Postgraduate Studies and Training Administration

Faculty of Economics

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The Impact of Health Insurance on Quality of Healthcare Services among Libyan Community in Zawia Municipality, Libya

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Declaration

I **Rabie M. Salem Khbaiza** confirm that the work contained in this thesis / dissertation, unless otherwise referenced is the researcher's own work, and has not been previously submitted to meet requirements of an award at this University or any other higher education or research institution, I furthermore, cede copyright of this thesis / dissertation in favor of University of Zawia.

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Dedication

This thesis is lovingly dedicated to my beloved mother, whose endless prayers, encouragement, and sacrifices have been my greatest source of strength.
To the memory of my late father, whose wisdom, love, and guidance continue to inspire me every day — this achievement is as much his as it is mine.

To my dear wife and family, whose patience, understanding, and unwavering support have sustained me throughout this journey.

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Rabie M. Salem Khbaiza

The impact of health insurance on quality of healthcare services among Libyan community in Zawia municipality

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Abstract

This study examines the impact of health insurance on the quality of healthcare services in Zawia Municipality, Libya. As health insurance represents a critical mechanism for promoting equitable access to medical care, understanding its role within the Libyan context is essential for improving healthcare outcomes and policy planning.

The research aims to assess the influence of health insurance on healthcare quality, accessibility, and patient satisfaction, while also identifying the challenges faced by uninsured individuals in obtaining quality services. A case-control study design was employed, utilizing face-to-face questionnaires and interviews with (206) participants. Data were analyzed using (SPSS version 27) to determine the statistical significance of relationships between insurance coverage and key healthcare indicators.

The findings revealed that health insurance coverage in Zawia Municipality is moderate, primarily dominated by public schemes, with persistent gaps in accessibility. Insured individuals reported higher healthcare utilization rates, greater satisfaction with service quality, and more positive interactions with medical staff. However, overall perceptions of healthcare quality remained average, constrained by inadequate facility preparedness and limited access to specialized care. Treatment delays and out-of-pocket payments continued to affect both insured and uninsured residents.

The study concludes that expanding health insurance coverage, investing in healthcare infrastructure, and enhancing provider competence are vital to improving service quality and equity. Strengthening administrative efficiency and promoting public awareness of insurance benefits are further recommended to ensure sustainable improvements in healthcare delivery.

Keywords: Health Insurance, Healthcare Quality, Accessibility, Patient Satisfaction, Zawia Municipality, Libya

أثر التأمين الصحي على جودة خدمات الرعاية الصحية في المجتمع الليبي ببلدية الزاوية

إعداد: ربيع مصطفى سالم خبيزة

المشرف: ندى عبدالله هويسة

الملخص

تتناول هذه الدراسة أثر التأمين الصحي على جودة خدمات الرعاية الصحية في بلدية الزاوية، ليبيا. ونظراً لأن التأمين الصحي يمثل آلية أساسية لتعزيز العدالة في الحصول على الرعاية الطبية، فإن فهم دوره في السياق الليبي يُعد ضرورياً لتحسين نتائج الرعاية الصحية والتخطيط الصحي.

تهدف الدراسة إلى تقييم تأثير التأمين الصحي على جودة الرعاية الصحية، وإمكانية الوصول إليها، ورضا المرضى، مع تحديد التحديات التي يواجهها الأفراد غير المؤمن عليهم في الحصول على خدمات ذات جودة.

وقد تم اعتماد تصميم دراسة حالة-شاهد، باستخدام استبيانات ومقابلات مباشرة مع (206) مشاركاً.

وتم تحليل البيانات باستخدام برنامج SPSS) الإصدار 27 (لتحديد الدلالة الإحصائية للعلاقات بين التغطية التأمينية والمؤشرات الرئيسة للرعاية الصحية.

أظهرت النتائج أن التغطية التأمينية في بلدية الزاوية متوسطة، وتغلب عليها البرامج العامة، مع استمرار وجود فجوات في إمكانية الوصول.

وقد أفاد المؤمن عليهم بمعدلات أعلى في استخدام الخدمات الصحية، ورضا أكبر عن جودة الخدمات، وتفاعلات أكثر إيجابية مع الكوادر الطبية.

ومع ذلك، بقيت التصورات العامة لجودة الرعاية الصحية في المستوى المتوسط، نتيجة قصور في جاهزية المرافق وقلة الوصول إلى الرعاية التخصصية.

كما استمرت مشكلات التأخير في العلاج والدفع المباشر من جيوب المرضى في التأثير على كل من المؤمن عليهم وغير المؤمن عليهم.

وتخلص الدراسة إلى أن توسيع نطاق التغطية التأمينية، والاستثمار في البنية التحتية الصحية، وتعزيز كفاءة مقدمي الخدمة، تُعد خطوات أساسية لتحسين جودة الخدمات وتحقيق العدالة.

كما توصي الدراسة بضرورة تعزيز الكفاءة الإدارية وزيادة الوعي العام بفوائد التأمين الصحي لضمان تحسينات مستدامة في تقديم خدمات الرعاية الصحية.

الكلمات الدالة: التأمين الصحي، جودة الرعاية الصحية، إمكانية الوصول، رضا المرضى، بلدية الزاوية، ليبيا

Table of Contents

DECLARATION .... **II**

DEDICATION .... **III**

ACKNOWLEDGEMENTS .... **IV**

ABSTRACT V

TABLE OF CONTENTS .... **VII**

LIST OF TABLES .... **X**

LIST OF FIGURES .... **XI**

LIST OF APPENDICES .... **XII**

LIST OF ABBREVIATIONS .... **XIII**

CHAPTER 1: INTRODUCTION **1**

1.1. BACKGROUND AND RATIONALE 2

1.1.1. General Overview of Health Insurance 2

1.1.2. Health Insurance in Libya 3

1.1.3. Evolution of Health Insurance in Libya 4

1.1.4. Challenges in Libya's Health Insurance System 4

1.1.5. Health Insurance and Healthcare Quality 5

1.1.6. The Impact of Health Insurance on Healthcare Quality 5

1.1.7. Why Focus on Zawia municipality? 5

1.1.8. Healthcare Infrastructure in Zawia municipality 6

1.1.9. Health Insurance Disparities in Zawia municipality 6

1.1.10. Socioeconomic and Policy Relevance 6

1.2. PROBLEM STATEMENT. 7

1.3. RESEARCH OBJECTIVES 8

1.3.1. General Research Objective 8

1.3.2. Specific Research Objectives 8

1.4. RESEARCH QUESTIONS 9

1.5. STUDY HYPOTHESES 9

1.6. SIGNIFICANCE OF THE STUDY 10

1.6.1. Contribution to Policy Development and Health Insurance Reform 12

1.6.2. Enhancing Healthcare Service Quality and Accessibility 13

1.6.3. Economic Implications and Financial Sustainability of Healthcare 14

1.6.4. Addressing Social Inequality in Healthcare Access 14

1.6.5. Practical Implications for Healthcare Providers and Insurance Companies 15

1.6.6. Academic and Research Contributions *16*
1.7. Scope of the Study 16
1.8. Geographical Scope 17
1.8.1. Population Scope *17*
1.8.2. Thematic Scope *18*
1.9. Methodological Scope 19
CHAPTER 2: LITERATURE REVIEW 20
2.1. Health Insurance Systems: Global Perspectives 20
2.1.1. Definition and Purpose *20*
2.1.2. Theoretical and Empirical Foundations *20*
2.1.3. Evaluating HI System Performance *21*
2.2. Theoretical Framework and Key Concepts 21
2.2.1. The Flagship Framework *21*
2.2.2. Health Insurance: Typologies and Functions *22*
2.2.3. Healthcare Quality: Dimensions and Determinants *23*
2.3. Global Experiences with Health Insurance Systems 24
2.3.1. United States: Fragmented Coverage and Persistent Inequities *24*
2.3.2. China: *26*
2.3.3. Germany: *27*
2.3.4. Iran: *28*
2.3.5. Abu Dhabi: *28*
2.3.6. The Kingdom of Saudi Arabia (KSA): *30*
2.3.7. Libya: *30*
2.3.8. Comparative Insights: *31*
2.4. Health Insurance and Healthcare Quality Indicators 32
2.4.1. Access to Healthcare *32*
2.4.2. Affordability and Financial Protection *32*
2.4.3. Process Quality and Patient Satisfaction *33*
2.4.4. Health Outcomes *33*
2.5. The Libyan Context and Research Gap 35
2.5.1. Epidemiological and Regional Context *35*
2.5.2. Historical Context of Healthcare in Libya *35*
2.5.3. Current Health Insurance Landscape *36*
2.5.4. Challenges Affecting Healthcare Quality in Libya *36*
2.5.5. Research Gap and Study Rationale *37*
2.6. Conclusion of Literature Review 37
CHAPTER 3: METHODOLOGY 38
3.1. Introduction 38
3.2. Study Design 38

3.3. Study Setting and Population 38
3.4. Sampling Technique and Sample Size 39
3.5. Data Collection Methods 39
3.6. Variables and Measurements 40
3.7. Data Analysis 41
3.8. Ethical Considerations 41
3.9. Conclusion 42

CHAPTER 4: RESULTS 43

4.1. Statistical Methods 43
4.2. Questionnaire Validity: 43
4.3. Reliability of the questionnaire 44
4.4. Demographics 45
4.5. Health Insurance Status 49
4.6. Access to Healthcare 50
4.7. Quality of Healthcare Services 52
4.8. Patient Outcomes and satisfaction 54
4.9. Hypotheses Testing: 57
4.10. Summary of Results 58
4.11. The conclusion 60

CHAPTER 5: DISCUSSION 61

5.1. Structural and Governance Frameworks 61
5.2. Financing Mechanisms and Sustainability 62
5.3. Equity, Access, and Quality of Care 63
5.4. Policy Implications for Libya 64
5.5. Analytical Summary 70

CHAPTER 6: CONCLUSION 71

6.1. The conclusion 71
6.2. Strengths and Limitations 72
6.2.1. Strengths 72
6.2.2. Limitations 72
6.3. Recommendations 73
7. References 74

List of Tables

table (1) prepared by the researcher 29

table (2) illustrates the results of the t-test for testing the difference between the two groups 44

table (3) results of the test for the reliability of the study questionnaire (cronbach's alpha) 44

table (4) sample distribution based on age 45

table (5) sample distribution based on gender 46

table (6): sample distribution based on education level 46

table (7): sample distribution based on employment status 47

table (8) sample distribution based on residence location 48

table (9) health insurance coverage and barriers in the libyan community of zawia municipality 49

table (10) patterns of healthcare utilization in the libyan community of zawia municipality 50

table (11) perceptions of healthcare quality and professional attitude in the libyan community of zawia municipality 52

table (12) impact of health insurance on access to specialized care and patient satisfaction in the libyan community of zawia municipality 54

table (13) comparison of healthcare access and satisfaction between insured and uninsured individuals in the libyan community of zawia municipality 55

table (14) prepared by the researcher 68

comparison between libya phif and other countries health insurance programs 68

List of Figures

figure 1 control knobs (roberts et al,2008) 22

figure 2 donabedian's structure-process-outcome paradigm (donabedian,1988) 24

figure 3 us health insurance system (shi &singh ,2022) 25

figure 4 enrollment rate of beneficiaries by years (shi &singh ,2022) 26

figure 5 selected health indicators for some countries in mena region (katoue et al.,2022) 34

figure 6 research model 41

figure 7 sample distribution based on age 45

figure 8 sample distribution based on gender 46

figure 9 sample distribution based on education level 47

figure 10 sample distribution based on employment status 48

figure 11 sample distribution based on residence location 49

List of Appendices

APPENDIX A STUDY QUESTIONNAIRE ... 77

APPENDIX B ETHICAL APPROVAL ... 79

APPENDIX C LETTER OF DATA COLLECTION ... 80

APPENDIX D LETTER OF DATA COLLECTION ... 81

APPENDIX E LETTER OF DATA COLLECTION ... 82

List of Abbreviations

ACA	Affordable Care Act
BMI	Basic Medical Insurance System
CCHI	Council of Cooperative Health Insurance
EBMI	Employee Basic Medical Insurance System
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
HAAD	Health Authority of Abu Dhabi
HI	Health Insurance
IHIO	Iran Health Insurance Organization
KSA	The Kingdom of Saudi Arabia
MENA	Middle East and North Africa
NCDs	Non-Communicable Diseases
NCMS	New Cooperative Medical Scheme
NHS	National Health Service
NHIA	National Health Insurance Authority
NHIS	National Health Insurance Scheme
NHSA	National Healthcare Security Administration
OOP	Out-of-Pocket
PHI	Private Health Insurance
PHIF	Public Health Insurance Fund
RBMI	Resident Basic Medical Insurance System
SHI	Statutory Health Insurance
SPSS	Statistical Package for the Social Sciences
SSO	Social Security Organization
UAE	United Arab Emirates
UHC	Universal Health Coverage
UEBMI	Urban Employee Basic Medical Insurance
UMIS	Universal Medical Insurance System
URBMI	Urban Resident Basic Medical Insurance
US	United States
WHO	World Health Organization

CHAPTER 1:
INTRODUCTION

Healthcare is a fundamental pillar of societal well-being, ensuring that individuals receive the necessary medical attention to maintain and improve their quality of life. One of the key mechanisms for facilitating access to healthcare services is health insurance, which plays a crucial role in reducing financial barriers and improving healthcare utilization.

Health insurance has been widely studied for its potential to enhance the quality, accessibility, and efficiency of healthcare services.

However, in many developing countries, including Libya, the effectiveness and impact of health insurance systems remain underexplored.

Health insurance is a financial tool that provides financial coverage for medical expenses.

A health insurance policy is a contract between the insurance company or institution and an individual.

The individual pays a premium to the insurer and the insurer offers financial protection against healthcare expenses to the individual in return.

Health insurance covers wide-ranging medical expenses like the cost of medicines, surgery, doctor's consultations, room rent, ambulance charges and more.

Healthcare quality: Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes (WHO).

The six domains of healthcare quality (**STEEIP**) are:

Safe – avoiding harm to people for whom the care is intended.

Timely – reducing waiting times and sometimes harmful delays.

Effective – providing evidence-based healthcare services to those who need them.

Efficient – maximizing the benefit of available resources and avoiding waste.

Integrated – providing care that makes available the full range of health services throughout the life course.

People-centered – providing care that responds to individual preferences, needs and values.

1.1. Background and Rationale

Several global studies suggest that the presence of a well-structured health insurance system can lead to improved service delivery, patient satisfaction, and better health outcomes.

However, research specifically focusing on Libya remains limited, and empirical data on the relationship between health insurance and service quality is scarce.

This study, therefore, seeks to fill this gap by assessing the extent to which health insurance contributes to improved healthcare quality, patient satisfaction, and access to essential medical services in Zawia municipality.

1.1.1. General Overview of Health Insurance

Health insurance is a fundamental component of modern healthcare systems, designed to provide financial coverage for medical expenses, thereby improving access to healthcare services and protecting individuals from financial hardships associated with medical costs.

It operates on the principle of risk pooling, where insured individuals contribute to a common fund that covers healthcare expenses in times of need.

The primary objective of health insurance is to reduce out-of-pocket spending, enhance healthcare accessibility, and ensure that individuals receive timely and appropriate medical attention.

Globally, health insurance is structured through different models, each reflecting the economic and healthcare priorities of a country.

These models include:

Public (Government-Funded) Health Insurance: Operated and financed by the government through taxation or social security contributions, ensuring universal coverage for citizens.

Examples include the National Health Service (NHS) in the United Kingdom and Medicare in Canada.

Private Health Insurance: Offered by private entities, where individuals or employers purchase policies to cover medical expenses.

This model is prevalent in the United States and some European nations.

Hybrid Systems: A combination of public and private insurance, allowing both government-sponsored and private insurance coverage.

Countries like Germany and France employ this model to balance accessibility and quality.

An effective health insurance system is essential for achieving universal health coverage (UHC), a goal emphasized by the World Health Organization (WHO).

UHC ensures that all individuals receive the healthcare services they need without suffering financial hardship.

However, despite its significance, challenges such as cost escalation, inequitable access, administrative inefficiencies, and service disparities remain prevalent in many health insurance systems worldwide.

In many developing countries, the lack of a well-structured health insurance system leads to high out-of-pocket healthcare expenditures, resulting in financial burdens for individuals and families.

Libya, like other middle-income nations, faces challenges in establishing a comprehensive health insurance system that effectively meets the needs of its population.

1.1.2. Health Insurance in Libya

Libya's healthcare system has traditionally been government-funded, offering free or heavily subsidized healthcare services to its citizens.

This system, which was primarily financed through oil revenues, aimed to ensure universal access to healthcare without direct costs to patients.

However, over the years, economic instability, political conflicts, and governance challenges have weakened Libya's public healthcare infrastructure, leading to deteriorating service quality and increased dependence on private healthcare providers.

The Libyan healthcare system has faced significant challenges over the past decades, including political instability, economic constraints, corruption, low quality, and inefficiencies in healthcare infrastructure.

While health insurance has been introduced as a mechanism to improve healthcare access and service quality, its implementation remains fragmented.

Many Libyan citizens rely on out-of-pocket payments, leading to disparities in access to medical services and financial hardships for low-income groups.

Understanding how health insurance influences the quality of healthcare services in Zawia municipality, a significant urban center in Libya, is essential for informing future policy reforms.

1.1.3. Evolution of Health Insurance in Libya

Historically, Libya did not have a widespread health insurance system, as public healthcare services were provided at no cost to citizens.

However, as the country's economy fluctuated and healthcare demands grew, discussions on implementing health insurance as an alternative financing mechanism emerged.

Efforts to introduce health insurance began in the early 2000s, with pilot programs aimed at covering public sector employees and select private-sector workers.

Despite these initiatives, implementation remained slow due to weak regulatory frameworks, financial constraints, and administrative inefficiencies.

The political instability following the 2011 conflict further disrupted the healthcare system, limiting government resources and increasing reliance on private healthcare services, by 2017 the public health insurance fund (PHIF) was established by the presidential council.

1.1.4. Challenges in Libya's Health Insurance System

The development of a comprehensive national health insurance scheme in Libya remains limited due to several key challenges:

Limited Insurance Coverage: A significant portion of the population remains uninsured, relying on out-of-pocket payments for medical expenses.

Fragmented Healthcare System: The absence of a unified national insurance policy results in inconsistencies in coverage and service quality.

Economic Constraints: Declining oil revenues and political instability have reduced government investment in healthcare financing.

Service Disparities: Public healthcare facilities often lack essential resources, trained professionals, and modern medical technologies, while private healthcare services remain unaffordable for many citizens.

Regulatory and Administrative Barriers: Weak institutional capacity and a lack of enforcement mechanisms hinder the effective implementation of health insurance programs.

Given these challenges, health insurance reform is increasingly seen as a necessary step toward improving healthcare financing, service efficiency, and healthcare quality in Libya.

1.1.5. Health Insurance and Healthcare Quality

Health insurance plays a critical role in enhancing healthcare quality by ensuring financial protection, increasing access to essential services, and encouraging investment in healthcare infrastructure.

Research in various countries has demonstrated that insured individuals are more likely to seek medical care, benefit from preventive services, and experience better health outcomes compared to those without insurance coverage.

1.1.6. The Impact of Health Insurance on Healthcare Quality

Health insurance contributes to improving healthcare services in the following ways:

Greater Access to Healthcare: Insured individuals have higher utilization rates of healthcare services, leading to earlier diagnosis and treatment of illnesses.

Financial Protection: Health insurance reduces out-of-pocket costs, ensuring that individuals do not delay or avoid seeking medical care due to financial constraints.

Better Health Outcomes: Studies indicate that insured populations have lower mortality rates, higher treatment adherence, and improved chronic disease management.

Investment in Medical Infrastructure: A well-funded health insurance system encourages hospitals and clinics to invest in modern medical technologies, highly trained professionals, and improved healthcare delivery mechanisms.

However, the mere presence of health insurance does not guarantee high-quality healthcare.

The effectiveness of an insurance system depends on policy design, regulatory enforcement, provider reimbursement models, and service efficiency.

In Libya, where health insurance is still evolving, its impact on healthcare quality remains inconsistent, as issues such as unequal access, weak oversight, and service inefficiencies persist.

1.1.7. Why Focus on Zawia municipality?

The Zawia municipality, located in northwestern Libya, represents an important case study for assessing the impact of health insurance on healthcare quality.

The municipality has a diverse population and a mix of public and private healthcare facilities, making it a suitable setting for analyzing variations in healthcare access, insurance coverage, and service quality.

1.1.8. Healthcare Infrastructure in Zawia municipality

Zawia municipality has a network of government-funded hospitals, private clinics, and specialized medical centers.

However, these facilities differ significantly in resource availability, service efficiency, and medical expertise.

1.1.9. Health Insurance Disparities in Zawia municipality

A large portion of the municipality's population relies on out-of-pocket healthcare payments, with limited access to health insurance coverage.

Individuals with private insurance tend to receive higher-quality medical services, while uninsured individuals face delays in care, financial burdens, and limited treatment options.

1.1.10. Socioeconomic and Policy Relevance

Zawia is home to different socioeconomic groups, allowing an analysis of how income levels impact health insurance access and healthcare quality.

The municipality has experienced fluctuations in healthcare funding, making it an insightful case study for evaluating health policy effectiveness and financial sustainability.

Findings from Zawia can provide valuable insights for national-level health insurance reforms, helping policymakers design more inclusive and effective insurance models for Libya.

Health insurance plays a fundamental role in improving healthcare accessibility, financial security, and overall service quality.

However, Libya's health insurance system remains underdeveloped, with challenges in coverage expansion, regulatory oversight, and healthcare equity.

The Zawia municipality presents a valuable case study for examining the real-world impact of health insurance on healthcare quality, highlighting both strengths and weaknesses in the current system.

This research aims to contribute to evidence-based policymaking by identifying practical strategies for enhancing health insurance effectiveness and ensuring equitable access to quality healthcare services in Libya.

1.2. Problem Statement.

Health insurance plays a crucial role in ensuring equitable access to healthcare services, reducing financial burdens, and improving overall health service quality. However, Libya does not possess a comprehensive national health insurance framework, resulting in notable disparities in healthcare access and quality.

Within Zawia Municipality, these inequalities are particularly evident, as public health facilities suffer from chronic underfunding and shortages of resources, while private healthcare remains financially unattainable for many residents.

The lack of a structured insurance system has produced a dual healthcare model, where individuals with private coverage or sufficient financial means obtain superior services, whereas those without insurance face treatment delays, reduced service quality, and increased out-of-pocket expenses.

This reality raises serious concerns regarding equity, efficiency, and the sustainability of healthcare provision in Zawia Municipality.

This study aims to examine the effect of health insurance on healthcare quality in Zawia Municipality, focusing on both insured and uninsured groups.

By exploring patient experiences, service delivery standards, and provider perspectives, the research seeks to clarify how insurance contributes to improved accessibility, efficiency, and quality of care.

It also highlights the principal obstacles hindering effective implementation of insurance policies and proposes recommendations to strengthen healthcare financing and service delivery in Libya.

Despite initiatives to introduce insurance programs, persistent challenges such as administrative inefficiency, lack of standardization, and limited coverage continue to restrict their impact.

Healthcare providers frequently encounter shortages of resources, extended waiting times, and inconsistent service quality, raising doubts about whether insurance has produced tangible benefits for the insured population.

Given the scarcity of empirical evidence on the relationship between insurance and healthcare quality in Libya, this study investigates whether insured individuals in Zawia Municipality receive better services compared to those without coverage.

Healthcare financing remains a pressing issue in Libya, where the public system has traditionally offered free or subsidized care. Yet, political instability, economic

volatility, and weak infrastructure have limited its capacity to meet the population's growing needs.

This situation has led to an increased reliance on private healthcare providers, making healthcare accessibility dependent on out-of-pocket expenses and limited insurance coverage.

Despite the potential of health insurance to improve healthcare accessibility, affordability, and quality, Libya has struggled to implement a comprehensive and effective health insurance system.

In Zawia municipality, a growing number of residents face barriers to accessing quality healthcare services, largely due to financial constraints and limited insurance coverage.

While private health insurance is available to some individuals, particularly those working in multinational companies, oil companies or government institutions, a significant portion of the population remains uninsured, leading to disparities in healthcare access.

Public hospitals face challenges such as overcrowding, medical supply shortages, and insufficient healthcare personnel, while private healthcare services remain unaffordable for many residents.

These conditions raise concerns about the role of health insurance in addressing healthcare disparities and improving service quality in the municipality.

Given these challenges, this research seeks to examine the impact of health insurance on the quality of healthcare services in Zawia municipality, Libya.

It aims to explore whether insured individuals receive better-quality care compared to those who rely on out-of-pocket payments and to assess how the presence or absence of health insurance influences patient outcomes, service efficiency, and overall healthcare accessibility.

1.3. Research Objectives

1.3.1. General Research Objective

The primary objective of this research is to reveal the impact of health insurance on the quality of healthcare services among the Libyan community in Zawia municipality.

1.3.2. Specific Research Objectives

To achieve the general research objective, the study had focus on the following specific objectives:

1-To investigate the effect of health insurance on healthcare accessibility.

2-To evaluate the impact of health insurance coverage on patient satisfaction.

3-To Identify the challenges faced by uninsured individuals in accessing quality healthcare.

4-To assess policy gaps and recommend improvements in Libya's health insurance system.

Given the current limitations of health insurance in Libya, this study will define policy gaps that hinder its effectiveness. It will assess:

The regulatory weaknesses preventing widespread insurance adoption.

The financial and administrative inefficiencies affecting insurance service delivery.

The extent to which government policies support or hinder the development of a sustainable health insurance model.

1.4. Research Questions

To understand the relationship between health insurance and healthcare quality in Zawia municipality, this study will address the following key research questions:

1-How does health insurance impact the quality of healthcare services in Zawia municipality?

2- How does health insurance influence access to healthcare services in Zawia municipality?

3-What is the relationship between health insurance and patient satisfaction with healthcare services?

4-What are the primary challenges faced by insured individuals in utilizing healthcare services?

5-What policy recommendations can be made to enhance health insurance coverage and improve healthcare quality in Zawia municipality?

These questions aim to provide a comprehensive understanding of the strengths and weaknesses of the current health insurance system, its effectiveness in improving healthcare quality, and the barriers to achieving universal and equitable health insurance coverage in the municipality.

1.5. Study Hypotheses

Null hypothesis:

H01: there is no impact of health insurance coverage on healthcare quality of healthcare services.

H02: there is no impact of health insurance coverage on healthcare accessibility of healthcare services.

H03: there is no impact of health insurance coverage on patient satisfaction with healthcare services.

H04: there is no impact of health insurance coverage on people health outcome.

Alternative hypothesis:

H1: Health insurance coverage positively influences healthcare quality in Zawia municipality.

H2: Health insurance coverage positively influences healthcare accessibility in Zawia municipality.

H3: Insured individuals report higher levels of satisfaction with healthcare services than uninsured individuals.

H4: Health insurance coverage is associated with better health outcomes among the insured population.

1.6. Significance of the Study

Addressing the challenges of health insurance and healthcare quality in Zawia municipality is not only a local imperative but also a strategic priority for national health system reform in Libya.

The study's findings are expected to generate actionable insights that inform policy decisions, guide healthcare investments, and support the design of insurance reforms tailored to the Libyan context.

By focusing on Zawia—a municipality that reflects both urban and peri-urban healthcare dynamics—this research offers a microcosmic view of broader systemic issues affecting access, equity, and service quality across the country.

Specifically, the study will contribute to:

1. Policymakers:

By providing empirical data and policy-relevant analysis, the research will support the development of strategies to expand health insurance coverage, optimize healthcare financing mechanisms, and align insurance models with population health needs and fiscal sustainability.

2. Healthcare Providers:

The study will help providers understand how insurance status influences clinical decision-making, resource allocation, patient flow, and satisfaction.

This understanding is critical for improving service delivery models and ensuring that care is both patient-centered and financially viable.

3. Residents of Zawia Municipality:

The research will empower community members with knowledge about the benefits and limitations of the current health insurance system.

This awareness can foster civic engagement, advocacy for policy change, and informed utilization of healthcare services.

By addressing the identified challenges, this research aspires to contribute to the development of a more inclusive, equitable, and effective health insurance framework in Libya—one that guarantees universal access to high-quality healthcare services regardless of individuals' financial capacity, geographic location, or social status.

Furthermore, the study enriches the limited body of literature on health insurance in Libya by offering empirical evidence of its impact on healthcare quality.

In a context where data scarcity and fragmented systems hinder evidence-based policymaking, this research fills a critical gap.

It provides a foundation for future academic inquiry and practical reform, especially in areas such as benefit package design, provider payment mechanisms, and quality assurance protocols.

The findings are expected to be of practical value to a wide range of stakeholders, including policymakers, healthcare administrators, insurance providers, and academic researchers.

By identifying strengths and weaknesses within the current insurance structure, the study offers well-grounded insights that may guide reforms aimed at enhancing the equity, efficiency, and overall effectiveness of health insurance programs across Libya.

Moreover, the study holds broader relevance as a reference point for future research on health insurance policy formulation in post-conflict and transitional societies. Libya's ongoing efforts to rebuild its institutions and restore public trust in healthcare systems make this research particularly timely.

The contextually informed recommendations derived from this study can be adapted to other nations facing similar challenges in reconstructing and reforming their healthcare infrastructure.

The study, entitled "The Impact of Health Insurance on the Quality of Health Services Among the Libyan Community in Zawia Municipality, Libya," seeks to evaluate the role of health insurance in promoting and improving the quality of healthcare delivery.

Its significance lies in its multidimensional contributions to policy design, healthcare system enhancement, economic evaluation, and the promotion of social justice. Ultimately, the findings will offer valuable guidance to decision-makers, healthcare professionals, researchers, and the Libyan community in their collective pursuit of sustainable improvements in healthcare financing and service quality.

Contributions of the Study

1.6.1. Contribution to Policy Development and Health Insurance Reform

One of the most significant contributions of this study lies in its potential to inform and guide healthcare policy reform efforts in Libya.

At present, the country lacks a unified, structured, and comprehensive health insurance system.

This absence has led to fragmentation in healthcare service delivery, inefficiencies in resource distribution, and inequitable access to medical care across different population groups.

The current system does not adequately address the financial risks associated with illness, nor does it ensure consistent quality of care for all citizens.

By focusing on the relationship between health insurance coverage and healthcare quality in Zawia municipality, this study provides a localized yet representative case study that reflects broader national challenges.

The research findings will offer evidence-based recommendations for expanding health insurance programs, improving the design and implementation of policy frameworks, and strengthening regulatory oversight mechanisms.

These recommendations will be grounded in empirical data and contextual realities, making them both practical and adaptable.

Specifically, the study aims to:

- Identify structural gaps and operational inefficiencies within the existing health insurance landscape.
- Evaluate the effectiveness of current policies in enhancing access to care and improving service quality.
- Propose a roadmap for developing a more inclusive, equitable, and financially sustainable health insurance model that aligns with Libya’s healthcare goals and socio-economic conditions.

By addressing these critical policy-related issues, the study will serve as a valuable reference for government officials, health sector planners, and insurance regulators.
It will support the formulation of strategic interventions aimed at building a resilient and responsive healthcare financing system that promotes health equity and universal coverage.

1.6.2. Enhancing Healthcare Service Quality and Accessibility

Access to high-quality healthcare services is a fundamental right and a cornerstone of any effective health system.
However, in Libya—and particularly in Zawia municipality—many individuals continue to face substantial barriers to accessing essential medical services.
These barriers are often exacerbated by limited or absent health insurance coverage, which can result in financial hardship, delayed treatment, and disparities in the quality of care received by insured versus uninsured individuals.
This study seeks to evaluate the extent to which health insurance coverage influences the quality and timeliness of healthcare services.
It will explore whether insured individuals are more likely to receive prompt medical attention, benefit from more efficient treatment pathways, and report higher levels of satisfaction with their care.
Additionally, the research will examine how insurance coverage affects key operational metrics such as waiting times, diagnostic accuracy, and continuity of care.
The study will also investigate the role of health insurance in stimulating investment in healthcare infrastructure, including the expansion of medical facilities, the acquisition of advanced technologies, and the professional development of healthcare workers.
These factors are essential for improving service delivery and ensuring that healthcare systems can meet the evolving needs of the population.
By highlighting the direct and indirect effects of insurance on healthcare quality and accessibility, the research will provide actionable insights for healthcare administrators, hospital managers, and clinical leaders.
These insights can inform the development of targeted strategies to enhance service efficiency, optimize resource allocation, and elevate the overall standard of care in Zawia municipality.

1.6.3. Economic Implications and Financial Sustainability of Healthcare

In an era of rising global healthcare expenditures—projected to surpass $10 trillion by 2026, according to the World Health Organization—the economic sustainability of healthcare systems has become a central concern for policymakers worldwide.

In Libya, where public healthcare services are often underfunded and operationally constrained, the financial burden of healthcare falls heavily on individuals and families, particularly those without insurance coverage.

This study contributes to the economic discourse on healthcare financing by examining the role of health insurance in mitigating financial risk and promoting fiscal sustainability.

It will assess how insurance coverage reduces out-of-pocket expenditures, protects households from catastrophic health spending, and enhances financial predictability for both patients and providers.

Furthermore, the study will explore whether the implementation of a comprehensive health insurance system can lead to cost savings for healthcare institutions and government budgets.

This includes analyzing the potential for improved efficiency through risk pooling, reduced duplication of services, and better management of chronic conditions.

By addressing these economic dimensions, the research will offer a nuanced understanding of how health insurance can support long-term financial sustainability in Libya's healthcare sector.

It will provide evidence to guide investment decisions, inform budget allocations, and support the design of cost-effective insurance models that balance affordability with quality.

1.6.4. Addressing Social Inequality in Healthcare Access

Healthcare inequality remains a persistent and deeply rooted issue in Libya.

Variations in income, employment status, education level, and geographic location contribute to significant disparities in access to quality healthcare services. Individuals without health insurance are particularly vulnerable, often facing:

- Limited access to specialized care and diagnostic services.
- Increased financial burdens due to high out-of-pocket payments.-
- Lower health outcomes resulting from delayed or inadequate treatment.-

This study aims to analyze how health insurance can serve as a tool for reducing these disparities and promoting social justice in healthcare.

It will examine the extent to which insurance coverage improves access for marginalized groups, including low-income households, informal sector workers, and residents of rural or underserved areas.

By evaluating the equity-enhancing potential of health insurance, the research will support broader efforts to build a more inclusive healthcare system—one in which access to care is determined by medical need rather than financial capacity.

The findings will also contribute to the global discourse on health equity and align with international frameworks such as the Sustainable Development Goals, particularly Goal 3 on ensuring healthy lives and promoting well-being for all.

1.6.5. Practical Implications for Healthcare Providers and Insurance Companies

In addition to its policy and economic relevance, this study offers practical implications for healthcare providers and insurance companies operating within the Libyan context. Understanding how insurance coverage affects service quality, efficiency, and patient expectations can help providers adapt their operational models to better serve insured populations.

Hospitals and clinics may use the findings to:

- Redesign service delivery processes to accommodate the needs of insured patients.
- Improve coordination between clinical and administrative function. −
- Enhance patient satisfaction through more responsive and personalized care.−
- Insurance companies, on the other hand, can leverage the research to:
- Refine their benefit packages and coverage policies based on population health needs.
- Develop more transparent and efficient reimbursement systems.−
- Collaborate with providers to ensure that insurance schemes support quality improvement and cost containment.

Moreover, the study may empower healthcare professionals to advocate for fairer compensation mechanisms, improved working conditions, and greater involvement in insurance policy design.

By fostering collaboration between providers and insurers, the research contributes to the development of a more integrated, sustainable, and patient-centered health insurance ecosystem in Zawia municipality.

1.6.6. Academic and Research Contributions

Health insurance remains an underexplored area of academic inquiry in Libya, with limited empirical studies examining its impact on healthcare quality, access, and system performance.

This study addresses this gap by offering a rigorous, context-specific analysis of the relationship between insurance coverage and healthcare outcomes in Zawia municipality.

The research will contribute to the academic literature by

- Providing a localized case study that reflects the unique socio-political and economic dynamics of post-conflict Libya.
- Generating data-driven insights into the effectiveness of insurance policies and their implications for service delivery.
- Establishing a foundation for comparative research across other Libyan cities and similar settings in the MENA region and beyond.

By advancing the scholarly understanding of healthcare financing and insurance reform, the study will serve as a valuable resource for researchers, graduate students, and professionals in public health, health economics, and policy studies.

It will also inform curriculum development, stimulate academic debate, and inspire future research aimed at improving health system performance in transitional and resource-constrained environments.

1.7. Scope of the Study

This study focuses on evaluating the impact of health insurance on the quality of healthcare services in Zawia municipality, Libya.

It encompasses both public and private healthcare facilities and examines the experiences of insured and uninsured patients during the period from 2024 to 2025. The research aims to capture recent trends and developments in Libya’s evolving health insurance sector and assess how insurance coverage influences healthcare accessibility, service efficiency, patient satisfaction, and overall health outcomes.

By concentrating on Zawia municipality—a significant urban center in northwestern Libya—the study provides a localized yet representative analysis of the role of health insurance in enhancing healthcare quality.

The findings are intended to inform national health policy discussions and contribute to the broader discourse on healthcare reform in post-conflict and transitional settings.

The scope of this research is delineated across four dimensions: geographical, population, thematic, and methodological.

1.8. Geographical Scope

The geographical focus of the study is confined to Zawia municipality, which serves as a strategic location for examining healthcare dynamics in Libya.

The Municipality of Zawia is characterized by a mix of public and private healthcare institutions, diverse patient demographics, and varying levels of insurance coverage. This diversity allows for a comprehensive investigation into how health insurance affects service delivery across different facility types and socioeconomic groups.

The selection of Zawia municipality enables the study to:

- Conduct an in-depth analysis of healthcare service quality within a defined urban context.
- Explore the operational differences between public and private healthcare providers in relation to insurance coverage.
- Generate insights that, while specific to Zawia, may reflect broader patterns and challenges within Libya's healthcare system.

It is important to note that while the findings may offer valuable implications for national policy, they are contextually bound to Zawia and may not be fully generalizable to other regions without further comparative research.

1.8.1. Population Scope

The population scope of the study includes residents of Zawia municipality, with a particular focus on individuals who are either insured or uninsured.

This dual focus allows for a comparative analysis of healthcare experiences and outcomes based on insurance status.

The study will collect data from patients accessing services in both public and private healthcare settings.

This approach ensures:

- Representation of diverse patient experiences across different healthcare delivery models.
- Inclusion of various demographic groups, including low-income individuals, informal sector workers, and those with chronic health conditions.
- A balanced understanding of how insurance coverage—or the lack thereof—affects healthcare utilization, affordability, and satisfaction.

By examining both insured and uninsured populations, the study aims to highlight disparities in access and quality, and identify areas where policy interventions may be most needed.

1.8.2. Thematic Scope

The thematic scope of the study is centered on five key areas that collectively define the relationship between health insurance and healthcare quality:

1- Healthcare Accessibility and Affordability

The study investigates how health insurance facilitates or hinders access to medical services, including primary care, specialist consultations, and diagnostic procedures. It also examines the extent to which insurance coverage alleviates financial barriers to treatment.

2- Service Quality and Patient Outcomes

This theme explores the impact of insurance on service delivery metrics such as waiting times, treatment efficiency, clinical outcomes, and patient satisfaction.

It seeks to determine whether insured patients receive more timely and effective care compared to their uninsured counterparts.

3- Challenges Faced by Uninsured Individuals

The research assesses the specific difficulties encountered by uninsured patients, including high out-of-pocket costs, delayed access to care, and limited availability of specialized services.

These challenges are analyzed in relation to health equity and social justice.

4- Stakeholder Perspectives

The study incorporates the views of healthcare professionals, administrators, and insurance providers regarding the effectiveness of current insurance mechanisms. Their insights are critical for understanding operational constraints and opportunities for system improvement.

5- Policy Recommendations

Based on empirical findings, the study will propose evidence-based recommendations for enhancing health insurance coverage and improving the quality of healthcare services in Libya.

These recommendations aim to support the development of a more inclusive and sustainable health financing model.

1.9. Methodological Scope

The methodological scope of the study is defined by a case-control research design, employing quantitative data collection and analysis techniques.

The study had utilize structured surveys administered to patients in public and private healthcare facilities, capturing data on service utilization, satisfaction levels, and perceived quality of care.

Key methodological features include:

- **Sampling Strategy:**

Stratified sampling to ensure representation of both insured and uninsured individuals across different healthcare settings.

- **Data Collection Tools:**

Standardized questionnaires designed to measure variables related to access, affordability, quality, and satisfaction.

- **Analytical Techniques:**

Statistical analysis using descriptive and inferential methods to identify patterns, correlations, and significant differences between study groups.

This methodological approach allows for robust, data-driven conclusions that can inform policy and practice in the Libyan healthcare context.

CHAPTER 2:
LITERATURE REVIEW

This chapter presents a comprehensive review of the existing literature relevant to the study of health insurance systems and their relationship to healthcare quality.

The purpose of this review is to synthesize theoretical frameworks, empirical findings, and global experiences to establish a robust foundation for the current research.

It identifies key concepts, highlights gaps in knowledge, and contextualizes the study within both international and Libyan healthcare landscapes.

The chapter is structured into five main sections:

(1) global perspectives on health insurance systems.

(2) theoretical frameworks and key concepts.

(3) international experiences with health insurance reforms.

(4) the relationship between health insurance and healthcare quality indicators.

(5) the Libyan context and the identified research gap.

2.1. Health Insurance Systems: Global Perspectives

2.1.1. Definition and Purpose

Health insurance (HI) is a fundamental pillar of modern health systems, functioning as a financial mechanism to ensure equitable access to healthcare services.

It operates on the principle of risk pooling and cost-sharing, whereby individuals contribute through premiums or taxes to collectively finance healthcare needs.

The overarching goals of HI include reducing financial barriers to care, promoting social solidarity, and enhancing the quality and efficiency of service delivery (Donabedian, 1988; Kutzin, 2013).

In both high-income and low- to middle-income countries (LMICs), HI has been positioned as a strategic tool for achieving Universal Health Coverage (UHC). Managed care models and strategic purchasing mechanisms—where insurers selectively contract providers based on performance—have been increasingly adopted to improve cost-effectiveness, equity, and responsiveness of health systems.

2.1.2. Theoretical and Empirical Foundations

The theoretical underpinnings of HI are grounded in health economics and public policy.

Economic theory posits that insurance reduces the marginal cost of care to the consumer, thereby increasing healthcare utilization. Empirical studies have consistently

demonstrated that HI coverage is positively associated with increased access to preventive and curative services, reduced unmet healthcare needs, and improved health outcomes (Roberts et al., 2008; Wagstaff et al., 2011).

Moreover, insured populations often report higher satisfaction with healthcare services due to reduced out-of-pocket (OOP) expenditures and improved continuity of care (Kruk & Freedman, 2008).

However, moral hazard and adverse selection remain critical challenges in insurance design, necessitating regulatory safeguards and risk adjustment mechanisms.

2.1.3. Evaluating HI System Performance

The performance of HI systems is typically evaluated across five interrelated domains: quality, accessibility, efficiency, continuity, and fairness (Donabedian, 1988).

These dimensions reflect both system-level outcomes and patient-centered metrics. For instance:

- Quality encompasses clinical effectiveness, safety, and patient experience.
- Accessibility refers to the ease with which individuals can obtain needed services.
- Efficiency involves optimal resource use to achieve desired outcomes.
- Continuity reflects the coordination and integration of care over time.
- Fairness addresses equity in financing and service provision.

While HI has been shown to reduce catastrophic health expenditures and increase service utilization, its impact on quality is context-dependent.

Factors such as benefit package design, provider payment mechanisms, and regulatory oversight significantly influence outcomes.

In fragmented or under-resourced systems, insurance expansion alone may not translate into improved quality unless accompanied by systemic reforms.

2.2. Theoretical Framework and Key Concepts

2.2.1. The Flagship Framework

The Flagship Framework developed by Roberts et al. (2008) offers a comprehensive model for analyzing and reforming health systems.

It identifies five "control knobs" through which policymakers can influence system performance:

1- Financing:

Mechanisms for mobilizing and pooling resources, including taxation, premiums, and OOP payments.

2- Payment:

Methods for remunerating providers, such as fee-for-service, capitation, or performance-based payments.

3- Organization:

The structural arrangement of service delivery, including public-private mix, referral systems, and provider networks.

4- Regulation:

Legal and institutional rules governing provider behavior, quality standards, and market entry.

5- Behavior:

Strategies to influence the actions of providers and patients, including health education, incentives, and accountability measures.

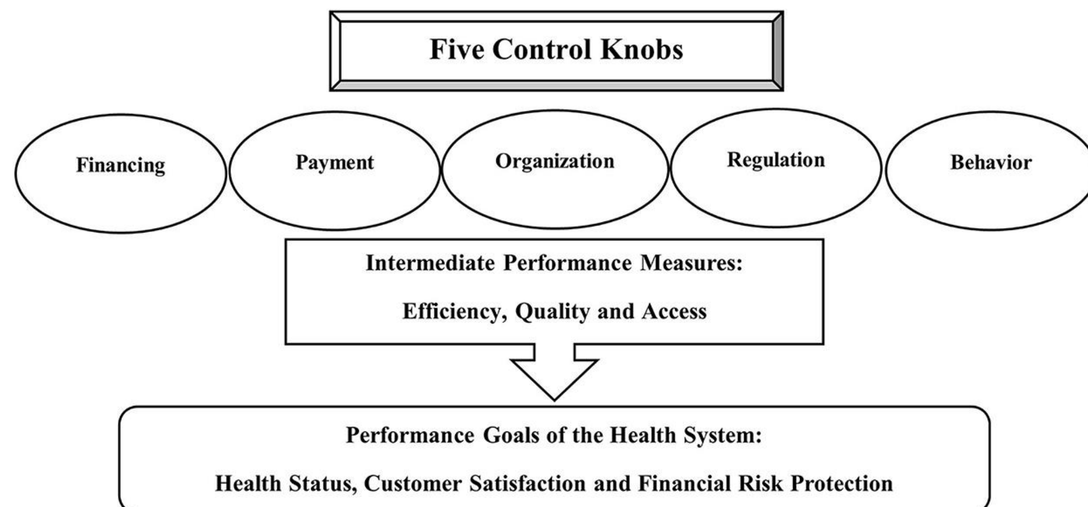


Figure 1 control knobs (Roberts et al,2008)

This framework is particularly relevant for evaluating the Libyan health insurance landscape, as it allows for a multidimensional assessment of how financing, regulation, and organizational structures interact to shape access, quality, and efficiency.

2.2.2. Health Insurance: Typologies and Functions

Health insurance can be classified into several typologies based on funding source, coverage scope, and governance:

- Public insurance (e.g., national health insurance):

It is typically tax-funded and aims for universal coverage.

- Private insurance:

This is may be employer-based or individually purchased, often supplementing public schemes.
- Community-based insurance:
It is prevalent in LMICs, relying on local pooling and voluntary contributions.
Across these models, core functions include risk pooling, resource mobilization, and strategic purchasing.
International evidence suggests that well-designed HI systems can reduce inequities, improve financial protection, and enhance service delivery—particularly when integrated with primary care and supported by robust information systems (WHO, 2010).

2.2.3. Healthcare Quality: Dimensions and Determinants

Healthcare quality is defined by the Institute of Medicine (2001) 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." Donabedian's (1988) classic triad remains foundational:
- Structure:
It is means the Physical and organizational infrastructure, including facilities, equipment, and human resources.
- Process:
It includes the Interactions between patients and providers, adherence to clinical guidelines, and timeliness of care.
- Outcomes:
It expresses the Changes in health status, patient satisfaction, and functional improvement.
High-performing health systems integrate these dimensions through continuous quality improvement (CQI), accreditation mechanisms, and performance monitoring. Importantly, quality is not solely a technical construct—it is also shaped by patient perceptions, cultural expectations, and systemic equity.

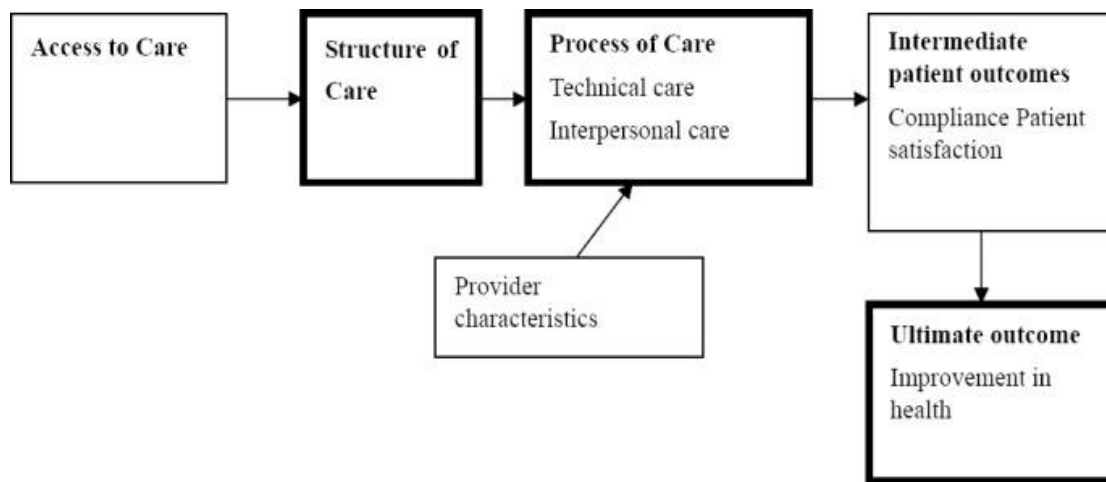


Figure 2 Donabedian's structure-process-outcome paradigm (Donabedian,1988)

2.3. Global Experiences with Health Insurance Systems

This section explores diverse health insurance models across five countries—United States, China, Germany, Iran, and the Emirate of Abu Dhabi—highlighting their structural features, coverage dynamics, and implications for healthcare access and quality.

These cases illustrate how insurance design, financing mechanisms, and population targeting influence equity, service utilization, and financial protection.

The comparative analysis underscores the importance of contextual adaptation in health insurance reform.

2.3.1. United States: Fragmented Coverage and Persistent Inequities

The United States operates a complex, multi-payer health insurance system characterized by a mix of public and private schemes.

Public programs include Medicare (for the elderly and disabled) and Medicaid (for low-income individuals), while private insurance is predominantly employer-sponsored or purchased individually.

In 2018, 91.5% of Americans had health insurance at some point during the year, with 67.3% covered by private plans and 34.4% by public programs (Berchick, 2019).

Despite high aggregate coverage, systemic disparities persist.

Coverage gaps are disproportionately experienced by racial minorities, immigrants, and low-income populations.

For example, foreign-born heterosexual adults exhibit higher rates of inadequate coverage (Kaiser Family Foundation, 2020), and low-income minorities face significantly lower insurance rates (Lee et al., 2021).

These disparities are compounded by coverage instability—nearly 9.1 million adults aged 18–64 experienced interruptions in coverage in 2018, which were associated with reduced access to care and preventive services (Yabroff et al., 2021).

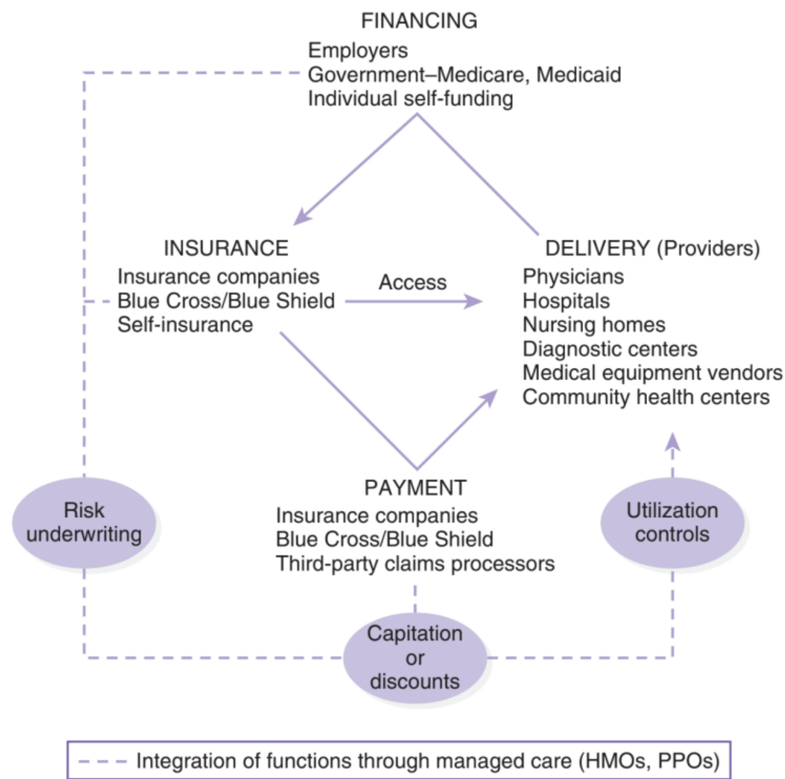


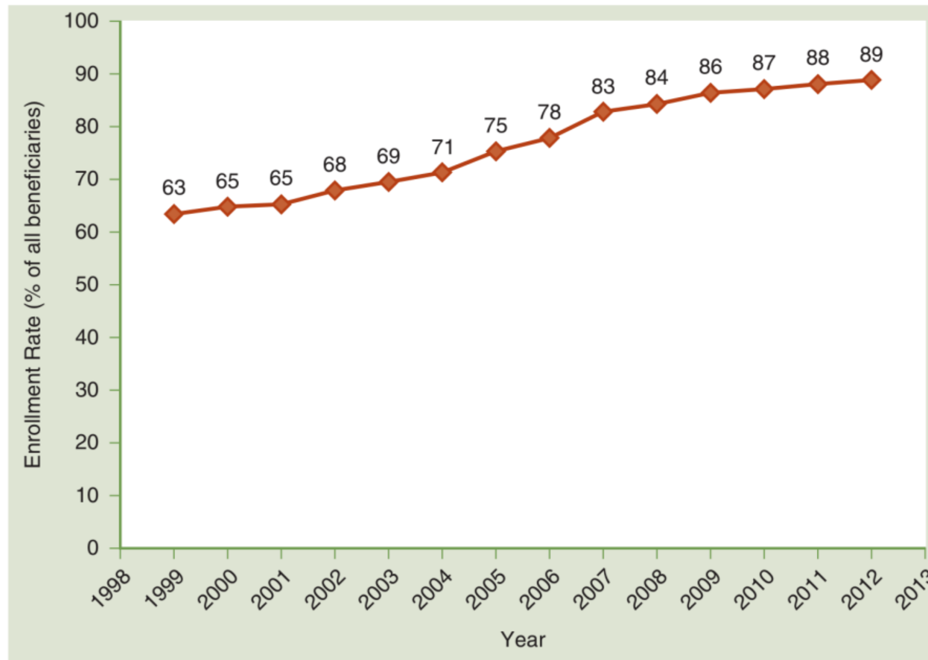
Figure 3 US health insurance system (shi &singh ,2022)

Medicaid expansion under the Affordable Care Act (ACA) improved access and timeliness of care, particularly among vulnerable groups.

However, linguistic barriers and immigration status continue to influence service utilization.

Adults with limited English proficiency benefited more from insurance expansion than their high-proficiency counterparts, yet persistent inequities remain (Shi & Singh, 2022).

Major Characteristics of U.S. Health Care Delivery



Medicaid Managed Care Enrollment, 1999–2012

Figure 4 Enrollment rate of beneficiaries by years (shi &singh ,2022)

These findings emphasize the need for policy interventions that address structural determinants of coverage and promote continuity.

2.3.2. China:

Universal Enrollment with Variable Coverage Depth

China's Basic Medical Insurance (BMI) system is the largest globally, covering over 95% of the population through two primary schemes:

Employee Basic Medical Insurance (EBMI) and Resident Basic Medical Insurance (RBMI) (Yi, 2021).

The system has undergone extensive reforms aimed at achieving universal coverage, with enrollment reaching 1.35 billion people by 2020.

Despite this achievement, coverage depth remains uneven, with most individuals enrolled in low-benefit plans.

The BMI system is financed through a mix of government subsidies, employer contributions, and individual premiums.

In 2019, the national medical insurance fund generated CNY ¥2.44 trillion in revenue and spent CNY ¥2.09 trillion, reflecting fiscal sustainability (Yi, 2021). However, out-

of-pocket (OOP) expenditures still constitute a significant share of healthcare spending, particularly among rural and low-income populations (Yu, 2015).

Insurance generosity varies across schemes:

- UEBMI: Covers ~80% of medical costs
- URBMI: Covers 50–80%
- NCMS (for rural residents): Covers <50%

This stratification results in inequitable access and financial vulnerability.

Migrant workers and rural residents, often enrolled in NCMS, report lower utilization of preventive and chronic care services.

Although only 3.15% of Chinese adults were uninsured in 2018, the majority held low-coverage plans, limiting their ability to afford comprehensive care (Lee et al., 2022).

These findings highlight the importance of benefit package reform and targeted subsidies to enhance equity.

2.3.3. Germany:

Dual Insurance Model with Equity Safeguards

Germany's health insurance system is unique in Europe, maintaining a dual structure comprising Statutory Health Insurance (SHI) and Private Health Insurance (PHI).

SHI covers approximately 89% of the population, while PHI is available to high-income earners, self-employed individuals, and civil servants (Achstetter et al., 2022).

The SHI system is financed through payroll contributions and operates under principles of solidarity and risk pooling.

PHI, in contrast, is market-driven and offers enhanced benefits, including faster access to specialists and more personalized care.

Despite these differences, outcome measures such as morbidity and mortality remain comparable across groups, suggesting that Germany's regulatory framework effectively mitigates inequities (Blümel, 2020).

Challenges persist, including cost containment, demographic aging, and provider payment reform.

Nonetheless, Germany's system demonstrates how pluralistic models can maintain equity and efficiency when supported by robust governance and standardized benefit packages.

2.3.4. Iran:

Gradual Expansion Toward Universal Coverage

Iran's health insurance landscape comprises multiple schemes, including the Iran Health Insurance Organization (IHIO), Social Security Organization (SSO), and Armed Forces Insurance.

These programs target different population segments—formal sector employees, rural residents, and special groups.

Between 1995 and 2016, Iran reduced OOP expenditures from 80.5% to 38.8%, reflecting substantial progress in financial protection.

However, coverage depth and benefit uniformity remain uneven, with rural populations and informal workers facing limited access to specialized services.

The system's fragmentation necessitates policy harmonization, particularly in benefit design and provider payment mechanisms.

Iran's experience illustrates the importance of phased implementation, stakeholder engagement, and fiscal sustainability in achieving universal health coverage (UHC).

2.3.5. Abu Dhabi:

Tiered Insurance for Nationals and Expatriates

Abu Dhabi's health insurance system is structured around four plans:

Thiqa, Basic, Enhanced, and Visitor, each tailored to specific population groups (HAAD, 2013).

- Thiqa Plan:

It is Offers comprehensive, free coverage to Emirati nationals, including outpatient, inpatient, maternity, dental, and preventive care.

Emergency services are covered abroad, with an annual limit of AED 500,000 (US$137,000).

- Basic Plan:

Usually Targets low-income expatriates earning AED 4,000–5,000/month, with government-subsidized premiums.

Coverage includes essential services but is geographically restricted to Abu Dhabi.

- Enhanced Plan:

Designed for higher-income expatriates, offering expanded benefits and lower deductibles.

- Visitor Plan:

Provides short-term coverage for visa holders, focusing on emergency and essential care.

This tiered model balances inclusivity with fiscal prudence, ensuring access for both nationals and non-nationals.

However, geographic restrictions, coinsurance requirements, and benefit variability raise concerns about equity and continuity of care.

Abu Dhabi's experience underscores the need for regulatory oversight and periodic evaluation to align insurance design with population health needs.

Table (1) prepared by the researcher

Structured Summary of Health Insurance Plans in Abu Dhabi (HAAD, 2013).

Plan Type	Target Group	Coverage Scope	Annual Limit	Premium/Cost	Key Features
Basic Plan	Low-income expatriates (≤ AED 4,000–5,000/month)	Within Abu Dhabi (emergency across UAE)	AED 250,000 (US$68,120)	AED 600 (US$163) annually	Hospitalization, primary care, diagnostics, limited dental, maternity (AED 500 deductible), 30% coinsurance on drugs capped at AED 1,500.
Enhanced Plan	Higher-income expatriates	Extended, possibly international	Varies (above Basic)	Market-determined	Includes all Basic benefits plus ≥2 enhancements; higher pharmaceutical coverage; no age limit; optional dental coverage.
Thiqa Plan	Emirati nationals	UAE-wide (emergency abroad)	AED 500,000 (US$137,000)	Free (government-funded)	Comprehensive coverage; 10% coinsurance outside Abu Dhabi; full maternity and dental; cancer screening benefits; optional 'Thiqa Top-Up.'
Visitor Plan	Short-term visitors	Abu Dhabi & UAE (limited)	AED 100,000 (US$27,400)	Based on stay duration	Covers emergency and essential care; no premium refund; renewable annually.

2.3.6. The Kingdom of Saudi Arabia (KSA):

Expatriate Dominance and Emerging Insurance Reform

Saudi Arabia presents a unique demographic and policy context for health insurance analysis.

Expatriates constitute over 80% of the private sector workforce, representing approximately 56% of the total labor force (Al-Hanawi et al., 2020).

This demographic composition challenges conventional health-financing models and underscores the need for context-specific policy frameworks.

Unlike traditional low- or high-income countries, Gulf Cooperation Council (GCC) states—including KSA—finance healthcare primarily through natural resource revenues, rather than taxation or social insurance contributions (Alkhamis et al., 2014).

This structural distinction limits the applicability of global health-financing evidence and necessitates localized research on insurance uptake and health-seeking behavior.

By 2016, approximately 38% of Saudi Arabia's population was insured, with 78% of those insured being expatriates and the remainder comprising Saudi citizens employed in the private sector (Al-Hanawi et al., 2020).

The system remains in a developmental phase, with ongoing efforts to expand coverage and integrate public-private partnerships.

However, disparities in benefit design, geographic access, and service quality persist, particularly among low-income migrant workers.

These challenges highlight the importance of regulatory oversight, benefit harmonization, and equity-focused reforms.

2.3.7. Libya:

Public Health Insurance Fund (PHIF) and Systemic Constraints

Libya's healthcare system has been significantly impacted by political instability, infrastructure deterioration, and workforce shortages.

The country lacks a comprehensive national health insurance system, with coverage primarily employment-based and concentrated in urban areas (Al-Tamimi & Al-Ghazali, 2020).

Out-of-pocket payments remain prevalent, contributing to financial hardship and access inequities.

The Public Health Insurance Fund (PHIF) represents a strategic initiative to expand coverage through a subscription-based model grounded in social solidarity. Established

under Presidential Council Resolution No. 854 of 2017 and governed by Law No. (3) of 2005 and Law No. (20) of 2010, PHIF aims to share the burden of illness and reduce direct payments at the point of care.

PHIF guarantees coverage of basic healthcare services for all subscribers, emphasizing quality, efficiency, and economic sustainability.

It seeks to foster public-private partnerships and improve spending effectiveness.

As of September 30, 2025, the number of registered beneficiaries reached 237,059 (PHIF Official Website).

While promising, PHIF's impact remains constrained by limited infrastructure, uneven provider distribution, and the absence of a unified national health strategy.

2.3.8. Comparative Insights:

Synthesizing Global Lessons

The comparative analysis of health insurance systems across diverse contexts yields several key insights:

1. Coverage Breadth and Depth:

Universal enrollment enhances access, but the scope and generosity of benefits determine utilization, satisfaction, and health outcomes.

2. Insurance Type and Equity:

Dual systems (e.g., Germany) and fragmented models (e.g., U.S., China) often produce disparities in process quality and specialist access.

3. Coverage Stability:

Continuous insurance is critical for preventive care, chronic disease management, and patient satisfaction.

4. Financial Sustainability:

Effective risk pooling, government subsidies, and strategic purchasing are essential for maintaining service quality and fiscal balance.

5. Socioeconomic and Demographic Factors:

Income, ethnicity, language proficiency, and migrant status significantly influence access, utilization, and outcomes.

6. Organization and Regulation:

Provider payment mechanisms, accreditation, and regulatory enforcement shape the quality and efficiency of care delivery.

These lessons inform the design of equitable, efficient, and context-sensitive health insurance reforms, particularly in transitional systems such as Libya and emerging models like KSA.

2.4. Health Insurance and Healthcare Quality Indicators

This section explores the multidimensional relationship between health insurance and healthcare quality, focusing on four key indicators:
access, affordability, process quality, and health outcomes.
Drawing on global evidence, it highlights how insurance coverage influences service delivery and patient experience across diverse settings.

2.4.1. Access to Healthcare

Access encompasses availability, affordability, and accommodation—the extent to which services are reachable, financially feasible, and culturally appropriate (Penchansky & Thomas, 1981).
Health insurance facilitates access by reducing financial barriers and enabling utilization of preventive, primary, and tertiary services.
In the United States, coverage disruptions are linked to delayed care and reduced preventive service uptake, underscoring the importance of coverage continuity (Yabroff et al., 2021).
In the MENA region, access varies widely:
oil-rich GCC states offer near-universal access, while rural populations in Egypt and Morocco face significant geographic and financial barriers.
China's urban residents report higher healthcare spending and better access than rural counterparts, despite the existence of NCMS and URBMI programs.
These disparities reflect the need for targeted subsidies, infrastructure investment, and benefit harmonization.

2.4.2. Affordability and Financial Protection

Financial protection is a core objective of health insurance, aiming to prevent catastrophic health expenditures and promote equity.
In Iran, insurance expansion reduced out-of-pocket spending from 80.5% to 38.8% of total health expenditures (Doshmangir et al., 2021).
Similarly, China's UMIS increased service utilization, though low-income households remain vulnerable to high costs for emergent care.

In the U.S., even insured individuals experience financial strain due to coverage gaps and high deductibles.

Medicaid expansion has demonstrated the potential of public insurance to reduce cost barriers and improve affordability.

These findings emphasize the importance of progressive financing, benefit standardization, and cost-sharing mechanisms that protect vulnerable populations.

2.4.3. Process Quality and Patient Satisfaction

Process quality refers to how care is delivered, including timeliness, adherence to clinical guidelines, and the nature of patient-provider interactions.

Insurance coverage influences process quality by enabling access to better-equipped facilities and incentivizing providers through payment mechanisms.

In Germany, privately insured patients report higher satisfaction with communication and specialist access compared to SHI enrollees.

In China, insurance coverage is positively associated with preventive and tertiary service utilization.

Ghanaian data show modest improvements in wait times among insured patients, though perceived care quality differences were minimal (Duku et al., 2018).

Coverage disruptions in the U.S. interrupt continuity of care, reducing process quality and patient satisfaction.

These findings highlight the role of provider incentives, continuity, and patient-centered care models in enhancing service delivery.

2.4.4. Health Outcomes

Health outcomes reflect the ultimate impact of health insurance on morbidity, mortality, and quality of life.

Evidence shows that insurance coverage improves outcomes when combined with adequate service availability and provider incentives (Kruk & Freedman, 2008).

In the MENA region, upper-income countries have largely eradicated communicable diseases, but NCDs such as cardiovascular diseases, diabetes, and cancer now account for more than 60% of disease burden (Katoue et al., 2022).

Coverage continuity, as emphasized by U.S. data, is critical for managing chronic conditions and improving long-term health outcomes.

	Life expectancy at birth (years) (2019)	Adult mortality rate[b] (both sexes) (2016)	Infant mortality rate[c] (both sexes) (2020)	Hospital beds (per 10,000 population) (2017)	Medical doctors (per 10,000 population)	Nursing and midwifery personnel (per 10,000 population)
Algeria	77.13	95.03	19.46 (18.47–20.52)	19 (2015)	17.19 (2018)	15.48 (2018)
Bahrain	75.81	56.81	5.78 (4.34–7.73)	17.40	9.26 (2015)	24.94 (2015)
Djibouti	65.81	244.50	47.18 (28.17–76.07)	14.00	2.24 (2014)	7.29 (2014)
Egypt, Arab Republic	71.82	164.60	16.65 (11.31–24.23)	14.30	7.46 (2019)	19.26 (2018)
Iran, Islamic Republic	77.35	80.13	11.14 (6.53–18.92)	15.60	15.84 (2018)	20.77 (2018)
Iraq	72.42	173.50	21.32 (16.4–27.48)	13.20	9.66 (2020)	23.87 (2020)
Jordan	77.87	110.50	12.92 (9.35–17.66)	14.70	26.61 (2019)	33.47 (2019)
Kuwait	80.97	79.22	7.58 (7.04–8.16)	20.40	23.42 (2020)	46.83 (2020)
Lebanon	76.44	95.62	5.97 (2.77–12.04)	27.30	22.07 (2019)	16.74 (2018)
Libya	75.78	150.30	9.53 (5.58–16.16)	32.00	20.91 (2017)	65.31 (2017)
Morocco	72.99	69.06	16.02 (11.36–21.85)	10.00	7.31 (2017)	13.89 (2017)
Oman	73.90	96.25	9.45 (8.38–10.68)	14.70	17.74 (2020)	39.38 (2020)
Qatar	77.17	61.76	4.93 (4.42–5.5)	12.50	24.85 (2018)	71.97 (2018)
Saudi Arabia	74.31	89.13	5.99 (4.61–7.94)	22.40	27.38 (2020)	58.17 (2019)
Sudan	69.15	223.90	39.92 (29.96–53.04)	7.40	2.62 (2017)	11.46 (2018)
Syrian Arab Republic	72.67	301.10	18.45 (9.58–24.45)	14.00	12.87 (2016)	15.41 (2016)
Tunisia	77.04	91.00	14.29 (12.64–16.09)	21.80	13.03 (2017)	25.14 (2017)
United Arab Emirates	76.08	73.95	5.62 (4.95–6.4)	13.80	26.01 (2019)	57.46 (2019)
Yemen, Republic	66.63	221.30	45.71 (23.97–81.09)	7.10	5.25 (2014)	7.85 (2018)

[a]Most recent data from the World Health Organization Global Health Observatory Indicators Index Data. Source of data: (25).
[b]Adult mortality rate is defined as the probability of dying between 15 and 60 years per 1,000 population.
[c]Infant mortality rate between birth and 11 months per 1,000 live births.

Figure 5 Selected health indicators for some countries in MENA region (katoue et al.,2022)

Some of the MENA countries such as the low-income countries and rural areas in middle-income countries (e.g., Egypt and Morocco) are challenged by dual burdens of disease characterized by increasing rates of NCDs accompanied by decreasing, but prevalent communicable diseases.

An earlier study reported that NCDs and injuries are the underlying cause for more than 75% of the disability-adjusted life years in lower middle-income countries except in Sudan and Yemen.

In these two countries, NCDs account for less than 50% of the disease burden while infectious and parasitic diseases comprise a significant share (Katoue et al., 2022).

On the other hand, middle- and upper-income countries in MENA are mainly impacted by the burden of NCDs while having largely eradicated communicable diseases.

Cardiovascular disorders, diabetes mellitus, behavioral and mental disorders and malignant neoplasms account for more than 60% of the NCDs disease burden in most of the countries in the region.

The rapid rise in NCDs is attributed to the rapid urbanization and changes in diet and lifestyle of the population of these countries.

2.5. The Libyan Context and Research Gap

2.5.1. Epidemiological and Regional Context

The MENA region exhibits a heterogeneous disease burden shaped by income level, urbanization, and health system maturity.

In low-income and rural areas of middle-income countries such as Egypt and Morocco, populations face a dual burden of disease—a persistent prevalence of communicable diseases alongside a rising tide of non-communicable diseases (NCDs).

According to Katoue et al. (2022), NCDs and injuries account for over 75% of disability-adjusted life years (DALYs) in most lower-middle-income MENA countries, with the exception of Sudan and Yemen, where infectious and parasitic diseases still dominate.

In contrast, middle- and upper-income MENA countries have largely eradicated communicable diseases and now contend primarily with NCDs.

Cardiovascular disorders, diabetes mellitus, mental and behavioral conditions, and malignant neoplasms constitute more than 60% of the disease burden in these settings.

The epidemiological transition is driven by rapid urbanization, sedentary lifestyles, and dietary shifts—factors increasingly relevant to Libya's evolving health profile.

2.5.2. Historical Context of Healthcare in Libya

Historically, Libya operated a state-funded healthcare system that provided free services to all citizens.

While this model ensured nominal access, it was often characterized by limited quality, inefficiencies, and geographic disparities, particularly in rural and underserved regions.

Following the 2011 political upheaval, the healthcare system experienced profound disruptions, including:

- Infrastructure deterioration due to conflict and underinvestment.
- Human resource shortages, with uneven distribution of skilled professionals.
- Fragmented service delivery, lacking coordination across levels of care.
- Weak regulatory oversight, undermining quality assurance and accountability.

These challenges have eroded public trust and contributed to increased reliance on private providers and out-of-pocket (OOP) expenditures (World Health Organization, 2018).

2.5.3. Current Health Insurance Landscape

Libya currently lacks a comprehensive, unified health insurance system.

Existing coverage is primarily employment-based, benefiting formal sector workers in urban centers while excluding large segments of the population—particularly rural residents, informal workers, and the unemployed (Al-Tamimi & Al-Ghazali, 2020). The Public Health Insurance Fund (PHIF), while a promising initiative, remains limited in scale and reach.

Key features of the current insurance landscape include:

- Limited population coverage, with significant geographic and occupational disparities.
- High reliance on OOP payments, contributing to financial hardship and delayed care.
- Underutilization of preventive services, particularly for NCDs.
- Lack of integration between public and private sectors, leading to inefficiencies.

These systemic weaknesses hinder the realization of equitable, high-quality healthcare and underscore the need for evidence-based reform.

2.5.4. Challenges Affecting Healthcare Quality in Libya

The quality of healthcare in Libya is constrained by multiple interrelated factors:

- Infrastructure limitations:

Aging facilities, equipment shortages, and inadequate supply chains.

- Human resource gaps:

Shortages of trained personnel, especially in rural areas.

- Organizational fragmentation:

Lack of coordination across providers and levels of care.

- Financial barriers:

Persistent OOP payments and absence of risk pooling mechanisms.

- Epidemiological transition:

Rising burden of NCDs without corresponding investment in chronic care and prevention.

These challenges collectively undermine access, continuity, and patient satisfaction—core dimensions of healthcare quality.

2.5.5. Research Gap and Study Rationale

Despite the growing interest in health system reform, empirical research on the impact of health insurance in Libya remains scarce.

Specifically, there is a lack of data on:

- Comparative outcomes between insured and uninsured populations in terms of access, satisfaction, and health status.
- The role of insurance continuity and stability in mitigating disparities and improving care quality.
- Contextual adaptation of global best practices, including how international models can inform Libyan health policy.

This study seeks to address these gaps by evaluating the relationship between health insurance coverage and healthcare quality in Zawia municipality, a representative urban setting.

The findings aim to inform policymakers, contribute to the academic literature, and support the development of a more equitable and effective health insurance framework in Libya.

2.6. Conclusion of Literature Review

This chapter has synthesized theoretical frameworks, global experiences, and regional dynamics to establish a comprehensive foundation for the current study.

Key insights include:

1- Health insurance enhances access, financial protection, and patient satisfaction, but its effectiveness depends on coverage depth, continuity, and system integration.

2- International experiences—from China, Germany, Iran, the U.S., Ghana, and GCC countries—demonstrate the critical role of insurance design, socio-economic context, and regulatory mechanisms in shaping healthcare quality.

3- Libya faces structural, financial, and organizational challenges, with limited empirical evidence on the role of insurance in improving care delivery and outcomes.

These findings underscore the relevance and urgency of the present research, which aims to contribute to both academic discourse and health policy development in Libya.

The next chapter outlines the methodological approach employed to investigate these issues in Zawia municipality.

CHAPTER 3:
METHODOLOGY

3.1. Introduction

This chapter outlines the methodological framework employed to investigate the impact of health insurance on the quality of healthcare services among residents of Zawia municipality, Libya.

It details the research design, study setting and population, sampling strategy, data collection instruments, variable definitions, analytical procedures, and ethical safeguards.

The methodology was designed to ensure internal validity, contextual relevance, and alignment with international research standards.

3.2. Study Design

A case-control study design was adopted to compare healthcare experiences between two distinct groups:

- Individuals with health insurance (case group).
- Individuals without insurance (control group).

This design is well-suited for evaluating the association between an exposure—health insurance status—and outcomes such as access to care, service quality, and patient satisfaction at a single point in time (Schlesselman, 1982).

The case-control approach enables the identification of statistically significant differences between groups while controlling for confounding variables.

It is particularly appropriate in settings where randomized trials are impractical and where retrospective comparisons can yield actionable insights for policy and practice.

3.3. Study Setting and Population

The study was conducted in Zawia municipality, a major urban center in western Libya characterized by socioeconomic diversity and variable access to healthcare services.

The Municipality of Zawia was selected due to its representative population, availability of both public and private healthcare providers, and relevance to national health insurance reform efforts.

Inclusion Criteria

- Adults aged 18 years and above
- Residents of Zawia municipality
- Individuals who accessed healthcare services during the study period

Exclusion Criteria

- Individuals younger than 18 years
- Patients unable to provide informed consent due to cognitive or medical impairments

The target population included both insured and uninsured individuals who had utilized healthcare services in Zawia, ensuring a balanced representation of experiences and perspectives.

3.4. Sampling Technique and Sample Size

A convenience sampling technique was employed to recruit participants from healthcare facilities, community centers, and public spaces.

While non-probabilistic, this approach was deemed appropriate given logistical constraints and the need for rapid data collection.

The final sample comprised 200 participants, equally divided between the two groups:

103 - Insured individuals (case group)

103 - Uninsured individuals (control group)

Sample size calculations were performed using OpenEpi software (Version 3.01), based on the following parameters:

- Confidence level: 95%
- Statistical power: 80%
- Case-to-control ratio: 1:1

This sample size was sufficient to detect meaningful differences between groups across key outcome variables.

3.5. Data Collection Methods

Data were collected through a structured, face-to-face questionnaire, administered by trained interviewers (appendix a).

The instrument included both open-ended and close-ended items, organized into five thematic sections:

- Demographic characteristics:

Age, gender, education level, income bracket.

- Health insurance status:

Type of coverage, duration, and continuity.

- Access to healthcare services:

Ease of obtaining care, waiting times, affordability.

- Quality of care received:

Measured across structural, process, and outcome dimensions.

- Patient satisfaction:

Assessed using a 5-point Likert scale ranging from “very dissatisfied” to “very satisfied".”

The questionnaire was adapted from validated instruments used in previous studies to ensure content validity.

A pilot test was conducted with a small subsample to assess clarity, reliability, and cultural appropriateness.

Revisions were made based on pilot feedback to enhance comprehension and response accuracy.

3.6. Variables and Measurements

Independent Variable.

Health insurance status:

Categorized as “insured” or “uninsured"

Dependent Variables.

1. Access to healthcare services:

Operationalized through indicators such as waiting time, affordability, and ease of entry.

2. Patient satisfaction:

Measured using Likert-scale responses across multiple service dimensions.

3. Health outcomes:

Self-reported changes in health status, recovery rates, and perceived effectiveness of care.

These variables were selected based on the Donabedian model and international literature linking insurance coverage to healthcare quality.

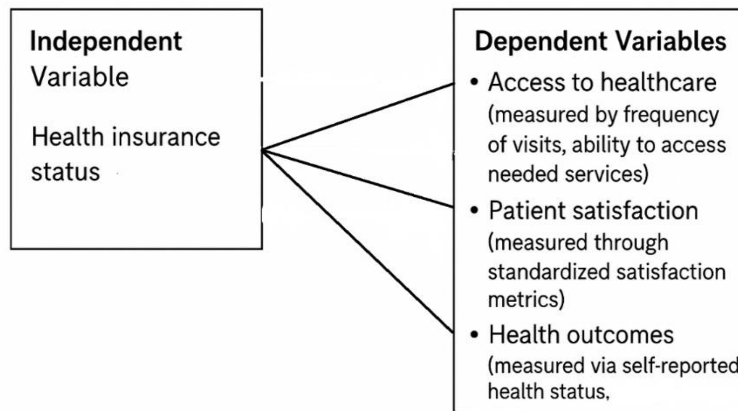


Figure 6 research model

3.7. Data Analysis

Data were entered and analyzed using Statistical Package for the Social Sciences (SPSS) software (version 27).

The analysis included both descriptive and inferential statistics:

- Descriptive statistics:

Means, medians, standard deviations, and frequency distributions were used to summarize demographic and baseline characteristics.

- Inferential statistics:

Comparative analyses (e.g., chi-square tests, t-tests, logistic regression) were conducted to assess associations between insurance status and key outcomes.

The choice of statistical tests was guided by data type, distribution, and research hypotheses.

Statistical significance was set at $p < 0.05$, and confidence intervals were reported where appropriate to enhance interpretability.

3.8. Ethical Considerations

Ethical approval was obtained from the Libyan National Committee for Biosafety and Bioethics, affiliated with the Libyan Center for Medical Research (appendix b).

The study adhered to international ethical standards for human subjects' research.

Prior to participation, respondents were:

- Informed about the study’s purpose, procedures, and potential risks.
- Provided with a written consent form outlining their rights.

- Assured of confidentiality and anonymity.

No personal identifiers were recorded, and all data were securely stored and used exclusively for research purposes.

Participation was voluntary, and respondents could withdraw at any time without penalty.

3.9. Conclusion

This chapter has detailed the methodological approach used to examine the impact of health insurance on healthcare quality in Zawia municipality.

It described the study design, sampling strategy, data collection tools, variable definitions, analytical techniques, and ethical safeguards.

These methods provide a robust foundation for the empirical analysis presented in the subsequent chapter.

CHAPTER 4:
RESULTS

4.1. Statistical Methods

Data were collected through a structured questionnaire administered to residents of Zawia municipality, Libya, to assess the impact of health insurance on healthcare accessibility, service quality, patient satisfaction, and health outcomes.

The data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS, Version 27).

Descriptive statistics (frequencies and percentages) were used to summarize socio-demographic characteristics and responses to perception-based questions.

To test the study hypotheses, chi-square tests of independence (χ^2) were employed to examine associations between health insurance coverage and key variables, including accessibility of healthcare services, patient satisfaction, and perceived health outcomes. Statistical significance was set at $p < 0.05$, with results presented in corresponding tables.

4.2. Questionnaire Validity:

Validity of the study questionnaire refers to the extent to which the questionnaire measures what it is intended to measure.

We ensured the validity of the questionnaire through the following types of validity:

1) Face Validity of the Questionnaire (Validity of Experts)

The researcher tested the validity of the study questionnaire by using the expert validity method.

The questionnaire was presented to a group of experts who have experience in the field of the study.

The researcher considered the majority of the experts' comments to finalize the questionnaire's formulation.

2) Discriminant Validity

Discriminant validity, also known as concurrent validity, is calculated using an independent samples t-test to determine the difference between two extreme groups.

The calculated t-value for the significance of the difference between the two extreme groups in the total score represents the discriminant validity of the scale. To achieve this, the total scores of the questionnaire items are arranged in descending order from the highest score to the lowest score.

The two extreme groups are identified in the total score with a percentage of 27% in each group.

By conducting an independent samples t-test, a calculated significance value of < 0.001 was obtained for overall of the questionnaire, which is less than 0.05.

This indicates that the Questionnaire has discriminant validity, meaning it has a high discriminatory ability.

Table (2) Illustrates the results of the t-test for testing the difference between the two groups

Dimension	Group	Mean	Std	Means difference	T value	P-value
Overall	Upper group	29.84	2.342	11.18	28.860	< 0.001
	Lower group	18.56	1.709			

4.3. Reliability of the questionnaire

To assess the reliability of the performance, the researcher calculated the reliability coefficients of the scale using the following method:

Cronbach's Alpha Coefficient:

To test the reliability of the study tool, Cronbach's alpha test was used to measure the internal consistency of the questionnaire.

The results shown in Table (3) indicate a reliability level of 77.7% in the responses of the study sample, which is an acceptable percentage since alpha values above 70% are considered reliable.

Therefore, it can be concluded that this scale is reliable, meaning that the respondents understand its items in the same way as intended by the researcher.

Consequently, it can be relied upon in this field study, as the likelihood of obtaining consistent results upon reapplication is estimated at 77.7%.

Table (3) Results of the test for the reliability of the study questionnaire (Cronbach's Alpha)

Dimension	Number of statements	Cronbach's Alpha
Overall	11	0.777

4.4. Demographics

Table (4) Sample distribution based on age

Age	Count	%
Less than 30 years	34	16.5
30-50 years	65	31.6
More than 50 years	107	51.9
Total	206	100.0

Table 4 shows the age distribution of respondents in the study examining the impact of health insurance on the quality of healthcare services among the Libyan community in Zawia Municipality.

Out of the total sample (N = 206), the largest proportion of participants were over 50 years of age (n = 107, 51.9%).

Participants between 30 and 50 years represented nearly one-third of the sample (n = 65, 31.6%), while the youngest group, those under 30 years, accounted for only 16.5% (n = 34).

These findings indicate that the sample was predominantly composed of older adults, which may influence perceptions of healthcare quality and the role of health insurance, given that older individuals typically have higher healthcare needs.

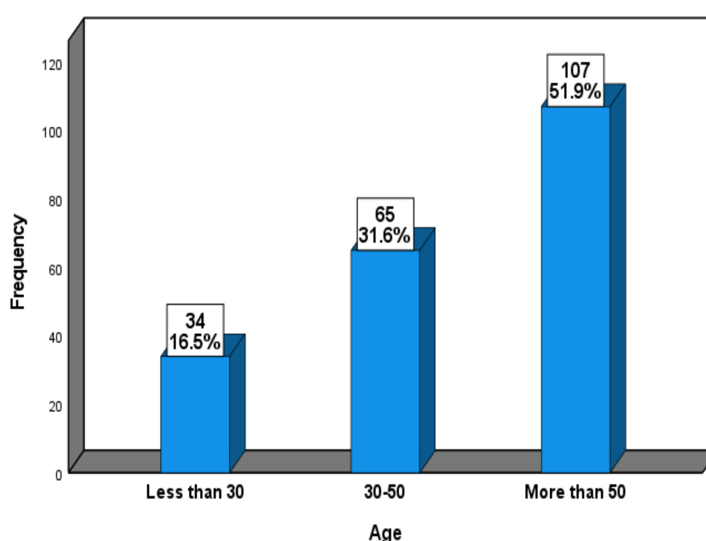


Figure 7 sample distribution based on age

Table (5) Sample distribution based on gender

Gender	Count	%
Male	92	44.7
Female	114	55.3
Total	206	100.0

As presented in Table 5, the sample consisted of 206 participants, with females forming the majority (n = 114, 55.3%) compared to males (n = 92, 44.7%).

This slight overrepresentation of females suggests that women's perspectives on health insurance and healthcare quality may be more prominently reflected in the findings.

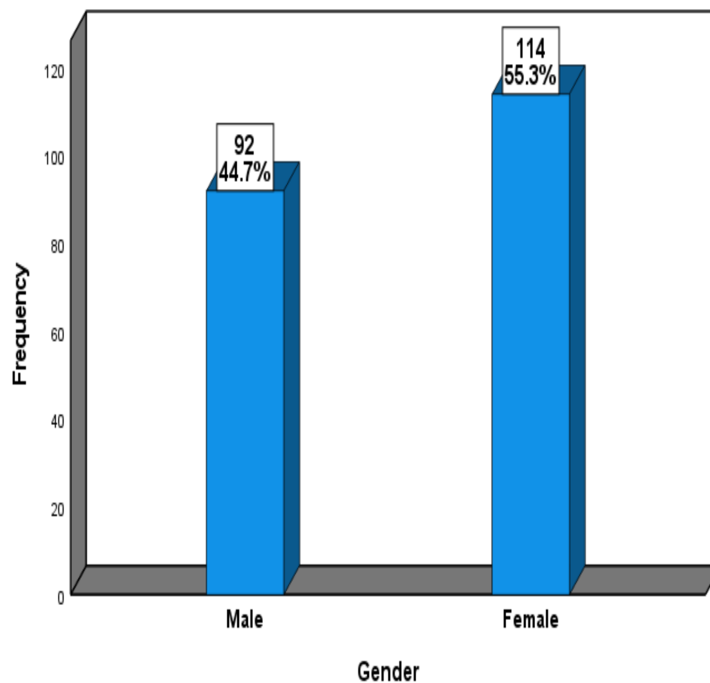


Figure 8 sample distribution based on gender

Table (6): Sample distribution based on education level

Education Level	Count	%
No formal education	30	14.6
Primary education	31	15.0
Secondary education	36	17.5
University degree or higher	109	52.9
Total	206	100.0

Table 6 illustrates the educational background of the respondents.

More than half of the participants (n = 109, 52.9%) reported having a university degree or higher.

Those with secondary education represented 17.5% (n = 36), while participants with only primary education constituted 15.0% (n = 31). A smaller portion of the sample (n = 30, 14.6%) reported having no formal education.

This indicates that the study sample was generally well-educated, with a majority possessing higher education qualifications, which may shape their awareness and expectations regarding healthcare quality and insurance coverage.

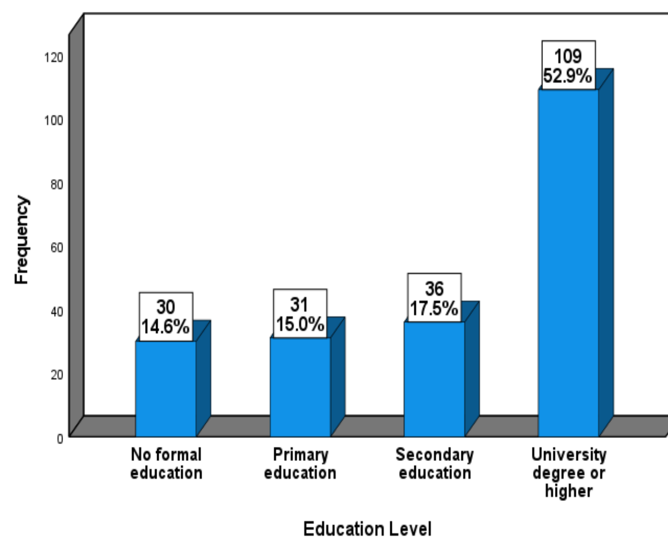


Figure 9 sample distribution based on education level

Table (7): Sample distribution based on employment status

Employment Status	Count	%
Employed	88	42.7
Unemployed	39	18.9
Retired	67	32.5
Student	12	5.8
Total	206	100.0

As shown in Table 7, the employment status of participants varied, with the largest group being employed individuals (n = 88, 42.7%).

Retired participants represented nearly one-third of the sample (n = 67, 32.5%), while unemployed respondents accounted for 18.9% (n = 39).

A smaller proportion of the participants were students (n = 12, 5.8%).

These findings indicate that the sample included a diverse range of employment categories, with a notable representation of both working-age and retired individuals, which may provide different perspectives on the role of health insurance in accessing and evaluating healthcare services.

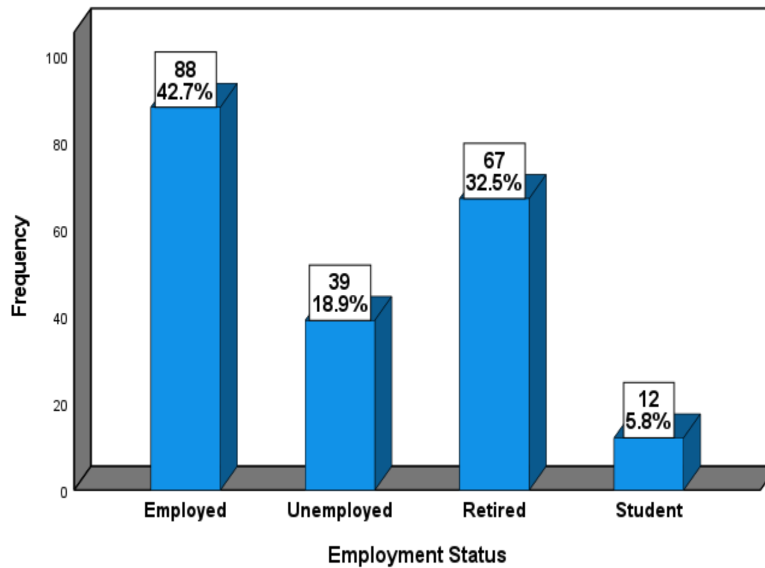


Figure 10 sample distribution based on employment status

Table (8) Sample distribution based on residence location

Residence Location	Count	%
Urban area	111	53.9
Rural area	95	46.1
Total	206	100.0

Table 8 presents the distribution of participants according to their residence.
Slightly more than half of the respondents reported living in urban areas (n = 111, 53.9%), while the remaining 46.1% (n = 95) resided in rural areas.
This relatively balanced distribution ensures that the perspectives of both urban and rural residents are represented in the study, which is particularly relevant since access to and quality of healthcare services may vary by location.

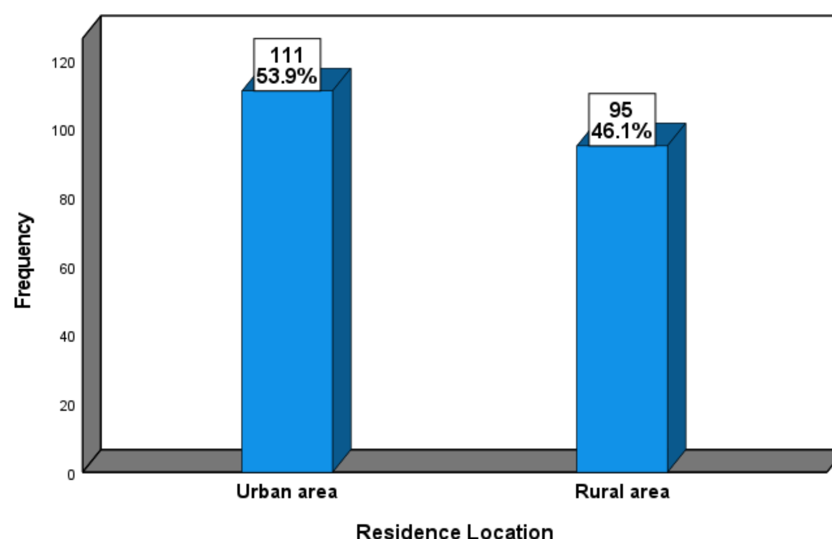


Figure 11 sample distribution based on residence location

4.5. Health Insurance Status

Table (9) Health Insurance Coverage and Barriers in the Libyan Community of Zawia Municipality

Question	Count	%	Chi square	P value
Do you have health insurance?				
Yes	120	58.3	5.612	0.018
No	86	41.7		
Total	206	100.0		
If yes, what type of insurance do you have?				
Public/Government-provided	116	96.7	104.533	< 0.001
Private	4	3.3		
If no, why don't have health insurance?				
Cannot afford it	4	4.7	89.977	< 0.001
Not available in my area	59	68.6		
Not aware of its benefits	12	14.0		
Other	11	12.7		

Table 9 summarizes participants' health insurance coverage and barriers.

Out of the total sample (N = 206), a majority reported having health insurance (n = 120, 58.3%), while 41.7% (n = 86) indicated that they did not.

A chi-square test revealed a statistically significant difference in coverage distribution, $\chi^2 = 5.61$, $p = .018$.

Among those who reported having insurance, nearly all participants were covered by public/government-provided health insurance (n = 116, 96.7%), whereas only 3.3% (n = 4) held private insurance.

This distribution was highly significant, $\chi^2 = 104.53$, $p < .001$.

For participants without health insurance, the most common reason was the unavailability of insurance in their area (n = 59, 68.6%).

Other reasons included lack of awareness of its benefits (n = 12, 14.0%), inability to afford it (n = 4, 4.7%), and other unspecified causes (n = 11, 12.7%).

The differences across these reasons were statistically significant, $\chi^2 = 89.98$, $p < .001$.

Overall, these findings highlight that although the majority of participants had health insurance—primarily public—the lack of availability in certain areas was the primary barrier among the uninsured.

4.6. Access to Healthcare

Table (10) Patterns of Healthcare Utilization in the Libyan Community of Zawia Municipality

Question	Count	%	Chi square	P value
How often do you visit healthcare facilities?				
Rarely (less than once a year)	36	17.5	30.767	< 0.001
Occasionally (1-2 times a year)	69	33.5		
Frequently (3 or more times a year	101	49.0		
How long does it usually take to access a healthcare facility				
Less than 30 minutes	136	66.0	115.816	< 0.001
30 minutes to 1 hour	59	28.6		
More than 1 hour	11	5.4		
How do you pay for your healthcare services?				
Out of pocket	160	77.7	195.068	< 0.001
Insurance coverage	44	21.3		
Other	2	1.0		

Table 10 presents patterns of healthcare utilization among participants.

Regarding frequency of visits, nearly half of the respondents reported visiting healthcare facilities frequently (three or more times per year; n = 101, 49.0%), while 33.5% (n = 69) visited occasionally (1–2 times per year), and only 17.5% (n = 36) visited rarely (less than once a year).

The distribution was statistically significant, $\chi^2 = 30.77$, $p < .001$.

Concerning accessibility, the majority of participants (n = 136, 66.0%) reported reaching a healthcare facility in less than 30 minutes.

About 28.6% (n = 59) required 30 minutes to one hour, while a small fraction (n = 11, 5.4%) reported travel times exceeding one hour.

This difference was highly significant, $\chi^2 = 115.82$, $p < .001$.

In terms of payment methods, most respondents relied on out-of-pocket payments (n = 160, 77.7%), whereas 21.3% (n = 44) reported using insurance coverage, and only 1.0% (n = 2) mentioned other methods.

This distribution was also statistically significant, $\chi^2 = 195.07$, $p < .001$.

Overall, the findings indicate that while healthcare facilities are relatively accessible to most residents in Zawia Municipality, reliance on out-of-pocket payments remains high, and regular healthcare utilization is common.

4.7. Quality of Healthcare Services

Table (11) Perceptions of Healthcare Quality and Professional Attitude in the Libyan Community of Zawia Municipality

Question	Count	%	Chi square	P value
How would you rate the quality of healthcare services you receive?				
Excellent	9	4.4	93.146	< 0.001
Good	68	33.0		
Average	99	48.1		
Poor	30	14.5		
Are the healthcare facilities well-equipped to meet your needs?				
Yes, always	49	23.8	87.553	< 0.001
Sometimes	107	51.9		
Rarely	28	13.6		
No	22	10.7		
How satisfied are you with the attitude of healthcare professionals				
Very satisfied	43	20.9	42.495	< 0.001
Satisfied	64	31.0		
Neutral	54	26.2		
Dissatisfied	36	17.5		
Very dissatisfied	9	4.4		
Do you feel that having health insurance has improved the quality of care you receive?				
Yes	86	41.8	12.272	0.002
No	74	35.9		
Not applicable	46	22.3		

Table 11 highlights participants' perceptions of healthcare quality and professional attitudes.

When asked to rate the quality of healthcare services, nearly half of the respondents (n = 99, 48.1%) reported that services were "average," while 33.0% (n = 68) rated them as "good." A smaller proportion described services as "poor" (n = 30, 14.5%) or "excellent" (n = 9, 4.4%).

This distribution was statistically significant, $\chi^2 = 93.15$, $p < .001$.

Regarding healthcare facilities' preparedness, over half of the participants (n = 107, 51.9%) indicated that facilities were "sometimes" well-equipped to meet their needs.

Meanwhile, 23.8% (n = 49) reported that facilities were “always” well-equipped, whereas others noted rare adequacy (n = 28, 13.6%) or complete inadequacy (n = 22, 10.7%).

This difference was highly significant, $\chi^2 = 87.55$, $p < .001$.

When evaluating professional attitudes, about one-third of respondents (n = 64, 31.0%) reported being “satisfied,” and 20.9% (n = 43) were “very satisfied.”

However, 26.2% (n = 54) remained neutral, while 17.5% (n = 36) were dissatisfied, and 4.4% (n = 9) were very dissatisfied.

These results were statistically significant, $\chi^2 = 42.50$, $p < .001$.

Finally, regarding the role of health insurance in improving care quality, 41.8% (n = 86) believed it enhanced their healthcare, whereas 35.9% (n = 74) disagreed, and 22.3% (n = 46) reported that the question was not applicable to them.

This distribution was also significant, $\chi^2 = 12.27$, $p = .002$.

Overall, these findings suggest that while many participants perceive healthcare services in Zawia Municipality as “average,” concerns remain about the adequacy of facility equipment and professional attitudes.

Moreover, although health insurance is associated with perceived improvements in care for some, a substantial proportion of participants did not report a positive impact.

4.8. Patient Outcomes and satisfaction

Table (12) Impact of Health Insurance on Access to Specialized Care and Patient Satisfaction in the Libyan Community of Zawia Municipality

Question	Count	%	Chi square	P value
Since obtaining health insurance, has your ability to access specialized healthcare services (e.g., surgeries, specialists) improved?				
Yes	37	18.0	29.835	< 0.001
No	101	49.0		
Not applicable	68	33.0		
How often do you experience delays in receiving treatment?				
Rarely	23	11.2	59.019	< 0.001
Occasionally	113	54.8		
Frequently	70	34.0		
Overall, how satisfied are you with your healthcare experience?				
Very satisfied	39	18.9	65.990	< 0.001
Satisfied	42	20.4		
Neutral	81	39.3		
Dissatisfied	36	17.5		
Very dissatisfied	8	3.9		

Table 12 summarizes the impact of health insurance on access to specialized care and overall patient satisfaction.

When asked whether health insurance improved access to specialized healthcare services, only 18.0% (n = 37) reported improvements, while nearly half (n = 101, 49.0%) indicated no improvement, and 33.0% (n = 68) stated the question was not applicable.

This distribution was statistically significant, $\chi^2 = 29.84$, $p < .001$.

Regarding delays in receiving treatment, the majority of respondents (n = 113, 54.8%) reported experiencing occasional delays, while 34.0% (n = 70) reported frequent delays, and only 11.2% (n = 23) experienced delays rarely.

The results were significant, $\chi^2 = 59.02$, $p < .001$.

As for overall satisfaction with healthcare experiences, the largest group of participants reported a neutral stance (n = 81, 39.3%).
A smaller proportion were satisfied (n = 42, 20.4%) or very satisfied (n = 39, 18.9%), while others expressed dissatisfaction (n = 36, 17.5%) or strong dissatisfaction (n = 8, 3.9%).
This distribution was statistically significant, $\chi^2 = 65.99$, $p < .001$.
Taken together, these findings indicate that while some patients perceive benefits of health insurance in accessing specialized care, many do not report improvements. Moreover, delays in treatment remain a common issue, and overall satisfaction with healthcare experiences tends to be moderate, with many participants reporting neutral or mixed perceptions.

Table (13) Comparison of Healthcare Access and Satisfaction Between Insured and Uninsured Individuals in the Libyan Community of Zawia Municipality

Question	Categories	health insurance		Chi square	P value
		Yes N (%)	No N (%)		
How often do you visit healthcare facilities?	Rarely	10(4.9)	26(12.6)	21.091	< 0.001
	Occasionally	38(18.4)	31(15.0)		
	Frequently	72(35.0)	29(14.1)		
How long does it usually take to access a healthcare facility	Less than 30 minutes	78(37.9)	58(28.2)	0.293	0.864
	30 minutes to 1 hour	36(17.5)	23(11.2)		
	More than 1 hour	6(2.9)	5(2.4)		
How do you pay for your healthcare services?	Out of pocket	77(37.4)	83(40.3)	37.732	< 0.001
	Insurance coverage	43(20.9)	1(0.5)		
	Other	0(0.0)	2(1.0)		
How would you rate the quality of healthcare services you receive?	Excellent	7(3.4)	2(1.0)	4.018	0.260
	Good	36(17.5)	32(15.5)		
	Average	56(27.2)	43(20.9)		
	Poor	21(10.2)	9(4.4)		
Are the healthcare facilities well-equipped to meet your needs?	Yes, always	45(21.8)	4(1.9)	52.546	< 0.001
	Sometimes	64(31.1)	43(20.9)		
	Rarely	9(4.4)	19(9.2)		
	No	2(1.0)	20(9.7)		
How satisfied are you with the attitude of healthcare professionals	Very satisfied	42(20.4)	1(0.5)	48.990	< 0.001
	Satisfied	41(19.9)	23(11.2)		
	Neutral	21(10.2)	33(16.0)		
	Dissatisfied	15(7.3)	21(10.2)		

Question	Categories	health insurance		Chi square	P value
		Yes N (%)	No N (%)		
	Very dissatisfied	1(0.5)	8(3.9)		
Do you feel that having health insurance has improved the quality of care you receive?	Yes	62(30.1)	24(11.7)	65.253	<0.001
	No	55(26.7)	19(9.2)		
	Not applicable	3(1.5)	43(20.9)		
Since obtaining health insurance, has your ability to access specialized healthcare services improved?	Yes	25(12.1)	12(5.8)	120.130	< 0.001
	No	91(44.2)	10(4.9)		
	Not applicable	4(1.9)	64(31.1)		
How often do you experience delays in receiving treatment?	Rarely	10(4.9)	13(6.3)	3.137	0.208
	Occasionally	65(31.6)	48(23.3)		
	Frequently	45(21.8)	25(12.1)		
Overall, hoe satisfied are you with your healthcare experience?	Very satisfied	28(13.6)	11(5.3)	49.142	< 0.001
	Satisfied	40(19.4)	2(1.0)		
	Neutral	41(19.9)	40(19.4)		
	Dissatisfied	10(4.9)	26(12.6)		
	Very dissatisfied	1(0.5)	7(3.4)		

Table 13 compares healthcare access and satisfaction between insured and uninsured participants.

Significant differences emerged across several domains.

In terms of healthcare utilization, insured respondents were more likely to visit healthcare facilities frequently (35.0%) compared to the uninsured (14.1%), while uninsured individuals were more likely to report rare visits (12.6%), $\chi^2 = 21.09$, $p < .001$.

However, no significant difference was observed regarding travel time to healthcare facilities, $\chi^2 = 0.29$, $p = .864$.

Payment methods differed markedly:

insured participants relied more on insurance coverage (20.9% vs. 0.5%), whereas uninsured individuals relied heavily on out-of-pocket payments (40.3% vs. 37.4%), $\chi^2 = 37.73$, $p < .001$.

Regarding perceived service quality, no significant differences were found between insured and uninsured groups, $\chi^2 = 4.02$, $p = .260$.

However, perceptions of facility preparedness varied significantly:

insured individuals were more likely to report that facilities were "always" well-equipped (21.8% vs. 1.9%), while uninsured participants more often reported inadequacy (9.7% vs. 1.0%), $\chi^2 = 52.55$, $p < .001$.
Satisfaction with professional attitudes also differed significantly, $\chi^2 = 48.99$, $p < .001$. Insured respondents were more likely to be "very satisfied" (20.4% vs. 0.5%), while dissatisfaction was more prevalent among uninsured participants.
Importantly, insured individuals were significantly more likely to perceive that health insurance improved care quality (30.1% vs. 11.7%), $\chi^2 = 65.25$, $p < .001$, and enhanced access to specialized services (12.1% vs. 5.8%), $\chi^2 = 120.13$, $p < .001$.
No significant difference was observed in reported delays in receiving treatment, $\chi^2 = 3.14$, $p = .208$.
However, overall satisfaction with healthcare experiences differed significantly, $\chi^2 = 49.14$, $p < .001$, with insured respondents reporting higher satisfaction (13.6% very satisfied vs. 5.3% among uninsured), while dissatisfaction was more prevalent among uninsured individuals (12.6% vs. 4.9%).
Taken together, these findings indicate that health insurance was associated with greater utilization of healthcare services, higher satisfaction, and improved perceptions of facility preparedness and professional attitudes, though not with shorter travel times or reduced delays in treatment.

4.9. Hypotheses Testing:

Hypothesis 1:

H_0: There is no impact of health insurance coverage on healthcare accessibility of healthcare services.

H_1: There is impact of health insurance coverage on healthcare accessibility of healthcare services.

We can test this hypothesis by using the results from Table (12) for Access to specialized healthcare services (Yes/No/Not applicable):
From Table (12), Chi-square for "access improvement since obtaining insurance" is 29.835 with $p < 0.001$.
and since $p < 0.05$, we reject the null hypothesis and conclude that there is a statistically significant impact of health insurance coverage on accessibility to healthcare services in the Libyan community of Zawia Municipality.

Hypothesis 2:

H_0: There is no impact of health insurance coverage on patient satisfaction with health services.

H_1: There is impact of health insurance coverage on patient satisfaction with health services.

We can test this hypothesis by using the results from Table (12) for how satisfied are you with your healthcare experience (Satisfied/Neutral/Dissatisfied):

From Table (12), Chi-square for "how satisfied are you with your healthcare experience" is 65.990 with $p < 0.001$. and since $p < 0.05$, we reject the null hypothesis and conclude that there is a statistically significant impact of health insurance coverage on patient satisfaction with health services in the Libyan community of Zawia Municipality.

Hypothesis 3:

H_0: There is no impact of health insurance coverage on people health outcome

H_1: There is impact of health insurance coverage on people health outcome

We can test this hypothesis by using the results from Table (12) for improvement in access to specialized care (Yes/No/Not applicable):

From Table (13), Chi-square for "Do you feel that having health insurance has improved the quality of care you receive" is 65.253 with $p < 0.001$.

and since $p < 0.05$, we reject the null hypothesis and conclude that there is a statistically significant impact of health insurance coverage on people health outcome in the Libyan community of Zawia Municipality.

4.10. Summary of Results

The study examined the impact of health insurance on healthcare access, utilization, quality, and patient satisfaction among the Libyan community in Zawia Municipality.

The sample (N = 206) was predominantly older adults, with 51.9% over 50 years, and slightly more females (55.3%) than males (44.7%).

Most participants held a university degree or higher (52.9%), and employment status was distributed across employed (42.7%), retired (32.5%), unemployed (18.9%), and students (5.8%).

Urban residents slightly outnumbered rural residents (53.9% vs. 46.1%).

These demographic characteristics suggest that the findings reflect the perspectives of a relatively well-educated population with diverse employment and residential

backgrounds, which may influence their perceptions and utilization of healthcare services.
A majority of participants (58.3%) reported having health insurance, predominantly public/government-provided (96.7%).
Among those without insurance, the main barrier was unavailability in their area (68.6%).
This indicates that while insurance coverage exists for many, geographic and accessibility limitations remain important challenges.
Healthcare utilization was frequent, with 49.0% visiting facilities three or more times per year.
Most participants (66.0%) could access facilities within 30 minutes.
However, a majority (77.7%) still paid out-of-pocket for services, highlighting reliance on personal funds despite insurance availability.
Perceptions of service quality were generally “average” (48.1%) or “good” (33.0%), with limited reports of “excellent” services (4.4%).
Facility preparedness was inconsistent, as only 23.8% felt facilities were always well-equipped.
Satisfaction with professional attitudes varied, with 31.0% satisfied, 20.9% very satisfied, and 22.0% dissatisfied.
About 41.8% of insured participants perceived an improvement in care quality due to insurance, reflecting its partial impact on patient experience.
Access to specialized care improved for only 18.0% of participants with insurance.
Delays in treatment were common, with 54.8% experiencing occasional delays and 34.0% frequent delays.
Overall satisfaction was moderate, with 39.3% neutral, 20.4% satisfied, and 18.9% very satisfied.
Insured participants demonstrated significantly higher healthcare utilization, greater satisfaction with professional attitudes, and better perceptions of facility preparedness.
They were also more likely to report improvements in care quality and access to specialized services.
However, insurance did not significantly reduce travel time or treatment delays.
The findings suggest that health insurance plays a critical role in enhancing perceived quality and access to healthcare services, especially regarding utilization and satisfaction with professional care.

Nonetheless, structural barriers, such as geographic unavailability of insurance, out-of-pocket payments, and treatment delays, continue to limit its full impact.
The moderate ratings for overall service quality highlight the need for improvements in infrastructure, equipment, and professional practices to maximize the benefits of health insurance.

4.11. The conclusion

1. Health insurance coverage in Zawia Municipality is moderate, with public insurance dominating and gaps in accessibility for some residents.
2. Insured individuals experience higher healthcare utilization and report greater satisfaction with services and professional attitudes.
3. Overall perceptions of healthcare quality remain average, with facility preparedness and access to specialized care as key limitations.
4. Treatment delays and reliance on out-of-pocket payments persist, even among the insured.
5. There is impact of health insurance coverage on healthcare accessibility of healthcare services.
6. There is a statistically significant impact of health insurance coverage on patient satisfaction with health services in the Libyan community of Zawia Municipality.
7. There is a statistically significant impact of health insurance coverage on people health outcome in the Libyan community of Zawia Municipality.

CHAPTER 5:
DISCUSSION

This section presents a review of the literature comparing the Libyan Public Health Insurance Fund (PHIF) with health insurance systems in other countries.

Variations in economic capacity, demographic composition, and policy orientation have led to notable differences in the structure and functioning of these systems. Despite sharing the common objective of promoting equitable access to quality healthcare, the design and implementation of these health insurance models differ considerably across contexts.

5.1. Structural and Governance Frameworks

Libya's Public Health Insurance Fund (PHIF), established under Presidential Council Resolution No. 854 of 2017, represents an emerging national framework intended to operationalize the principles of social solidarity and financial risk-sharing (PHIF, 2025).

The Fund is supervised by the Presidency of the Council of Ministers and aims to provide universal basic healthcare coverage in accordance with Law No. 20 of 2010 on Health Insurance.

Despite these ambitions, PHIF coverage remains limited in scale, with approximately 237,000 registered beneficiaries as of September 2025.

In practice, the Libyan system continues to depend heavily on public financing and out-of-pocket payments, reflecting a transitional stage toward universal health protection.

In contrast, Abu Dhabi's health insurance model demonstrates a mature, multi-tiered regulatory system administered by the Health Authority of Abu Dhabi (HAAD, 2013). Its four structured plans—Thiqa, Basic, Enhanced, and Visitor—illustrate a comprehensive approach integrating both public and private actors.

The Thiqa plan, fully funded by the government, guarantees extensive coverage for Emirati nationals, including preventive, inpatient, and outpatient services, whereas expatriate and visitor plans operate under private insurance frameworks with defined co-payment limits and coinsurance structures.

This multi-plan architecture promotes inclusivity across demographic and employment groups, balancing social equity with market efficiency.

The Saudi Arabian system, governed under the Cooperative Health Insurance Law, reflects a hybrid model emphasizing employer-based contributions and regulated private participation(Al-Hanawi et al., 2020) .

By 2016, roughly 38% of the total population was insured, with expatriates comprising the majority of beneficiaries.

The Council of Cooperative Health Insurance (CCHI) oversees compliance and service standards.

However, despite strong regulatory foundations, the Saudi system remains in a developmental phase, facing challenges of fragmented service delivery, unequal access between nationals and expatriates, and heavy fiscal reliance on oil-based revenues(Alkhamis et al., 2014).

Iran, by comparison, represents a more advanced stage of social health insurance evolution.

Its multi-tiered system, administered through the Iran Health Insurance Organization (IHIO), Social Security Organization (SSO), and Armed Forces Insurance, covers over 90% of the population (WHO, 2017).

Continuous reforms have reduced out-of-pocket (OOP) expenditures from 80.5% in 1995 to 38.8% in 2016 (Doshmangir et al., 2021), demonstrating effective financial protection and institutional sustainability.

Nonetheless, inequities persist between different insurance schemes, especially in rural and informal sectors, emphasizing the ongoing need for benefit harmonization and standardized service packages.

5.2. Financing Mechanisms and Sustainability

The financing structures across these systems illustrate divergent models of sustainability.

Libya's PHIF relies primarily on public budget allocations and periodic contributions, yet remains constrained by economic instability and limited enrollment.

Out-of-pocket spending still accounts for a high proportion of healthcare expenditure, creating affordability barriers and limiting the equity of access.

By contrast, Abu Dhabi's financing model blends public subsidies (for nationals and low-income expatriates) with private insurance contributions (for higher-income groups).

This diversification ensures fiscal stability and service continuity.

The Thiqa plan is fully state-funded, whereas Basic and Enhanced plans operate under regulated market competition, ensuring affordability through caps on coinsurance and deductibles(Hamdi et al., 2014).
In Saudi Arabia, financing is largely employer-based within the private sector, where expatriates must be insured as a condition of employment.
This mechanism reduces the direct fiscal burden on the government while maintaining a baseline of service access for non-citizens.
However, the exclusion of non-employed groups and the limited public coverage for Saudis in the informal economy create gaps in inclusivity and risk pooling (Al-Hanawi et al., 2020).
Iran's financing strategy is more comprehensive, integrating contributions from employees, employers, and government transfers.
Its pluralistic but state-supervised approach ensures steady fund inflows while safeguarding financial risk protection for vulnerable populations.
This structure has proven effective in reducing catastrophic expenditures and ensuring steady improvements in healthcare access (WHO, 2017).

5.3. Equity, Access, and Quality of Care

In terms of equity and accessibility, Libya faces considerable disparities, particularly between urban and rural areas.
The PHIF's coverage remains geographically uneven, and the majority of citizens continue to pay directly for medical services despite being nominally insured.
The Libyan system's performance in ensuring equitable access lags behind Abu Dhabi and Iran, where national policies have systematically targeted coverage expansion and benefit equity.
Abu Dhabi's model demonstrates exemplary inclusivity, with all residents—nationals, expatriates, and visitors—entitled to at least basic insurance coverage.
This structure not only guarantees near-universal access but also incorporates preventive care and screening, contributing to higher service quality and patient satisfaction levels.
In Saudi Arabia, accessibility improvements are evident primarily within the private sector, while gaps persist in rural regions and among low-income citizens. Furthermore, discrepancies in waiting times and specialist access remain concerns despite substantial investment in healthcare infrastructure.

Iran, meanwhile, has achieved notable progress in both access and service utilization. Expanding insurance coverage has led to higher rates of healthcare use, particularly in rural areas, where the IHIO subsidizes care for low-income populations.

Nonetheless, the coexistence of multiple insurance funds occasionally produces administrative inefficiencies and variations in benefit levels.

5.4. Policy Implications for Libya

The comparative analysis indicates that Libya's PHIF remains at an early developmental stage but possesses strong policy potential.

Drawing lessons from Abu Dhabi, Libya could adopt a tiered insurance model differentiating between citizens, expatriates, and low-income populations, thereby ensuring financial sustainability and inclusivity.

The Saudi experience underscores the importance of regulating private-sector involvement and mandating employer-based insurance to reduce government expenditure while maintaining broad coverage.

Meanwhile, Iran's reforms demonstrate the feasibility of phased expansion toward universal health coverage through standardized benefits and cost-sharing mechanisms.

To enhance equity and service quality, Libya should prioritize expanding PHIF enrollment, integrating private providers under regulated contracts, and strengthening health information systems for effective monitoring.

Implementing mixed financing strategies and establishing co-payment ceilings would also mitigate financial burdens on households while improving utilization and satisfaction.

In conclusion, while Abu Dhabi and Iran have achieved near-universal coverage through structured and diversified systems, Saudi Arabia and Libya remain in transitional phases characterized by partial coverage and uneven service quality. Libya's PHIF can evolve into an effective national insurance system by adopting hybrid financing mechanisms and regulatory models inspired by its regional counterparts, ultimately ensuring equitable, efficient, and sustainable healthcare for all citizens.

The findings from this study on the impact of health insurance on healthcare access and quality in Zawia Municipality, Libya, align with global evidence emphasizing the critical role of insurance coverage in shaping healthcare utilization and patient satisfaction.

In this study, health insurance coverage PHIF was found to be moderate, with most participants (58.3%) enrolled in public insurance programs.

This trend mirrors patterns observed in other middle-income settings, such as Iran and China, where government-sponsored insurance schemes dominate the healthcare financing landscape.

However, the Libyan case demonstrates persistent challenges, including geographical disparities in insurance availability, out-of-pocket (OOP) payments, and limited improvement in specialized care access—issues that resonate with similar findings from developing health systems.

In comparison**,** Iran's health insurance system, though largely state-run, has shown greater coverage expansion and cost-sharing efficiency.

Between 1995 and 2016, Iran's OOP expenditure fell from 80.5% to 38.8% of total health spending as national health insurance reforms expanded to cover over 95% of the population(Doshmangir et al., 2021) .

Despite these advances, Iranian insured populations still faced inequities in access and service quality—paralleling the Libyan findings where insurance did not fully eliminate treatment delays or OOP expenses.

Both contexts underscore that while financial protection mechanisms have broadened access, quality improvement and system efficiency remain key gaps.

In contrast, advanced economies like the United States demonstrate a more diversified insurance structure encompassing public (Medicare, Medicaid) and private schemes. U.S. studies reveal that insurance continuity is a major determinant of healthcare access and satisfaction.

For instance, adults experiencing coverage disruptions in 2018 reported significantly reduced access to preventive services and greater affordability challenges(Yabroff et al., 2021b) .

This aligns with the Libyan finding that insured individuals were more satisfied and had higher utilization, but the persistence of structural barriers—such as distance, waiting times, and uneven service quality—dampened overall benefits.

Moreover, disparities based on income and geography remain salient in both contexts, suggesting that insurance coverage alone does not ensure equity in care delivery.

Similarly, China's universal medical insurance system (UMIS), which by 2014 covered over 97% of the population, improved hospital access and reduced inpatient mortality but left low-income groups vulnerable to catastrophic expenditures(Yip et al., 2019).

The Libyan findings echo this dynamic—insurance coverage increased utilization and satisfaction but did not significantly mitigate out-of-pocket spending or treatment delays.

Both systems illustrate the tension between coverage expansion and effective service delivery—a central challenge for countries transitioning toward universal health coverage (UHC).

African evidence further contextualizes Libya's position.

In Ghana, insured patients reported higher satisfaction with waiting times and laboratory services but no significant difference in perceived care quality compared to uninsured patients (Fenny et al., 2014).

This mirrors the Libyan respondents' "average" overall assessment of healthcare quality (48.1%), suggesting that while insurance enhances affordability and access, it does not automatically translate into superior clinical experiences or outcomes. Furthermore, the Libyan result showing that only 18% perceived improved access to specialized care reflects systemic limitations in service availability, comparable to rural-urban disparities observed in Ghana and China.

International comparisons also highlight the role of socioeconomic and geographic determinants.

In the U.S., income and race remain strong predictors of uninsurance, with low-income minorities having 68% lower odds of being insured compared to high-income Whites(Lee et al., 2021) .

Although Libya's context differs, geographic inaccessibility and uneven resource distribution similarly hinder equitable coverage.

These parallels emphasize the intersection of structural and social barriers across varying health systems.

The Libyan study's evidence of significant correlations between insurance coverage, satisfaction, and perceived health outcomes confirms that health insurance exerts a positive, though partial, influence on healthcare experience.

Similar conclusions have been drawn from evaluations of the Affordable Care Act (ACA) in the U.S., where coverage expansions improved access but did not eliminate cost burdens or disparities.

The persistence of out-of-pocket payments among insured Libyans (77.7%) particularly highlights inefficiencies in policy implementation and financial protection—an issue that Iran successfully mitigated through government-subsidized risk pooling.

Overall, the Libyan findings underscore a transitional health system, where insurance plays a growing but incomplete role in improving healthcare delivery.
While parallels can be drawn with systems like Iran's and China's in terms of structural expansion and mixed-quality outcomes, Libya's progress remains constrained by resource allocation, administrative inefficiencies, and service disparities.
Comparative evidence suggests that to realize the full potential of health insurance, Libya must strengthen provider accountability, infrastructure investment, and regional equity mechanisms—transforming financial coverage into tangible service quality and health gains.
In summary, the literature demonstrates considerable variation in how health insurance systems are designed and implemented across different countries.
To synthesize these findings and facilitate comparison, a summary table is presented below, highlighting the key features and differences among selected health insurance models.

Table (14) prepared by the researcher

Comparison between Libya PHIF and other countries health insurance programs

Aspect	**Libya**	**Abu Dhabi** (UAE)	**Saudi Arabia** (KSA)	**Iran**	**United States** (USA)	**China**	**Ghana**
Governing Body	Public Health Insurance Fund (PHIF)	Health Authority of Abu Dhabi (HAAD)	Council of Cooperative Health Insurance (CCHI)	IHIO, SSO, Armed Forces Insurance	Medicare & Medicaid Services (CMS), private insurers	National Healthcare Security Administration (NHSA)	National Health Insurance Authority (NHIA)
System Type	Emerging social insurance (public)	Mixed public–private model	Employer-based compulsory insurance	Multi-tiered social insurance system	Mixed private–public (pluralistic)	Multi-tiered social health insurance	National Health Insurance Scheme (NHIS)
Coverage Scope	Basic healthcare for subscribers; ~237,000 beneficiaries	Universal within Abu Dhabi	Partial (~38% insured; mainly expatriates)	Near-universal (>90%)	Partial (~91% insured)	Near-universal (~97%)	Expanding (~55–60%)
Target Groups	Public employees, formal-sector workers	Nationals, expatriates, visitors	Private-sector workers, expatriate	Employees, rural and low-income groups	Citizens, residents, and workers	Urban employees, rural residents, elderly	All residents (formal/informal sectors)
Financing Mechanism	Public funding	Government and employer funding	Employer contributions; government support	Shared contributions (employer, employee, state)	Payroll taxes, premiums, government subsidies	Employer, employee, and government funding	Payroll deductions, VAT, government subsidies
Public Subsidy Level	High (state-financed)	Full for nationals; partial for expats	Partial for nationals	High for rural/low-income groups	Moderate (Medicaid & ACA subsidies)	High (government-supported)	High (poor exempted from premiums)

Aspect	**Libya**	**Abu Dhabi** (UAE)	**Saudi Arabia** (KSA)	**Iran**	**United States** (USA)	**China**	**Ghana**
Out-of-Pocket (OOP) Payments	High	Low (limited co-payments)	Moderate	Declined from 80.5% (1995) to 38.8% (2016)	High (~10% of GDP)	Moderate (~28%)	Moderate (~36%)
Private Sector Role	Limited	Strong (e.g., Daman)	Significant in-service delivery	Complementary	Dominant (private insurers ~60%)	Moderate	Moderate (PPP model)
Benefit Package	Basic services	Comprehensive (hospital, maternity, dental)	Essential benefits	Standardized (includes preventive care)	Variable by plan	Broad (inpatient, outpatient, maternity)	Basic + maternal/child health
Equity & Accessibility	Limited; urban–rural gap	High; universal access	Moderate; expatriate dominance	High; subsidized for poor	Moderate; income-based inequity	High; rural–urban gap narrowing	Improving; rural access growing
Quality & Satisfaction	Moderate	High; well-regulated	Improving	Generally good	Mixed; high quality but unequal	Increasing satisfaction	Moderate; service delays
Coverage Goal	In progress	Achieved	Partial; Vision 2030 target	Achieved	Partial	Achieved (UHC 2017)	In progress
Key Challenges	Low enrollment, OOP reliance	Cost control, population growth	Fragmentation, expat focus	Benefit disparities, admin inefficiency	High cost, inequity	Aging, rising costs	Financing sustainability, capacity limits
Policy Lessons for Libya	—	Tiered plan design; strong regulation	Employer-based mandates	Standardized benefits; solidarity financing	Managed competition, consumer choice	State-led universal model	Community-based inclusiveness

Sources: HAAD (2013); Al-Hanawi et al. (2020); IHIO (2018); CMS (2019); NHSA (2020); NHIA (2021); PHIF (2025).

5.5. Analytical Summary

Libya's Public Health Insurance Fund (PHIF) is a developing initiative emphasizing social solidarity but limited in scope.

Abu Dhabi has achieved universal access via a multi-tiered insurance system, while Saudi Arabia continues expanding under Vision 2030.

Iran demonstrates effective financial protection with reduced out-of-pocket payments.

The U.S. remains fragmented, with persistent inequities, while China's near-universal model and Ghana's inclusive approach offer policy lessons for Libya's path toward universal coverage.

Sources: HAAD (2013); Al-Hanawi et al. (2020); IHIO (2018); CMS (2019); NHSA (2020); NHIA (2021); PHIF (2025).

Chapter 6:
Conclusion

6.1. The conclusion

This study examined the impact of health insurance on the quality of health services in Zawia Municipality, Libya, using a case-control design.

The findings revealed that health insurance coverage in the municipality is moderate, with public insurance schemes being the predominant form of coverage.

However, notable gaps in accessibility persist, particularly among certain population groups.

Insured individuals demonstrated higher levels of healthcare utilization and greater satisfaction with service quality and professional conduct compared to their uninsured counterparts.

Despite these positive associations, overall perceptions of healthcare quality in Zawia remain average.

Challenges related to facility preparedness, limited access to specialized care, and persistent treatment delays continue to hinder optimal healthcare delivery. Furthermore, out-of-pocket payments remain a burden even among the insured, indicating inefficiencies in coverage scope and implementation.

Statistical analysis confirmed a significant relationship between health insurance coverage and three key dimensions of healthcare quality: accessibility, patient satisfaction, and health outcomes.

These results affirm that health insurance plays a meaningful role in enhancing healthcare service delivery, though its full potential has yet to be realized in the Libyan context.

To strengthen the system's effectiveness, the study recommends expanding insurance coverage to underserved and rural populations, upgrading health facility infrastructure, and enhancing healthcare provider training to improve patient satisfaction.

Additionally, addressing systemic delays in treatment and increasing public awareness of insurance benefits are crucial to achieving equitable and high-quality healthcare for all residents of Zawia Municipality.

Overall, this research contributes to the growing body of evidence on health insurance in developing contexts and underscores the importance of comprehensive policy reforms to achieve universal health coverage and improved health outcomes in Libya.

6.2. Strengths and Limitations

6.2.1. Strengths

This study provides a valuable contribution to the limited body of research on health insurance systems in Libya, particularly in relation to their impact on the quality of healthcare services in Zawia municipality.

By adopting a case-control study design, a quantitative method approach, the study offers a comprehensive understanding of the relationship between health insurance coverage and service quality from multiple perspectives.

The use of primary data collected directly from insured and uninsured individuals, enhances the credibility and contextual relevance of the findings.

Moreover, the inclusion of a comparative analysis with other countries' health insurance models broadens the scope of interpretation, enabling a better understanding of Libya's progress and challenges within a global context.

The findings of this research can serve as a foundation for policymakers and health administrators to design more effective insurance mechanisms aimed at improving service quality and equity in access.

6.2.2. Limitations

Despite its contributions, the study is subject to several limitations:

First, the research was conducted within a single municipality (Zawia), which may limit the generalizability of the findings to other regions of Libya with different healthcare infrastructures and socioeconomic conditions.

Second, the study relied on face-to-face interviews, which may introduce response bias due to participants' subjective perceptions or social desirability tendencies. Additionally, access to official and up-to-date health insurance statistics in Libya was limited, potentially constraining the depth of data analysis.

Finally, external factors such as political instability, economic fluctuations, and regional disparities could have influenced the healthcare environment during the study period, making it difficult to isolate the impact of health insurance policies alone.

6.3. Recommendations

To enhance the effectiveness and equity of the healthcare system, several policy actions are proposed.

1. Expansion of Health Insurance Coverage

It is recommended that health insurance schemes be strategically expanded to encompass rural and underserved populations. Such expansion is essential to ensure equitable access to essential healthcare services, thereby reducing disparities in health outcomes and advancing the principle of universal health coverage.

2. Investment in Healthcare Infrastructure and Equipment

Greater investment in healthcare infrastructure and the procurement of advanced medical equipment is imperative. Strengthening these foundational elements is vital to guarantee consistent delivery of high-quality care that adequately meets patient needs and aligns with international standards of healthcare provision.

3. Enhancement of Professional Competence and System Efficiency

Strengthening the professional competence and communication skills of healthcare providers is crucial for fostering patient satisfaction and trust. In parallel, measures should be introduced to minimize treatment delays through the optimization of appointment systems and the establishment of more efficient referral pathways. Together, these interventions would significantly improve the overall patient experience and healthcare system responsiveness.

4. Promotion of Public Awareness Campaigns

Sustained public awareness campaigns should be implemented to increase understanding of health insurance benefits. By fostering greater enrollment and participation, such initiatives would maximize the overall impact of insurance schemes on healthcare quality, accessibility, and long-term sustainability.

7. References

Al-Hanawi, M. K., Mwale, M. L., & Kamninga, T. M. (2020). The effects of health insurance on health-seeking behaviour: Evidence from the Kingdom of Saudi Arabia. Risk Management and Healthcare Policy, 595–607.

Alkhamis, A., Hassan, A., & Cosgrove, P. (2014). Financing healthcare in Gulf Cooperation Council countries: A focus on Saudi Arabia. The International Journal of Health Planning and Management, 29(1), e64–e82.

Al-Tamimi, S., & Al-Ghazali, B. (2020). Health insurance and access in Libya. Libyan Journal of Medical Sciences, 5(2), 45-52.

Berchick, E. R. (2019). Health insurance coverage in the United States: 2018. U.S. Census Bureau. Retrieved from https://www.census.gov/library/publications/2019/demo/p60-267.html

Blümel, M. (2020). Germany: Health system review. European Observatory on Health Systems and Policies. Retrieved from https://eurohealthobservatory.who.int/publications/i/germany-health-system-review-2020

Donabedian, A. (1988). The quality of care: How can it be assessed? JAMA, 260(12), 1743-1748.

Doshmangir, L., Bazyar, M., Rashidian, A., & Gordeev, V. S. (2021). Iran health insurance system in transition: Equity concerns and steps to achieve universal health coverage. International Journal for Equity in Health, 20(1), 37.

Duku, S. K. O., Nketiah-Amponsah, E., Janssens, W., & Pradhan, M. (2018). Perceptions of healthcare quality in Ghana: Does health insurance status matter? PloS One, 13(1), e0190911.

Fenny, A. P., Enemark, U., Asante, F. A., & Hansen, K. S. (2014). Patient satisfaction with primary health care–a comparison between the insured and non-insured under the National Health Insurance Policy in Ghana. Global Journal of Health Science, 6(4), 9.

GKV-Spitzenverband. (2025). Statutory health insurance. Retrieved from https://www.gkv-spitzenverband.de/english/statutory_health_insurance/statutory_health_insurance.jsp

Hamdi, S., Shaban, S., Mahate, A. A., & Younis, M. Z. (2014). Health care reform and the development of health insurance plans: The case of the emirate of Abu Dhabi, UAE. J Health Care Finance, 40(3), 47–66.

Katoue, M. G., Cerda, A. A., García, L. Y., & Jakovljevic, M. (2022). Healthcare system development in the Middle East and North Africa region: Challenges, endeavors and prospective opportunities. Frontiers in Public Health, 10, 1045739.

Kutzin, J. (2013). Health financing and universal coverage. Bulletin of the World Health Organization, 91(8), 602-603.

Lee, D.-C., Liang, H., & Shi, L. (2021). The convergence of racial and income disparities in health insurance coverage in the United States. International Journal for Equity in Health, 20(1), 96.

Lee, D.-C., Wang, J., Shi, L., Wu, C., & Sun, G. (2022). Health insurance coverage and access to care in China. BMC Health Services Research, 22(1), 140.

Roberts, M., Hsiao, W., Berman, P., & Reich, M. (2008). Getting health reform right: A guide to improving performance and equity. Oxford University Press.

Shi, L., & Singh, D. A. (2022). Essentials of the US health care system. Jones & Bartlett Learning.

World Health Organization. (2018). Libya health system assessment. World Health Organization. Retrieved from https://www.who.int/publications/i/item/9789241513488

Yabroff, K. R., Zhao, J., Halpern, M. T., Fedewa, S. A., Han, X., Nogueira, L. M., Zheng, Z., & Jemal, A. (2021a). Health insurance disruptions and care access and affordability in the US. American Journal of Preventive Medicine, 61(1), 3–12.

Yi, B. (2021). An overview of the Chinese healthcare system. Hepatobiliary Surgery and Nutrition, 10(1), 93.

Yip, W. (2023). Universal health coverage in China part 1: Progress and challenges. The Lancet Regional Health – Western Pacific, 23, 100373

Yip, W., Fu, H., Chen, A. T., Zhai, T., Jian, W., Xu, R., Pan, J., Hu, M., Zhou, Z., & Chen, Q. (2019). 10 years of health-care reform in China: Progress and gaps in Universal Health Coverage. The Lancet, 394(10204), 1192–1204.

Yu, H. (2015). Universal health insurance coverage for 1.3 billion people: What accounts for China's success? Health Affairs, 34(6), 1027-1036.

Appendix A Study Questionnaire

(استبيان حول أثر التأمين الصحي على جودة الخدمات الصحية ضمن المجتمع الليبي في بلدية الزاوية)

الهدف من هذا الاستبيان هو جمع معلومات حول تأثير التأمين الصحي على جودة الخدمات الصحية في بلدية الزاوية،

الإجابات ستبقى سرية وستُستخدم لأغراض البحث العلمي فقط.

يرجى الإجابة على الأسئلة التالية:					
العمر:	☐ أقل من 30 سنة	☐ 30 الى 50 سنة	☐ أكثر من 50 سنة		
الجنس:	☐ ذكر	☐ أنثى			
المستوى التعليمي:	☐ بدون تعليم	☐ التعليم الابتدائي	☐ التعليم الثانوي	☐ شهادة جامعية او اعلى	
الحالة الوظيفية:	☐ موظف	☐ عاطل عن العمل	☐ متقاعد	☐ طالب	
مكان الاقامة:	☐ قريب من مركز المدينة	☐ بعيد عن مركز المدينة			
هل لديك تأمين صحي:	☐ نعم	☐ لا			
إذا كانت الإجابة بنعم، ما نوع التأمين الذي لديك؟	☐عام (مقدم من الحكومة)	☐ خاصة	☐ أخرى، يرجى التحديد		
إذا كانت الإجابة لا، لماذا لا تمتلك تأميناً صحياً؟	☐ قلة التوعية بالتأمين الصحي	☐ غير متاح لي		☐ تعقيدات الإجراءات الاداري	☐ أخرى (يرجى التحديد): ....
ما مدى تكرار زيارتك للمرافق الصحية؟	☐ نادرا (اقل من مرة في السنة)	☐ أحيانا(مرة – مرتين)		☐ بشكل متكرر	
ما المدة التي تستغرقها عادتا للوصول الى مرفق رعاية صحية؟	☐ اقل من 30 دقيقة	☐ من 30 دقيقة الى ساعة		☐ أكثر من ساعة	
كيف تدفع مقابل خدمات الرعاية الصحية الخاصة بك؟	☐ من جيبك الخاص	☐ تغطية التأمين	☐ الحكومة	☐ إعانات ومساعدات	☐ أخرى (يرجى التحديد): ....
كيف تقيم جودة خدمات الرعاية الصحية التي تتلقاها؟	☐جيد جدا	☐ جيد	لا اعلم☐	☐ متوسط	☐ رديء

هل المرافق الصحية مجهزة بشكل جيد لتلبية احتياجاتك؟	☐ نعم، دائما	☐ احيانا	☐لا اعلم	☐ نادرا	☐ لا
ما مدى رضاك عن موقف المتخصصين في الرعاية الصحية؟	☐ راضٍ جداً	☐ راضً	لا اعلم☐	☐ غير راضٍ	☐ غير راضٍ جداً
هل تشعر ان وجود تأمين صحي قد أدى الى تحسين جودة الرعاية التي تتلقاها؟	☐ موافق بشدة	☐ موافق	☐لا اعلم	☐ غير موافق	☐غير موافق بشدة
منذ الحصول على تأمين صحي، هل تحسنت قدرتك على الوصول الى خدمات الرعاية الصحية المتخصصة (مثل الجراحة والمتخصصين)؟	☐ نعم	☐ احيانا	☐لا اعلم	☐ نادرا	☐لا
كم مرة تواجه تأخيرا في العلاج؟	☐ نادراً	☐ احياناً	☐لا اعلم	☐ كثيراً	☐دائما
بشكل عام ما مدى رضاك عن تجربتك في الرعاية الصحية؟	☐ راضٍ جداً	☐ محايد	☐لا اعلم	☐ غير راضٍ	☐ غير راضٍ جداً
برأيك ما الذي يمكن تحسينه في نظام التأمين الصحي لتعزيز جودة الرعاية الصحية؟					
20.ماهي التحديات التي تواجهك في الوصول الى خدمات الرعاية الصحية الجيدة؟					
شكراً جزيلاً على مشاركتكم!					

Appendix B Ethical Approval

المركز الليبي للبحوث الطبية

(Libyan Medical Research Center)

دولة ليبيا
الهيئة الليبية للبحث العلمي

اللجنة الفرعية للسلامة الحيوية والأخلاقيات البيولوجية

Biosafety and Bioethics committee

pEthical Approval Letter

NBC:018.H.24. 12

Project Title : The Impact of Health Insurance on Quality of Health services Among Libyan Community in Zawia City , Libya .

Dear : Rabie Mostafa Khbaiza .

According to the Libyan Medical Research Center Bioethics Committee meeting held on 2 / 1 /2025 to review ethical approval applications

We hereby inform you the following.

Application Approved without any modifications ☒

Application Rejected ☐

***If the application rejected, please indicate the reason and recommendation in the table bellow**

Reasons for rejection	
Recommendation	

Signed by Chairman of the Committee

Dr. Salah Bahroon ....

Date ..../........./2024

Appendix C Letter of data collection

دولة ليبيا
مجلس الوزراء
صندوق التأمين الصحي العام
P H I F
فرع المنطقة الغربية

التاريخ: 2025/11/26
الرقم الإشاري: 0082-25-10

الى من يهمه الامر

تحية طيبة وبعد،

نفيدكم بان الباحث ربيع مصطفى سالم خبيزة قد قام بتجميع البيانات الخاصة بدراسته من قسم خدمات المشتركين، وذلك من خلال توزيع استبيان يتعلق بجودة التامين الصحي.

كما نؤكد حرص صندوق التامين الصحي العام على دعم الباحثين وتسهيل مهامهم العلمية بما يساهم في تطوير المعرفة والارتقاء بجودة الخدمات الصحية.

وتفضلوا بقبول فائق الاحترام والتقدير

د. عبد الفتاح البشير المريمي
مدير فرع الصندوق بالمنطقة الغربية

صندوق التأمين الصحي العام
فرع المنطقة الغربية

صورة الى:
ملف المعني
ملف الصادر

الزاوية - شارع عمرالمختار شمال جزيرة الريحانة www.phif.gov.ly info@phif.gov.ly

Appendix D Letter of data collection

LIBYAN MEDICAL CENTER FOR PHYSICAL THERAPY AND ORTHOPEDICS

دولة ليبيا
وزارة الصحة
المركز الطبي الليبي الأجنبي

التاريخ / 26 - نوفمبر - 2025م

الرقم الإشاري / 100 - ش - ع - ع - ل/ 2025م

إلي من يهمه الأمر..

تحية طيبة وبعد،،،

نفيدكم بأن الباحث// ربيع مصطفى سالم خبيزة.... قد قام بتجميع البيانات الخاصة بدراسته من المركز الطبي الليبي الأجنبي، وذلك من خلال توزيع استبيان يتعلق بأثر التأمين الصحي على جودة الخدمات الصحية في المجتمع الليبي، وذلك خلال الفترة من شهر مايو إلى شهر يونيو.

كما نؤكد... حرص المركز الطبي الليبي الأجنبي على دعم الباحثين وتشجيعهم، بما يساهم في تطوير المعرفة والارتقاء بجودة الخدمات الصحية.

وتفضلوا بقبول فائق الاحترام والتقدير.
والسلام عليكم ورحمة الله وبركاته..

د. عبد الباري صالح الخرباش
رئيس مجلس الإدارة

صورة إلى:
الملف الدوري العام + الموضوع
قسم التأمين.

@ medicalzawia@gmail.com
face book المركز الطبي الليبي الأجنبي

الزاوية - طريق الساحلي جوددائم
0945307518

Appendix E Letter of data collection

State of Libya

Ministry of helth

Bir Muammar al-Karoui hospital - Al Zawiya

دولـــة ليبيــا

وزارة الصحـــــــة

مستشفى بئر معمر القروي - الزاوية

التاريخ : 2025/7/08

الرقم الإشاري :......بلا........

الى من يهمـــه الامـــــــــــــر..

تحيه طيبة وبعد،،

نفيدكم بأن الطالب ربيع سالم خبيزة قد قام بتجميع البيانات الخاصة بدراسته من خلال توزيع استبيان يتعلق بأثر التأمين الصحي على جودة الخدمات الصحية في المجتمع الليبي وذلك خلال الفترة من شهر مايو الى يونيو.

أعطـــــيت... لـه هـذه الإفـادة بنـاء علـى طلبـه ولاسـتعمالها في الأغراض المسموح بها قانونا.

والســــــ علـيـكم ـــــلام

د. إلهام ابراهيم الدباشي

مدير إدارة الموارد البشرية

صـــورة

ملف الـــدوري العـــام

ادارة الـموارد البـــشرية

لسنة 2026م

الزاويـة - شارع بئر الغنم . حوالي 7 كيلومتر من كوبري بئر الغنم