3 (H3): There are no significant differences in the patients' perceptions based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic at a 5% level of significance.
- 4) Hypothesis 4 (H4): There are no significant differences in the quality gap based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah according to their sociodemographic characteristics at a 5% level of significance.
- 5) Hypothesis 5 (H5): There is no significant association between patient satisfaction based on the SERVQUAL scale among patients attending the National Centre for Dermatology in Ramallah and their sociodemographic characteristics at a 5% level of significance.

1.8 Significance of the study

The importance of this study stands out because it studies The National Centre for Dermatology which is considered the only specialized center that is affiliated with the government (Ministry of Health) in Palestine. This center provides a variety of services along with other new approaches in dermatological treatments like treatment with phototherapy, laser, nitrogen, and cautery. Also, patients can do allergy tests (Prick Tests) which are not found in any other place related to the Ministry of Health except the National Centre for Dermatology.

In this research, the satisfaction of patients who visit the center to have their treatments is assessed. This assessment will aid in identifying the areas of improvement in the healthcare provider of dermatology services. In addition, this research will provide the opportunity for managers and policymakers to have a better understanding of the views of patients and their involvement in improving the quality of services.

Moreover, this study is the only one conducted in Palestine to measure the satisfaction of dermatological patients who visited the National Center for Dermatology to have their treatments because this center is newly established and the only specialized in dermatological services and disease.

Finally, the research methodology of this work can be used to assess other healthcare services in Palestine, and it can be also utilized in other regional and international studies.

1.9. Conceptual Definition

1.9.1 SERVQUAL

It is a multiple-item scale that is used to assess the service quality. It depends on the discrepancies between perceived and expected service quality. It relies on five dimensions (Reliability, Tangibles, Responsiveness, Assurance, and Empathy). It was established in 1988 by Parasureman, Zeithmal, and Berry. (Coulthard, 2004).

1.9.2 Quality in Healthcare

According to (Endeshaw, 2020) Quality is defined as the services or products that need to be satisfied with the requirements and expectations of the customers, so it is based on the perceptions of the performance of the customers. Also, according to IOM, Quality is defined as: “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge “.(Harteloh, 2003).

1.9.3 Patient Satisfaction

According to (Kanan et al., 2023) Patient satisfaction is considered a measure of how a patient is happy or by the sense of pleasure of the patients which can happen when the perceived services meet or exceed their needs or requirements.

1.9.4 Perceived Service Quality

(MBA Skool, 2023) expressed the perceived service quality as the opinion of the customers about the whole quality of the product or service concerning their purposes for use against their alternatives. Also, it is the real experience of customers with the product or service.

1.10 Operational Definition

The research assesses the service quality within the National Centre for Dermatology by the use of the SERVQUAL model which depends on the difference between the perceived service quality and the expected one (P-E). SERVQUAL instrument has five dimensions (Tangibles, Reliability, Responsiveness, Assurance, and Empathy), so the research assessed the effect of these dimensions and the sociodemographic variables (Age, Gender, Residency, Educational level, Social Status, Number of visits, and the Employment status) on the service quality.

The dependent variables in this study were the patients' expectations, perceptions, quality gaps, and satisfaction based on the SERVQUAL scale, while the independent variables of the study included sociodemographic variables such as gender, age, social status, level of education, residency, employment status, and the frequency of visits.

Chapter Two: Literature Review

2.1 Introduction

This chapter includes two parts: the first part contains a thorough review of the literature related to the subject of the study. It addressed many basic concepts that were related to the study, like the SERVQUAL model, Quality with its models, Patient Satisfaction, and the SERVQUAL with its application in the healthcare context. The second part involved many literature reviews that covered several previous studies where the SERVQUAL model is used to evaluate the service quality and to identify the gaps for improvements between the expected service quality and the perceived one and its impact on patient satisfaction. Also, it dealt with many previous studies in which SERVQUAL can be used in different. Many previous studies were reviewed either in the health care field or in many other fields like higher education, motor vehicles, VTC, banks, and Jenin municipality. Also, many other literatures were reviewed in the Palestinian and international contexts.

2.2 SERVQUAL

Parasuraman et al. (1985) suggested that the quality of services involves the presence of a comparison between the customers' expectations and the performance. They considered that evaluating the quality of goods is more difficult than that of the services or performance quality. In other words, to assess the quality, it must have an evaluation of the process in which the services were delivered, not solely depending on the outcomes. In the past, before the presence of the SERVQUAL model, it was difficult to evaluate the quality, for example when a customer buys many goods, then they set many cues (tangible ones) to judge the quality of these bought goods (color, feel, fit, order, package, label, style.... etc.). On the other hand, when the customer purchases a service, fewer tangible issues help him to judge the quality. It is difficult for consumers to evaluate how they perceive their services and their quality. As a result, there was a need for more studies and investigations. In their study, Parasuraman et al. (1985) chose four categories that present services. These services include credit card, product repair and maintenance, retail banking, and securities brokerage. The authors conducted many in-depth interviews that had open-ended questions with 14 executives who were asked about many issues that were related to service quality. In addition, the authors held 12 focus group questions that

covered the satisfaction and dissatisfaction with ideal service descriptions. The insights that arose after the interviews and focus groups became a basis for a model that can describe the nature of perceived service quality from the perspective of consumers. The model set ten key dimensions for the evaluation of service quality and its determinants. These dimensions are listed and defined in Table 2.1.

Table 2.1: The Ten Dimensions of SERVQUAL, (Parasuraman et al., 1985)

#	Dimension	Definition	Criteria
1	Reliability	Involves the consistency of performance and dependability/ the firm performs the service right the first time	-accuracy in billing -keeping records correctly -performing the service at the designated time
2	Responsiveness	The willingness or readiness of employees to provide service/ involves the timeliness of services	-mailing a transaction slip immediately -calling the customer back quickly -giving prompt service (appointment setting)
3	Competence	Possession of the required skills and knowledge to perform the service	-knowledge and skills of the contact personnel -knowledge and skill of operational support personnel -research capability of the organization
4	Access	Approachability and ease of contact	-The service is easily accessible by telephone (lines are not busy) -waiting time to receive service is not extensive -convenient hours of operation

			-convenient location of service facility
5	Courtesy	Involves politeness, respect, consideration, and friendliness of contact personnel.	-consideration for the consumer's property (no muddy shoes on the carpet) -the clean and neat appearance of public contact personnel.
6	Communication	Keeping customers informed in a language they can understand and listening to them	-explaining the service itself -explaining how much the service will cost -explaining the trade-offs between service and cost -assuring the consumer that a problem will be handled
7	Credibility	Trustworthiness, believability, honesty. (involves having the customer's best interests at heart).	Contributing to credibility: -company name -company reputation -personal characteristics of the contact personnel. -The degree of hard sell involved in the interactions with the customers.
8	Security	The freedom from danger, risk, or doubt	-physical facilities -financial security -confidentially

9	Understanding/Knowing	The customer involves making the effort to understand the customer's needs.	<ul style="list-style-type: none"> -learning the customer's specific requirements -providing individualized attention -Recognize the regular customer
10	Tangibles	Physical evidence of the service	<ul style="list-style-type: none"> -physical facility -appearance of the person -tools or equipment used to provide the service -physical representations of the service -other customers in the service facility

The ten dimensions as in Parasuraman et al., (1985) They were utilized as the base for the service quality structural domains from which the five domains as in the current SERVQUAL model, based on many statistical analyses and correlation processes, which revealed many correlations within the ten domains model, as in the study of (Shweiki, 2016) .

Accordingly, the SERVQUAL tool can determine the influence of five dimensions on quality, which are: tangibility, reliability, assurance, responsibility, and empathy. These dimensions can be used to track the trends of quality over periods. According to (Zeithaml et al., 1990) The ten domains model and their correlations to be five main structural ones in the SERVQUAL instrument are summarized in Table 2.2.

Table (2.2): Correspondence between the five Dimensions of SERVQUAL and the Original ten dimensions for the assessment of Service Quality (Zeithaml et al., 1990)

The original ten dimensions for evaluating service quality	Tangibles	Reliability	Responsiveness	Assurance	Empathy
1- Tangible					
2- Reliability					
3- Responsiveness					
4- Competence 5- Courtesy 6- Credibility 7- Security					
8- Access 9- Communication 10- Understanding the customer					

According to (Shi & Shang, 2020), SERVQUAL is considered a model designed to assess the quality of services. It was developed by three famous American marketing team experts, Zeithamlai, Parasuraman, and Barry, for non-medical sectors in 1985. The model that was developed for measuring quality in services has a great impact on the satisfaction of customers, which also led to improving their experiences and enhancing their brand loyalty.

SERVQUAL is based on standardized parameters (Jonkisz et al., 2021). There are assumed discrepancies between the levels of the services that the customer expected and the ones that were received. When the customer's expectation exceeds the real experience, a gap emerges in the quality of services. Assessing such a gap will assist in eliminating this dissonance, which in turn will contribute to enhancing and increasing the satisfaction within the customer and increase the level of quality.

Several studies addressed the utilization of SERVQUAL, some of the published studies include the fields of travel, hotels, tourism, business, car servicing, architectural services,

schools, airline catering, accounting firms, mobile telecom services in addition to healthcare services. SERVQUAL became an integral part of the monitoring of customers.

Moreover, the SERVQUAL model has been utilized in many countries to measure the quality of services in healthcare sectors (Teshnizi et al., 2018). SERVQUAL can determine the influence of five dimensions on the quality. These dimensions are tangibility, reliability, assurance, responsibility, and empathy. These dimensions can be used to track the trends of quality over periods. Teshnizi et al. (2018) defined the dimensions in Table 2.2 below:

Table 2.3: Definition of the Five Dimensions of SERVQUAL (Teshnizi et al. 2018)

Dimension	Definition
Tangibility	Physical facilities, equipment, and staff appearance
Reliability	The ability to perform the promised service dependably and accurately
Assurance	Employees' knowledge, courtesy, and ability to instill trust and confidence in the customer toward the service provider
Empathy	The provision of caring, individualized attention to customers
Responsibility	The willingness to help customers and provide prompt service

Hospitals are considered at the top of the healthcare system and the central part of the reform process of the system (Ozretić Došen et al., 2020). Hospitals' share in the budget is considered to be very significant. For example, the share of healthcare services in the European countries in 2019 was 50%- 70%. Measurement and implementation of service quality were essential for the overall improvements of the healthcare systems, especially in countries that were going through a future approach that forms an essential input for managerial decisions in the future with more focus on patients who play a main actor in the evaluation of service quality (Ozretić Došen et al., 2020).

Pekkaya et al. (2019) conducted a study in a hospital in Zonguldak/ Turkey, to evaluate the perceived and expected healthcare services by the customers. The authors recognized that the manager should know the weak points in the details of the dimensions of service quality and to what degree it was extended for the institution. This was achieved by the assessment of the quality of services using the SERVQUAL scale. This also helped in the evaluation of patients' satisfaction with the ongoing healthcare services concerning the view of patients. This study was. As a result, tangibles, one of the SERVQUAL dimensions, got the highest score. Also, this study recognized that the healthcare services

differed among patients according to demographic changes in terms of age, service type, and income, but not for marital status, gender, profession, and educational level. In addition to that, reliability was also observed as being the most determinant dimension for the satisfaction of patients.

Jonkisz et al. (2021) assumed the existence of some gaps between the level of both services, which are the expected and the perceived ones. When the gap is identified, this helps in the elimination of the dissonance that has been presented between the level of the expectation of the customer and the perception of the provided service. According to (Parasuraman A et al, 1985), five gaps were distinguished, where the first is related to the differences between the expectations of the customers and the perception of the providers for the services (generating entity) towards the customer needs. The size of this gap was influenced by the marketing research that was carried out by the given entity. Moreover, the second gap is related to the discrepancies between the service concept and its factual characteristics. Its size depends upon the commitment of the management to the service quality issues and goals, as well as the standardization of the tasks and the perception of the opportunities. The third gap is related to the contradiction between the provided services and the specificity that is concerned with the creation of the quality of services. The size of the gap depends on the teamwork and the matching of the employee to the work entrusted to the technology, and the supervision and control of the system. The next gap is the difference between delivered and promised service. Its size depends on or is influenced by horizontal communication as well as the tendency to expand the promises. Finally, the last, fifth gap results from the previous gaps; the difference between what the client, e.g. patient, receives with what he expects.

The main disadvantage of SERVQUAL is the uniformity of all the sectors that introduce services and that remain unsure and can't measure the outcome perceptions for the services (Hitesh Bhasin, 2023).

2.3 Quality

There is a lack of consensus on defining quality because quality as a concept seems to vary in understanding and definition. Some definitions focus completely on quality as conformity to specifications. Deming, Ishikawa, and Feigenbaum define quality as services or products that need to meet or satisfy customers according to their expectations and needs. However, Juran defined quality as the incorporation of both specifications and satisfaction of customers simultaneously (Endeshaw, 2020).

According to (Fatima et al., 2019), some authors also defined quality as the degree and direction of the difference or discrepancies between both the perceptions and expectations of the customers. Cronin and Taylor, according to (Fatima et al., 2019), also emphasized the quality in terms of “performance–only measures”. That means quality is based on the customers' perceptions of the providers' performance. According to this study, SERVQUAL is considered the most commonly useful tool for measuring healthcare services in developing countries. (Nikolova, n.d.) also recognized that the quality measurement for care is an important process because it can identify the poor quality in medical services or activities, and thus needs the process of reduction or prevention of the emergence of these inappropriate providers in the healthcare systems.

Daqar & Constantinovits, (2020) examined the role of TQM in the enhancement of service quality in private healthcare in the Northern part of the West Bank in Palestine. It is referred to as quality by the achievement of a high level of satisfaction among the patients toward the provided services and thus improves the financial performance of the organization.

The Institute of Medicine (IOM) has also defined quality of care as “the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. According to IoM, quality is measured and assessed by six dimensions: safety, effectiveness, timeliness, patient-centered care, efficiency, and equity, which all lead to better performance of the healthcare systems. WHO added a seventh dimension, “integrated care, “in their definition of healthcare quality. The need for improvements in these dimensions is essential to eventually “cross the quality chasm” (Ajmi & Aase, 2021).

Table 2.4: Dimensions of Quality According to IOM (Ajmi & Aase, 2021).

Number	Dimension	Definition of the dimension
1	Safe	Avoiding harm to patients from the care that is intended to help them.
2	Effective	We are providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively).

3	Patient-centered	They are providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.
4	Timely	We are reducing waits and sometimes harmful delays for both those who receive and those who give care.
5	Efficient	Avoiding waste, including waste of equipment, supplies, ideas, and energy.
6	Equitable	It provides care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

Endeshaw (2020) reviewed quality measurement instruments (models or/ and frameworks) in healthcare. Some characteristics of healthcare, such as heterogeneity, intangibility, and simultaneity, make it difficult to define and measure the quality and complexity of the nature of healthcare. The different interests of the providers who deliver services in healthcare, in addition to the requirements of ethical considerations when a problem arises. In addition, the provision of services was varied for patients due to the differences in the background, skills, experiences, and personal characteristics of professionals. So, the quality needs a definition that must be multidimensional and incorporated with the different views of healthcare stakeholders.

According to Endeshaw (2020), there are five Models for measuring the quality of healthcare they are: Donabedian's model, SERVQUAL, HEALTHQUAL, PubHosQual, and Hospitalqual model.

The Donabedian model is considered the first to study quality in healthcare (Endeshaw, 2020). Donabedian stated that the possibility of improvements in the quality of healthcare depends on both the technical and interpersonal quality of services in healthcare (Binti Masrom et al., 2022). Interpersonal care is related to the communication process with patients about the treatment, while technical care is about the aspects of medical treatment of patient care. It focused on skills accuracy of practices, and medical examination. The Donabedian model has used three connected issues that are connected and related together: structure, process, and outcomes. The structure is defined as the settings and the qualification of the managerial system, in addition to the providers through which the care

takes place. At the same time, the process is related to the activity that is put into practice. Outcomes refer to the return to its initial position or the survival of the patients. Also, the Donabedian model recognizes seven dimensions as tools for measuring service quality: efficacy, effectiveness, optimality, efficiency, acceptability, legitimacy, and equity. The Donabedian model is used mainly to assess the quality of healthcare services, so the system research will become a powerful area to conduct research and an inspiring field of activity. This model helped optimize the patient flow and sharing knowledge by modifying the frameworks and procedures with the delivering unit within healthcare systems.

HEALTHQUAL MODEL: Although SERVQUAL was developed and applied to most service industries, some scholars argued for the development of a framework that was specifically for the healthcare sector (Endeshaw, 2020). They used the Donabedian model as a basis for their work to improve service quality, and it was very useful concerning process, structure, and outcomes. They used a comprehensive model based on six major dimensions, and they applied this model to measure the quality of services in a hospital in Malta. The six dimensions were: the admission process, the attitudes of the medical staff (doctors), the attitudes of the nursing officers, the environment of the hospital, patients' facilities, and discharge planning and coordination. The work of Donabedian and Parasuraman et al developed a model called HEALTHQUAL, which was considered an adaptation of SERVQUAL, and it also incorporated the aspects of the quality of services acknowledged in the literature, and that being applied to the services of the healthcare. (Endeshaw, 2020).

SERVQUAL model is a multidimensional model that aims to measure the quality of services and is tailored according to its research objectives (Endeshaw, 2020). Fatima et al. (2019) defined service quality as “the degree and direction of discrepancies between customers’ perceptions and expectations “. Moreover, Parasuraman et al., (1985) Utilized an improved SERVQUAL model to measure the quality of services within an organization. This model was a continuation of previous ones, where 10 dimensions (Tangibility, Responsiveness, Assurance, Reliability, Empathy, Communication, Competence, Courtesy, Credibility, and Security) but decreased to five (Tangibility, Reliability, Responsiveness, Empathy, and Assurance). Al Omari (2021) implemented this modified model to assess the gaps between what the patient perceived and what he expected in the quality of healthcare services. SERVQUAL can be used by hospital management to improve their operational performance and to benchmark their approach

against other competitors in the market of healthcare market. Additionally, SERVQUAL provides valuable information to top management and policymakers to deliver more patient-centered care and thus improve the system of healthcare.

The PubHosQual model is proposed for public hospital quality services (Endeshaw, 2022 & Kanan et al., 2023). It was developed in India by the use of five dimensions of hospitals. These are: admissions, medical services, overall service, discharge, and social responsibility. It was used to recognize and identify the areas that need improvement and then modified. This model differed from one country to another in that PubHosQual was applied in Indian public hospitals, while it did not incorporate the technical aspects of the services in healthcare.

HospitalQual was a model that was developed based on the disconfirmation of the paradigm of the SERVQUAL model (Endeshaw, 2020 & Kanan et al., 2023). It was proposed for monitoring, controlling, and then improving the quality of services for the inpatients in public hospitals in Hyderabad / India. Managers of the hospitals used it.

In conclusion, there is evidence that more researchers who intended to assess the quality of the services in healthcare have adopted and developed a suitable model by existence content of their healthcare services. So, every country and every health organization should develop its model or framework for measuring the quality of its healthcare services.

2.4 Patient Satisfaction

According to Kanan et al. (2023), Satisfaction refers to the customers' experience with the services compared to their previous expectations. Others suggested that customers become satisfied when the delivered services meet their needs and expectations. While others referred to satisfaction as an intended effort that makes the customers feel happy. Kanan et al. (2023) classified satisfaction into two classical formulations: the first is the confirmation /disconfirmation approach that lies beyond the customer level of satisfaction with a service that was determined by the difference between the expectation of the customer and the actual performance that was perceived. The second contains the variables of importance, in which importance was considered as a central determinant for satisfaction. Howsawi et al. (2020) & Kano et al. (1984) developed a model of customer satisfaction that categorized the dimensions of quality into three groups:

1. Must-be (basic) needs: the customer won't express them unless the failure of the hospital fails to perform them, and their absence is considered dissatisfying.

2. One-dimensional (expected) needs: they are typically what we can get by just asking the customers about what they want, so these needs can satisfy or dissatisfy in proportion to their presence in their service.

3. Exciting (unexpected) needs: this is what produces satisfaction.

According to Howsawi et al. (2020) & Kano et al. (1984), the needs of customers are dynamic and change with time; some of them were “expected “in the past, but now they become “must-be “needs. This recognizes that the need or quality of services must be continuously improved to fit or meet the expectations of customers

Many factors played a major role in detecting the satisfaction of patients with the services introduced to them. Gibbons et al. (2018) main objective was to synthesize information from data that identifies and detects factors that contribute to patients' satisfaction with dermatology care. It utilized on-location observations and Semi-structured interviews. Additionally, it discovered a rise in patient satisfaction, which is connected to 1) the patient’s confidence in the provider's prognosis. 2) Patients' perceptions of their advisors. 3) The caliber of the healthcare providers' explanations and patient education during the visit. This study also emphasizes that qualitative and quantitative methods can be used to gauge patient satisfaction. The qualitative methodology is thought to be essential for gathering patient perspectives on the care of patients and satisfaction, and this should be a model to be used in research in the future because the quantitative methodology relies on data collection but can't capture the nuances of the patient experience.

Queen et al. (2021) examined the impact of online reviews of general dermatology providers on patient satisfaction. The most significant factors that influenced positive ratings were the physician's personality and the physician's bedside manner, both of which are related to the provider's personality and will influence patient willingness to recommend them in the future.

Godillot et al. (2021) aimed to assess the tools that are validated to measure the satisfaction of patients with the physician's interaction. They extracted 2229 articles from Cochrane Library, PubMed, and EMBASE. They explored the following domains: empathy, listening skills, confidentiality, honesty, caring, behavioral, technical skills, time given, satisfaction with the information given, environment, confidence and trust in the physician, ability to respond to recommendations, and the readiness of the physician to other patients. They assumed that communication skills must be improved by specific training, so there is a need for the improvement of the evaluation of the quality of the

relationship between the physician and the patient in dermatology by using validated instruments.

Al Zabadi et al. (2023) assessed patient satisfaction with pharmaceutical services, which is considered crucial for the improvement of healthcare quality and outcomes. He aimed to evaluate and assess the satisfaction of patients and their perceptions of the pharmaceutical care services that were provided in both public and private hospitals in Palestine to highlight the weaknesses and identify these areas. This satisfaction of patients was based on the subjective understanding of an individual of the received care, which is the provision of the drug therapy by the pharmacist who is responsible for achieving a definite outcome that is important for enhancing the quality of life with positive clinical outcomes.

Al Zabadi et al., (2023) Also discussed many factors that played an important role in the satisfaction of patients with pharmacological services, including socio-demographic variables such as gender, age, race, and marital status, in addition to other factors like medical status, waiting time, patient expectation, location of the pharmacy, cost and the variability of drugs. As a result, there was no significant effect of the social-demographic factors on the satisfaction of patients, but on the other hand, it showed that patients who were intended for the morning shift showed a higher level of satisfaction than those in the evening shift due to the better control and the availability of the medications. Also, it recommended the involvement of technological programs like the electronic prescribing and management system for medications to ensure the accuracy and efficiency of the pharmaceutical services and then ensure patient satisfaction.

Takruri et al. (2023) studied many factors that can influence the satisfaction of patients, like their experiences with the medical team, communication with the workers and management, and the hospital facilities. The study was also used to assess whether the patient's experiences can be varied by some characteristics like gender, age, health and financial status, and area of residence, in addition to the type of hospital (governmental, NGOs, or hospitals located outside Palestine). The article used a scale of (HCAHPS), which is a scale developed by the (AHRQ). The HCAHPS questionnaire was used in many countries to evaluate the experiences of patients with the care introduced to them in hospitals and then provide feedback about the weak areas that need to be improved. The data were gathered from the West Bank and Gaza Strip between October 2021 and February 2022.

Yurizali & Adhyka (2022) studied the effect of the speed of service as it is considered one factor that demands hospital services. The speed starts from the registration process to the discharge one after receiving the services. The most common problem that faces patients in hospitals is the length of the queue waiting for services. By decreasing the time of waiting, not only will the satisfaction of patients increase, but also it will improve the quality of hospitals' efficiency and capacity planning. They recommended the application of a good queuing system (ticketing system), which has been affected by the safety of life and systems improvements that must be carried out in the hospitals. A good queuing system will facilitate the management system in the hospitals, especially if it provides accurate waiting times.

Al Shammrie et al. (2022) assessed patient satisfaction with the medical care provided in Saudi Arabia. The study concluded that the most important factors for patient satisfaction were respect for patients' wishes, the provision of emotional support, and the level of physical comfort. Additionally, the study demonstrated that a balance must be established between the services provided to ensure effective care and the patient's perception that they are acceptable and beneficial.

Theofilou (2022) assessed the satisfaction level in patients by investigating the effect of the demographics of the respondents (gender, age, educational level, and marital status). They found that there was no significant effect on satisfaction between males and females. On the other hand, they found that the age of patients with marital status has a significant effect on the level of satisfaction of patients. With increasing age, the level of satisfaction will increase. The article showed no possible relationship between satisfaction and education level. At the same time, people who were divorced or widowed tend to show a higher satisfaction level than others status.

Salamatullah et al. (2021) evaluated the level of satisfaction of patients in five hospitals in the city of Makkah, Saudi Arabia. The study examined the relationship between the number of visits to the pharmacy the patient satisfaction. It indicated that patients were more likely to be satisfied with pharmaceutical services when it was their first visit, rather than when they had visited the pharmacy before.

Asamrew et al. (2020) suggested many factors at Black Lion Specialized Hospital, in Addis Ababa, Ethiopia. The good service quality that was provided by the hospital physician, the availability of laboratories and radiology services, the pain management service, and the service of inpatient pharmacy, all lead to positive effects and thus enhance the satisfaction of the patients. In addition to other factors that are related to the cleanliness

of toilets, the availability of rooms for accommodation, and the dietary service had a significant relation to the level of satisfaction in patients. This study also recommended the use of a checklist during the delivery of services, which may improve the patient-client interaction and ensure the standards.

2.5 SERVQUAL in Healthcare

Umoke et al., (2020) suggested that by resolving issues affecting patient satisfaction, patients may be satisfied. Satisfaction of patients is considered an essential part of measuring quality in healthcare. Also, it highlights the progress of the workers towards the needs and desires of patients. So, this shaped their expectations. The satisfaction of patients is mainly affected by the health workers' attitudes toward their patients, their ability to offer attention to them, their waiting time, their ability to send them information, and the forgiveness by the providers to give clear explanations to the patients about what was wrong before they giving a detailed and obvious message that concerned or related to their drugs and the environment.

Conducting satisfaction surveys by healthcare systems to assess and understand the quality from the patient's viewpoint and their visitors enables the application of feedback from the patients to improve the quality (Lu et al., 2020). However, reports about the service quality in critical care units are still limited. The intensive care units (ICU) were characterized by the high severity of the illness and marked the abundance of care which made it difficult for the patients and their families to give their opinions about their experience during the stay. Accordingly, additional tools might be needed for approaching the assessment of these gaps. The SERVQUAL tool has been used to capture and measure the opinions of patients about nursing care, hospital services, and various healthcare environments. According to Lu et al., (2020), patients having reliable, responsive, and assured care were the most significant issues for the assessment of the quality in the units of ICU care.

Al-Neyadi et al., (2018) investigated the quality of services in healthcare that affected the satisfaction of patients in both public and private hospitals by using the SERVQUAL questionnaire in the United Arab Emirates. The results showed that the perceived services don't vary between private and public hospitals. Patients showed more satisfaction with the nursing care, and the services that were perceived by physicians as well as the quality of the environments of the hospitals don't differ among both ones in the United Arab Emirates context (Al-Neyadi et al., 2018).

Additionally, Christia et al., (2021) used SERVQUAL to improve the service quality after a correction of some services-related issues and then demonstrated the importance of the evaluation of the quality of services of the appropriate change that has been done. So, the management of this medical office implemented some needed improvements among the weak areas that were identified after the first sample. So, the evaluation of the quality of services from the point of view of patients is considered a useful way for managers and policymakers to find major factors that mostly affect service quality and then apply effective methods and strategies to solve the problems and improve the weak points and thus enhance the service quality.

SERVQUAL can be used with other tools to make a more specific evaluation process of quality. Zaid et al., (2020) investigated the linkage between SERVQUAL, total quality management (TQM), perceived service quality (PSQ), (PS) patient satisfaction, and (BI) behavioral intentions among the healthcare organizations in Palestine. So, any organization needs to strive to provide a high level of quality services and provide it to its clients in a way that exceeds their aspirations and needs. As patients provided correct and obvious feedback that truly reflected the performance of that institution this was considered an important factor for understanding and measuring the quality of the services in the healthcare from the view of patients. They conducted a study on patients from 40 selected hospitals in the West Bank in Palestine.

2.6 Previous Studies

The following sections review studies conducted in Palestine and outside. The studies were conducted in healthcare sectors in addition to other sectors rather than health like the high education, automobile, VTC, Islamic banks, and Jenin Municipality. Also, these studies include regional and international ones in healthcare sectors.

2.6.1 Previous Studies in the Palestinian Context:

Okal & Jaaron, (2013) concluded that satisfaction of customers in the banking industry can lead to the further development of services since loyal customers are willing to suggest improvement opportunities. Measuring the gaps between the expectations of customers about the services and their perception can help managers identify weaknesses that may affect the performance of the bank and all the transaction processes with the customers. Accordingly, SERVQUAL was utilized through a questionnaire of a seven-point Likert scale. Furthermore, qualitative methods were used to discover the opinions

and perceptions from the customers' perspectives about the variables. Interviews with eight employees were performed to obtain information and data about the correlations between the dimensions (Tangibility, Reliability, Responsiveness, Assurance, and Empathy) and the variables that govern the Palestinian Banks. The authors used semi-structured interviews because of their flexibility. As a result, this study revealed that the expected service quality was higher than the perceived one. Empathy scored the largest gap, so it was the weakest dimension. Assurance, Reliability, and Responsiveness gaps came after respectively. The study also showed a significant effect of gender on the level of service quality because females showed more satisfaction than males while the number of years dealing with the bank and its size had no significant effect. The research recommended increasing the monitoring process to increase the satisfaction level of customers and sustain their loyalty. There must be training programs for the employees to improve their knowledge and professional experience, Also the managers must have a main role in satisfying the needs of customers by applying electronic self-services which can help in improving productivity and profitability. There must be communication between the employees and customers, and they must pay more attention to their complaints and try to solve them.

SERVQUAL plays an important role in assessing the quality of higher education in universities. (Thabet, 2015) Conducted a study in Al -Al-Azhar University in Gaza in Palestine to determine the degree of satisfaction of Al Azhar University's students. Higher education played an important role in the development of our country. Increasing the demand and attention to the university when being assured about the quality of education and satisfaction of students has been a great chance for managers to have the ability to compete and then continue. SERVQUAL identifies the weaknesses and strengths by studying the gaps between the expected and perceived services by assessing the five dimensions. The targeted population was the students who belong to Al Azhar University. As a result, the expectation of services was higher than the perceived one among the five dimensions. Assurance has the highest gap between the expected and the perceived service while Empathy has the lowest one. Moreover, this study sets many recommendations that enable managers and policymakers to make many changes that help in the improvement of higher education at Al Azhar University. From this recommendation, the university must redevelop its physical facilities and equipment. Also, they must focus on solving problems that the students can face. The employee must present the service at the promised time. Students must be safe and secure in all their

transaction processes within the university. In addition, the employee must understand all the requirements and desires of the students. Having a higher level of education played an important role in the progress of countries worldwide.

Atweh (2016) used the quality function deployment (QFD) model to improve the quality of medical services that are provided to thalassemia patients in the Palestinian context. Thalassemia is a genetic blood disease that is transmitted from parents to their children, and it will accompany the patient all their life. This disease makes the haemoglobin, which is present in the RBC, unable to perform its job, which is the oxygen transfer from the lungs to all the cells of the body which resulting in anemia. This leads to the need for blood transfusion to compensate for the decreased level of hemoglobin. Thalassemia is considered a progressive disease that can cause severe damage to many vital organs and sometimes lead to the death of patients if it is not managed properly. It has a high prevalence level and is widespread throughout the world, especially in countries of the Mediterranean basin. Palestine consists of 4%- 6% of the population. Atweh (2016) used the SERVQUAL scale, which is popular because of its ease of flexibility and application, with its dimensions, which can be tailored and modified to suit the purpose of the study. QFD can serve as a tool for translating the requirements and needs of the customer (voice of the customer), so it can be used for guiding to improve the service quality by using SERVQUAL. They assessed a sixth dimension, which is referred to as Availability and Accessibility. The study included all the patients of thalassemia who received their medical treatment in the thalassemia clinics at governmental hospitals in both the West Bank and the Gaza Strip, in addition to Dubai centers. The study focused on the quality of healthcare for thalassemia patients at seven hospitals in Palestine, in addition to the Dubai Thalassemia Center, which is accredited by JCIA and considered a top performer in the region. The hospitals selected were from the West Bank (WB), Gaza Strip (GS), and Dubai. The research combined both primary and secondary data, focusing on healthcare dimensions like Accessibility, Availability, Responsiveness, and Assurance. As a result of this study, the Dubai Thalassemia Center had the most qualified, full-time, multidisciplinary staff, while hospitals in Palestine and Gaza experienced shortages, particularly of hematologists and psychologists. According to the Accessibility and Availability were considered the most important to patients in both the West Bank and Gaza, but the second most important dimension was Responsiveness, followed by Assurance. The study recommended the development of public policies and strategies addressing thalassemia care, incorporating patient

perspectives into health service planning. Also, it is recommended that Staff training programs and the recruitment of necessary professionals be recommended to improve healthcare quality. The study also advocated for a centralized approach to thalassemia care with clear management protocols for better healthcare delivery. This research emphasizes the need for better healthcare infrastructure, specialized staff, and strategic planning for thalassemia treatment in the Middle East. These results highlighted the strengths and weak points in which there was a chance for improvements, and these differences in the quality of services could be due to demographic variables between (WB, Gaza, and Dubai centers).

(Shweiki, 2016) Aimed to assess the gaps between the expected and perceived service quality of both patients and employees within hospitals in the southern parts of the West Bank in Palestine. SERVQUAL was used as a tool with its five dimensions. It seemed to be very crucial to improve the hospital's service level through managerial and administrative adjustments. Private and nongovernmental providers for healthcare showed clear and evident success that would be a valuable chance to learn from it at both the quality assurance and managerial levels. It must be considered as an important way for the decision-makers in the healthcare sector to provide the safest and most efficient care in Palestinian hospitals. As a result of this study, revealed that the introduced services by these hospitals can't meet the expectations of customers and employees for all five dimensions. The largest gap was scored for the quality of Responsiveness, Reliability, Empathy, and Assurance for both. The smallest gap was scored for the quality of Tangibility for both patients and providers. It recommended the enhancement of communications between the patients and the staff with the management for a better understanding of their requirements. In addition to the conduct for training programs for the staff to improve their skills and increase attention to them.

Abd Ghani et al. (2017) studied the effect of increasing the service quality of the banking industry on the loyalty of customers and their satisfaction. Strong relations are built between the customers and the banks, giving a competitive advantage more than other banks. SERVQUAL was used to assess the service quality within the Arab Islamic Bank in Ramallah by assessing three dimensions (Tangibility, Reliability, and Assurance) that can be affected by subjective norms and customer satisfaction. Improving the quality within banks causes an increase in sales profits, competition, market share, and the development of a good image. Perceived service quality has a significant relationship with subjective norms, which can be defined as "the individual perception that is related to a

group of people or individuals that can affect the behaviors either to improve or disapprove “. It is considered the social environment effect or pressure. Also, it has a significant relation with the satisfaction and loyalty of the customers of the banks. As a result, there was a significant effect of the three dimensions on the satisfaction of the customers and their loyalty. Also, it reflects the Arabic culture in addition to the subjective norms of Palestine. Studying the effect of service quality within Islamic Banks was considered a good point for managers and policymakers to make efforts to improve service quality. Also, the subjective norms that affect customer satisfaction were not mentioned or discussed in any other Arabic cultural context other than this study, so it was recommended for the extension of this study in other developing countries because this study was contextualized in the Palestinian context.

Barghouthi & Imam (2018) compared patient satisfaction between a credited hospital with others that didn't with the SERVQUAL instrument. In addition, the study used demographic factors such as age, sex, education level, place of residence, and length of stay in a hospital as independent variables in addition to hospital characteristics like the size of the hospital, accreditation status, the owner, and the teaching status. This study examined patient satisfaction at two hospitals in Palestine: Al Makassed Islamic Charitable Society Hospital in Jerusalem (established in 1968) and The Arab Specialized Hospital in Nablus (established in 1997). Al Makassed is a therapeutic and teaching hospital affiliated with Al Quds University, while The Arab Specialties Hospital is known for conducting sophisticated surgeries. The inclusion criteria were the adult patients (18+ years old) treated as inpatients for more than 1 day but no more than 30 days, while the exclusion criteria were ICU and CCU patients, and those who were mentally or psychologically unable to participate, and those unable to read or write. As a result, older patients and those with higher education tend to be more satisfied with their healthcare experience.

This study links the less educated patients with a high level of satisfaction. In addition, it showed a significant difference relating to the residency area, favoring more for the southern area, which includes the Gaza Strip, in which patients from Gaza were treated in both hospitals as a referral, so making them regard the services provided to them in both hospitals as better than they had expected. The study results showed that the status of accreditation doesn't affect the level of satisfaction among the patients. Also, it showed no significant differences between satisfaction and the hospital characteristics like size, teaching status, and the owner.

Kharroub & Mansour, (2019) Adopted SERVQUAL as a tool to study the effect of strategic planning on the quality of services provided by Jenin Municipality from the perspective of citizens and the relation between (vision, mission, strategic choices, and objectives) and the dimensions of SERVQUAL and their impacts on the quality that was introduced to citizens. The importance of strategic Planning is to know the real position of the organization where it is and where it will be, also it improves the implementation and performance of its work, in addition to the management portfolio at any level of enterprise for any initiatives. Strategic planning can also control any risk position and then manage it, so the municipalities need to develop and improve. Strategic planning is considered the optimized use of resources, operating in opportunities, and then overcoming all weaknesses, which leads to lowering all external competitors and threats. The main findings of this study showed a positive relationship between strategic planning and the quality of services. Strategic planning has an important impact on the service quality and the level of satisfaction of customers who receive services from the municipality. This, in turn, recommended an increase in the level of participation of the staff in the setting and updating of the strategic plan in Jenin Municipality. Also, it was recommended to provide the services at the time promoted to it without any delays. Jenin Municipality must pay more attention to dealing with the complaints quickly and transparently. Regular evaluation feedback must be provided to assess the employees' and services' strengths and weaknesses. This study will be very beneficial for other Palestinian Municipalities to know more about the correlation between strategic planning and the quality of services, taking into consideration its recommendations.

Karsh & Harb (2021) conducted a study to explore the quality of after-sales services in the automobile industry and the satisfaction of customers with these services. After-sales services refer to activities that maintain the quality and reliability of a vehicle after it is sold, including maintenance and the availability of spare parts. These services are crucial for improving revenues, as vehicle sales alone yield low profits, so after-sales services help increase profits. The research was conducted in six automobile centers in Ramallah, and the brands were anonymized as A, B, C, D, E, and F. The findings of this study revealed that Assurance gets the highest-ranking dimension according to the customer because customers always value safety and security in their financial transactions, which leads to high confidence in the service center. Tangibility is another dimension that customers always appreciate because customers tend to modern equipment and visually appealing services that result in a positive impression, so

Tangibility showed the largest gap between expectations and perceptions. The lowest score was related to Responsiveness because customers felt that the centers were less responsive to their needs. So, it was important to emphasize the importance of addressing the gaps in Tangibility and Responsiveness to improve satisfaction and then boost the profitability of after-sales services.

Qabaja., (2022), Assessed the effect of quality of services on patient satisfaction in the governmental Hebron Hospitals by using SERVQUAL and its dimension impacts. The main objective of this study was to suggest a crucial way to enhance and improve the quality of care in these hospitals. This needs managerial and operational changes. This will lead to creating a definition of the current status of Hebron Hospitals, about the satisfaction of patients with the services introduced to them, which can allow the decision makers to create a new healthcare plan that can achieve the required results. It also helped to highlight the weak points that must be checked and thus improved. Applying SERVQUAL can give feedback about the gaps between patient-perceived services and expected ones. As a result of this study, all independent variables showed significant scores with patient satisfaction. So, it is recommended to take valuable steps by the hospitals to improve the quality and then patient satisfaction by focusing on the improvement of facilities and making efforts to ensure the consistency of delivering services with a high level of quality. Also, sure about trust of care and empathy by understanding and being more responsive to the desires and needs of patients and their interactions with the staff.

Shublaq, (2022) Used SERVQUAL to assess the gaps between the services that were expected by patients and that were perceived. They used 352 questionnaires from patients who attended the dental clinics at the University of Palestine, which was located in the Gaza Strip. Socio-demographic aspects can also affect the satisfaction of dental patients. Age, gender, marital status, and education level are factors used to assess their effect on the satisfaction of patients with dental services introduced to them. This study revealed that Assurance scored a high level as perception exceeded expectations, while Assurance and Empathy have equal scores. On the other hand, the lowest level was scored by Responsiveness. Patients who were single and young had higher levels of expectations than those who were older, divorced, married, or widowed. So, there was a need to establish a quality control unit to adopt a quality service policy in addition to a regular feedback evaluation. Policy-makers and clinic staff must do their best to increase the level

of trust among patients with the employees and physicians. Enhance the communication among them and thus increase the satisfaction of patients with the service quality.

Kanan et al. (2023) utilized the SERVQUAL model in an optical center in the West Bank in Palestine. In the Palestinian context, optical centers need to increase the level of quality of services, especially with the increasing number and competition among them (249 in Palestine: 154 were in the West Bank, 95 were in the Gaza Strip). In the optical context, satisfaction was referred to as the patients' attitudes, feelings, and perceptions of the services that were provided by the healthcare providers. As a result of this study, the findings showed that the customers have a high level of service quality expectation in the optic centers rather than it was perceived in the five dimensions of SERVQUAL. Also, this study investigated the effect of age, educational level, and income level, which played a significant role in the perception levels of quality in services. The findings also confirmed that tangible, assurance, reliability, and empathy have an important impact on the satisfaction of customers in the optics sector. Specific limitations referred to the convenient nature of the sampling and the smaller sample size, which caused limitations in its use, and this happened due to the coronavirus pandemic during the collection of data. These findings would be very useful indicators for decision-makers, including the Palestinian Council of Optometry and Optics, also for the managers of the centers, and for the officials in the optical colleges to highlight the direction for the improvements of the service quality in the optical sectors in Palestine.

Hassan et al., (2023) Evaluated the quality of services introduced by ten vocational training centers (VTC) in the West Bank from the trainees' perspective using the SERVQUAL model. The assessment of the VTCs is important because this can increase the demand of the labor market, which in turn leads to a lowering in unemployment. The five SERVQUAL dimensions were assessed, and as a result of the assessment, all of the VTCs evaluated in the study showed a high level of quality with some discrepancies. This means that the perceived service exceeds the expected one from the trainees. Although they had an acceptable level of service quality, there is a need to improve the interest and the involvement of the trainees by having a comprehensive understanding of their needs and their expectations, then applying a clear definition of the nature of the service provided to them from the beginning of the training. Vocational education is still the most perfect solution for the unemployment problem by increasing confidence in this sector in the community in Palestine. (Hassan et al., 2023).

2.6.2 Studies for the Application of SERVQUAL in the Regional and International Contexts:

Alheety & Alkhawlan, (2019) Explained the effect of the hospital environment and the staff working on the quality of services that have an impact on the loyalty of patients. The healthcare system in Yemen was suffering from a lack of resources, and it was still limited because of the lack of governmental rules and regulations that affect the monitoring and controlling process of the health system. The health system in Yemen was considered the most significant system because of its closeness to human life. Many rich Yemeni people travel to get their health care treatment in other countries such as the USA, Europe, UAE, Jordan, and India. So, a limited application for quality control procedures even in the private sector. This study was conducted in a private hospital in Yemen's Capital city (Sana'a) in five private hospitals (Al-Mutawakkil, Azal, Science and Technology, Modern German, and Yemen German). This will have a low-quality level due to the lack of information and the lack of incentives, and a rewards system. This will affect the hospital's services, which fail in identifying and fulfilling the needs and expectations of patients. The study also focused on these significant dimensions of SERVQUAL (Reliability, Tangibility, and Responsiveness) because they considered those dimensions that most affected the patients' loyalty. The research revealed that tangibility had a significant effect on loyalty, while Reliability and Responsiveness had no effect or impact on it. It was recommended to use mediating variables to enhance the satisfaction and loyalty of patients, like the regulation and control of governance, the impact of job satisfaction, and the marketing of medical services. Also, it was recommended to evaluate the public hospitals through the use of SERVQUAL dimensions and compare them with the service quality that was provided in other countries.

Arafat, n.d. (2020) investigated the effect of age on the expectations and satisfaction of the level of nursing service in outpatient clinics in Egypt using SERVQUAL. The expectations of elderly people have an impact on their satisfaction level, which is affected mainly by their experience with the healthcare services provided to them, in addition to their health status, age, and personal predisposition, which can all affect the perceptions of the services. Including elderly patients aged 60 or older who are attending the clinics either for treatment or for preventive services, the results showed low expectations and lower satisfaction with the nursing provided care. The study emphasized a relationship between the level of satisfaction and meeting expectations. A high level of expectations was scored for Assurance. Geriatrics always expects trust, feelings, safety, and

responsibility. Empathy and Reliability scored the lowest in the satisfaction of the elderly. The study recommended making corrective actions, focusing on the Reliability and Responsiveness dimensions. The article suggested conducting training programs and enhancing communication with patients and all health providers.

Demir et al., (2020) Measured the quality of performance of the OHS (Occupational Health and Safety) from the views of experts derived from different workplaces. This was achieved by assessing the discrepancies between the expectations and perceptions of the OHS experts. They used the SERVQUAL model with its five dimensions. OHS performed the tasks of protecting and guarding the workers and worksites, which helped in reducing the accidents within the workplaces (occupational accidents). The level of occupational accidents has increased due to the widespread industrialization of industrial-oriented societies. OHS performed a crucial job in preparing the employees for a healthy and safer environment on the work site, which resulted in a reduction in occupational accidents. This can also help in preventing financial damage and enhancing productivity. This study was conducted in Istanbul, Turkey, and contains 81 responses from OHS experts. As a result of this study, the OHS services are lower than what was expected, which causes dissatisfaction. So, this indicated a low level of quality. The highest gap was scored for the Assurance dimension, while the smallest one was for Tangibility. This study is important in that it can help the employees get a comprehensive understanding of the issues required for addressing OHS. This study also recommended the need for the establishment of OHS-specialized units to increase the level of awareness among employees about the OHS. Also, it emphasized the main role of managers to give more support for the activities of OHS, which in turn helped to overcome the shortcomings.

Bentum-Micah et al. (2020) emphasized that the quality of hospital service provided in Ghana can be measured by the discrepancy between the expectations of the patients for the services and the perception of it. This has a great impact on the quality of services and the loyalty of patients. SERVQUAL, with its five dimensions, was used as a model in this study. Ghana is considered a developing country that suffers from a deficiency in healthcare specialists and is widely dependent on public hospitals with a highly dense population, so the government tried to subsidize the costs of patients in public hospitals, in addition to the private hospitals, which contributed to the reduction in the financial burden. This, in turn, leads to low or no form of patient satisfaction at all. There were 562 participants derived from the outpatients from four major hospitals in Ghana between March and June 2019. This study showed that all five dimensions of

SERVQUAL played an important role in driving satisfaction and loyalty by the quality expression in healthcare-provided services. This study revealed that Tangibility, Responsiveness, Reliability, and Empathy have an important impact on the satisfaction of patients. As a result, it emphasized that the quality of services provided has a chance to raise the level of loyalty and thus increase the level of satisfaction. The study didn't intend to use other factors, e.g.) culture, religion, technology acceptance, gender, and safety matters, which can have an obvious impact on satisfaction and loyalty, so the recommendation was to conduct future research on these dimensions.

Another study Ozretić Došen et al., (2020) Used a gaps model SERVQUAL to analyze the gaps between the expectations of services and their perceptions to evaluate the service quality in the Republic of Croatia. Over the past two decades, during the high growth of industry, the interest in quality started to grow, especially in transitional and developing countries. Hospitals were located at the top of the most important system that is healthcare, and they shared significantly in the forming budget (e.g., in the European countries it was 50-70% of the total budget). So, the services that were presented by the hospitals significantly affected the whole population. The Republic of Croatia was passed through economic and managerial transformations, which affected the overall health system. The study was conducted at Sestre Milosrdnice University Hospital Centre in Zagreb (SM UHC). It was considered one of the oldest educational and healthcare institutions in the Republic of Croatia. The main role of SM UHC was to provide high-quality healthcare services in addition to the development of medical and health activities. The study revealed that the service quality was unsatisfactory and that the level of expectations exceeded the perception one except for empathy. The importance dimensions to respondents were Reliability, Assurance, Responsiveness, Empathy, and Tangibles, respectively. According to the university hospital center, SERVQUAL presented a very useful method for recognizing patients' expectations and perceptions through different departments in the hospital, which is considered an important input for future research. This study also highlighted a crucial point that the patients were considered the main actors in the evaluation and appraisal process for service quality. Managers should pay more attention to the needs and expectations of patients because this is considered an appropriate and effective way to focus more on the effective approaches to fulfilling them. Umoke et al., (2020) Assessed the quality of services in hospitals and its impact on the satisfaction of patients, this will reflect the progress of workers to meet the desires and needs of patients. In the past years, patient satisfaction has been affected by the ability of

service providers to give direct attention to patients, the health workers' attitudes toward patients, waiting time, and the ability of healthcare workers to give information to explain the real condition that was related to the drugs and environment. Achieving a high level of patient satisfaction will increase the profitability of hospitals, increase returns from patients, lower complaints, and increase referrals. Many factors according to this study played an obvious role in achieving the satisfaction of patients like access, financing, government policy, health personnel, and waste disposal. Others included communication, interpersonal skills, diagnostic and technical services, and convenience. The SERVQUAL is the model used in this assessment. This study was conducted at the General Hospital in Ebonyi State, South East, Nigeria from April to December 2016. The patients showed a high satisfaction level with empathy and a lower level of tangibility. So, this highlighted the areas that needed to be improved by managers like the neat appearance of the workers in the organization, waiting facilities, and hygiene-related conditions. It recommended a biannual evaluation of patient satisfaction, the results of which will provide a platform for many reforms in the health sector.

Rahim et al., (2021) Suggested that SERVQUAL can be used automatically by the use of a machine learning classifier. In this study, they established a social media site for a hospital and then made dubbing for patients' online reviews (POR). This was considered a new procedure to assess the quality of services and its impact on the satisfaction of patients. Achieving high-quality healthcare services is very important to lower mortality and morbidity all over the world. As the Industrial Revolution 4.0, it becomes an important factor to be more focused on the patient-centered values, interests, and desires. Social media can help patients read and know about their health conditions which raises their level of education. Sometimes these social media platforms for ratings and reviews can be beneficial to rate the performance of hospitals and other healthcare organizations which can help in the evaluation of the quality that mostly affects satisfaction. In this way, they can evaluate the patient's satisfaction by assessing the SERVQUAL dimensions frequency in all the reviews on the Facebook of Malaysian Public Hospital. The data was gathered from January 2017 until December 2019. This was considered the first study conducted in Malaysia that used automated methods from online reviews from hospitals to be evaluated. This method can be very beneficial for stakeholders to use the data extracted from social media at any time rather than the use of expensive questionnaires which need more time and effort to be distributed and completed. Also, this study revealed that mostly (Responsiveness, Empathy, and Reliability) are related to dissatisfaction. So,

more attention was needed for them. This study recommended the need for more communication, and improving interpersonal skills training, especially for medical students. These results could not be representative of the whole Malaysian population that hospitals serve.

Goula et al., (2021b) Aimed to explore the patients' perceptions and expectations regarding the quality of health services in Greece by using SERVQUAL. Greece from 2008- to 2018 fell under an economic crisis so the health system was considered as underfunded as the expenditure on public health didn't exceed 5 % which was considered as low as the other developed countries. The quality of services introduced in the health system has been considered a main priority in many developed countries over the last few decades. In Greece, public health care quality depends on many factors like accessibility, friendliness, preparedness to provide, adequacy, suitability, and ongoing support. The quality of health services depends mainly on meeting patients' needs and requirements. The study was conducted in five public hospitals in the Region of Attica, Greece. The inclusion criteria for hospitals were those whose large number of patients were being treated frequently in it. For patients, the inclusion criteria were those who were above 18 years of age, and not have COVID-19, and must speak the Greek language fluently. It was conducted from 7th November 2020 to 31st December 2020. As a result, the patient's expectations were not met for all five dimensions of SERVQUAL as negative scores were recorded. So, this study revealed that healthcare professionals and managers should be more concerned about the needs of patients and they should work best to find ways that approach them to fulfill them. They should focus on the human aspect which shows a critical one needed for development and having a higher quality level.

Febres-Ramos & Mercado-Rey, (2020) Assessed the quality of health services and their influence on the satisfaction of patients. This study was applied to patients of External Internal Medicine consultation at Hospital Daniel Alcides Carrion-Huancayo in Peru from July to November 2016. To enhance high quality in a society, there must be a development in the policies and strategies that were used to improve the quality. Quality can be expressed by multiple dimensions which play an important role at the cultural level and by power actors. Satisfaction acted as a mediator between the patient's expectations and perceptions of services. When the perceived services were met or exceeded by what was expected, satisfaction and quality were achieved. The study focused more on the relationship between doctors and patients that relied on the best deal, more attention to the pathology, and the clear, understandable information about the treatment. The research

recommended the implementation of more strategies that helped to improve the services provided in a timely and high level of quality.

A'aqoulah et al., (2022) Used SERVQUAL to assess the gaps between the patient expectations of healthcare services and their perceptions of it in Jordanian Hospitals. It is important to focus on the quality of services in healthcare rather than other fields because it can have a significant risk. The expectations and perceptions of service quality varied according to different contexts and the SERVQUAL domains may be more prominent than others. Also, some demographic factors have an obvious effect on the expectation and perception of service quality. In the last two decades, the Jordanian healthcare system has improved as it is considered one of the best healthcare systems in the Middle East. Although it is one of the best healthcare systems, many challenges were being faced like the lack of resources, funding, lack of relations, and correlation between the private and public sectors. The population grew quickly so there was an increase in the demand for healthcare services as there was a benchmark between the private and public sectors, so this led to an increase in the level of awareness about the needs and expectations of the patients to get effective and high-quality healthcare service. The number of participants was 415 outpatients' clinics from two major Jordanian Hospitals. These two hospitals were chosen because they were run by an academic staff and people thought that these were perfectly performing so they could meet their expectations. As a result of this study, the expectations of service quality were higher than the perceptions for all the five domains of SERVQUAL. It also showed no significant effect of demographic factors like (Gender, Age, and level of education) on the expectations and perceptions of services. So, the managers should take essential actions and set many policies that can reduce the gaps between both expectations and perceptions referring to all dimensions of SERVQUAL. Also, there must be a complete comprehensive identification and analysis of the needs and desires of patients that achieve a high service quality level. They must also work to detect the obstacles that can lead to the presence of gaps between the perceptions and expectations of services. Periodic revisions should be conducted as the needs of patients and their expectations may vary and differ over time, so they can help in employing both human and material resources and thus enhance the service quality level.

Rahimi & Solymani, (2022) Aimed to evaluate the quality of services in hospitals in Iran from the viewpoints of patients. The main goal for hospitals is to provide a high level of service equality to patients that meets their needs and expectations which has an impact on their satisfaction. This leads to increased hospital performance and productivity and lowers

the costs for the hospitals. There must be a monitoring process on the quality from the perspective of patients by supplying patients' feedback periodically which plays an important role in enhancing the hospital's effectiveness. A narrative literature review was applied in 2021 by using electronic journals which were published between January 1994 and December 2021 containing models that were related to evaluating the quality of services among hospitals in both national (Iranian) and international databases. The inclusion criteria were studies from English and Persian. As a result of this study, most studies in Iran used the SERVQUAL model. It was a useful way to identify the weaknesses and strengths of the service quality and assess the gaps between expectations and perceptions of the services. The reviewed studies showed that there were significant differences between the patient's perceptions and expectations in all five dimensions. Another review showed that all patients who received services from hospitals affiliated with Islamic Azad University, Tehran Medical Science branch were fully satisfied. SERVQUAL can be used as a tool with other stakeholders' views to evaluate the quality. This study can lead to more information about the quality gaps for healthcare providers and policymakers in Iran.

Jonkisz et al., (2022b) Aimed to have literature systematic reviews about the assessments of quality provided in healthcare institutions. It also assessed the size of quality gaps between the patient's expectations and perceptions about the quality of services by using the SERVQUAL model. The application of SERVQUAL allowed the managers to check and identify the weak points within the hospital services and then make efforts to strengthen the system and enhance the service quality. According to WHO, it recommended the use of scores to measure patient satisfaction to manage the efforts of treatment to improve the service quality and thus enhance the outcomes and the performance of the healthcare organization. For a high-quality level, the policy makers along with the managers should identify the patient's needs and priorities to meet them to ensure the highest quality level. This was conducted from the patient's perspectives and feedback. This study uses meta-analysis and systematic reviews following PRISMA guidelines. The main electronic medical database publications that were used: were PubMed, Medline, Scopus, and Cochrane for publications from January 2000 to April 2020. The study included studies from different Asian countries: eight studies from Iran, two from Pakistan, and one from Saudi Arabia, Malaysia, South Korea, Bangladesh, and Iraq. As a result of this study, showed that patients' expectations exceed the perceptions in all five dimensions. The tangibility highest gap was recorded as a main problem faced

by Korean people because they have a high level of standard in their lives, on the other hand, they fulfilled the responsiveness dimension. In Bangladesh, responsiveness was of moderate importance for patients. A great gap in the dimension of Empathy was scored in Iran hospitals while it scored high in Pakistan. The study emphasized that the SERVQUAL method was widely used to assess the quality of medical sectors in different countries. Also, it recommended paying more attention to the training programs to enhance interpersonal skills and improve communication which is considered as a main problem in this issue. Enhancing communication can solve the problem of meeting the needs and understanding the requirements of patients in their treatment journey and so ensuring the provided service quality level.

Mrabet et al., (2022) Assessed the five dimensions of SERVQUAL on the perceived service quality and its impact on patient satisfaction in the private sectors in Algeria. Achieving a high-quality level in the services the hospitals provide is considered a measuring factor for success. Algerians have limited control and monitoring of private hospitals. So, this resulted in a low level of quality service and failure to meet the needs and expectations of the patients. The study was conducted in one of the famous private hospitals in Tlemcen City, Western Algeria. The study revealed an association between patient satisfaction and all the dimensions of SERVQUAL except for Empathy from the perspective of Algerian people. The most important dimension was Assurance which played a major role in predicting the satisfaction of patients. The lack of an Empathy dimension can annoy or disturb patients but when it lacked a lone, no effect on the satisfaction of patients at all. This study emphasized the positive relation between SERVQUAL and the satisfaction of customers and considered a SERVQUAL model the most suitable model to assess the quality of services in private health sectors in Algeria.

Kalaja & Krasniqi, (2022) Studied the five dimensions of SERVQUAL as a key factor in achieving a high level of service quality and its effect on patients' satisfaction in Albania. Although the quality in delivering services in healthcare organizations hadn't taken the needed attention for being fulfilled. In Albania, the healthcare system and its services depend mainly on the public. This means that the states served most of the services introduced to the population e.g.) promotion, diagnosis, and treatment. Also, there was an improved private sector but it mostly focused on delivering pharmaceutical, diagnosis clinics, and dental care but mainly concentrated in the capital city, Tirana. Ministry of Health worked together with social protection to set up the policies and strategies that were related to the health services and systems. So, the managers should work to develop

teams to monitor all the guidelines and standards to ensure the application of quality in all medical services. The study was conducted in ten hospitals within different districts of the country from September to October 2019. As a result, it showed that all five dimensions had a significant effect on patient satisfaction. So, the perspective of patients was considered a very important aspect of assessing the quality of service, so it should be taken into consideration by the managers to do their best to meet their needs. Managers also should conduct periodic evaluations to check for quality. Conduct additional training programs to enhance the staff with more knowledge and interpersonal skills, enhance communication with patients, and the allocation of more human and financial resources to emphasize the provision of a high-level quality of services.

Prada-García & Benítez-Andrades, (2022) Assessed the quality of care that affects the satisfaction of patients. They conducted a satisfaction survey using SERVQHOS, a modified form that adopted the SERVQUAL surveys. According to SERVQUAL, quality is defined as the customer's expectations of the services compared to their perception of experience. SERVQHOS is an adaptation of SERVQUAL surveys. It was used to evaluate patients' satisfaction after hospitalization in Spanish-speaking countries. The study was conducted in the outpatient department in the Complejo Asistencial Universitario de León (CAULE) dermatology department. The study was very useful in measuring the satisfaction of patients on their opinions and detecting the areas that needed improvements to present efficient and quality care. The study was conducted between 1 November 2020 and 31 March 2021. The sample was 250 patients. Many variables affected the satisfaction positively e.g.) the technology of the medical equipment, the confidence of the staff, the experience of the consultant, and how careful the staff was in solving problems. The study gave a chance for improvements provided by the dermatology services.

Alrwashdh & Alishaq, (2023) Used SERVQUAL to assess patient satisfaction with Hamad Medical Corporation Hospital (HMC) in Qatar by measuring the gaps between patients' expectations and perceptions of the services provided to them. Many factors played an important role in shaping the care process like communication skills, level of expertise and knowledge, behaviors with the staff and patients, and hospital support services. When the patient perception of provided services exceeds the level of expectations this means a high level of service quality that leads to a high patient satisfaction level. HMC is considered a main public healthcare provider which serves 70% of health services while the remaining are related to private sectors and military clinics. HMC is composed of 13 hospitals classified according to the scope of services

they provide as general or specialty hospital, also classified according to the time of opening whether old or new; (the new hospitals was opened after 2016, while older ones referred to ones that opened before that date). This research evaluated the effect of sociodemographic factors on the satisfaction of patients, also it compared the old and newly opened hospitals regarding the quality of services and its impact on patient satisfaction. The population of the study consisted of all inpatients and outpatient units. Ambulance and Emergency departments were excluded in addition to mental care patients. The data was collected within the first half of 2019. The results of the study revealed a significant effect of socio-demographic factors on patient satisfaction, males reported a slightly higher level of satisfaction than females, also married ones did. Also, a higher level of satisfaction tended toward newly opened hospitals than old ones. The empathy dimension of SERVQUAL was ranked at the top followed by Responsiveness, while Assurance was the lowest one. Qatar's population contains many different cultural backgrounds which has an impact on service quality due to the presence of different viewpoints and experiences of patients. Overall patients are considered satisfied with the quality of services which is considered an important parameter measure for hospital competitiveness in both internal and external markets.

Tofik et al., (2023) Emphasized that the quality of healthcare must be provided at an efficient, efficacious level in association with the clinical standards and also the guidelines to get perceived service quality that meets or exceeds the expectations of the patients. SERVQUAL tool with its five dimensions was used as a tool to assess the gaps between patients' expectation and their perception of the quality of services. Applying a high level of quality to the health care services increases the trust of customers and then revisits the facility of health. Healthcare services with a high level of quality were an important factor in improving healthcare outcomes, improvement in treatment compliance, and enhancement in service utilization. Quality of healthcare raises the level of performance of the organization. In Ethiopia, sometimes patients were forced to attend private hospitals because of the bad conditions in the public ones as the misdiagnosis and the failure in the treatment. In the last three decades, the health system in Ethiopia has focused on the improvement and coverage access in addition to curative services. The health system was jeopardized after the COVID-19 pandemic. The study was conducted between 10 March and 01 April 2020 among two public hospitals in Ethiopia. These hospitals were (Hiwot Fana and Jugol). Every patient was asked two times; one before receiving the service to catch the expectations and the other after the service to catch the

perceptions. SERVQUAL tool was a very important one in which the hospital managers can identify many points that need many improvements in the quality of services and make sure that all services are in hand for all patients. As a result of this study, the patient's expectations were higher than the perceptions, also it scored a high level for reliability and lower for assurance dimensions. This study recommended having regulatory feedback from patients about their quality opinions in hospitals or hospital professionals.

Akbar et al., (2023) Assessed patient satisfaction as an impact on dental care quality by evaluating the SERVQUAL instrument. The researcher presented the patient satisfaction by Empathy and Responsiveness dimensions of SERVQUAL and differentiated them between both rural and urban areas in Bone District in Indonesia. According to the law of the Republic of Indonesia based on the Ministry of Health Regulations was considered as every hospital has an obligation that was to provide health services according to quality dimensions (safe, quality, effective, and -discriminability in addition to the prioritization of patients' interests). Indonesia is considered a developing country facing many problems related to health quality. Dental care is a critical issue that affects patient satisfaction when it is presented at a high level of quality. SERVQUAL is a widely used model based on the gap between patient's expectations and perceptions about the quality of services. The inclusion criteria were all citizens from Bone Regency, South Sulawesi, Indonesia, who attended any public center, dental office, or hospital to have dental treatment. The data was gathered from Feb. 25th -March 1st 2019. The result revealed that for Empathy and Responsiveness dimensions fell in the moderate category for both rural and urban areas which means that they need to be improved and developed in such a way that can raise the level of patient satisfaction.

Jonkisz et al., (2023) Assessed the quality gaps between the expectations of patients and their perceptions about the services by using SERVQUAL. In medical procedures, it was emphasized that the clinical quality provided and perceived one were the essential two domains of the quality. Clinical quality refers to the perception of the medical staff related to their jobs, their attention, and their assurance that the provided quality was the highest possible level. For the perceived quality, it was referred to the patients and their feelings after receiving medical services. By using SERVQUAL it was possible to assess the discrepancies between the services provided and the level expected. The study was conducted at the Independent Public Teaching Hospital in Lublin, Poland from July 2019 to November 2019. This study showed that patients had a high level of expectations

regarding the services perceived. Also, gender had a significant effect on the expectations as women had a higher level than men. The study revealed that the dimension that was not fulfilled was Tangibility in both inpatients and outpatients. The smallest gap was for Assurance. The dermatological field played a crucial role in the level of quality of services supplied by qualified and highly skilled dermatologists which was central for achieving patient satisfaction. The study recommended more ongoing efforts to enhance the quality level and the patients' experience within the dermatologist field as the treatment required long-term periods with follow-up results. So, the application of corrective measures, modification of selected medical procedures, and implementation of information and communication systems effectively were required.

Al-Balas et al., (2024) Aims To investigate the quality of services among Jordanian healthcare organizations. The need for the quality of services has gained more attention from healthcare providers, especially after the rise of Pandemic COVID-19. Many healthcare providers were founded in Jordan because there were (The Ministry of Health, NGOs, Private sectors, and JRMS). In this research, there was an assessment of the level of service quality and whether it was different among these different providers or not. Also, it aims to study the effect of demographic variables on the level of quality. The SERVQUAL tool was conducted to evaluate the quality gap between the expectations of patients related to their services and the perception of it provided by the five dimensions of SERVQUAL. Over the past two decades, it was known that many Jordanian Hospitals started to adopt multiple quality programs to enhance the quality of level of services introduced to patients. The study revealed that there were differences among the scores for the five dimensions of SERVQUAL between both expectations and perceptions with a shift more toward expectations. It also showed no significant effect for demographic factors such as gender, age, educational level, social status, visits to hospitals, and monthly income. As a result, patients who received health services from the private sector tend to show a higher satisfaction level than those who received them from the Jordanian Ministry of Health. These results can be used as a guideline for many further research in the future focusing more on having good plans and ideas to raise the level of quality among many standards of hospital care. By applying SERVQUAL, many weak points were highlighted to enable the managers and policymakers to bridge the chasm that was established because of the patient's perception of services and their expectations.

Sharka et al., (2024) Used SERVQUAL as an instrument to assess the dental service that was offered by Umm Al Qura University in Saudi Arabia. It includes both the outpatient

waiting area and the clinical settings. These dentistry schools played an important role in fulfilling requirements for patients and practical knowledge and instructions for students. The evaluation of the quality of dental care was very important because the feedback from patients and the perceptions of the service were very helpful in catching the gaps and many improvements will then take place. SERVQUAL with its five dimensions was used as a tool to assess the quality of dental services in addition SERVQUAL was tailored to fit the dental services by adding two other factors: staff-related factors and cost-effectiveness that were considered suitable and essential for the evaluation of quality and dentistry which in turn has its impact on revisit intentions. The sample size was 355 dental patients. As a result of this study Responsiveness, Cost-effectiveness, and Staff related have a significant impact on the revisit intention and positively affect the quality of the dental service level. Staff -Related was essential for patients to revisit because staff with exceptional skills and expertise, in addition to knowledge, will allow patients to communicate with a dentist since the dental treatment lasts longer than any other treatment. More efforts should be focused on developing dental facilities and equipment for a high dental quality service level.

Hijazi et al., (2024) Showed the importance of care-optimizing the quality of childbirth care to lower the maternal and infant morbidity and mortality rate by inhibiting the preventable causes of death. This can be achieved by the full understanding of the gaps between the mother's expectations and perceptions of their quality services pre- and post-delivery. SERVQUAL tool is considered the most fit instrument to emphasize the quality aspects that focus more on the empathy of the care providers, the responsiveness of the staff, the internal procedures of the process, and the reliability of the delivering service. In low and middle-income countries, many mothers faced life-threatening conditions during their intrapartum due to the lack of support and inadequate care with poor resources. WHO's guidelines define intrapartum care as the comprehensive, wide care that is provided to women during the entire process of giving birth with full covering for all stages of labor, following the care for both women and baby also after birth. SERVQUAL depends on measuring the women's expectations before childbirth and their perceptions after it. The exclusion criteria were for women who were lower than 18 years and more than 45 years. Women who were in the first or second trimester were excluded because the requirements were those who were in the latter stages. This data for the first stage was gathered from June 2018 to September 2019 by a female interviewer who was skilled, and well-trained. To ensure communication with mothers after birth a telephone

number was registered. For the second stage, they contacted by using a phone number for all the women who shared in the first stage within the first three months to be sure that mothers were physically and emotionally adjusted. As a result of this study, the gaps were widened by the increase in the age and the level of education due to the increase in the experience of childbirth. An obvious correlation has arisen between cesarean birth and the lowering in the gaps of Responsiveness and Assurance dimensions. This was related to prioritizing and executing the care tasks for cesarean births, while for normal vaginal births, it was expected to have fears from pain which can affect their perceptions about the response of the care providers and assurance. The overall scores for the perceptions were lower for all the dimensions of SERVQUAL. This required a comprehensive study with a full understanding of all the factors that can lead to widening the gaps which could be: the birth mode, level of education, time of admission for the labor, the duration of time, the gender of the physician, midwife care and how the management of pain during the labor process. Identifying these factors will lead to a proactive appropriate strategy to improve the intrapartum experience.

Kilpeläinen (2024) used the SERVQUAL model to identify factors impacting patient satisfaction in teledermatology and to assess the value of these factors from the patient's perspective. Teledermatology, a subspecialty of telemedicine, uses technology to diagnose and treat skin conditions remotely, providing significant benefits for patients who cannot access dermatological clinics, especially those in rural areas. The study was conducted at Derma Camp, a private skin-care clinic in Finland. Semi-structured telephone interviews ensured patient anonymity. The interviews had three sections: preliminary questions about the patients, open-ended questions on their experiences and assisted open-ended questions derived from the SERVQUAL model. The results showed that the most valued factor in teledermatology was Reliability since patients appreciated the consistency and dependability of the services provided. On the other hand, the least valued one was for Empathy because patients prioritized technical aspects over emotional connection. So, the patients give priority to video-based consultations. This study showed the importance of the improvement of communication skills for healthcare providers in both verbal and nonverbal interactions (via videos) to be clear and empathetic. This would help align expectations and improve strategies for patient care, allowing teledermatology to continue evolving in line with patient and healthcare professional needs.

2.7 Summary

Studies presented previously show typical utilization of SERVQUAL as a model with its five dimensions to evaluate the quality gaps in different industries. SERVQUAL is well utilized in health, higher education, banking, VTC, and in the automobile industries. Studies reviewed here presented the experience of using SERVQUAL not only in our country Palestine but in many other neighboring Arab and international countries. The studies utilized the SERVQUAL model in different ways and for different aims. The results highlighted gaps for improvement.

SERVQUAL is a flexible model that can be tailored according to its use and set to check the quality gaps. It is not essential when using SERVQUAL that the researcher must use all five dimensions together but instead, some studies can use only two or three of them. This depends on the nature of the study, the industry of the firm/service being evaluated, the impact of each dimension on the quality, and the setting and the field in which the study is conducted. Abd Ghani et al., (2017) Assesed only three dimensions of SERVQUAL (Tangibility, Reliability, and Assurance) because they were the most effective factors in the firm subject of the study. Additionally, Alheety & Alkhawlani, (2019) Assessed three dimensions of SERVQUAL (Tangibility, Reliability, and Responsiveness) in hospitals in the Yemeni Capital (Sana'a).

However, SERVQUAL flexibility allowed some studies to add further dimensions along with the five dimensions of SERVQUAL. Atweh, (2016) Added a sixth dimension which is availability and accessibility to his study. Sharka et al., (2024) Used SERVQUAL in addition to two other factors cost-effectiveness and staff-related in their study in Saudi Arabia.

SERVQUAL can be used in conjunction with other tools or models for the sake of evaluating and improving quality. Atweh, (2016) Used QFD along with SERVQUAL. Prada-García & Benítez-Andrades, (2022) Extended SERVQUAL with SERVQHOS dimensions to evaluate the quality after the hospitalization of patients in Spain So SERVQHOS is used especially to assess the perceived service quality and patient satisfaction of hospital care.

The previous studies confirm that Tele dermatology would be a useful tool for dermatology in the future and could be very useful and effective in some cases.

Kilpeläinen, (2024) Utilized the SERVQUAL model for the identification of the factors that can affect satisfaction with tele dermatology in Finland. To ensure anonymity, the author used a combination of qualitative and quantitative analysis including semi-

structured interviews by telephone. Okal & Jaaron, (2013)Used a similar approach to interviewing relevant people to lead to precise results.

Many previous studies displayed the use of SERVQUAL in a new way. Rahim et al., (2021) In Malaysia used SERVQUAL combined with machine learning by applying the frequency of SERVQUAL dimensions in all hospital reviews on Facebook. They established a social media site for a hospital and then made dubbing for (POR) which can be very useful in assessing the SERVQUAL dimensions frequency in all the reviews on Facebook.

In their literature review, (Rahimi & Solymani, 2022) Concluded that the most used tool to assess service quality in Iran is the SERVQUAL model. Similarly, (Jonkisz et al., 2022b)Referred to many different systematic reviews and meta-analyses in different Asian countries and concluded that SERVQUAL was the most effective tool with its dimension for the assessment of quality.

The aim of using this model SERVQUAL was not limited only to measuring the quality by evaluating the gaps between the expectations of services and the real perceived service. Several studies used SERVQUAL to evaluate patient satisfaction. Some other studies used SERVQUAL to estimate the loyalty of customers especially those in the bank industry. (Abd Ghani et al., 2017). Some studies also used this model to study the effect of strategic planning with its factors on the quality of services introduced to customers. (Kharroub & Mansour, 2019). Some studies used it to compare the quality of services with other healthcare providers. (Al-Balas et al., 2024). Alwashdh & Alishaq, (2023) Used the SERVQUAL model to show that the quality of services in Hamad's new hospital was higher than that in the old ones. Akbar et al., (2023) Used the model to compare the rural and urban areas related to the provided dental services in Indonesia. Another important study conducted in Palestine (Barghouthi & Imam, 2018) Comparing the satisfaction of patients between accredited hospitals and non-accredited ones showed that the satisfaction wasn't affected by the accreditation status of the hospitals.

This thesis benefits from the introduced previous studies in multiple aspects such as the building knowledge of the researcher in the topic and learning from different approaches to utilize the SERVQUAL model. Accordingly, developing the methodology and understanding the results of this study.

As an example, some of the reviewed studies brought different ideas such as the addition of new other factors and the online use of SERVQUAL. In addition, the questionnaires

that were distributed in the previous studies gave new ideas for this thesis to develop and construct its own questions in a very efficient and effective way.

Moreover, although this thesis shares some characteristics with previous studies in that it used the SERVQUAL model in the healthcare field, there is a scarcity of research related to dermatological service quality in Palestine and worldwide.

In addition, most previous studies have focused on patient satisfaction, primarily on assessing the quality. However, this thesis is focused mainly on quality as it was applied in the NCD which is the first dermatological public center in Palestine and it is still in the development stage.

Chapter Three: Methodology

3.1 Introduction

This chapter addresses the methodology used in this thesis work. First, the study design, the variables identification, questionnaire development, population identification, sample size, sampling procedures, and strategies used in the study. It also specifies the research techniques, details the questionnaire, and presents the statistical methods utilized to obtain the results.

3.2 Study Design

In this research work a cross-sectional study design was employed which aligns with the study objectives. This design involves collecting data at a specific point in time without any follow-up. It also offers several advantages, including reaching a large, diverse group of respondents and enabling fast data collection and analysis.

3.3 Survey Questionnaire

The quality of health care services was assessed using the original validated SERVQUAL model (Parasuraman et al., 1988 and Parasuraman et al., 1991). This model was broadly adopted in the literature to assess the quality of medical services in different healthcare settings, refers to Sharka et al., 2024; Alanazi et al., 2023; Kanan et al., 2023; A'aqoulah et. al, 2022; Chang et al., 2019 and Golshan et al, 2019.

. Goula et al. (2021a) proposed a questionnaire consisting of two parts with 22 statements for each part: the first one asks about expectations while the second part assesses the perceived service quality. An Arabic version of the SERVQUAL scale is used to collect the data for this research. Muhammad Butt & Cyril de Run (2010) and Swain & Singh (2021) used SERVQUAL model which consists of 22 Likert-type 7-point scoring items ranging from 1 = strongly disagree to 7 = strongly agree. These items are distributed in five dimensions: Tangibles (four items), Reliability (five items), Responsiveness (four items), Assurance (four items), and Empathy (five items), see Table 3.1.

By answering each statement of the questionnaire, the gap can be calculated as follows:

$$\text{GAP Score} = P - E$$

Where:

- P: correspond to the customers' perspective ratings, and
- E: corresponds to the customers' expectations (Shruthi, 2020)

The questionnaire included three sections. The first section contained the work-related sociodemographic information of the participants (i.e., gender, age, social status, level of education, residency, employment status, and frequency of visit). The second and third sections contained 22 matching items for evaluating patients' expectations and perceptions, respectively.

The questionnaire was distributed in two steps, the first before the patient received the healthcare service to assess their expectations, and the second after the healthcare service was received to assess the perceived quality of service. Such an approach will assist in measuring the gap between expected and perceived service quality levels. Accordingly, the questionnaire was distributed at the registration stage before the patients received their services and met the care providers to assess their expectations about the services and they were given the same questionnaire to continue providing their opinion after they finished their visit and receiving the service.

3.4 Questionnaire Validation

The validity of the questionnaire was assessed through content validity. A research panel consisting of two faculty members from the health sciences department at Arab American University (AAUP) reviewed the questionnaire. They are Dr. Ashraf Al Mimi and Dr. Sami Sader in addition to an external member named Dr. Mohammad Abdel Rahman from Al Quds University. Their feedback was used to craft the questions understandably, where minor modifications were made in the wording.

A final version of the questionnaire was piloted by 10 patients who were not part of the study to further evaluate the questions' clarity and to document the time required to complete the questionnaire. Following the pilot study, some words were modified. Internal consistency was assessed by measuring Cronbach's Alpha coefficient ($CB\alpha$). The values of $CB\alpha$ for the SERVQUAL domains (i.e., tangibles, reliability, responsiveness, assurance, and empathy) were higher than the threshold value of 0.70 for each dimension in both sections (i.e., expectations and perceptions) and presented acceptable reliability, see Table 3.1.

3.5 Sampling and Sample Size

Convenience sampling was applied to select the participants at the registration counter according to the inclusion criteria. The research included adult patients aged 18 years and above who accepted the request to participate in the study regardless of the frequency of visits. To determine the minimum required sample size, we adopted the single population proportion formula implemented in the online Statdisk software. The recommended sample size was 278 based on a $\pm 5\%$ margin of error and with a 95% confidence interval. The population size was estimated based on the average monthly number of patients during the last six months to be 1,000 patients, with an average daily adult patient attendance at the Centre of 40 patients. A 10% was added to the sample size, accounting for incomplete responses or missing data. Hence, the estimated sample size was 306 patients.

3.6 Data Collection

An Arabic version of the SERVQUAL instrument is used to collect the data for this study (see Appendix 1). The cross-sectional study was conducted for 25 days, starting from the middle of July until the last week of August 2024 at the National Centre for Dermatology, Ramallah, Palestine. The daily adult patient attendees at the Centre ranged from 30 to 50 patients according to the Centre records during the collection period.

Accordingly, 350 questionnaires were distributed among adult patients who were treated at the NCDs in Ramallah and were willing to give consent. However, the total number of returned and valid questionnaires was 320 questionnaires, which exceeded the required sample size.

Table 3.1: The Internal Consistency of the SERVQUAL Scale (N = 320).

Factor	Measurement variables/ items		Cronbach' s alpha (CB α)	
			Expectation	Perception
Tangibles	T1	The Centre has up-to-date equipment The Centre has visual appeal and comfortable physical facilities Staff show neat professional appearance	0.951	0.921
	T2			
	T3			
	T4			

		The Centre has high standards of hygiene and cleanliness		
Reliability	Rel1 Rel2 Rel3 Rel4 Rel5	The Centre provides service as promised Staff show sincere interest in solving patients' problems The Centre delivers accurate and reliable medical diagnosis The Centre provides services at the time promised The Centre maintains accurate records	0.800	0.898
Responsiveness	Res1 Res2 Res3 Res4	The Centre promptly informs patients when services will be performed Staff give prompt service to patients Staff are always willing to help patients Staff readily respond to patients' requests	0.895	0.873
Assurance	A1 A2 A3 A4	Patients feel trustworthy of the staff Patients feel safe in all transactions Staff are courteous at all times Staff have the knowledge to answer patients' questions	0.920	0.874
Empathy	E1 E2 E3	The Centre gives personalized care to patients	0.923	0.900

	E4 E5	The Centre has convenient operating hours The staff recognizes the special needs of patients Staff have patients' best interests at heart The Centre provides an equal service to all patients		
Overall scale			0.944	0.950

3.7 Study Variables

This study contains dependent and independent variables. The dependent variables in this study are the patients' expectations, perceptions, quality gaps, and satisfaction based on the SERVQUAL scale. Independent variables of the study included sociodemographic variables such as gender, age, social status, level of education, residency, employment status, and the frequency of visits.

3.8 Data Analysis

The analysis was performed using the Statistical Package for Social Sciences (SPSS) software 29 edition. Frequencies and percentages were used to describe personal and demographic variables, while means (averages) and standard deviations were used to measure the perceptions and expectations of respondents. For reliability analysis, internal consistency was assessed by measuring Cronbach's Alpha coefficient ($CB\alpha$), where the minimum criterion for acceptable reliability is a $CB\alpha$ of at least 0.7 (Hair et al., 2017). The mean scores and standard deviations of the service gaps were calculated according to differences in the scores of the paired items (i.e., perception - expectation), where a positive quality gap for any dimension in the SERVQUAL scale indicates a customer was satisfied and their expectation was met on that dimension. Meanwhile, the negative quality gap indicates dissatisfaction where the service has not been completely fulfilled.

A paired T-test was conducted to compare each item between the expectation and perception, as well as to compare each dimension. Service gaps by patients' general characteristics were analyzed using the independent T-test, and (ANOVA) F test with the Scheffé post-hoc test.

Multiple logistic regression was used to identify significant predictors associated with patient satisfaction, where the mean quality gap score for all 22 matched items determined the level of satisfaction, which was also categorized into two outcomes: “satisfied” if the mean quality gap score was zero or more, and “dissatisfied” if the mean was less than zero. A P-value ≤ 0.05 was considered to be statistically significant, where the significance level was set at 5% for all calculations.

Chapter Four :Results

4.1 Introduction

This chapter presents the data analysis and findings related to the research hypotheses, organized into seven sections: Section 4.1: Describes the sociodemographic characteristics of the respondents. Section 4.2: Analyzes the SERVQUAL scale dimensions and their items, focusing on the quality gap (perception minus expectation). A paired T-test was used to compare the differences between expectation and perception scores, identifying critical dimensions with the largest negative quality gaps. Section 4.3: Explores the relation between the sociodemographic factors and the patient's expectations based on the SERVQUAL scale, using independent-sample T-tests and one-way ANOVA (F tests) with the Scheffé post hoc test. Section 4.4: Examines the relation between the sociodemographic variables and the patient's perceptions of service quality based on the SERVQUAL scale. Section 4.5: Assesses whether sociodemographic factors influence the quality gap scores using dependent-sample T-tests and ANOVA. Section 4.6: Evaluates patient satisfaction based on the mean quality gap across 22 SERVQUAL items, categorizing satisfaction as "satisfied" (score ≥ 0) or "dissatisfied" (score < 0). The Chi-square test and multiple logistic regression were used to analyze the relationship between satisfaction and sociodemographic factors, and identify significant predictors of satisfaction Section 4.7: Provides a concise summary of the findings.

The chapter highlights the relationship between sociodemographic factors, service quality perceptions, and patient satisfaction, with a focus on the SERVQUAL scale as a measurement tool.

4.2 General Characteristics of the Respondents

A total of 320 patients participated in this study. Patients' demographic data are presented in Table 4.1. Prominent features of the patients were that the majority were females (70.0%) and most were married (64.4%). Most were less than 40 years old (63.5%) and had a university degree (70.3%). Very few respondents were living in refugee camps (5.9%). More than half (53.8%) were employed. Nearly half (46.9%) of patients visited the Centre frequently (3 or more times).

Table 4.1: Sociodemographic Characteristics Among Participants (N = 320).

Variable		n (%)
Gender	Male	96 (30.0)
	Female	224 (70.0)
Age, years	18 - 29	100 (31.3)
	30 - 39	103 (32.2)
	40 - 49	68 (21.3)
	≥ 50	49 (15.3)
Marital status	Single	97 (30.3)
	Married	206 (64.4)
	Divorced	14 (4.4)
	Widowed	3 (0.9)
Education level	Less than secondary	23 (7.2)
	Secondary	72 (22.5)
	Diploma	43 (13.4)
	Bachelor	141 (44.1)
	Postgraduate studies	41 (12.8)
Residency	City	152 (47.5)
	Village	149 (46.6)
	Refugee Camp	19 (5.9)
Employment status	Employed	172 (53.8)
	Unemployed	138 (43.1)
	Retired	10 (3.1)
Frequency of visit	1	106 (33.1)
	2	64 (20.0)
	≥ 3	150 (46.9)

4.3 Patients' Expectations, Perceptions, and Quality Gaps

Table 4.2 summarizes the analysis for SERVQUAL scale factors and its measurable items, where a paired T-test was used to compare the difference in the mean score between expectation and perception of individual items and dimensions to identify the most critical dimensions with the largest negative value of a quality gap. The quality gap score was calculated by subtracting expectations from perceptions scores. Positive or zero scores

reflect ideal or adequate service quality. A negative score indicates a service experience that did not meet patient expectations.

The analysis showed that the patients' expectations of services provided were higher than their perceptions for all SERVQUAL individual items and dimensions. The tangible dimension had the highest mean score for the level of expectation and perception (6.03 and 5.28, respectively), while the responsiveness dimension had the lowest mean score for the level of expectation and perception (5.77 and 4.89, respectively) as shown in Figure 1. The most critical was the responsiveness dimension, which had the highest negative service quality gap (quality gap = - 0.88), followed by assurance (quality gap = - 0.85). Furthermore, the most satisfied was the empathy dimension which has the lowest negative service quality gap (quality gap = - 0.68), followed by the reliability dimension (quality gap = - 0.73) as shown in Figure 2. Our findings also revealed that the service quality gaps were negative in all SERVQUAL individual items and dimensions and that there were significant differences between patient's expectations and perceptions (i.e., p-value < 0.05).

Considering all 22 items, the three largest negative gap scores were observed in the items:

- Responsiveness :Staff provide prompt service (quality gap = - 1.10),
- Reliability: Accurate and reliable medical diagnosis (quality gap = - 1.02), and
- Assurance: Staff are polite (quality gap = - 1.01).

On the other hand, the three smallest negative gap scores were observed in:

- Reliability: Maintain accurate records (quality gap = - 0.50),
- Tangibles: Modern looking equipment (quality gap = - 0.51) and,
- Empathy: Services are delivered equally (quality gap = - 0.57), see also Figure 3

Table 4.2: Patients Expectations, Perceptions, and Gap Scores Based on SERVQUAL Dimensions (N = 320).

Quality Dimensions		Expectations	Perceptions	Quality gap		
		Mean \pm SD	Mean \pm SD	Mean \pm SD	Rank	P-value (Paired T)
Tangibles						
T1.	Modern looking equipment	5.97 \pm 1.34	5.46 \pm 1.54	- 0.51 \pm 1.69	4	< 0.001*
T2.	Appealing physical facilities	6.08 \pm 1.30	5.13 \pm 1.82	- 0.95 \pm 1.90	1	< 0.001*
T3.	Staff have neat appearances	6.05 \pm 1.32	5.37 \pm 1.59	- 0.68 \pm 1.67	3	< 0.001*

T4.	High standards of hygiene and cleanliness	6.02 ± 1.33	5.16 ± 1.71	- 0.86 ± 1.82	2	< 0.001*
Overall tangibles		6.03 ± 1.24	5.28 ± 1.50	- 0.75 ± 1.56	-	< 0.001*
Reliability						
Rel1.	Staff keeps promises	5.86 ± 1.43	5.04 ± 1.57	- 0.82 ± 1.94	2	< 0.001*
Rel2.	Staff solves problems	5.92 ± 1.36	5.26 ± 1.60	- 0.66 ± 1.92	3	< 0.001*
Rel3.	Accurate and reliable medical diagnosis	6.11 ± 1.34	5.09 ± 1.65	- 1.02 ± 1.89	1	< 0.001*
Rel4.	Staff are timely	5.88 ± 1.46	5.24 ± 1.64	- 0.64 ± 1.93	4	< 0.001*
Rel5.	Maintain accurate records	5.92 ± 1.39	5.42 ± 1.57	- 0.50 ± 1.79	5	< 0.001*
Overall reliability		5.94 ± 1.04	5.21 ± 1.36	- 0.73 ± 1.50	-	< 0.001*
Responsiveness						
Res1.	Promptly inform patients	5.79 ± 1.46	5.14 ± 1.60	- 0.65 ± 1.99	4	< 0.001*
Res2.	Staff provide prompt service	5.90 ± 1.35	4.80 ± 1.62	- 1.10 ± 1.94	1	< 0.001*
Res.3	Staff are always willing to help	5.95 ± 1.34	5.09 ± 1.61	- 0.86 ± 1.85	3	< 0.001*
Res4.	Staff readily respond to patients' requests	5.43 ± 1.55	4.52 ± 1.77	- 0.91 ± 2.11	2	< 0.001*
Overall responsiveness		5.77 ± 1.24	4.89 ± 1.41	- 0.88 ± 1.67	-	< 0.001*
Assurance						
A1.	Staff behave confidently	6.13 ± 1.37	5.47 ± 1.55	- 0.66 ± 1.85	4	< 0.001*
A2.	Patients feel safe in all transactions	6.07 ± 1.37	5.26 ± 1.69	- 0.81 ± 1.98	3	< 0.001*
A3.	Staff are polite	5.95 ± 1.41	4.94 ± 1.51	- 1.01 ± 1.84	1	< 0.001*
A4.	Staff are professional and knowledgeable	5.93 ± 1.39	5.02 ± 1.64	- 0.91 ± 1.97	2	< 0.001*
Overall assurance		6.02 ± 1.24	5.17 ± 1.36	- 0.85 ± 1.63	-	< 0.001*
Empathy						
E1.	Staff give personalized service	5.76 ± 1.29	5.17 ± 1.68	- 0.59 ± 1.79	4	< 0.001*
E2.	Convenient operating hours	5.91 ± 1.36	5.29 ± 1.63	- 0.62 ± 1.88	3	< 0.001*
E3.	Staff recognize patients' special needs	5.99 ± 1.20	5.30 ± 1.70	- 0.69 ± 1.76	2	< 0.001*

E4.	Staff have patients' best interests at heart	6.02 ± 1.17	5.07 ± 1.81	- 0.95 ± 1.90	1	< 0.001*
E5.	Services are delivered equally	6.02 ± 1.28	5.45 ± 1.82	- 0.57 ± 1.98	5	< 0.001*
Overall empathy		5.94 ± 1.10	5.26 ± 1.46	- 0.68 ± 1.53	-	< 0.001*
Overall quality		5.94 ± 0.92	5.17 ± 1.16	- 0.77 ± 1.16	-	< 0.001*
SD: Standard deviation						
*The differences were statistically significant (i.e., p-value ≤ 0.05)						

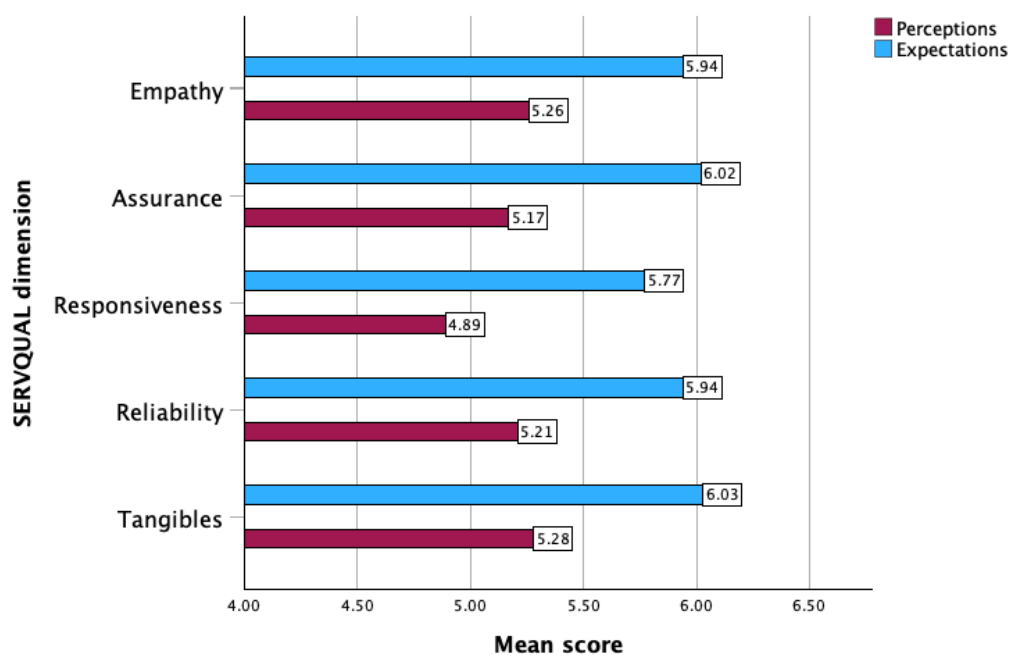


Figure 4.1: Mean Score for Patients' Expectations and Perception Based on the SERVQUAL Dimensions

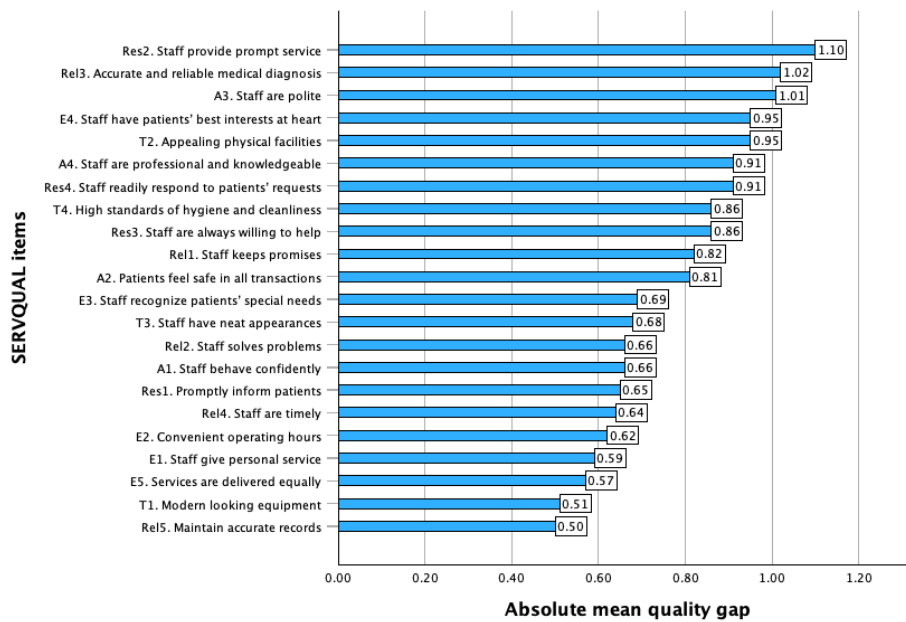


Figure 4.2: Overall Absolute Mean Score for Service Quality Gap Based on the SERVQUAL Dimensions

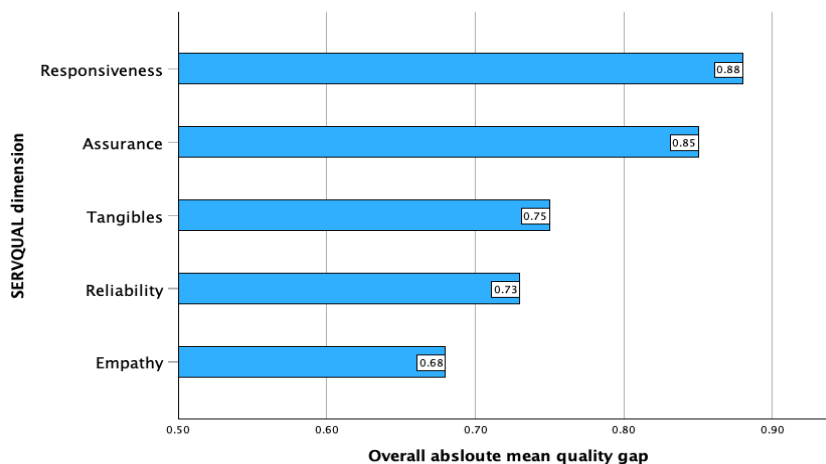


Figure 4.3: Absolute Mean Score for Service Quality Gap Based on the SERVQUAL Individual Items

4.4 The Relation Between the Sociodemographic Factors and Patients' Expectations

The independent-sample T-test and one-way ANOVA (F test) with the Scheffé posthoc test were used to evaluate the impact of sociodemographic variables on the patients' expectations based on SERVQUAL scale dimensions. The mean score of the patients' expectations according to socio-demographic variables is shown in Table 4.3. The analysis revealed a significant association between education level and patients' expectations based on the SERVQUAL scale (p-value = 0.032), where higher education levels have higher expectations. Moreover, there was a significant association between

the frequency of visits and patients' expectations (p-value < 0.001), where patients who visited the dermatology Centre frequently (i.e., 3 or more) had lower expectations. On the other hand, the differences in the mean score of patients' expectations were not significant based on the groups of other sociodemographic characteristics (i.e., gender, age, social status, residency, and employment status), where the p-values are greater than 0.05.

Table 4.3: Relationship Between Patients' Expectations and Sociodemographic Variables (N = 320).

Characteristic		Mean \pm SD	P-value (t or F)	Scheffé Test
Gender	Male	5.98 \pm 0.89	0.598	-
	Female	5.92 \pm 0.94		
Age, years	18 - 29	5.96 \pm 0.80	0.947	-
	30 - 39	5.88 \pm 0.99		
	40 - 49	5.88 \pm 1.00		
	\geq 50	5.97 \pm 0.92		
Social status	Single	5.83 \pm 0.88	0.247	-
	Married	6.00 \pm 0.95		
	Divorced/Widowed	5.76 \pm 0.79		
Education	Less than secondary	5.67 \pm 0.80	0.032*	a, b < d, e
	Secondary	5.71 \pm 1.12		
	Diploma ^{cy}	5.96 \pm 0.94		
	Bachelor	6.01 \pm 0.78		
	Postgraduate studies	6.20 \pm 0.94		
Residency	City	5.93 \pm 0.94	0.686	-
	Village	5.93 \pm 0.93		
	Refugee Camp	6.11 \pm 0.60		
Employment status	Employed	5.99 \pm 0.95	0.540	-
	Unemployed	5.87 \pm 0.90		
	Retired	5.95 \pm 0.75		
Frequency of visit	1 ^a	6.12 \pm 0.63	< 0.001*	c < a, b
	2 ^b	6.11 \pm 0.63		

	$\geq 3^c$	5.73 ± 1.13		
--	------------	-----------------	--	--

*The differences were statistically significant (i.e., p-value ≤ 0.05)

4.5 The Relation Between the Sociodemographic Factors and Patients' Perceptions

Table 4.4 illustrates the mean score of the patients' perceptions based on SERVQUAL scale dimensions according to socio-demographic factors, where the independent-sample T-test and one-way ANOVA (F test) were used to evaluate the impact of sociodemographic factors on the patient's perceptions. None of the sociodemographic factors (i.e., gender, age, social status, education level, residency, employment status, and the frequency of visits) were significantly associated with the patient's perceptions, where all the p-values were greater than 0.05.

Table 4.4: Relationship Between Patients' Perceptions and Sociodemographic Variables (N = 320).

Characteristic		Mean \pm SD	P-value (t or F)
Gender	Male	5.20 ± 0.97	0.726
	Female	5.15 ± 1.23	
Age, years	18 - 29	5.20 ± 1.05	0.370
	30 - 39	5.08 ± 1.20	
	40 - 49	5.34 ± 1.19	
	≥ 50	5.01 ± 1.22	
Social status	Single	5.14 ± 1.11	0.561
	Married	5.20 ± 1.19	
	Divorced/Widowed	4.89 ± 1.16	
Education level	Less than secondary	5.38 ± 0.97	0.394
	Secondary	5.34 ± 1.06	
	Diploma	5.12 ± 1.09	
	Bachelor	5.11 ± 1.34	
	Postgraduate studies	4.98 ± 0.70	
Residency	City	5.14 ± 1.19	0.553
	Village	5.16 ± 1.15	
	Refugee Camp		

		5.44 ± 0.99	
Employment status	Employed	5.08 ± 1.24	0.350
	Unemployed	5.27 ± 1.05	
	Retired	5.10 ± 1.00	
Frequency of visit	1	5.14 ± 0.90	0.967
	2	5.19 ± 1.12	
	≥ 3	5.17 ± 1.33	

4.6 Impact of Sociodemographic Factors on Quality Gap

The independent-samples T-test and one-way ANOVA (F test) with the Scheffé post-hoc test were used to evaluate the impact of sociodemographic variables on the quality gaps (i.e., perceptions - expectations) based on SERVQUAL scale dimensions. The mean score of the patients' quality gaps according to socio-demographic characteristics were illustrated in Table 4.5. The analysis indicated that the gaps were significantly associated with the education level (p-value < 0.001), where patients with high education levels had high negative quality gaps. Moreover, the gaps were significantly associated with the frequency of visits (p-value = 0.007), where patients who visited the dermatology Centre frequently (i.e., 3 or more) had the lowest negative quality gaps. On the other hand, the differences in the mean score of the quality gaps were not significant based on the groups of other sociodemographic characteristics (i.e., gender, age, social status, residency, and employment status), where the p-values were greater than 0.05.

Table 4.5: Relationship between quality gap and sociodemographic variables (N = 320).

Characteristic		Mean ± SD	P-value (t or F)	Scheffé Test
Gender	Male	- 0.78 ± 0.90	0.920	-
	Female	- 0.77 ± 1.26		
Age, years	18 - 29	- 0.76 ± 1.07	0.198	-
	30 - 39	- 0.86 ± 1.05		
	40 - 49	- 0.53 ± 1.36		
	≥ 50	- 0.95 ± 1.22		
Social status	Single	- 0.69 ± 1.09	0.698	-
	Married			

	Divorced/Widowed	- 0.80 ± 1.16 - 0.87 ± 1.47		
Education	Less than secondary Secondary Diploma ^{cy} Bachelor Postgraduate studies	- 0.29 ± 0.42 - 0.37 ± 0.62 - 0.84 ± 1.05 - 0.91 ± 1.36 - 1.22 ± 1.26	< 0.001*	a, b < c, d, e
Residency	City Village Refugee Camp	- 0.79 ± 1.27 - 0.77 ± 1.07 - 0.67 ± 0.87	0.918	-
Employment status	Employed Unemployed Retired	- 0.91 ± 1.33 - 0.60 ± 0.87 - 0.85 ± 1.13	0.065	-
Frequency of visit	1 ^a 2 ^b ≥ 3 ^c	- 0.99 ± 0.96 - 0.92 ± 1.24 - 0.56 ± 1.22	0.007*	c < a, b
*The differences were statistically significant (i.e., p-value ≤ 0.05)				

4.7 Predictors Associated with Patient Satisfaction

Although there was satisfaction as shown in Table 4.2 and Figure 4.1. (According to the 7 points Likert scale any element scored higher than 4.5 was considered to be satisfied) So based on this research, there a satisfied customer. However, there are still quality gaps that are based on the difference between the perception and expectation of the service quality. The level of satisfaction was determined by analyzing the mean quality gap from all 22 matched items of the SERVQUAL scale. Patient satisfaction was categorized into two outcomes based on the following criterion: “satisfied” if the mean quality gap score was zero or more, and “dissatisfied” if the mean was less than zero. Accordingly, the results showed that less than one-quarter (22.8%) of the respondents were satisfied with the NCDs, see Figure 4. Measuring the satisfaction of customers according to the quality gaps can be relatively inaccurate because results showed that customers have levels of satisfaction according to their scores and satisfaction measured by receiving the services

(perceived ones) rather than the expected ones. These quality gaps were very effective in revealing the weak points that need more improvements.

The relationships between respondents' level of satisfaction and sociodemographic factors were analyzed using the Chi-square test. Our findings are summarized in Table 4.6. Generally, the results revealed a significant association between low education level and higher satisfaction (p-value = 0.016). The frequency of visits to the dermatology Centre was also one of the significant factors influencing the level of satisfaction among patients, where patients who visited the Centre frequently had higher levels of satisfaction (p-value = 0.016). On the other hand, the relationships between patients' level of satisfaction and other sociodemographic characteristics (i.e., gender, age, social status, residency, and employment status) were not significant, where the p-values were greater than 0.05.

Lastly, multiple logistic regression was performed to determine the significant predictors of patient satisfaction among the respondents. Forward/backward logistic regression methods were applied. The best-estimated model is summarized in Table 4.4. The findings showed that only two factors (i.e., low education level and three or more Centre visits) were associated with patient satisfaction.

- Patients with secondary or less education were more likely to be satisfied with dermatology Centre services than those with a higher level of education (OR = 1.81; 95% CI: 1.04 - 3.15; p = 0.037), fixing other sociodemographic factors constant.
- Patients who visited the Centre frequently (i.e., 3 or more) were more likely to be satisfied with dermatology Centre services than those who visited the Centre once or twice (OR = 2.17; 95% CI: 1.27 - 3.72; p = 0.005), fixing other sociodemographic factors constant.

Furthermore, the classification table indicated that 77.2% of the observed dependent outcomes were correctly

reclassified by the model. Hence, presenting a satisfactory model.

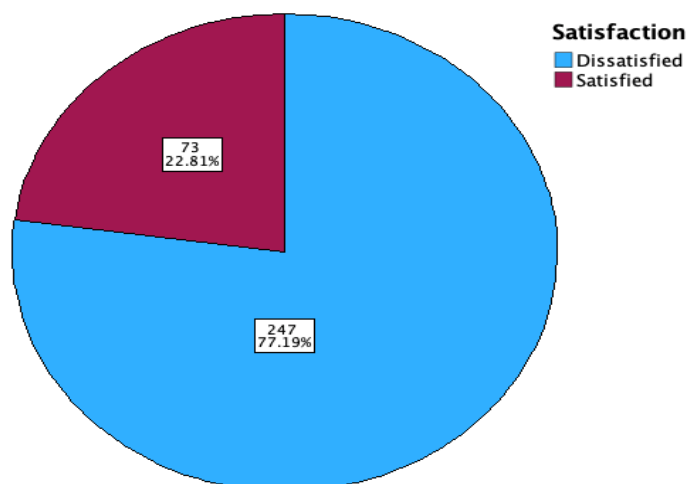


Figure 4.4: The level of patient satisfaction based on the SERVQUAL scale

Table 4.6: Relationship Between Patient Satisfaction and Sociodemographic Characteristics Among Respondents (N = 320)

Characteristic		n (%) ^a	P-value (Chi-square test)
Gender	Male	17 (17.7)	0.154
	Female	56 (25.0)	
Age, years	18 - 29	19 (19.0)	0.103
	30 - 39	20 (19.4)	
	40 - 49	23 (33.8)	
	≥ 50	11 (22.4)	
Social status	Single	27 (27.8)	0.546
	Married	43 (20.9)	
	Divorced/Widowed	3 (17.6)	
Education level	Less than secondary	10 (43.5)	0.016*
	Secondary	19 (26.4)	
	Diploma	8 (18.6)	
	Bachelor	33 (23.4)	
	Postgraduate studies	3 (7.3)	
Residency	City	35 (23.0)	0.917
	Village	33 (22.1)	

	Refugee Camp	5 (26.3)	
Employment status	Employed	35 (20.3)	0.478
	Unemployed	36 (26.1)	
	Retired	2 (20.0)	
Frequency of visit	1	17 (16.0)	0.016*
	2	11 (17.2)	
	≥ 3	45 (30.0)	
^a Frequencies/percentages of respondents who were satisfied within each category of the sociodemographic factors [*] The relationships were statistically significant (i.e., p-value ≤ 0.05)			

Table 4.7: Predictors Associated with Patient Satisfaction Using Multiple Logistic Regression Analysis (N = 320).

Predictors	Estimated Coefficients	OR (95% CI)	P-value (Wald test)
Education Level Secondary or less	0.591	1.81 (1.04, 3.15)	0.037*
Frequency of visits ≥ 3 ^b	0.776	2.17 (1.27, 3.72)	0.005*
OR: Odds Ratio; CI: Confidence Interval			
^a Reference category was university education level; ^b Reference category was < 3			
[*] The relationships were statistically significant (i.e., p-value ≤ 0.05)			

4.8 Summary

The SERVQUAL instrument was used to collect the data for this research. The cross-sectional study was conducted for 25 days, which started in the second week of July until the last week of July 2024 at the National Centre for Dermatology, Ramallah, Palestine. This instrument was widely used in patient satisfaction studies and has been found appropriate in various healthcare settings.

In this study, the tangible dimension had the highest mean score for the level of expectation and perception (6.03 and 5.28, respectively), while the responsiveness dimension had the lowest mean score for the level of expectation and perception (5.77 and 4.89, respectively). The most critical was the responsiveness dimension (quality gap = - 0.88), followed by assurance (quality gap = - 0.85). On the other hand, the most

satisfied was the empathy dimension (quality gap = - 0.68), followed by the reliability dimension (quality gap = - 0.73). Our findings also revealed that the service quality gaps were negative in all SERVQUAL individual items and dimensions and that there were significant differences between patient's expectations and perceptions (i.e., p-value < 0.05). The three largest negative gap scores were observed in items: Staff provide prompt service (quality gap = - 1.10), Accurate and reliable medical diagnosis (quality gap = - 1.02) and Staff are polite (quality gap = - 1.01). On the other hand, the three smallest negative gap scores were observed in: Maintain accurate records (quality gap = - 0.50), Modern looking equipment (quality gap = - 0.51), and Services are delivered equally (quality gap = - 0.57).

The present research findings also revealed a significant association between education level and patients' expectations based on the SERVQUAL scale (p-value = 0.032), where higher education levels had higher expectations. Moreover, there was a significant association between the frequency of visits and patients' expectations (p-value < 0.001), where patients who visited the Centre frequently (i.e., 3 or more) had low expectations. On the other hand, none of the sociodemographic factors (i.e., gender, age, social status, education level, residency, employment status, and the frequency of visits) were significantly associated with the patient's perceptions, where all the p-values were greater than 0.05. Furthermore, our findings indicated that the quality gaps were significantly associated with the education level (p-value < 0.001), where patients with high education levels had high negative quality gaps. Moreover, the gaps were significantly associated with the frequency of visits (p-value = 0.007), where patients who visited the Centre frequently (i.e., 3 or more) had the lowest negative quality gaps.

Finally, the results showed that less than one-quarter (22.8%) of the respondents were satisfied with the NCDs. Generally, there was a significant association between low education level and higher satisfaction, where patients with secondary or less education were more likely to be satisfied than those with higher levels of education (OR = 1.81; 95% CI: 1.04 - 3.15; p = 0.037). Moreover, the frequency of visits to the dermatology Centre was also one of the significant factors influencing the level of satisfaction among patients, where patients who visited the Centre frequently (i.e., 3 or more) were more likely to be satisfied than those who visited the Centre once or twice (OR = 2.17; 95% CI: 1.27 - 3.72; p = 0.005).

Although the research showed low satisfaction levels in the patients who visited the NCDs according to the quality gap score the dimensions showed a relatively high

satisfaction level in the perceived service so the quality gap could be used more for the assessment of improvement points than the assessment for the satisfaction level.

Chapter Five: Discussion and Recommendations

5.1 Introduction

This chapter discusses and concludes the results of the research. In addition, the chapter provides several recommendations for healthcare centers and institutions practitioners. Limitations and some suggestions for future research were also mentioned.

5.2 Discussion of Results

Continuous evaluation and improvement are required for healthcare centers to provide better quality healthcare services. In this study, a cross-sectional research design has been employed, where a SERVQUAL (SERV-service, QUAL-quality) scale-based questionnaire has been used for assessing the quality dimensions (i.e., Tangibles, Reliability, Responsiveness, Assurance, and Empathy) and patient satisfaction in the case of healthcare services offered by the National Centre for dermatology in Ramallah, Palestine based on standardized evaluation parameters.

The results show that all of the five quality dimensions had a significant negative gap between patients' expectations and perceptions, meaning that the service in the dermatology Centre did not meet patients' expectations. Specifically, these gaps in descending order were Responsiveness (quality gap = - 0.88), Assurance (quality gap = - 0.85), Tangibles (quality gap = - 0.75), Reliability (quality gap = - 0.73), and Empathy (quality gap = -0.68). The responsiveness dimension was identified as the most critical dimension in need of improvement as it had the largest negative quality gap. On the other hand, Hassan et al., (2023), in their study in Palestine on the VTC which is the only study that showed a high-quality level of services in which perception exceeds the expectation of services.

Some studies showed the same result in which the Responsiveness dimension scored the highest negative gap like a study by (Shweiki, 2016) at the hospitals in the southern part of WB and a study by Sharka et al., (2024) In Saudi Arabia, the dentist sector also indicated that the Responsiveness dimension was the most important in determining the level of quality and revisit intention of patients.

Likewise, a study in Korea, Jonkisz et al., (2022b) Pointed out that the highest gap score was recorded for Responsiveness while it is of moderate importance for Bangladesh

people. On the contrary, (Shublaq, 2022) Concluded that Responsiveness is the lowest gap score for dental services at the University of Palestine in Gaza.

In this thesis, the results show that the “Assurance” dimension gets the second score after Responsiveness (the second important dimension after Responsiveness). In the meanwhile, a study by (Demir et al., 2020 & Mrabet et al., 2022) showed that the Assurance dimension is the most important dimension rather than Responsiveness. Also, similarly (Karsh & Harb, 2021 & Thabet, 2015) Emphasized that Assurance scored the highest negative gap, while (Alrwashdh & Alishaq, 2023 & Tofik et al., 2023) in which Assurance was the lowest negative score. A study (Shublaq, 2022) Showed that perception services exceed expectations in the dimension of Assurance.

The results of this research work concluded that patients attending the dermatology Centre were dissatisfied with the Centre's willingness to provide prompt and helpful services, knowledge and courtesy of employees, and their ability to convey trust and confidence.

On the other hand, the most satisfied SERVQUAL dimension was empathy as it had the smallest negative quality gap, the same results were achieved in Iran. (Jonkisz et al., 2022b) and (Okal & Jaaron, 2013 & Alrwashdh & Alishaq, 2023) but in Pakistan, it was the highest negative score (Jonkisz et al., 2022b). Another study (Ozretić Došen et al., 2020) In which perception exceeds the expectations for Empathy. In some studies, as (Mrabet et al., 2022) in which they Showed that Empathy has no association with the satisfaction of patients with the services. This means that patients were at least satisfied with the Centre's provision of individual and customized care to all patients.

Furthermore, considering all 22 items of the SERVQUAL scale, the three most critical items with the largest negative gap scores were observed: Staff provide prompt service (quality gap = - 1.10), Accurate and reliable medical diagnosis (quality gap = - 1.02), and Staff is polite (quality gap = - 1.01). On the other hand, the three most satisfied items with the smallest negative gap scores were observed in: Maintain accurate records (quality gap = - 0.50), Modern looking equipment (quality gap = - 0.51) and, Services are delivered equally (quality gap = - 0.57).

The finding of the negative scores of quality gaps for SERVQUAL scale items and dimensions was consistent with most of the studies in Palestine, see e.g., Kanan et al., 2023, as well as in other countries, see e.g., the review paper of Jonkisz et al., 2022 and the references therein. However, the findings about the most critical or satisfied SERVQUAL scale items and dimensions from these studies were conflicting. The

variation in the quality gaps may be due to the healthcare settings, which offer different services and may yield different levels of expectation and perception towards these services. Generally, each institution provided heterogeneous services. So, they may differ from day to day, site to site, customer to customer, and producer to producer. Furthermore, the level of expectation and perception may differ from one patient to another and the time they received the services, even with similar healthcare settings and services, see e.g., Parasuraman et al. 1988, and Zun et al., 2018.

Sometimes many factors can interfere and can affect the results like seasonal variations which can play an important role and can affect many cases. (Jensen et al., 2022) Indicated that seasonal variation can affect the spread of psoriatic area, and can induce worry with elevated levels of anxiety and depression so this will affect the results especially when the perceived service that would be assessed. Patient who has aggressive psoriasis for example expect to have a high level of service quality, faced with highly responsive staff that can meet their needs and obey their requirements. In the NCD there was a high load of work compared with the number of staff so the patient will not have what he expects and this will hurt the results of the study. Seasonal variations also have an obvious effect on mood change which in turn can also affect the results of this study. (Jensen et al., 2022). So the researcher must consider them.

The results showed that the tangible dimension had the highest mean score for both the level of expectation and perception (6.03 and 5.28, respectively) because the NCD has a newly devices like the PUV (phototherapy) and laser one so the patients cared a lot with these details. While the responsiveness dimension had the lowest mean score for the level of expectation and perception (5.77 and 4.89, respectively), see Figure 4. This may be because patients do not have the knowledge and the expertise to question the doctors' decisions about their health problems. Also, there was a shortage in the number of employees, so the response to the patients was slower. Sometimes there will be a high load of work on the staff due to that in these current economic crises the staff doesn't attend to the work every day they distributed their days so there are sometimes a few numbers of employees in the opposite high number of patients. So, they were busier. Therefore, the tangibles dimension is considered the easiest to assess (e.g., Karassavidou et. al, 2009).

Despite the quality gap scores for SERVQUAL scale items and dimensions were all negative, it is important not to jump to a negative conclusion about the services offered.

Indeed, the perception evaluation scores that were reported for the dermatology Centre were above the neutral value of “4” for all the items and dimensions (see Figure 5.1), and these negative gap scores resulted from high expectation scores (Goula et al., 2021). The NCD has many qualified specialist doctors who serve and can introduce their experts to the patients and supply them with accurate medical reports. Also, the whole staff that existed was considered trained and had a high level of expertise and were polite in dealing with the patients and they could answer all their questions about their cases. Also, the NCD as a physical facility is considered new and clean compared with other facilities related to the public sector so this gave a positive and good impression within the patients. So, these results mainly affect the perceived service as a mean score was above the neutral for all five dimensions.

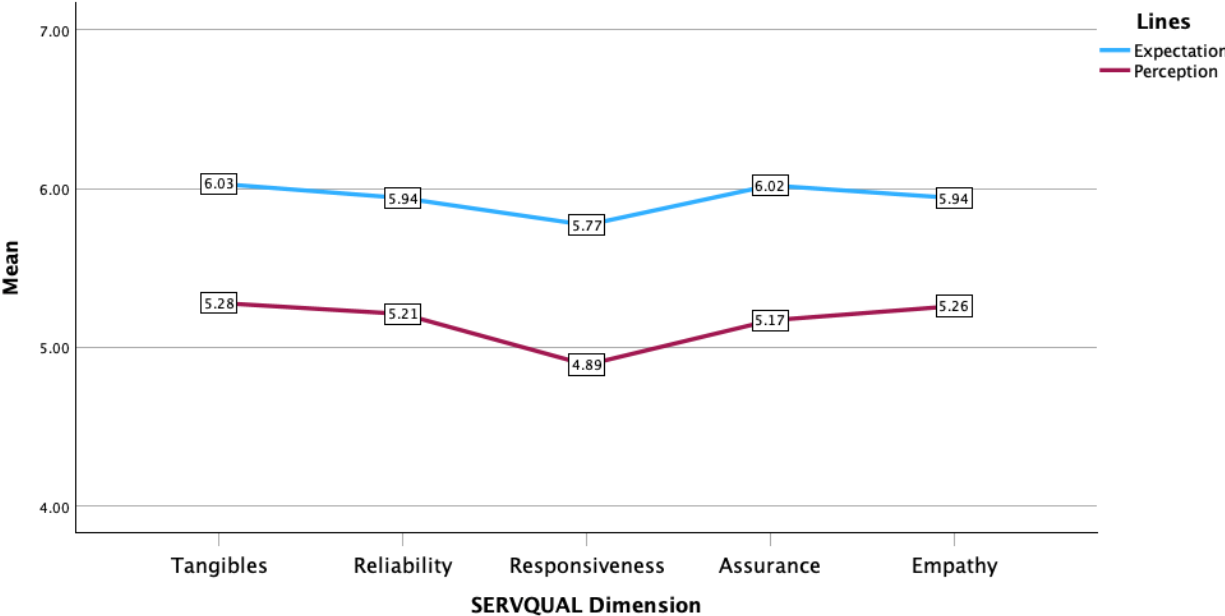


Figure 5.1: Mean Score for Patients’ Expectations and Perceptions Based on the SERVQUAL Dimensions

This study also revealed that a few respondents (22.8%) were satisfied with the service provided by the dermatology Centre although all the mean scores for the perceived service were above the neutral because the gaps were the ones that measured. A similarly low level of satisfaction was reported in several studies, that used the SERVQUAL instrument, see e.g., John et al., 2011. However, the level of satisfaction in this study was considered lower compared to other studies, see e.g., Zun et al., 2018. As mentioned above, the variability in the level of satisfaction may result from healthcare settings, which deliver heterogeneous services, seasonal variations, and mood changes. Hence, yielding different levels of expectations and perceptions towards these services. Accordingly, they may

differ by day, site, client, and producer. Moreover, the level of satisfaction may differ according to the patient and the time of receiving the services, even with similar healthcare settings and services, see e.g., Parasuraman et al. 1988, and Zun et al., 2018.

In this study, we also examined the association between sociodemographic characteristics and patient satisfaction. We found that only two factors were significantly associated with the level of patient satisfaction among patients attending dermatology centers, which were the education level and the frequency of Centre visits. Like this study, many studies showed a significant association between low education level and higher satisfaction, see e.g., (Al-Momani, 2015 & Alanazi et al., 2023 & Barghouthi & Imam, 2018) Showed the same results.

Other studies (Atweh, 2016 & A'aqoulah et al., 2022) Indicated that the sociodemographic factors have no significant effect on the satisfaction of the patients.

A possible reason for the association between the low education level and a high level of satisfaction was due to patients with higher education levels are assumed to be more knowledgeable about the services they should receive. Hence, they have higher expectations, see Figure 5.2. Accordingly, they may give poor assessments when specific important items were not fulfilled, yielding a poor evaluation of the satisfaction level. Furthermore, those with higher levels of education can see the services objectively. Hence, they are more critical. Therefore, when the service offered did not meet their expectations, it caused dissatisfaction.

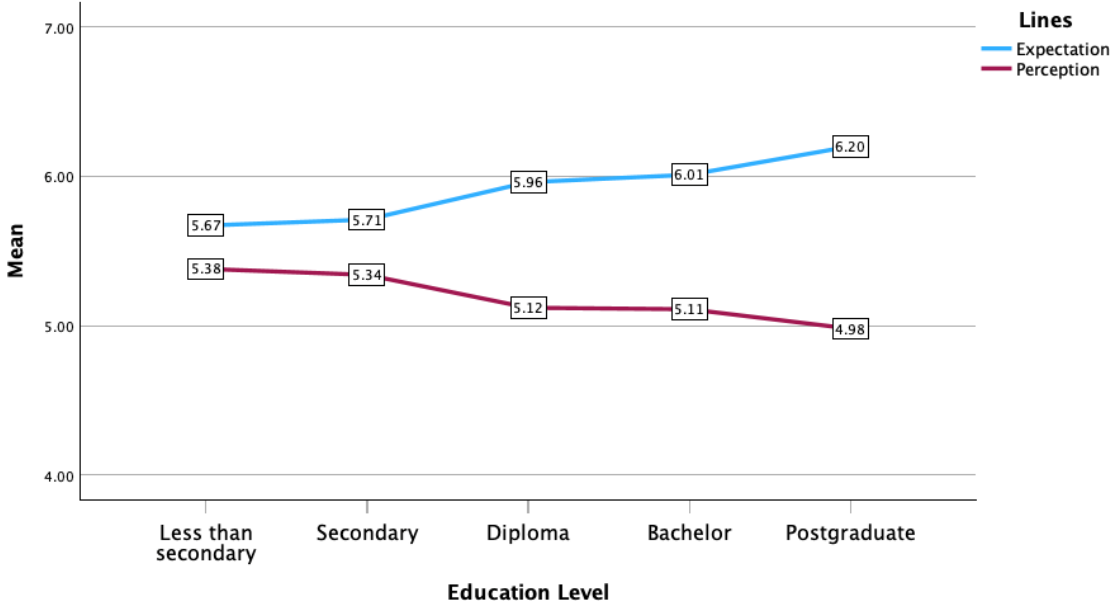


Figure 5.2: Mean Score for Patients' Expectations and Perceptions According to Education Level

Furthermore, we found that the frequency of visits to the dermatology Centre was also one of the significant factors influencing the level of satisfaction, where patients who visited the Centre frequently (i.e., 3 or more) were more satisfied. This finding was agreed with previous studies, see e.g., Cho et al., 2004 and Zun et al., 2018. This may be because when patients visit the Centre frequently, they have more information about the services offered and they become more familiar with the type of services provided which leads to low expectations, see Figure 5.3.

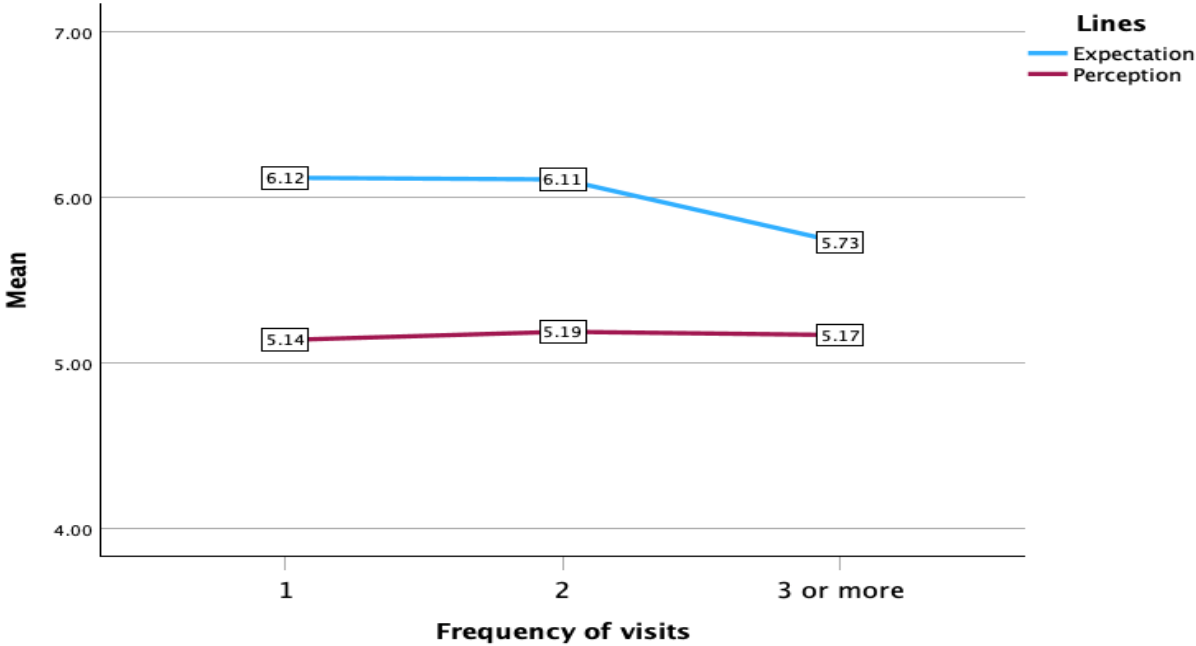


Figure 5.3: Mean Score for Patients’ Expectations and Perceptions According to Frequency of Visits

On the other hand, this current study showed an insignificant effect of the sociodemographic factors on the quality of services and its impact on the patient satisfaction level. On the other hand, some studies (Al-Balas et al., 2024 & Jonkisz et al., 2023 & Okal & Jaaron, 2013) showed a significant effect of gender over satisfaction and quality levels as the females showed a higher satisfaction level over males. On the contrary (Alrwashdh & Alishaq, 2023) study In which males had higher satisfaction levels than females. Another study like (Barghouthi & Imam, 2018) In which Gender has no significant effect. Some studies showed a significant effect of age on the level of quality as in (Shublaq, 2022) Who expressed that the young have a higher satisfaction level than the old while (Hijazi et al., 2024 & Barghouthi & Imam, 2018) Showed a high satisfaction level for old age rather than for young.

5.3 Limitations and Strengths

During the study, some limitations were found, which required the research to highlight. At first, the survey was conducted at one particular point in time, this might not reflect the overall performance of the services offered by the Dermatology Centre. Therefore, a cross-sectional design may not be appropriate and a future longitudinal study may provide a better grasp of the factors investigated.

Additionally, Respondents' evaluation might be affected by the experience, the personal mood at the time of the survey, and the presence of the observer/researcher. These factors might not reflect the true feelings about the offered services.

Other sociodemographic characteristics, such as socioeconomic status, and disease severity, which may influence patient assessment, were not measured. Additionally, the nature of convenience sampling does not lend itself to the generalization of the findings. Moreover, the study was conducted at a single dermatology center in Palestine. We postulate that there may be a substantial variation in service models across different dermatology centers in Palestine and this may not allow the generalization of the results.

Lack of previous studies that were conducted on this topic in Palestine and the lack of data about the skin diseases as this center is newly established so it was difficult to obtain the needed information related to this topic. Also, the lack of awareness among patients about the NCD as they were not familiar with the services introduced in it.

Not having qualitative data can be considered as another important limitation because the main object of this study was to know the quality of services and how the patients can feel from the perspective of them to have a complete identification of their needs and requirements in addition to their perception about the NCD so there is a need for more depth interviews and conducting focus group which could have a positive effect to know and high light the weakness points that need to be corrected and improved.

Some variables could be added in the future study and could have an impact on the study like the type of service provided to the patients and the relation between the frequency of visits and the type of service. Also, the type of disease and its severity could be another independent variable that can affect the outcomes of the studies.

Finally, the reduction of working days in the Palestinian Ministry of Health due to the financial crisis during the data collection period has reduced the sample size and may affect the overall satisfaction of the patients.

However, **despite these limitations, the study has some strengths. For instance,** this study was the first in Palestine that focused on patient satisfaction with the quality of services offered by the National Centre for Dermatology in Ramallah, Palestine, which is considered the first public specialized center in Dermatology. Our findings suggested which of the most critical SERVQUAL dimensions needs improvement to increase the patient's satisfaction level.

The presence of the residency program within the NCD center can be very effective and act as a strong point because of having more skilled and expert staff and healthcare providers which can play an important role in raising the level of quality for the services introduced. Also, this program makes it very possible for the NCD for being always in continuously improve with an increased consistency level, and the managers and responsible people will make their efforts to sustain the level of quality and increase it.

Observing patient satisfaction is an important element of a healthcare provider's effectiveness and should be a preference for quality improvement. Consequently, the evaluation of health service quality from a patient's point of view is essential for a manager to find major factors influencing service quality and implement effective methods to solve problems of service quality.

5.4 Conclusion

In summary, quality is a main concern of primary healthcare centers and institutions, and pursuing quality can lead to service improvement. This study explored patients' expectations and perceptions of service quality using the SERVQUAL model measure at the National Centre for Dermatology in Ramallah, Palestine. The SERVQUAL method was broadly used in a lot of studies to assess the quality of health services provided. The tangible dimension had the best scores for the level of expectation and perception. Nevertheless, the study demonstrated that patients had significantly higher expectations from offered health services in the five analyzed dimensions. Therefore, service quality gaps were significantly negative in all five dimensions, and service quality needs improvement in all dimensions.

However, the focus should be given to improving the responsiveness dimension, as well as addressing assurance issues, to further enhance the delivery of high-quality health services and increase the patient's satisfaction level. The most important message from the patients to employees of the dermatology centers in this study is to "provide prompt service, accurate and reliable diagnosis, and to be polite". The study also illustrated a low

satisfaction level with the services offered at the dermatology Centre, with a significant association between low education level and higher satisfaction. Moreover, frequent visits to the Centre are associated with higher satisfaction.

5.5 Recommendations

In addition to the above conclusion, the study proposes the following recommendations:

- Generally, all healthcare centers and institutions need continuous evaluation to improve the services they are offering.
- The research highlighted the weak points in the quality of services for the managers who must do their best to fix these points either by changing policies or putting new standards to deliver a high level of quality services.
- Healthcare centers and institution centers need to be more punctual in delivering their services promptly with no delays.
- Attention needs to be given to the way staff deals with the patients (i.e., willingness to help patients, provide prompt service, their knowledge and courtesy, and ability to convey trust and confidence). Consequently, staff need regular evaluation to ensure that the patients receive a welcoming treatment.
- It is essential for healthcare centers and institutions to prioritize the recruitment of staff that possess vast knowledge, exceptional expertise, and excellent interpersonal skills for effective patient communication.
- It is recommended to offer continuous training programs on service quality improvement for the healthcare centers and institution staff.
- Ensuring an effective monitoring system in the healthcare centers and institutions to anticipate probably misperceptions in the future.
- It is recommended to employ the SERVQUAL scale in different healthcare centers and institutions in Palestine, to evaluate the perceived quality and the patient's satisfaction from the offered services.
- Raise the level of awareness among the staff and employees about the importance of quality of services introduced to dermatological patients and it must be achieved which can have an important effect on the healing and recovery of patients' conditions who attend the NCDs.
- Introducing the center and its services to the people by making brochures or TV programs because many people didn't know about it.

- Conduct a qualitative analysis (interviews and focus groups) to be able to understand the needs and requirements from the perspective of patients which facilitates the identification of the weak points that need more improvements.
- Conduct a periodic evaluation of the quality from the perspective of patients and staff to keep the sustainability of the level of quality and be able to fix any problem at its time.
- Enhance the communication between the patients and the staff and among the staff themselves to have a better understanding of the nature of the services required.
- Working to provide the center with sufficient human and physical resources to cover the high load of work and be able to present the services with a high level of quality.

5.6 Implications for Further Research

This study evaluated the quality gaps between the expected service level and the perceived one among the dermatological patients in the NCD and the main finding was that there were high gaps with low levels of quality which means that the perception services didn't meet the expectations of the patients so this study can be used as a base for further studies in the future of Dermatology since this NCD is considered as the only one related to the MOH.

This research highlighted the weak points in the quality of services that the managers must consider for more development efforts in the future. Also, the quality assessment studies should not be limited to the Dermatology field only, they should be for every department of health care using different tools and models rather than SERVQUAL since there is a scarcity of research papers in Palestine for assessing quality. So, the achieving of high-level quality services will be a very important indicator for patient satisfaction and benchmarking with other private sectors and has a high reputation for the public centers. The managers should provide the NCD with the suitably experienced staff and physical equipment that were necessary for improving the service and achieving a high level of quality with periodical checking for these services. In the end, there must be a high level of intention to the quality as a conceptual theory and must do their best and effort to achieve and sustain it in different sectors in the healthcare organizations because it is a very important indicator for the degree of development and improvement of any country since we are a population under occupation who lives all his life surviving for his living and so we must approve that we can achieve every what we want despite the occupation.

References

- A'aqoulah, A., Kuyini, A. B., & Albalas, S. (2022). Exploring the gap between patients' expectations and perceptions of healthcare service quality. *Patient Preference and Adherence*, 1295–1305.
- Abd Ghani, M., Rahi, S., mansour, M., Abed, H., & Alnaser, F. M. (2017). The Impact of SERVQUAL Model and Subjective Norms on Customer's Satisfaction and Customer Loyalty in Islamic Banks: A Cultural Context. *International Journal of Economics & Management Sciences*, 06(05). <https://doi.org/10.4172/2162-6359.1000455>
- Ajmi, S. C., & Aase, K. (2021). Physicians' clinical experience and its association with healthcare quality: a systematised review. *BMJ Open Quality*, 10(4), e001545.
- Akbar, F. H., Awang, A. H., & Rivai, F. (2023). Effect of quality of dental health services to patient satisfaction in Indonesia 2019: Importance-performance analysis. *Pesquisa Brasileira Em Odontopediatria E Clínica Integrada*, 23, e200098.
- Al-Balas, S. M., Al-Maqableh, H. O., Athamneh, S., & Odeibat, A. M. (2024). Quality status: A SERVQUAL approach to evaluate the effect of the quality of healthcare services on patient satisfaction in Jordan. *International Journal of Healthcare Management*, 1–17.
- Alheety, S. N. Y., & Alkhawlan, M. A. (2019). Investigating the Impact of SERVQUAL Dimensions on Customer Loyalty in the Private Hospitals in the Yemeni Capital (Sana'a).
- Al-Neyadi, H. S., Abdallah, S., & Malik, M. (2018). Measuring patient's satisfaction of healthcare services in the UAE hospitals: Using SERVQUAL. *International Journal of Healthcare Management*, 11(2), 96-105.
- AlOmari, F. (2021). Measuring gaps in healthcare quality using SERVQUAL model: challenges and opportunities in developing countries. *Measuring Business Excellence*, 25(4), 407-420.
- Alrwashdh, S., & Alishaq, M. (2023). Analytical study to assess the impact of health service quality on patient satisfaction in Hamad Medical Corporation Hospitals in Qatar: using SERVQUAL. *IJQHC Communications*, 3(2), lyad016.
- Al Shammrie, F. F., Alanazi, W. S., Alduheim, M. A., Alenazi, A. A., Alhamazani, Y. S., Alkhuraisi, F. Y., ... & Alshammari Sr, B. (2022). Factors Affecting Patient Satisfaction in Dermatology Clinics in Saudi Arabia. *Cureus*, 14(12).
- Al Watan Voice. (2020, September 16). National Center for Dermatology: The percentage of referrals for dermatology is close to zero. *Al Watan Voice*. <https://www.alwatanvoice.com/arabic/news/2020/09/16/1367815.html>
- Al Zabadi, H., Shraim, R., Sawalha, R., & Alkaiyat, A. (2023). Outpatient satisfaction and perceptions toward pharmaceutical services in public and private hospitals in Palestine: a cross-sectional study. *Journal of Pharmaceutical Policy and Practice*, 16(1), 108.
- Arafat, Z. A. (2020). The Relationship between Aged Patients' Expectations and their Satisfaction with Health Service Quality in Outpatient Clinics. *Zeinab Ahmed Arafat1, Hoda A. El-Guindy 2, Aziza Mahmoud Abozied3, Mervat Abd El-kader Ahmed4*. 5(2).
- Asamrew, N., Endris, A. A., & Tadesse, M. (2020). Level of patient satisfaction with inpatient services and its determinants: a study of a specialized hospital in Ethiopia. *Journal of environmental and public health*, 2020(1), 2473469.
- Atweh, A. S. (2016). Improvement of Available Medical Services Quality for Thalassemia Patients in Palestine.
- Balieva, F. (2019). The psychological burden and life quality in patients with skin disease: A European study in dermatological patients.

- Barghouthi, E. D., & Imam, A. (2018). Patient satisfaction: a comparative study between Joint Commission International accredited and non-accredited Palestinian hospitals.
- Bentum-Micah, G., Ma, Z., Wang, W., Atuahene, S. A., & Bondzie-Micah, V. (2020). Perceived service quality, a key to improved patient satisfaction and loyalty in healthcare delivery: the servqual dimension approach. *Journal of Health and Medical Sciences*, 3(2).
- Bhasin, H. (2023). The Servqual model–Definition, dimensions, gaps and advantages service. *Marketing*, available at: www.marketing91.com/servqual/ (accessed 31 January 2024).
- Christia, J., Ard, A., & Runion, L. (2021). SERVQUAL measurement in a healthcare setting: before and after corrective strategy implementation. *Atlantic Marketing Journal*, 10(1), 3.
- Coulthard, L. J. M. (2004). A review and critique of research using SERVQUAL. *International Journal of Market Research*, 46(4), 479–497.
- Daqar, M. A., & Constantinovits, M. (2020). The role of total quality management in enhancing the quality of private healthcare services. *Problems and Perspectives in Management*, 18(2), 64.
- Demir, P., Gul, M., & Guneri, A. F. (2020). Evaluating occupational health and safety service quality by SERVQUAL: a field survey study. *Total Quality Management & Business Excellence*, 31(5–6), 524–541.
- Duran, S., & Yürekli, A. (2023). Quality of life and satisfaction with life in patients with skin diseases. *Psychology, Health & Medicine*, 28(10), 2848–2859.
- Endeshaw, B. (2020). Healthcare service quality-measurement models: a review. *Journal of Health Research*, 35(2), 106–117.
- Faeni, D. P. (2023). SERVQUAL measures: Indonesian government healthcare (BPJS) from a human resource perspective. *Journal of Infrastructure, Policy, and Development*, 8(2), 2271.
- Fatima, I., Humayun, A., Iqbal, U., & Shafiq, M. (2019). Dimensions of service quality in healthcare: a systematic review of the literature. *International Journal for Quality in Health Care*, 31(1), 11–29.
- Febres-Ramos, R. J., & Mercado-Rey, M. R. (2020). Patient satisfaction and quality of care of the internal medicine service of Hospital Daniel Alcides Carrión. *Huancayo-Perú. Revista de La Facultad de Medicina Humana*, 20(3), 397–403.
- Gibbons, C., Singh, S., Gibbons, B., Clark, C., Torres, J., Cheng, M. Y., ... & Armstrong, A. W. (2018). Using qualitative methods to understand factors contributing to patient satisfaction among dermatology patients: a systematic review. *Journal of Dermatological Treatment*, 29(3), 290–294.
- Godillot, C., Jendoubi, F., Konstantinou, M. P., Poncet, M., Bergeron, A., Gallini, A., & Paul, C. (2021). How to assess patient satisfaction regarding physician interaction: A systematic review. *Dermatologic therapy*, 34(2), e14702.
- Godovykh, M., & Pizam, A. (2023). Measuring patient experience in healthcare. *International Journal of Hospitality Management*, 112, 103405.
- Goula, A., Stamouli, M.-A., Alexandridou, M., Vorreakou, L., Galanakis, A., Theodorou, G., Staupoulos, E., Kelesi, M., & Kaba, E. (2021a). Public hospital quality assessment. Evidence from Greek health setting using SERVQUAL model. *International Journal of Environmental Research and Public Health*, 18(7), 3418.
- Gulzar, A. (n.d.). *Unveiling Service Quality: A Myth or a Reality?*
- Harteloh, P. P. M. (2003). The meaning of quality in health care: a conceptual analysis. *Health Care Analysis*, 11(3), 259–267.

- Hasan, M. M., & Karim, Z. (2023). Patient Expectations and Service Quality Perceptions in Healthcare: A Study of Hospitals in Bangladesh. *Journal of Healthcare in Developing Countries*, 3(1), 19–21.
- Hassan, H., Supervisor, S., & Saleh, Y. (2023). TRAINEE-PERCEIVED SERVICE QUALITY ASSESSMENT IN WEST BANK VOCATIONAL TRAINING CENTERS.
- Howsawi, A. A., Althageel, M. F., Mohaideen, N. K., Khan, M. S., Alzahrani, A. S., Alkhadir, M. A., ... & Hawsawi, R. A. (2020). Application of the Kano model to determine quality attributes of patient's care at the primary healthcare centers of the Ministry of Health in Saudi Arabia, 2019. *Journal of Family and Community Medicine*, 27(3), 178-185.
- Hijazi, H., Al-Yateem, N., Al Abdi, R., Baniissa, W., Alameddine, M., Al-Sharman, A., AlMarzooqi, A., Subu, M. A., Ahmed, F. R., & Hossain, A. (2024). Assessing the Gap Between Women's Expectations and Perceptions of the Quality of Intrapartum Care in Jordan: A Two-Stage Study Using the SERVQUAL Model. *Health Expectations*, 27(3), e14103.
- Jankowiak, B., Kowalewska, B., Krajewska-Kułak, E., & Khvorik, D. F. (2020). Stigmatization and quality of life in patients with psoriasis. *Dermatology and Therapy*, 10(2), 285–296.
- Jensen, K. K., Serup, J., & Alsing, K. K. (2022). Psoriasis and seasonal variation: a systematic review on reports from Northern and Central Europe—Little overall variation but distinctive subsets with improvement in summer or wintertime. *Skin Research and Technology*, 28(1), 180–186.
- Jonkisz, A., Karniej, P., & Krasowska, D. (2021). SERVQUAL method as an “old new” tool for improving the quality of medical services: A literature review. *International Journal of Environmental Research and Public Health*, 18(20), 10758.
- Jonkisz, A., Karniej, P., & Krasowska, D. (2022a). The servqual method is an assessment tool of the quality of medical services in selected Asian countries. *International Journal of Environmental Research and Public Health*, 19(13), 7831.
- Jonkisz, A., Karniej, P., & Krasowska, D. M. (2023). Meeting Patient Expectations: Assessing Medical Service and Quality of Care Using the SERVQUAL Model in Dermatology Patients at a Single Center in Poland. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*, 29, e941007-1.
- Kalaja, R., & Krasniqi, M. (2022). Patient satisfaction with the quality of care in public hospitals in Albania. *Frontiers in Public Health*, 10, 925681.
- Kanan, M., Al-Khalili, R., Alshaibani, E., Saleh, Y., Assaf, R., Al-Mimi, A., & Bakir, A. (2023). Assessing Service Quality at Optical Centers in Palestine Using SERVQUAL: Measuring Ambiguity.
- Karsh, S. M. A., & Harb, A. S. (2021). Assessment of Service Quality and Customer Satisfaction using SERVQUAL Model in Palestinian Automobile Industry. *Assessment*, 63(10), 7925-7936.
- Kharroub, A. O., & Mansour, M. M. (2019). The impact of strategic planning in Palestinian municipalities on the quality of service provided to its citizens. *International Business Research*, 12(5), 69–85.
- Kilpeläinen, E. (2024). Understanding patient priorities: Factors influencing patient satisfaction in tele dermatology.
- Lu, S. J., Kao, H. O., Chang, B. L., Gong, S. I., Liu, S. M., Ku, S. C., & Jerng, J. S. (2020). Identification of quality gaps in healthcare services using the SERVQUAL instrument and importance-performance analysis in medical intensive care: a

- prospective study at a medical center in Taiwan. *BMC Health Services Research*, 20, 1-11.
- Ma'an News. (2020, December 23). [The Minister of Health visits the National Dermatology Center]. Ma'an News. <https://www.maannews.net/news/2027840.html>
- MBA Skool. (2023, September 26). Perceived Quality: Definition, Importance & Example. MBA Skool. <https://www.mbaskool.com/business-concepts/marketing-and-strategy-terms/13570-perceived-quality.html>
- Ministry of Health. (2024). Annual report of the Ministry of Health 2024. Ministry of Health
- Mohammad Mosadeghrad, A. (2013). Healthcare service quality: towards a broad definition. *International Journal of Health Care Quality Assurance*, 26(3), 203–219.
- Mrabet, S., Benachenhou, S. M., & Khalil, A. (2022). Measuring the effect of healthcare service quality dimensions on patient satisfaction in the Algerian private sector.
- Muhammad Butt, M., & Cyril de Run, E. (2010). Private healthcare quality: applying a SERVQUAL model. *International journal of health care quality assurance*, 23(7), 658-673.
- Nikolova, V. Indicators of Quality of Primary Care Used in Health Systems Performance Assessment.
- Okal, J. E., & Jaaron, A. (2013). Assessing Service Quality and Customer Satisfaction Using SERVQUAL Model: An Empirical Study of Palestinian Conventional Banks.
- Ozretić Došen, Đ., Škare, V., Čerfalvi, V., Benceković, Ž., & Komarac, T. (2020). Assessment of the quality of public hospital healthcare services by using SERVQUAL. *Acta Clinica Croatica*, 59(2.), 285–292.
- Palestinian Medical Council. (2025, February 12). [Dermatological Specialized Committee]. Palestinian Medical Council. <https://www.pmc.ps/category-19/329.html>
- Palestine TV. (2023, October 1). [Psoriasis information, causes, and treatments that limit its spread] Palestine TV .<https://youtu.be/b-r-jXYw8XY?si=LQ0vT-2FPEQmqbWk>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41–50.
- Patel, N. H., Padhiyar, J. K., Patel, A. P., Chhebber, A. S., Patel, B. R., & Patel, T. D. (2020). The psychosocial and financial impact of disease among patients of dermatophytosis, a questionnaire-based observational study. *Indian Dermatology Online Journal*, 11(3), 373–377.
- Pekkaya, M., Pulat İmamoğlu, Ö., & Koca, H. (2019). Evaluation of healthcare service quality via Servqual scale: An application on a hospital. *International Journal of Healthcare Management*, 12(4), 340-347.
- Prada-García, C., & Benítez-Andrades, J. A. (2022). Evaluation of the satisfaction of patients seen in the dermatology department of a spanish tertiary hospital. *Healthcare*, 10(8), 1560.
- Qabaja ., M. H. (2022). THE EFFECT OF SERVICE QUALITY ON PATIENT SATISFACTION IN HEBRON GOVERNMENT HOSPITALS IN PALESTINE Master Thesis
- Queen, D., Trager, M. H., Fan, W., & Samie, F. H. (2021). Patient satisfaction of general dermatology providers: a quantitative and qualitative analysis of 38,008 online reviews. *JID Innovations*, 1(4), 100049.
- Rahim, A. I. A., Ibrahim, M. I., Musa, K. I., Chua, S.-L., & Yaacob, N. M. (2021). Patient satisfaction and hospital quality of care evaluation in malaysia using servqual and facebook. *Healthcare*, 9(10), 1369.

- Rahimi, M., & Solymani, F. (2022). Quality Assessment Methods of Hospital Services from the Viewpoint of Patients Based on Standard Assessment Models in Iran: A Narrative Review. *Modern Care Journal*, 19(3).
- Salamatullah, A., Ali, M., Alharbi, A., Balhmer, A., Jalal, R., Alabdali, D., & Alhadjaji, G. (2021). Patient satisfaction with pharmaceutical services in Makkah: A cross-sectional study. *Journal of research in pharmacy practice*, 10(4), 174-179.
- Sharka, R., Sedayo, L., Morad, M., & Abuljadayel, J. (2024). Measuring the impact of dental service quality on revisit intention using an extended SERVQUAL model. *Frontiers in Oral Health*, 5, 1362659.
- Shi, Z., & Shang, H. (2020). A review on quality of service and servqual model. *HCI in Business, Government and Organizations: 7th International Conference, HCIBGO 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings 22*, 188–204.
- Shruthi, P. (2020). AN EMPIRICAL STUDY OF SERVQUAL AS A TOOL FOR SERVICE QUALITY MEASUREMENT. *IJRAR-International Journal of Research and Analytical Reviews (IJRAR)*, 7(1), 153–166.
- Shublaq, H. S. M. (2022). Quality of Services Provided in Dental Clinics at University of Palestine: Patients Perception and Expectation.
- Shweiki, R. (2016). Quality Assessment of Hospital Services in the Southern West Bank. Hebron University.
- Sutton, A. V., Ellis, C. N., Spragg, S., Thorpe, J., Tsai, K., Patel, S., ... & Crew, A. (2017). Improving patient satisfaction in dermatology: A prospective study of an urban dermatology clinic. *Cutis*, 99(4), 273-278.
- Swain, S., & Singh, R. K. (2021). Measuring the impact of perceived service quality on insured and uninsured patients' satisfaction. *Measuring Business Excellence*, 25(3), 346–367.
- Talamonti, M., Galluzzo, M., Silvaggio, D., Lombardo, P., Tartaglia, C., & Bianchi, L. (2021). Quality of life and psychological impact in patients with atopic dermatitis. *Journal of Clinical Medicine*, 10(6), 1298.
- Takruri, A., Radwan, M., El Jabari, C., Nawajah, I., & Hassan, S. (2023). Experiences of Palestinian patients with hospital services: a mixed-methods study. *BMJ Open Quality*, 12(2), e002118.
- Teshnizi, S. H., Aghamolaei, T., Kahnouji, K., Teshnizi, S. M. H., & Ghani, J. (2018). Assessing quality of health services with the SERVQUAL model in Iran. A systematic review and meta-analysis. *International Journal for Quality in Health Care*, 30(2), 82-89.
- Thabet, W. M. (2015). Using Servqual Model to Assess Service Quality and Students Satisfaction in Al-Azhar University–Palestine. *International Journal of Innovative Research & Development*, 4(6), 222–229.
- Theofilou, P. (2022). The role of demographic features in Patients' satisfaction from healthcare: a cross sectional study using PSQ-18. *EC Nurs Healthcare*, 4, 1-15.
- Tofik, S., Yitayal, M., Negash, W., & Debie, A. (2023). Quality of healthcare services among adult outpatients at two Public Hospitals in East Ethiopia: Using service quality (SERVQUAL) assessment model.
- Umoke, M., Umoke, P. C. I., Nwimo, I. O., Nwalieji, C. A., Onwe, R. N., Emmanuel Ifeanyi, N., & Samson Olaoluwa, A. (2020). Patients' satisfaction with quality of care in general hospitals in Ebonyi State, Nigeria, using SERVQUAL theory. *SAGE Open Medicine*, 8, 2050312120945129.

- Unissa, R., Kumar, P. M., Pasha, M., Begum, S., & Maheswari, B. (2019). Psoriasis: a comprehensive review. *Asian Journal of Research in Pharmaceutical Science*, 9(1), 29–38.
- Yurizali, B., & Adhyka, N. (2022, March). The relationship of patient satisfaction with the waiting time and fast track services: Structural equation modelling test. In 1st International Conference on Health Sciences and Biotechnology (ICHB 2021) (pp. 164-168). Atlantis Press.
- Zaid, A. A., Arqawi, S. M., Mwais, R. M. A., Al Shobaki, M. J., & Abu-Naser, S. S. (2020). The impact of Total quality management and perceived service quality on patient satisfaction and behavior intention in Palestinian healthcare organizations. *Technology Reports of Kansai University*, 62(03), 221-232.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. Simon and Schuster.

Appendices

Appendix 1: The Questionnaire



المعلومات الديموغرافية

في المكان المناسب(ii)يرجى التكرم بوضع الإشارة		
1. الجنس	() ذكر () أنثى	
2. العمر	() 29-18 () 39-30 () 40 – 49 () 50 فأكثر	
3. الحالة الاجتماعية	() أعزب () متزوج () مطلق () أرمل	
4. المستوى التعليمي	() أقل من ثانوي () ثانوي () دبلوم () بكالوريوس () دراسات عليا	
5. مكان الإقامة	() مدينة () قرية () بادية () مخيم	
6. الوضع الوظيفي	() يعمل () لا يعمل () متقاعد	
7. عدد مرات الزيارات/ المراجعات	() مرة واحدة () مرتين () ثلاث مرات فأكثر	

القسم الثاني:

تقييم جودة الخدمة المتوقعة: يتناول هذا الجزء توقعاتك لمستوى الخدمة المقدمة في المركز الوطني للأمراض الجلدية، من فضلك، اظهر الى اي مدى تعتقد ان مركز الجلدية يجب ان يمتلك الميزات التالية:

		(في المكان الذي يرضى التكرم بوضع الإشارة) المناسب						
		7 = أوافق بشدة 1 = لا أوافق بشدة						
أولاً: الأشياء الملموسة Tangibles		1	2	3	4	5	6	7
١.	يجب ان تكون الاجهزة والمعدات والمستلزمات الطبية الموجودة في المركز متوفرة وحديثة Modern looking equipments							
٢.	يجب ان تكون المرافق المادية بما في ذلك اماكن انتظار المرضى والاستقبال والمرافق الصحية مناسبة Appealing physical facilities							
٣.	يجب ان يرتدي الاطباء والموظفون ملابس مناسبة وملائمة للمجال الطبي وتتوافق مع الخدمة المقدمة Staff have neat appearances							
٤.	يجب ان يكون المركز نظيفاً ومرتباً High standards of hygiene and cleanliness							

ثانياً: المصدقية Reliability		1	2	3	4	5	6	7
١.	يجب الالتزام بالمواعيد بدقة Staff keeps promises							
٢.	يجب ان يبدي كل من الادارة والطاقم الاهتمام والتعاون في حل مشاكل المرضى Staff solve problems							

٣.	يجب ان يكون التشخيص الطبي دقيقا وموثوقا Accurate and Reliable Medical diagnosis							
٤.	يجب ان يتم تقديم الخدمة المطلوبة في الوقت المحدد لها بدون تأجيل او تأخير Staff are timely							
٥.	اتوقع ان يتم توثيق كل المعلومات وكتابة التقارير المطلوبة بطريقة صحيحة Maintain Accurate reports							
	ثالثاً: الاستجابة Responsiveness	1	2	3	4	5	6	7
١.	يجب ان يتم الاتصال والتواصل مع المرضى واخبارهم بمواعيدهم لتلقي خدماتهم والرد على مكالماتهم Promptly inform patients							
٢.	يجب ان يتلقى المرضى خدمة سريعة من الموظفين Staff provide prompt service							
٣.	يجب ان يبدي الموظفون الاهتمام والمساعدة بشكل دائم Staff are always willing to help.							
٤.	يجب أن يتجاوب الموظفون مع طلبات المرضى فوراً بالرغم من الضغوطات وانشغالهم الدائم بتقديم الخدمات لآخرين Staff readily respond to patient requests							
	رابعاً: الثقة Assurance	1	2	3	4	5	6	7
١.	يجب ان يعزز سلوك الموظفين الثقة الكاملة لدى المرضى بالطاقم الطبي في مركز الامراض الجلدية Staff behave confidently							

٢.	يجب ان يشعر المريض بالأمان في كل تعاملاته مع المركز Patients feel safe in all transactions							
٣.	يجب ان يتعامل الموظفين بالمركز بلطف ولباقة مع المرضى Staff are polite							
٤.	يجب ان يوجد لدى الموظفين المعرفة والكفاءة اللازمة لاجابة المرضى حول اسئلتهم وكافة استفساراتهم Staff are professional and knowledgeable							
	خامساً: التعاطف Empathy	1	2	3	4	5	6	7
١.	يجب ان يكون لدى ادارة المؤسسة القدرة على ابداء الاهتمام الشخصي لكل مريض Staff give personal service							
٢.	يجب ان تلائم ساعات العمل حاجات المرضى ومواعيدهم Convenient operating hours							
٣.	يجب أن يكون لدى الموظفين بالمركز القدرة على فهم حاجات المرضى Staff recognize patients' special needs							
٤.	يجب ان يكون لدى الموظفين بالمركز القدرة على تقديم أفضل ما لديهم من الخدمة بما يلائم حاجات المرضى وتفضيلاتهم Staff have patients' best interests at heart							
٥.	يجب ان يتم تقديم الخدمة للمرضى بالتساوي بغض النظر عن مستواهم الاجتماعي							

Services are delivered equally							
--------------------------------	--	--	--	--	--	--	--

القسم الثالث:

التجربة : تتناول العبارات التالية تصورات الخدمة التي يقدمها مركز الجلدية، من فضلك اظهر الى اي مدى تعكس هذه العبارات تصورك للخدمة في المركز

		في المكان (ii) يرجى التكرم بوضع الإشارة المناسب						
		1 = لا أوافق بشدة 7 = أوافق بشدة						
أولاً: الأشياء الملموسة		1	2	3	4	5	6	7
١.	الاجهزة والمعدات والمستلزمات الطبية الموجودة في المركز متوفرة و حديثة							
٢.	المرافق المادية بما في ذلك اماكن انتظار المرضى والاستقبال والمرافق الصحية مناسبة							
٣.	الاطباء والموظفون يرتدون ملابس مناسبة وملامنة للمجال الطبي وتتوافق مع الخدمة المقدمة							
٤.	كان المركز نظيفاً ومرتباً							
ثانياً: المصدقية		1	2	3	4	5	6	7
١.	كان الالتزام بالمواعيد دقيق							
٢.	الادارة والطاقم يبديان الاهتمام والتعاون في حل مشاكل المرضى							
٣.	التشخيص الطبي كان دقيقاً وموثوقاً							
٤.	تم تقديم الخدمة المطلوبة في الوقت المحدد لها بدون تأجيل او تأخير							

٥.	عملية توثيق كل المعلومات وكتابة التقارير المطلوبة تمت بطريقة صحيحة							
	ثالثاً: الاستجابة	1	2	3	4	5	6	7
١.	كان هنالك اتصال وتواصل مع المرضى وتم اخبارهم بمواعيدهم لتلقي خدماتهم والرد على مكالماتهم							
٢.	كان المرضى يتلقون خدمة سريعة من الموظفين							
٣.	الموظفون يرغبون بتقديم الاهتمام والمساعدة بشكل دائم							
٤.	بالرغم من الضغوطات بانشغال الموظفين الدائم بتقديم الخدمات الا انهم كانوا يتجاوبون مع طلبات المرضى فوراً							

	رابعاً: الثقة	1	2	3	4	5	6	7
١.	عزز سلوك الموظفين الثقة الكاملة لدى المرضى بالطاقم الطبي في مركز الامراض الجلدية							
٢.	يشعر المريض بالأمان في كل تعاملاته مع الموظفين في مركز الامراض الجلدية							
٣.	تعامل الموظفين بالمركز بلطف ولباقة مع المرضى							
٤.	يوجد لدى الموظفين المعرفة والكفاءة اللازمة لإجابة المرضى حول اسئلتهم وكافة استفساراتهم							
	خامساً: التعاطف	1	2	3	4	5	6	7
١.	لدى ادارة المؤسسة القدرة على ابداء الاهتمام الشخصي لكل مريض							
٢.	ساعات العمل ملائمة لحاجات المرضى ومواعيدهم							
٣.	لدى الموظفين القدرة على فهم حاجات المرضى							
٤.	ما لدى الموظفين بالمركز القدرة على تقديم أفضل لديهم من الخدمة بما يتناسب مع حاجات المرضى وتفضيلاتهم							
٥.	تقديم الخدمة للمرضى كان يتم بالتساوي بغض النظر عن مستواهم الاجتماعي							

شكراً على حسن تعاونكم ... رافقتكم السلامة

Appendix 2: AAUP-IRB-R Consent -Arabic Version

نموذج الموافقة

AAUP-IRB-R Code No.:

AAUP-IRB-R Date:2024/05/19.....

(اسم المشارك /
اختياري) أوافق بموجبه على المشاركة في البحث السريري (الدراسة السريرية / دراسة الاستبيان / تجربة الأدوية)
المحددة أدناه:

.....دراسة الاستبيان قياس مدى جودة الخدمة المقدمة للمرضى المراجعين في المركز الوطني للأمراض الجلدية
باستخدام نموذج قياس جودة الخدمة
(.سيرفكوال).....

ادارة الجودة في لتحقيق درجة: الماجستير، في برنامج:
في الجامعة العربية الامريكية.....المؤسسات الصحية
تم شرح وتفسير طبيعة الدراسة وهدفها عن طريق الباحث: ...وعد عواد يوسف
سالم.....

لقد تم إخباري عن طبيعة البحث من حيث المنهجية والآثار السلبية المحتملة والمضاعفات (حسب ورقة معلومات
المشارك).

بعد معرفة وفهم جميع المزايا والعيوب المحتملة لهذا البحث، أوافق طواعية بمحض إرادتي على المشاركة في
البحث السريري المحدد أعلاه.

أفهم أنه يمكنني الانسحاب من هذا البحث في أي وقت دون إبداء أي سبب على الإطلاق.

التاريخ: إمضاء المشارك:

في حضور:-

اسم:

التسمية / اللقب: إمضاء:

(شاهد على توقيع المشارك)

أؤكد أنني أوضحت للمشارك طبيعة وهدف البحث المذكور أعلاه.

تاريخ: إمضاء: وعد عواد سالم

Appendix 3: Approval Letter

Arab American University
Institutional Review Board - Ramallah



الجامعة العربية الأمريكية
مجلس أخلاقيات البحث العلمي - رام الله

IRB Approval Letter

Study Title: "Assessing Perceived Service Quality by Patients at the National Centre for Dermatology Using SERVQUAL Model".

Submitted by: Waed Awwad Yousef Salem

Date received: 12th May 2024

Date reviewed: 16th May 2024

Date approved: 20th May 2024

Your Study titled "Assessing Perceived Service Quality by Patients at the National Centre for Dermatology Using SERVQUAL Model" with the code number "R-2024/A/82/N" was reviewed by the Arab American University Institutional Review Board - Ramallah and it was approved on the 20th of May 2024.

Sajed Ghawadra, PhD
IRB-R Chairman
Arab American University of Palestine



General Conditions:

1. Valid for 6 months from the date of approval.
2. It is important to inform the IRB-R with any modification of the approved study protocol.
3. The Board appreciates a copy of the research when accomplished.

تسهيل مهمة البحث في وزارة الصحة الفلسطينية: Appendix 4

State of Palestine
Ministry of Health
Education in Health and Scientific
Research Unit



دولة فلسطين
وزارة الصحة
وحدة التعليم الصحي
والبحث العلمي

Ref.:
Date:.....

الرقم: ٤٠٤ / ١١٣ / ٢٠٢٠
التاريخ: ٢٠٢٠ / ١١ / ٢٠

عطفة الوكيل المساعد لشؤون الصحة العامة وصحة الاسرة المحترم،،
تحية واحترام،،،

الموضوع: تسهيل مهمة بحث

يرجى تسهيل مهمة الطالبة: وعد عواد يوسف سالم - ماجستير ادارة الجودة في المؤسسات
الصحية- الجامعة العربية الامريكية، بعنوان:
"تقييم جودة الخدمة المدركة من قبل المرضى في المركز الوطني للأمراض الجلدية باستخدام نموذج
جودة الخدمة "

حيث ستقوم الطالبة بجمع معلومات عن حول موضوع البحث من خلال تعبئة استبانة، وذلك في:

- المركز الوطني للأمراض الجلدية

مع العلم ان مشرف الدراسة: د. سامي صدر.
على ان يتم الالتزام بالمحافظة على اخلاقيات البحث العلمي وسرية المعلومات، وعدم التعرض للمعلومات
التعريفية للمشاركين.
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعمد بعدم النشر لحين الحصول على موافقة وزارة
الصحة.

مع الاحترام،،،

د. عبد الله القواسمي
رئيس وحدة التعليم الصحي والبحث العلمي

نسخة: عميد كلية الدراسات العليا المحترمة/ الجامعة العربية الامريكية

تقييم جودة الخدمة المُدركة من قِبَل المرضى في المركز الوطني للأمراض الجلدية باستخدام نموذج SERVQUAL

وعد عواد سالم

اسماء لجنة الإشراف

د. سامي سدر

د. عماد أبو خضر

د. رند سلمان

ملخص

تعتبر الجودة أحد الاهتمامات الرئيسية لمراكز ومؤسسات الرعاية الصحية الأولية، لذلك يعتبر السعي في تحقيق الجودة مؤشرا أساسيا على التقدم. من أهم أهداف هذه الرسالة هو قياس جودة الخدمة المقدمة في المركز الوطني للأمراض الجلدية من خلال استخدام نموذج جودة الخدمة (SERVQUAL) والذي يركز على خمس محاور أساسية وهي (الملموسية، الاعتمادية، الاستجابة، الثقة، والتعاطف). يعتمد هذا النموذج على قياس الفجوة في جودة الخدمة وذلك من خلال قياس الفرق بين توقعات المرضى للخدمة وبين الخدمة الفعلية المقدمة لهم بالمركز. هذه الدراسة هي دراسة مقطعية تقوم على توزيع استبانة تم توزيعه وتم استخدام مقياس ليكرت السباعي لقياس مدى رضا المرضى. تم توزيع 350 استبانة على مدار 25 يوم في الفترة الواقعة ما بين منتصف شهر تموز ونهاية شهر اغسطس 2024، وبلغ مقدار الاستبانات الصحيحة والمرجعة 320 استبانة. ويتكون الاستبيان من ثلاثة أقسام: القسم الأول يحتوي على العوامل الديموغرافية المتعلقة بالمرضى، أما القسم الثاني والثالث فيحتوي كل منهما على 22 سؤال فيما يخص الخدمة المتوقعة والخدمة الفعلية. أظهرت نتائج الدراسة نتائج سلبية بالنسبة إلى الخمس أبعاد التي يركز عليها نموذج الجودة وهذا يدل على مستوى جودة منخفض فيما يخص تقديم الخدمة وأن الخدمة الفعلية لا تلبي توقعات المرضى واحتياجاتهم. حصل بعد الملموسية على أعلى معدل فيما يتعلق بالتوقعات والخدمة المدركة الفعلية (6.03 و 5.28 بالترتيب)، فيما حصل بعد الاستجابة على أقل معدل بين الأبعاد الخمسة بواقع (5.77 و 5.28 بالترتيب). أما بالنسبة لفجوات جودة الخدمة فقد أظهرت الدراسة أن بعد الاستجابة حصل على أعلى نتيجة سلبية وهذا يدل على وجود فجوة كبيرة (-0.88) يليه بعد الثقة (-0.85)،

فيما حصل بعد التعاطف على اقل نتيجة سلبية مما يعني اقل فجوة في جودة الخدمة بواقع (-0.68) يليه بعد الاعتمادية بواقع (-0.73). اما بالنسبة لأثر العوامل الديموغرافية فقد اظهرت نتائج الدراسة ان هناك أثر واضح على الجودة من خلال مستوى التعليم وعدد مرات الزيارة اما العوامل المتبقية الاخرى فلم يظهر لها اثر ملموس. اظهرت الدراسة ان المرضى ذوو التعليم المرتفع لديهم مستوى توقعات عال وهذا يؤدي الى وجود فجوة (نتيجة سلبية) في جودة الخدمة مما يؤثر سلبا على مدى الرضا للمرضى. اما بالنسبة لعدد مرات الزيارة للمركز فقد اظهرت الدراسة انه كلما زاد عدد مرات الزيارة كلما ارتفعت الجودة وهذا يؤدي الى ارتفاع الرضا لدى المرضى عن الخدمة المقدمة لديهم من قبل المركز الوطني للأمراض الجلدية. وقد اظهرت الدراسة بشكل عام ان اقل من ربع المرضى (22.8%) لديهم رضا عن الخدمة المقدمة لهم.

وعليه توصي الدراسة بوجود العمل على تطوير جودة الخدمة بشكل مستمر من خلال عقد برامج تدريبية للطواقم العامل بالمركز، بالإضافة الى وجود برنامج رصد وتقييم مستمر، وهذا يسلب الضوء على مواطن الضعف حتى يتسنى للمدراء والمخططين لبذل الجهود والعمل على اعداد خطط مستقبلية جديدة او تغيير سياسات معينة والتي قد تسهم بشكل كبير في رفع مستوى الجودة والوصول بها الى النتائج المطلوبة فيما يتعلق بتلبية توقعات المرضى ورغباتهم ، كما يمكن ان يكون هذا البحث كلبنة بناء اساسية وبداية لأبحاث مستقبلية اخرى لدعم الجودة ورفع مستوياتها في مختلف الاقسام والقطاعات سواء الصحية او غيرها.

الكلمات المفتاحية: نموذج SERVQUAL ، رضا المرضى، الجودة، الإدراك، التوقعات