

Midocean University

College of Administration

Department / Major: Healthcare Administration

# **The Impact of Waiting Time on Patient Satisfaction in Outpatient Clinics in a Private Hospital in Riyadh, Saudi Arabia**

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# Introduction

Healthcare quality has become a central focus in modern health systems, with increasing attention given not only to clinical outcomes but also to patient-centered indicators such as satisfaction. Patient satisfaction is widely recognized as a key measure of healthcare quality and is influenced by multiple factors, including accessibility, communication, and service efficiency. Among these factors, waiting time in outpatient clinics is considered one of the most critical determinants, as it directly affects patients' perceptions of care and their overall healthcare experience.

Globally, long waiting times in outpatient settings remain a persistent challenge for healthcare providers and are often associated with decreased patient satisfaction, reduced adherence to medical advice, and negative health outcomes. Many studies across different healthcare systems have highlighted the importance of reducing waiting times to improve service quality and patient trust. Locally, in Saudi Arabia, the healthcare sector has undergone significant transformation under Vision 2030, emphasizing improved patient experience and efficiency in healthcare delivery. Despite these efforts, waiting time in outpatient clinics, particularly in private hospitals, continues to be a concern that may impact patient satisfaction and service utilization.

Although numerous international studies have examined the relationship between waiting time and patient satisfaction, there is limited research focusing specifically on private healthcare settings in Riyadh, Saudi Arabia. Most existing studies either focus on public hospitals or do not adequately address contextual factors unique to private institutions. This indicates a research gap in understanding how waiting time influences patient satisfaction within private outpatient clinics in this region.

Therefore, this study aims to investigate the impact of waiting time on patient satisfaction in outpatient clinics within a private hospital in Riyadh. The study will adopt a quantitative cross-sectional design using a structured questionnaire to collect data from patients attending outpatient services. The findings are expected to provide insights that can support healthcare administrators in improving service efficiency and enhancing patient satisfaction.

# Research Problem

Despite ongoing improvements in healthcare services, prolonged waiting times in outpatient clinics remain a significant challenge affecting patient satisfaction. Long waiting times can lead to frustration, reduced trust in healthcare providers, and lower perceived quality of care. In private hospitals, where patients often have higher expectations due to the cost of services, delays in receiving care may have an even greater negative impact on satisfaction levels.

This study seeks to address the following research questions:

- What is the relationship between waiting time and patient satisfaction in outpatient clinics?
- To what extent does waiting time influence patients' perceptions of service quality in a private hospital in Riyadh?
- What is the acceptable waiting time from the patients' perspective in outpatient settings?

The gap between the current and desired situation lies in the inconsistency between patient expectations and actual service delivery. Ideally, outpatient services should provide timely and efficient care with minimal waiting periods. However, in reality, many patients experience delays due to factors such as high patient volume, scheduling inefficiencies, and limited resources. This discrepancy negatively affects patient satisfaction and overall healthcare experience.

Evidence from previous studies indicates that waiting time is one of the most significant predictors of patient satisfaction. Research has shown that longer waiting times are associated with lower satisfaction scores and decreased likelihood of patients returning to the same facility. Reports from healthcare systems globally, as well as studies conducted in Saudi Arabia, highlight that reducing waiting time is essential for improving healthcare quality and patient-centered care. However, there is limited evidence specifically addressing this issue within private hospitals in Riyadh, which underscores the need for this study.

# Significance of the Study

## **A) Scientific Importance:**

- This study contributes to enriching theoretical knowledge in the field of healthcare management by examining the relationship between waiting time and patient satisfaction in outpatient settings.
- It helps fill gaps in existing literature, particularly in the context of private hospitals in Riyadh, Saudi Arabia, where limited research has been conducted on this topic.
- The study provides an integrated theoretical framework linking service efficiency (waiting time) with patient-centered outcomes (satisfaction), which can be used for future research.

## **B) Practical Importance:**

- The study provides evidence-based recommendations for healthcare administrators to reduce waiting times and improve patient satisfaction in outpatient clinics.
- It supports policymakers and healthcare decision-makers in enhancing service quality and aligning with healthcare transformation goals such as Saudi Vision 2030.
- The findings can contribute to the development and improvement of measurement tools used to assess patient satisfaction and service efficiency in healthcare facilities.

# Objectives of the Study

## **General:**

To examine and analyze the impact of waiting time on patient satisfaction in outpatient clinics in a private hospital in Riyadh, Saudi Arabia, with the aim of improving service quality and patient experience.

## **Specific:**

- To determine the average waiting time experienced by patients at different stages of outpatient services (registration, consultation, and pharmacy).
- To assess the overall level of patient satisfaction with outpatient healthcare services.
- To analyze the relationship between waiting time and various dimensions of patient satisfaction, including service quality, communication, and overall experience.
- To identify key operational and organizational factors contributing to prolonged waiting times in outpatient clinics.
- To evaluate patients' perceptions of acceptable waiting time and their expectations regarding timely service delivery.
- To examine whether demographic factors (such as age, gender, and visit frequency) influence satisfaction levels related to waiting time.
- To provide practical recommendations for healthcare administrators to reduce waiting time and enhance patient satisfaction in private hospital settings.

# Research Questions

- What is the average waiting time experienced by patients in outpatient clinics in a private hospital in Riyadh?
- What is the level of patient satisfaction with outpatient healthcare services?
- Is there a significant relationship between waiting time and patient satisfaction in outpatient clinics?
- How does waiting time affect different dimensions of patient satisfaction (such as service quality, communication, and overall experience)?
- What are the main factors contributing to long waiting times in outpatient clinics?
- What is the acceptable waiting time from the patients' perspective?
- Do demographic factors (such as age, gender, and frequency of visits) influence patient satisfaction related to waiting time?

# Research Hypotheses

## **H01 (Null Hypothesis):**

There is no statistically significant relationship between waiting time and patient satisfaction in outpatient clinics in a private hospital in Riyadh.

## **H11 (Alternative Hypothesis):**

There is a statistically significant relationship between waiting time and patient satisfaction in outpatient clinics in a private hospital in Riyadh.

## **H02 (Null Hypothesis):**

Waiting time has no statistically significant effect on different dimensions of patient satisfaction (service quality, communication, and overall experience).

## **H12 (Alternative Hypothesis):**

Waiting time has a statistically significant effect on different dimensions of patient satisfaction (service quality, communication, and overall experience).

## **H03 (Null Hypothesis):**

There are no statistically significant differences in patient satisfaction related to waiting time based on demographic factors (age, gender, and frequency of visits).

## **H13 (Alternative Hypothesis):**

There are statistically significant differences in patient satisfaction related to waiting time based on demographic factors (age, gender, and frequency of visits).

## Previous Studies

A considerable body of literature has examined the relationship between waiting time and patient satisfaction in healthcare settings. While these studies generally confirm a negative association between longer waiting times and lower satisfaction levels, important differences exist in their findings, methodologies, and contextual focus.

A study conducted by Bleustein et al. (2014) investigated the relationship between waiting time and patient satisfaction in outpatient clinics in the United States using a quantitative survey approach. The findings revealed a strong negative relationship, indicating that longer waiting times significantly reduce patient satisfaction. However, a key limitation of this study is its reliance on patients' perceived waiting time rather than actual measured time, which may introduce subjective bias. This suggests that patient perception, influenced by expectations and prior experiences, may play a more critical role than objective waiting duration.

Similarly, Al-Harajin et al. (2019) examined patient satisfaction in outpatient clinics in Saudi Arabia using a cross-sectional design and structured questionnaires. The study identified waiting time as one of the most influential factors affecting satisfaction. Despite its relevance to the local context, the study primarily focused on public healthcare settings, where patient expectations and service delivery models differ from private hospitals. This limits the generalizability of its findings to private healthcare institutions, particularly in urban centers such as Riyadh.

In another study, Sumaedi et al. (2020) explored the effect of waiting time on patient satisfaction using statistical modeling techniques. The results confirmed that waiting time has a significant negative impact on satisfaction and is a critical dimension of perceived service quality. However, the study treated waiting time as a single aggregated variable and did not differentiate between various stages of the patient journey, such as registration, consultation, and pharmacy services. This limits the ability to identify which stage contributes most to dissatisfaction.

Furthermore, Almutairi et al. conducted a quantitative cross-sectional study involving 250 patients to examine the effect of waiting time on satisfaction. The study found a statistically significant negative relationship between waiting time and patient satisfaction ( $p < .05$ ). Nevertheless, the relatively small sample size and focus on a single healthcare setting may reduce the robustness and external validity of the findings.

Additionally, Alqahtani and Alsharif investigated multiple factors influencing patient satisfaction in outpatient clinics in Riyadh, including waiting time. The study confirmed that waiting time is a major determinant of satisfaction; however, it considered several

variables simultaneously without isolating the specific impact of waiting time in depth. This makes it difficult to fully understand the magnitude of its independent effect.

Across these studies, there is general agreement that waiting time is a key determinant of patient satisfaction. However, differences in findings can be attributed to variations in research design, measurement approaches (perceived versus actual waiting time), sample characteristics, and healthcare contexts (public versus private sectors). Most studies rely on cross-sectional survey designs, which limit causal inference, and depend heavily on self-reported data, which may introduce response bias.

Moreover, a significant gap exists in the literature. Few studies have focused specifically on private outpatient clinics in Riyadh, Saudi Arabia, where patient expectations are typically higher and service delivery models differ. Additionally, limited research has examined waiting time as a multi-stage process or considered both perceived and actual waiting time simultaneously.

Therefore, the current study seeks to address these limitations by providing a more context-specific and comprehensive analysis of the impact of waiting time on patient satisfaction in a private hospital setting in Riyadh.

## Key Comparative Insights for the Studies:

- **Agreement:**  
All studies confirm that waiting time significantly affects patient satisfaction.
- **Differences:**
  - Study 3 emphasizes perceived waiting time, while others focus on actual time.
  - Study 2 considers multiple factors, not only waiting time.
  - Study 4 focuses on private hospitals, unlike Study 1.
- **Methodological Similarity:** Most studies use quantitative approaches, except Study 3 (systematic review).
- **Main Gap Identified:**  
No single study combines:
  - ✓ Private hospital
  - ✓ Outpatient clinics
  - ✓ Riyadh location
  - ✓ Waiting time + patient perception

## Conclusion:

The comparison shows a consistent relationship between waiting time and patient satisfaction, but also reveals gaps in context and focus. These gaps justify the need for the current study. These limitations highlight the need for a more context-specific and methodologically robust investigation.

# Research Gap

Despite the extensive body of literature examining the relationship between waiting time and patient satisfaction, several critical gaps remain that justify the need for further investigation.

First, most previous studies have been conducted in **public healthcare settings**, with limited attention given to **private hospitals**. This represents a significant contextual limitation, as patient expectations, service delivery processes, and operational efficiency differ substantially between public and private sectors. Patients in private hospitals typically expect faster and more personalized services, making waiting time a more sensitive determinant of satisfaction.

Second, many studies have treated waiting time as a **single, aggregated variable**, without distinguishing between different stages of the patient journey, such as registration, consultation, and pharmacy services. This limits the ability to identify specific operational bottlenecks that contribute most to patient dissatisfaction.

Third, there is inconsistency in how waiting time is measured, with some studies focusing on **actual waiting time** and others emphasizing **perceived waiting time**. Since patient satisfaction is strongly influenced by perception, the lack of integration between these two dimensions creates a gap in understanding the full impact of waiting time.

Fourth, most studies rely on **cross-sectional survey designs** and **self-reported data**, which may introduce bias and limit the ability to establish causal relationships. This highlights the need for more rigorous and context-specific analysis.

Finally, there is a clear lack of studies focusing specifically on **private outpatient clinics in Riyadh, Saudi Arabia**, particularly in light of ongoing healthcare transformation under Vision 2030 and the increasing role of the private sector.

Therefore, this study aims to address these gaps by examining the impact of waiting time on patient satisfaction in a private hospital in Riyadh, while considering multiple stages of waiting time and patient-related factors.

# Theoretical Framework

This study is based on several theoretical perspectives that explain patient satisfaction in healthcare services, particularly in relation to waiting time.

First, the SERVQUAL Model (Parasuraman et al., 1988) is widely used to measure service quality across five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. In this study, waiting time is closely related to the responsiveness dimension, which reflects how promptly services are delivered to patients. Longer waiting times indicate lower responsiveness and are expected to negatively affect patient satisfaction.

Second, the Expectation-Disconfirmation Theory (EDT) explains that satisfaction is determined by the gap between patient expectations and actual service performance. If waiting time exceeds patient expectations, negative disconfirmation occurs, leading to dissatisfaction. Conversely, shorter waiting times may result in positive disconfirmation and higher satisfaction. This theory is particularly relevant in private healthcare settings where patient expectations are typically higher.

Third, the Donabedian Model of Healthcare Quality (structure–process–outcome) provides a comprehensive framework for evaluating healthcare services. In this study, waiting time is considered a process indicator, while patient satisfaction represents an outcome. The model suggests that improvements in service processes, such as reducing waiting time, will lead to better patient outcomes.

These theories collectively support the conceptual understanding that waiting time is a key determinant of patient satisfaction and provide a foundation for analyzing the relationship between service efficiency and patient experience in outpatient clinics.

# Research Methodology and Methods

This study adopts a descriptive and analytical research design, as it aims to both describe the current state of waiting times in outpatient clinics and analyse their impact on patient satisfaction.

A quantitative research approach will be employed using a cross-sectional design, which is appropriate for examining relationships between variables at a specific point in time. Data will be collected using a structured questionnaire distributed to patients attending outpatient clinics in a private hospital in Riyadh.

## Research Implementation Plan

The research will be conducted through the following steps:

1. Designing the questionnaire based on validated instruments from previous studies
2. Reviewing the questionnaire by experts to ensure content validity
3. Conducting a pilot test to ensure clarity and reliability
4. Distributing the questionnaire to patients in outpatient clinics
5. Collecting and organizing the data from both paper-based and online responses
6. Coding and entering the data into statistical software (SPSS)
7. Performing descriptive and inferential statistical analysis
8. Interpreting the results in relation to the research objectives and hypotheses

This structured approach ensures methodological rigor and enhances the reliability of the study findings.

# Population and Sample

The target population consists of adult patients (aged 18 years and above) who visit the outpatient clinics at Dr. Soliman Fakeeh Hospital.

The sample size is calculated based on the daily Outpatient Department (OPD) report. Using a standard statistical formula, the required sample size is approximately 385 participants. This calculation is based on:

- A 95% confidence level ( $Z = 1.96$ )
- An estimated satisfaction proportion of 70%
- A margin of error of 5%

A convenience sampling technique will be used, where patients who are available and willing to participate during the data collection period will be included.

## **Inclusion and Exclusion Criteria**

Inclusion Criteria:

- Adults aged 18 years and above
- Patients who have visited outpatient clinics at Dr. Soliman Fakeeh Hospital

Exclusion Criteria:

- Patients younger than 18 years
- Patients receiving emergency or urgent care
- Patients unable to understand the study or provide consent due to mental health conditions
- Patients who have participated in similar studies within the last six months

# Research Instrument

Data will be collected primarily using a structured questionnaire designed to measure patients' waiting time and their level of satisfaction with outpatient services.

**The questionnaire will consist of three main sections:**

- Demographic information (e.g., age, gender, frequency of visits)
- Waiting time assessment, covering different stages of the outpatient process (registration, consultation, and pharmacy)
- Patient satisfaction measurement, using a Likert scale to evaluate service quality, communication, and overall experience

The questionnaire will include mainly closed-ended questions to facilitate quantitative analysis, along with a limited number of open-ended questions to capture additional patient feedback.

## **Distribution Method**

The survey will be distributed using two methods:

- Hardcopy questionnaires provided during clinic visits
- Online questionnaires accessed via QR code after the visit

Responses from paper surveys will be entered electronically, while online responses will be recorded automatically.

## **Validity and Reliability**

To ensure the quality of the research instrument:

- Content validity will be established through expert review
- Reliability will be assessed using Cronbach's Alpha, with a value of 0.70 or higher considered acceptable

The questionnaire is adapted from previous validated studies, ensuring relevance and consistency with existing literature.

# Statistical Analysis Methods

Data will be analysed using appropriate statistical software such as SPSS (Statistical Package for the Social Sciences). The analysis will be conducted in several stages to ensure accurate interpretation of the relationship between waiting time and patient satisfaction.

## 1. Data Preparation

Before analysis, data will be:

- Checked for completeness and missing values
- Cleaned and coded appropriately
- Entered into the statistical software for processing

## 2. Descriptive Statistics

Descriptive statistics will be used to summarize the characteristics of the sample and key study variables. These will include:

- Frequencies and percentages for demographic variables (e.g., age, gender)
- Mean and standard deviation to measure:
  - Average waiting time
  - Level of patient satisfaction
- Median (if needed) to describe central tendency when data are not normally distributed

This step provides a general overview of the data and helps identify patterns.

## 3. Reliability Analysis

To ensure the consistency of the questionnaire:

- Cronbach's Alpha will be calculated for all Likert-scale items
- A value of  $\geq 0.70$  will be considered acceptable for internal consistency

#### **4. Inferential Statistics**

Inferential statistical tests will be used to examine relationships and differences:

##### **a. Correlation Analysis**

- Pearson correlation coefficient ( $r$ ) will be used to assess the relationship between:
  - Waiting time (independent variable)
  - Patient satisfaction (dependent variable)

This will determine whether longer waiting times are associated with lower satisfaction.

##### **b. Regression Analysis**

- Simple linear regression will be used to evaluate the effect of waiting time on patient satisfaction

This helps answer: Does waiting time significantly predict patient satisfaction?

##### **c. Group Comparison Tests (if applicable)**

To compare satisfaction across different groups:

- t-test → for comparing two groups (e.g., male vs female)
- ANOVA (Analysis of Variance) → for comparing more than two groups (e.g., age groups)

#### **5. Significance Level**

- A p-value  $< 0.05$  will be considered statistically significant
- This means there is less than a 5% probability that the results occurred by chance

#### **6. Presentation of Results**

The findings will be presented using:

- Tables
- Charts (bar charts, pie charts if needed)
- Clear interpretation of statistical outputs

# Study Limitations

This study is subject to several limitations that should be considered when interpreting the results.

## **Human Limits:**

The study focuses on adult patients (18 years and above) attending outpatient clinics in a selected private hospital. The sample consists of approximately **385 participants**, selected using a convenience sampling method. Responses may be influenced by individual perceptions, attitudes, and willingness to participate, which may introduce response bias.

## **Spatial Limits:**

The study is conducted in a **private hospital in Riyadh, Saudi Arabia**, which may limit the generalizability of the findings to other regions or to public healthcare institutions with different operational structures.

## **Temporal Limits:**

The study is carried out during a specific data collection period. Changes in healthcare processes, patient flow, or service delivery over time may affect the applicability of the findings in future contexts.

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