

Patients' Satisfaction with Quality of Care about Universal Health Insurance

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Abstract:

Background: Patient satisfaction with the quality of care under the Universal Health Insurance (UHI) system reflects not only service accessibility but also trust in its fairness, consistency, and focus on patient-centered care. High levels of satisfaction indicate the system's effectiveness in delivering quality healthcare across all socioeconomic groups. **Aim:** To assess patients' satisfaction levels regarding quality of care about UHI at Luxor Comprehensive Medical Center. **Subject and Method: Research Design:** Descriptive correlational study. **Setting:** Outpatient clinics at Luxor Comprehensive Medical Center. **Subject:** A convenience sample of 1320 patients. **Data Collection Tool:** Service quality (SERVQUAL) questionnaire, comprising two parts: Personal demographic data sheet and SERVQUAL dimensions assessing service quality. **Results:** There were statistically significant relationships between patient satisfaction and all dimensions of care quality. The results indicated a high level of overall satisfaction, particularly in the areas of tangibles (e.g., facilities and equipment). **Conclusion:** A strong positive correlation was found between patient satisfaction and the tangible aspects of care, with moderate positive correlations for reliability, responsiveness, and empathy. Assurance did not show a statistically significant correlation. **Recommendations:** Implement ongoing monitoring and evaluation systems to assess care quality and patient satisfaction. Use patient feedback to guide policy development and improve service delivery.

Keywords: Patients' satisfaction, Quality care & Universal health insurance

Introduction:

Universal Health Insurance (UHI) refers to ensuring that all individuals and communities have access to essential, high-quality health services without experiencing financial difficulties. This includes a comprehensive range of services—from health promotion and disease prevention to treatment, rehabilitation, and palliative care—across all stages of life (Umoke, 2020).

The primary goal of UHI is to provide every citizen with fair access to promotive, preventive, curative, and rehabilitative health services of high quality (Munaa, 2020).

According to the World Health Organization (WHO) and the Organization for Economic Cooperation and Development (OECD), as more countries strive to implement UHI, it becomes crucial to not only have the necessary infrastructure, medical resources, and healthcare personnel, but also to enhance healthcare delivery. This improvement should focus on delivering high-quality care that is effective, safe, people-centered, timely, equitable, and efficient (WHO & OECD, 2018).

The United Nations and the Astana Declaration have established Universal Health Coverage as a key target within the Sustainable Development Goals (SDGs), with a deadline of 2030. Achieving this target relies heavily on the quality of health services. To this end,

WHO has urged member states to regularly evaluate the quality of healthcare services based on patient feedback and establish mechanisms for quality assurance (Persai, 2022).

Patient satisfaction is a fundamental component of UHI. However, some research indicates that while reducing financial barriers and expanding service coverage, healthcare systems can face a decline in quality—such as reduced safety, efficiency, timeliness, and patient-centeredness—due to overuse and weak governance (Nzomo, 2021).

Service quality reflects patients' perceptions of how services or products are delivered. Delivering satisfactory service quality enhances patient intention to use those services again, making it a vital factor for competitiveness in healthcare systems (Karem, 2020). In the context of UHI, patient satisfaction is defined as the alignment between the patient's expectations and their perception of the care they receive. However, it does have limitations as a standalone measure of care quality (Sinyiza, 2022).

The quality of nursing care specifically addresses the nurse's ability to meet the physical, psychological, emotional, social, and spiritual needs of patients, contributing to their recovery and mutual satisfaction between patients and nurses (Yusefi, 2022).

Measuring patient satisfaction is essential in health service management because it serves as a core

indicator of healthcare quality. It can be described as the patient's evaluation of the care received and its outcomes (Olamuyiwa & Adeniji, 2021).

Finally, public satisfaction with the healthcare system is one of the metrics used by WHO to assess system performance. While it does not capture every aspect of healthcare quality, it remains a significant dimension of the overall quality framework (Yuan, 2021).

Significance of study

Egypt began implementing **Universal Health Insurance (UHI)** in 2019, aiming to achieve **Universal Health Coverage (UHC)** by 2030 through strategies focused on enhancing care quality and improving cost efficiency. However, limited public awareness and understanding of the new system have contributed to an increase in citizen complaints (Munaa 2020).

Patient satisfaction is a critical component of healthcare quality because it reflects the patient's overall experience and perception of the care they receive. High levels of patient satisfaction often indicate that services are patient-centered, communication is clear, staff are responsive, and care is delivered efficiently and compassionately. It also serves as an important indicator for healthcare quality, as satisfied patients are more likely to follow medical advice, return for future care, and recommend the facility to others. Moreover, patient satisfaction data helps healthcare providers identify areas for improvement, ensuring that care delivery aligns with both clinical standards and patient expectations. In this way, it acts as both a measure of performance and a guide for continuous quality improvement (El-Awady et al. 2023).

During the literature review, the researcher identified relevant **national studies**. As the following, the first study conducted by **Ayman et al. (2020)**, is titled "Path Dependence and Universal Health Coverage: The Case of Egypt." The second, by **Khalifa et al. (2021)**, is titled "Purchasing Health Services Under Egypt's New Universal Health Insurance Law." The third study, by **Farag et al. (2021)**, is titled "Does Implementation of Universal Health Insurance Affect the Quality of Referrals in the Health Care System?"

International studies published in professional articles and journals in the field of healthcare, the first one titled as "Public satisfaction with the healthcare system performance in South Korea: Universal healthcare system. Done by **Park et al (2016)**, the second one titled "Patients' experience of using primary care services in the context of Indonesian universal health coverage reforms " done by **Fitriana et al (2017)**, the third one titled as "Assessing patients' system satisfaction with universal health

coverage reforms using servequal model" done by **Nzomo (2021)**, and the fourth one, titled as "Assessment of the satisfaction with public health insurance programs by patients with chronic diseases in China " done by **Genge et al. (2021)**, the fifth one titled as "Patient's Satisfaction With Quality of Care at a National Health Insurance Clinic at a Tertiary Center, South- Nigeria., done by **Olamuyiwa & Adeniji (2021)**.

Based on the gap identified in the existing literature and the need for local evidence, the researcher decided to assess **patient satisfaction with the quality of care under the UHI system at Luxor Comprehensive Medical Center.**

Aim of study

To assess patients' satisfaction levels regards quality of care about UHI at Luxor Comprehensive Medical Center.

Research Questions

What are the levels of patients' satisfaction about UHI at Luxor comprehensive center?

Subject and Method

The study was portrayed according to the four following designs

- A. Technical Design
- B. Administrative Design
- C. Operational Design
- D. Statistical Design

Technical Design

This design involved the research design, setting, subjects and data collection tool

Research design

- A descriptive correlational study design was used in the present study.

Setting

The study was conducted at the Luxor comprehensive medical center which it is a major public hospital facility located in Luxor, considered one of the largest medical centers in the region. It serves as a cornerstone of enhanced healthcare provision in Upper Egypt. It is a major government-run hospital under the Egypt Healthcare Authority (EHA) and serves as one of Luxor's largest healthcare facilities, offering a broad range of medical specialties and a 24-hour emergency department. It consists of 7 clinics: General Internal Medicine Specific Internal Medicine General Surgery Specific Surgery Pediatric Gynecological and Obstetric- Physical Therapy.

Subject

The study subject was included patients from outpatient clinics who were attended in clinics at the 1st and 3rd week of December 2023.

Average patients numbers
(n= 1320) {(132)/daily=(660)/week}

Clinics	Total patients
General Internal Medicine	108
Specific Internal Medicine	188
General Surgery	450
Specific Surgery	220
Pediatric	114
Gynecological and Obstetric	120
Physical Therapy	120
TOTAL	1320

Data collection tools:

SERVQUAL Questionnaire: It was consisted of 2 parts:

Part (I): Related to personal characteristics data form which was included data about; age, gender, educational qualification, job title marital status, No. of children and residency.

Part (II): Service Quality (SERVQUAL) questionnaire: It was developed by **Parasuraman, et al (1988)** to assess the expectations and perceptions of service quality along five dimensions namely: reliability (5 items), tangibility (4 items), assurance (4 items), responsiveness (5 items) and empathy (5 items).

Scoring system

The responses were recorded on a five 5 points Likert scale anchored on 'strongly disagree' (1), disagree (2), neither agree nor disagree (3), agree (4) and 'strongly agree' (5) with the 'strongly disagree' end correlating with low expectations and perceptions and 'strongly agree' indicating high expectations (**Parasuraman, et al., 2021**). **High Expectations (4.5–5.0):** Patients strongly expect high-quality service in these dimensions, especially in **reliability, assurance, and tangibles**. **Moderate/Low Expectations (<3.5):** Patients have **lower expectations** in the **empathy** category, possibly due to past experiences or lack of confidence in staff-patient communication.

Administrative design

Official permission to conduct the study was obtained from the Dean of the Faculty of Nursing and the Director of Luxor Comprehensive Medical Center.

Ethical Considerations

The study proposal received approval from the Ethical Committee of the Faculty of Nursing at Assiut University. There was no anticipated risk to participants during the study's implementation. Verbal consent was obtained from all participants, who were informed of their right to decline participation or withdraw from the study at any time without providing a reason. Confidentiality and anonymity of the collected data were strictly maintained, and participants' privacy was respected throughout the data collection process.

Operational design

The study was conducted throughout three main phases: 1st preparatory, 2nd pilot study, and 3rd data collection described as:

1st Preparatory phase:

This phase lasted approximately one month, from December 1st to the end of December 2023. Following a review of the relevant literature on the study topic, the research tool was translated into Arabic. The face validity of the tool was then evaluated by a panel of five experts from the Nursing Administration Department at the Faculty of Nursing, Assiut University.

2nd phase: Pilot study

A pilot study was conducted prior to the main data collection to evaluate the clarity, simplicity, and comprehensibility of the study tool, as well as to estimate the time required for data collection. Additionally, it aimed to identify any potential issues that might arise during the actual data collection process. The pilot study was carried out over a period of seven days and included 10% of the total sample. Data collected during the pilot phase was analyzed separately, and participants involved in the pilot study were excluded from the final study sample.

3rd phase: Data collection

The data was collected along one month (from 1st to the end of January 2024) by using the SERVQUAL questionnaire. Data collection for the study involved gathering responses from both educated and non-educated patients to ensure a comprehensive understanding of satisfaction levels across diverse demographic groups. Structured interviews and standardized questionnaires were used, with adjustments made to accommodate varying literacy levels. Educated patients were provided with self-administered surveys, while non-educated participants were guided through the questions by the researcher in their preferred local language to ensure clarity and accuracy. This inclusive approach helped capture a wide range of patient experiences and perceptions regarding the quality of care under Universal Health Insurance.

Statistical design

Data entry and statistical analysis were performed using SPSS version 25. The results were presented using frequencies, percentages, means, and standard deviations. The Chi-square test was applied to compare qualitative variables, while the Independent Samples T-test was used to compare quantitative variables between two groups. For comparisons involving more than two groups, the ANOVA test was utilized. Pearson correlation was conducted to assess the relationship between quantitative variables. A p-value of ≤ 0.05 was considered statistically significant.

Results

Table (1): Percentage distribution of personal data of the studied patients (n=1320)

Personal data	No. (1320)	%
Age: (years)		
< 40	592	44.8%
40 - < 60	394	29.8%
≥ 60	334	25.3%
Gender:		
Male	718	54.4%
Female	602	45.6%
Level of education:		
Illiterate	232	17.6%
Basic education	343	26.0%
Secondary	383	29.0%
University	362	27.4%
Occupation:		
Not working	460	34.8%
Governmental employee	292	22.1%
Private sector employee	204	15.5%
Free business	364	27.6%
Residence:		
Urban	797	60.4%
Rural	523	39.6%
Marital status:		
Married	1039	78.7%
Single	152	11.5%
Divorced	71	5.4%
Widow	58	4.4%
Number of children:		
< 3	703	60.2%
≥ 3	465	39.8%

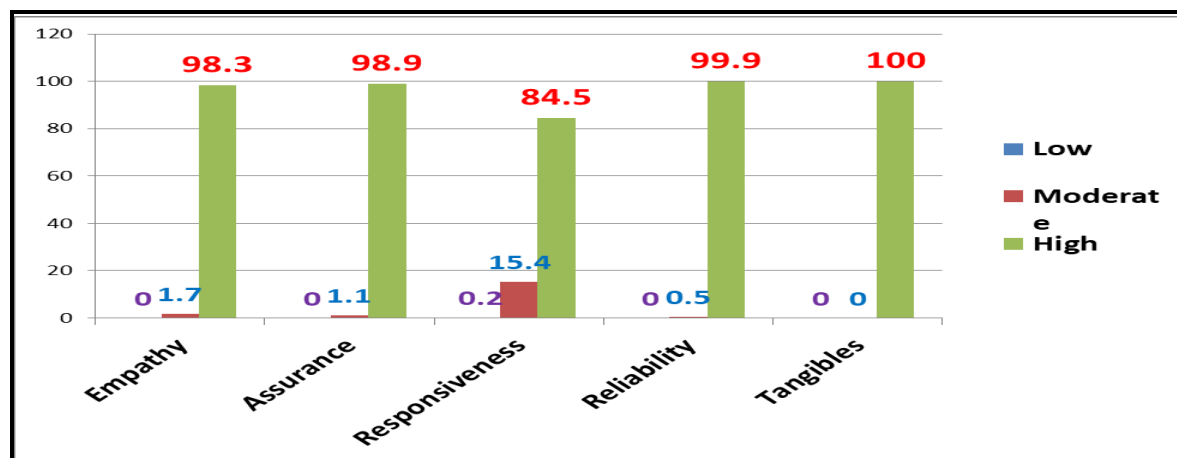


Figure (1): Percentage distribution of patient satisfaction levels toward quality of care about UHI (Actual perception)

Table (3-a): Perception of the patients about quality care about UHI (Actual)

	Mean ± SD	Range
Tangibles	4.87 ± 0.19	4.3-5.0
Reliability	4.79 ± 0.18	3.8-5.0
Responsiveness	4.52 ± 0.37	2.6-5.0
Assurance	4.86 ± 0.21	3.8-5.0
Empathy	4.70 ± 0.26	3.4-5.0

Table (3-b): Perception of the patients about quality care about UHI (Expected)

	Mean \pm SD	Range
Tangibles	4.96 \pm 0.11	4.0-5.0
Reliability	4.68 \pm 0.39	3.2-5.0
Responsiveness	4.53 \pm 0.42	3.2-5.0
Assurance	4.75 \pm 0.30	3.0-5.0
Empathy	4.67 \pm 0.45	2.4-5.0

Table (1): This table presents the demographic characteristics of the study participants. It indicates that 44.8% of them are under the age of 40, and 54.4% are male. In terms of educational background, 29% have completed secondary education, while 17.6% are illiterate. Regarding employment status, 34.8% are unemployed, and 27.6% are self-employed. Concerning place of residence, 60.4% live in urban areas. As for marital status, 78.7% are married, and 60.2% have fewer than three children.

Figure (1): The majority of participants reported high satisfaction across all dimensions: 100% rated Tangibles as high, 99.5% rated Reliability as high while 0.5% rated it moderate, 84.5% rated Responsiveness as high and 15.4% as moderate, 98.9% rated Assurance as high with 1.1% moderate, and 98.3% rated Empathy as high with 1.7% moderate.

These findings indicate a strong overall satisfaction with the quality of care, particularly in the areas of Tangibles and Reliability.

Table 3 (a-b): This table presents the mean, standard deviation (SD), and range for different dimensions of patient satisfaction with Universal Health Coverage (UHC) services. Tangibles received the highest average score at 4.87 ± 0.19 , reflecting strong satisfaction. Assurance was also rated highly, with a mean of 4.86 ± 0.21 , whereas responsiveness had a slightly lower mean score of 4.52 ± 0.37 . The scores across all categories ranged from 2.6 to 5.0, indicating that although most patients gave high ratings, there was some variability in individual responses.

Discussion:

Understanding the link between patient satisfaction and quality of care is crucial for improving healthcare delivery and ensuring positive health outcomes. Patient satisfaction not only reflects the care experience but also serves as a key measure of the effectiveness, efficiency, and responsiveness of healthcare services. By analyzing how different dimensions of service quality—such as tangibles, reliability, responsiveness, empathy, and assurance affect satisfaction, healthcare providers can pinpoint areas needing improvement and better allocate resources. This patient-centered approach fosters greater trust, improves adherence to treatment plans,

and ultimately leads to better health results (El Garem et al., 2024).

Furthermore, studies like this are highly valuable in today's competitive healthcare landscape, where patient perceptions significantly influence institutional reputation, patient retention, and accreditation success. The insights gained can guide strategic planning, staff training, and quality assurance efforts. For example, recognizing the strong connection between tangibles and reliability with patient satisfaction allows administrators to prioritize visible and operational aspects of care. Identifying weaker links, such as assurance, reveals communication gaps or confidence issues that may require focused interventions (El-Shafie & Magdy, 2023).

Thus, the current study aimed to assess patients' satisfaction levels regarding the quality of care under the Universal Health Insurance (UHI) system. Results of the current study revealed about half of the patients were under 40 years old, aligning with Wudu (2021), who found a similar age distribution in a study on inpatient nursing care satisfaction in Ethiopia. Similarly, Ismail et al. (2023) reported a mean participant age of 37 in a study on health system responsiveness in Egypt's Port Said Governorate.

In terms of gender, the study showed that more than half of the patients were males, which contrasts with El Garem et al. (2024), who found that females comprised about two-thirds of their sample in a study on patient loyalty in Egypt's private healthcare sector. Concerning education, roughly one-third of participants had completed secondary education, while a minority were illiterate. This agrees with Elkhadry & Tahooun (2024), who reported that more than half of Egyptian patients in their study were highly educated.

Regarding occupation, over one-third of participants were unemployed, and less than one-third were self-employed. This aligned with Ahmed (2022), whose study on women's satisfaction with primary healthcare in Egypt found a high percentage of housewives, indicating many non-working patients. However, El-Awady et al. (2023) reported a majority of patients engaged in formal employment, reflecting a different occupational distribution.

Concerning residence, about two-thirds of participants lived in urban areas, consistent with

findings from **Taha et al. (2022) & Mohamed et al. (2023)**, who reported predominantly urban populations in their studies on patient satisfaction in Egyptian cities. **Arafat (2021)** also found most participants to be urban residents in a study on expectations and satisfaction.

Regarding marital status, the majority were married, matching findings from **Elhady et al. (2025)**, **Farouk; Zahran (2023)**, & **Fawzy; Ahmed (2022)**, all of whom noted a predominance of married participants in their respective studies. When examining actual patient satisfaction with quality of care, most patients reported high satisfaction across all dimensions, particularly in tangibles and reliability. This corresponded with **Farouk et al. (2021)**, who found similar satisfaction levels in Egyptian patients, and **Ahmed & Soliman (2022)**, who noted high satisfaction in assurance and empathy in Upper Egypt's public hospitals. However, **El-Shafie & Magdy (2023)** reported moderate satisfaction in responsiveness and empathy, which is somewhat lower than the present findings.

From the researcher's perspective, the strong satisfaction in tangibles and assurance highlights the positive impact of Egypt's UHC in improving healthcare infrastructure and provider competence. The relatively lower empathy scores suggest room for improvement in patient-provider communication, consistent with prior studies emphasizing the need to enhance interpersonal aspects of care to achieve overall satisfaction.

Analysis of the relationship between tangible aspects of care and patient demographics revealed that age, occupation, and residence significantly influenced satisfaction. Younger patients (under 40), unemployed individuals, and rural residents reported higher satisfaction with tangibles. In contrast, gender, education, marital status, and number of children showed no significant effect ($p > 0.05$).

These findings suggested that demographic factors like age and socioeconomic status may shape patient perceptions of healthcare quality, particularly in visible service components. Younger patients may have different expectations regarding the physical environment, while non-working and rural individuals might have lower baseline expectations or greater appreciation for available services. The lack of impact from gender, education, marital status, and family size indicates these factors do not strongly affect satisfaction with tangibles. This highlights the importance of tailoring improvements to specific groups while focusing efforts where they will be most effective.

Similar results were reported by **Elhady et al. (2025)**, who found higher satisfaction with tangibles among younger patients following UHI implementation in

Egypt. Also, **Sanad et al. (2020)** observed greater satisfaction with dental services among non-working patients at Zagazig University Hospitals, attributing this to their appreciation for accessible care.

Conclusion:

The study found a strong and significant relationship between patient satisfaction and quality of care across all areas measured. Patients were especially pleased with tangible elements like facilities, equipment, and staff appearance, as well as the reliability of services. Tangibles showed the strongest positive correlation with satisfaction, while reliability, responsiveness, and empathy had moderate correlations. However, assurance did not significantly impact satisfaction. These results emphasize the importance of focusing on tangible and reliable service aspects to improve and maintain high patient satisfaction.

Recommendations:

1. Enhance patient communication and engagement that strengthen patient-provider communication to ensure patients feel heard, respected, and involved in decision-making, which is a key determinant of satisfaction.
2. Improve service delivery efficiency through reducing wait times and streamline administrative procedures in healthcare facilities.
3. Expand access to quality care to ensure equitable access to skilled healthcare professionals, essential medications, and diagnostic services across all regions, especially underserved areas.
4. Implement continuous quality monitoring system to establish regular monitoring and evaluation mechanisms to assess care quality and patient satisfaction, using feedback to inform policy and practice improvements.
5. Design care delivery models that are culturally sensitive and responsive to the specific needs and preferences of diverse patient populations.
6. Promote public awareness campaigns about Universal Health Insurance benefits and patient rights to improve utilization and satisfaction.
7. Provide ongoing training for healthcare workers in patient-centered care and service excellence to foster trust and better health outcomes.
8. Using digital health tools for appointment scheduling, follow-ups, and telemedicine to enhance accessibility and patient convenience.
9. Encourage and train staff on realistic communication and monitor and evaluate regularly to check if change improves the alignment between actual perception and assurance.

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