



STUDY OF THE IMPACT OF PATIENT APPOINTMENT  
SYSTEMS ON SERVICE QUALITY AT THUMBAY  
UNIVERSITY HOSPITAL'S OUTPATIENT DEPARTMENT  
IN AJMAN







# Dissertation Presentation

Presenter: Nandini Mehandiratta

Roll no : 1332

Course : MBA-HM 2nd year Healthcare Management

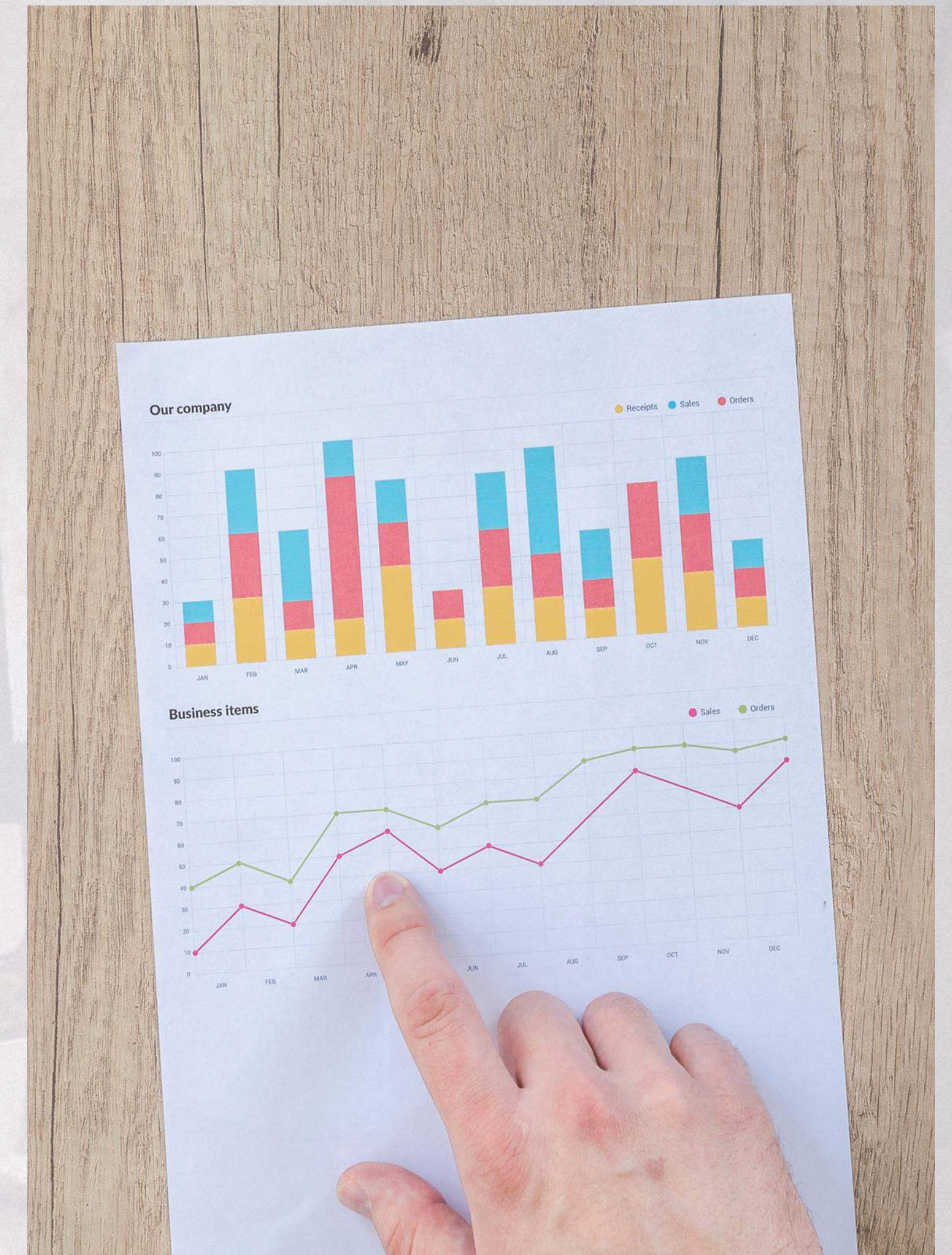




# BACKGROUND

A patient appointment system in the outpatient department (OPD) is crucial for efficient and effective healthcare services. Traditional walk-in systems often result in long waiting times, overcrowding, and patient dissatisfaction. The need for a patient appointment system arises to provide timely access to care, optimize resource allocation, reduce waiting times, enhance patient satisfaction, and improve overall healthcare access and safety. Implementing a patient appointment system enables efficient workflow management, facilitates data collection and analysis, and promotes informed decision-making. The importance of a patient appointment system lies in its ability to streamline operations, improve patient experience, and meet the evolving needs and expectations of patients.

With this backdrop this study was carried out to make available a detailed analysis of the association between service quality and the patient appointment systems, with focus on critical examination and observation-based outcomes.





# OBJECTIVES



To investigate the effectiveness of the patient appointment system.

To determine the impact of the patient appointment system on service quality.

To suggest methods for enhancing the Hospital's outpatient department's scheduling process and level of service.



# PATIENT APPOINTMENT SYSTEM TYPES

**Phone-based Appointment System :** With the assistance of hospital employees, patients can contact the hospital's hotline to make appointments

**Online appointment system :** With the use of this system, patients can schedule their appointments online via the hospital's website or by using a distinct online portal.

**Mobile Appointment System (MAS):** The MAS is used to allow patients to choose and book their appointments using their smartphones by using the mobile applications.





# ABOUT THUMBAY UNIVERSITY HOSPITAL APPOINTMENT SYSTEM

The hospital's innovative web-based appointment booking system for patients was crafted to make the process of appointment booking quicker and easier. The system has a number of features and functions that improve patient experience and streamline operations. The appointment system has been used by patients to book appointments with Thumbay University Hospital by using a dedicated smartphone application or the official website of the hospital. This enables easy management of appointments via a patient account and secure login process.





# PROBLEM STATEMENT

In recent years, the OPD at Thumbay University Hospital has undergone significant changes aimed at enhancing patient experiences and streamlining operations. However, the appointment booking system has been criticized for establishing inefficient appointment booking system, resulting in long wait hours at OPD, patient dissatisfaction, and degraded service quality. These problems have underlined the need of researching the influence of present Patient Appointment Systems (PAS) on service quality in order to develop effective solutions. As the current system fails to keep up with the increasing needs and expectations of patients





# PATIENT REVIEWS



Ahmed Elazrak  
10 reviews



★ ★ ★ ★ ★ a month ago

Very bad experience and very poor service, Frist delay for xry appointments (insurance approved )and delay from end side , however I tried to call to get appointment and finally booked , I went on time to hospital and no parking available taken much time , so I approached the reception for payment and they informed only 10 minutes there is other patient but they lie and I waited more than 2 hours, really very poor experience and they do not care about patient. Only receptionist (Sukina )she tried to help but no response from X-ray team.



Shahul Hameed  
7 reviews



★ ★ ★ ★ ★ a year ago

Worst experience in taking appointment. Unqualified staff in call center. They will never answer our call. And if we needs to talk to an department, they will connect after half an hour waiting they will cut the call. Even they dont have current update with call center team. They will say one rate patient affairs will say different rate. Still i didn't know what is the current price for Circumcision for my 3 year old boy. With my many years experience i am writing this,. i have complained several times regarding this also. No action has been taken. Worst and extremely worst. No answer after waiting 30 minutes on call. to connect to the department



Khaleel Madridista  
4 reviews



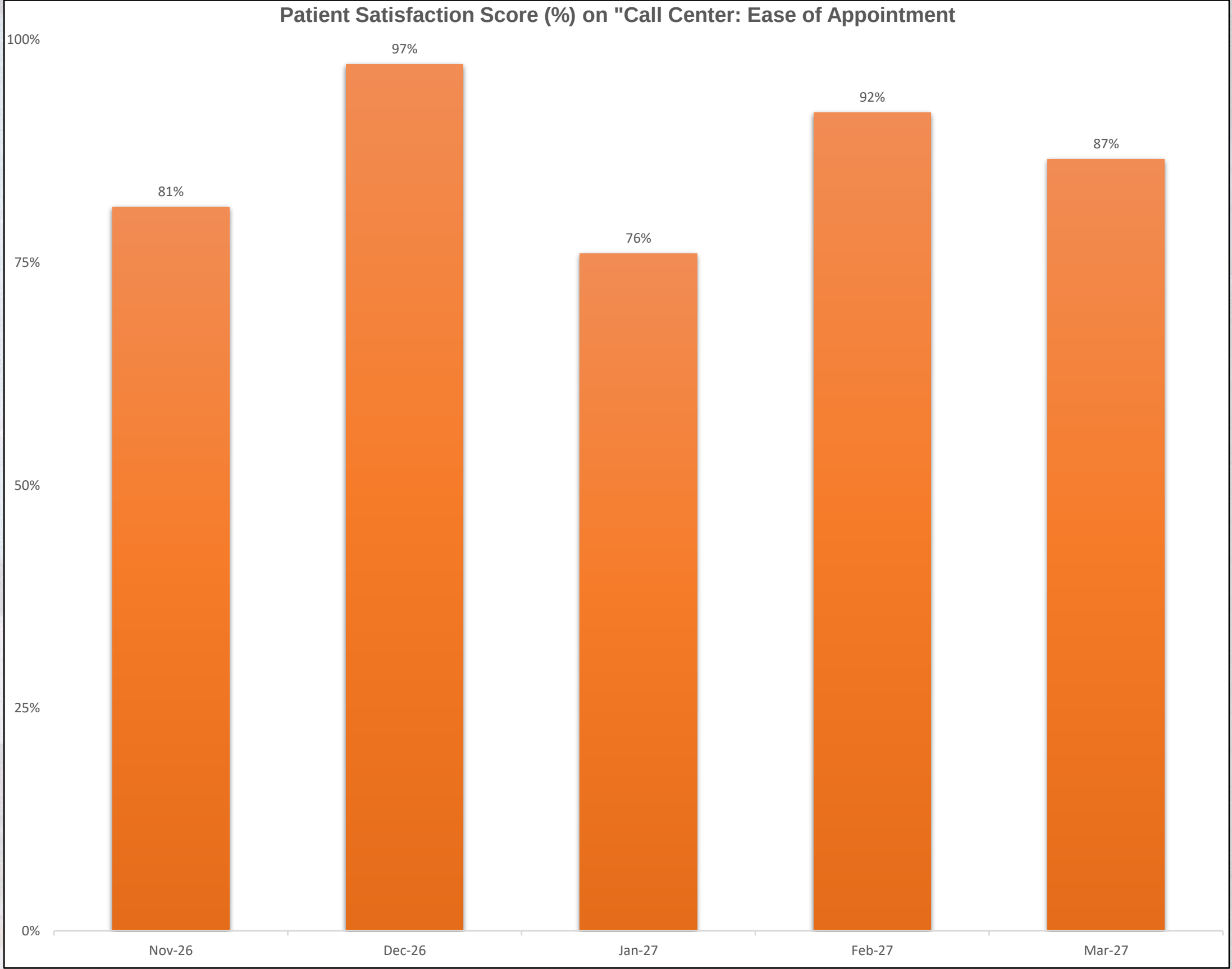
★ ★ ★ ★ ★ 2 months ago

When you book appointment with doctor few days ago  
And when you reach the hospital you still have to wait  
few hours and they don't care you had appointment  
You just have to sit and wait in line with whoever came  
that day without any appointments  
Very disappointing  
Please fix these  
Talked with staff even they agree it's messed up and  
can't do anything about it



The graph depicts patient ratings of the ease of the appointment system, revealing a disturbing pattern of dropping scores on a monthly basis. The current situation raises major concerns and highlights the importance of conducting a thorough investigation to resolve the underlying issue.

| Months               | Nov-22                           | Dec-22 | Jan-23 | Feb-23 | Mar-23 |
|----------------------|----------------------------------|--------|--------|--------|--------|
| RATINGS              | CALL CENTER: Ease of Appointment |        |        |        |        |
| Excellent            | 54%                              | 65%    | 46%    | 65%    | 67%    |
| Good                 | 27%                              | 32%    | 30%    | 27%    | 20%    |
| Average              | 6%                               | 2%     | 7%     | 5%     | 3%     |
| Below Average        | 6%                               | 0%     | 10%    | 1%     | 2%     |
| Poor                 | 6%                               | 1%     | 7%     | 2%     | 8%     |
| Satisfaction Score % | 81%                              | 97%    | 76%    | 92%    | 87%    |



Patient Satisfaction Score ( % ) From Nov. 2022 to March 2023



# METHODOLOGY

1. Key Research Question
2. Research Design
3. Study Setting
4. Study Population
5. Research Procedures/ Approaches
6. Sample Size Calculation
7. Sampling Technique
8. Study Instruments





# Key Research Question

- How does the implementation of Patient Appointment Systems impact the service quality at Thumbay University Hospital's Outpatient Department in Ajman?
- The results of this study can offer useful advice and insights for managing and implementing appointment systems optimally, which will ultimately result in higher service quality, better patient experiences, and greater patient satisfaction. By doing this study, I have the chance to advance our understanding of healthcare administration and have an advantageous impact on how Thumbay University Hospital provides healthcare services.

## Research Design

- The quantitative research approach used in this study includes a cross-sectional survey. As part of the data collection method, patients who made appointments through the patient appointment system and proceeded to the Thumbay University Hospital's outpatient department answered a prepared standard questionnaire.



# Study Setting

The study was conducted in Ajman at the outpatient department of Thumbay University Hospital.

# Study Population

- Inclusion Criteria: Adult patients (18 years and older) who have used the online patient appointment system and have visited the outpatient department at Thumbay University Hospital meet the inclusion criteria.
- Exclusion criteria: Patients who did not meet the study's inclusion requirements or who did not give their informed consent were not included in the research study.



# Research Procedures/ Approaches

**Step 1 :** Consent/Involvement of Participants

**Step 2 :** Questionnaire administration

**Step 3 :** Data Collection

**Step 4 :** Data cleaning and preparation

**Step 5 :** Data analysis

## Sample Size Calculation

A sample size of 385 patients was chosen based on a 95% confidence level, a 5% margin of error, and an expected population of 15,000 patients (3 months) who used the outpatient's department appointment system.



# Sampling Technique

The study participants were chosen using a convenience sampling technique. Patients who scheduled appointments online with the outpatient department were included in the study.

# Study Instruments

A structured questionnaire was part of the study tool. The purpose of the questionnaire was to gather information on how satisfied patients were with their appointment schedules and the level of the services they received.



# DESIGNED STRUCTURED QUESTIONNAIRE

Questionnaire included questions about the duration of the wait, the ease of making an appointment, the behaviors of the employees, communication, and general satisfaction.

<https://forms.gle/HdGVtEdmm2ZdHWd58>

**How satisfied you are with the present Patient Appointment System?**

**Scan the QR Code to share your appointment experience with us!**



**Dear Respondent,**

**Myself Nandini, I am conducting research for my dissertation on the topic of "Patient Appointment System." Your feedback will be crucial in helping me understand how satisfied you are with the current appointment system.**

**The purpose of this questionnaire is to gather information about your experiences with the present appointment system. The information you provide will be kept confidential and will be used solely for academic purposes. Please answer the questions after scanning the above QR code to the best of your knowledge and experiences.**

**Please help us in serving you better!**



# ETHICAL CONSIDERATIONS

**Confidentiality**

**Data protection**

**Research Integrity**

**Voluntary Participation**



# RESULTS

The study's findings, highlighting the analysis performed with the SPSS software. The use of SPSS allowed for an in-depth review of the obtained data, providing comprehensive insights into the impact of patient appointment systems on service quality at Ajman's Thumbay University Hospital's Outpatient Department. Both descriptive and inferential analyses were performed using several statistical techniques within the SPSS tool to give a robust assessment of the research study objectives and hypotheses.





# RESULTS

| Variable            | Frequency | Percentage |
|---------------------|-----------|------------|
| 1. Gender           |           | (%)        |
| - Male              | 281       | 73         |
| - Female            | 104       | 27         |
| - Others            | 0         | 0          |
| 2.Age (years)       |           | (%)        |
| -18-25 years        | 33        | 8.6        |
| - 26-35 years       | 148       | 38.4       |
| -36-45 years        | 41        | 10.6       |
| -Over 45 years      | 163       | 42.3       |
| 3.Hospital Visit    |           | (%)        |
| -First-time visitor | 120       | 31.2       |
| -Occasionally       | 39        | 10.1       |
| -Frequently         | 32        | 8.3        |
| -Regularly          | 194       | 50.4       |

Demographic Variables Responses

| Variable                                         | Frequency | Percentage |
|--------------------------------------------------|-----------|------------|
| 1. Mode of Appointment Booking                   |           |            |
| - Online Appointment through hospital website    | 16        | 4.2        |
| - Call the hospital @067705555                   | 369       | 95.8       |
| 2. Overall Patient Appointment System Experience |           |            |
| 1. Very dissatisfied                             | NIL       | NIL        |
| 2. Dissatisfied                                  | 30        | 7.8        |
| 3. Neutral                                       | 194       | 50.4       |
| 4. Satisfied                                     | 11        | 2.8        |
| 5. Very Satisfied                                | 150       | 39         |

Patient Appointment System Usage Variable Responses



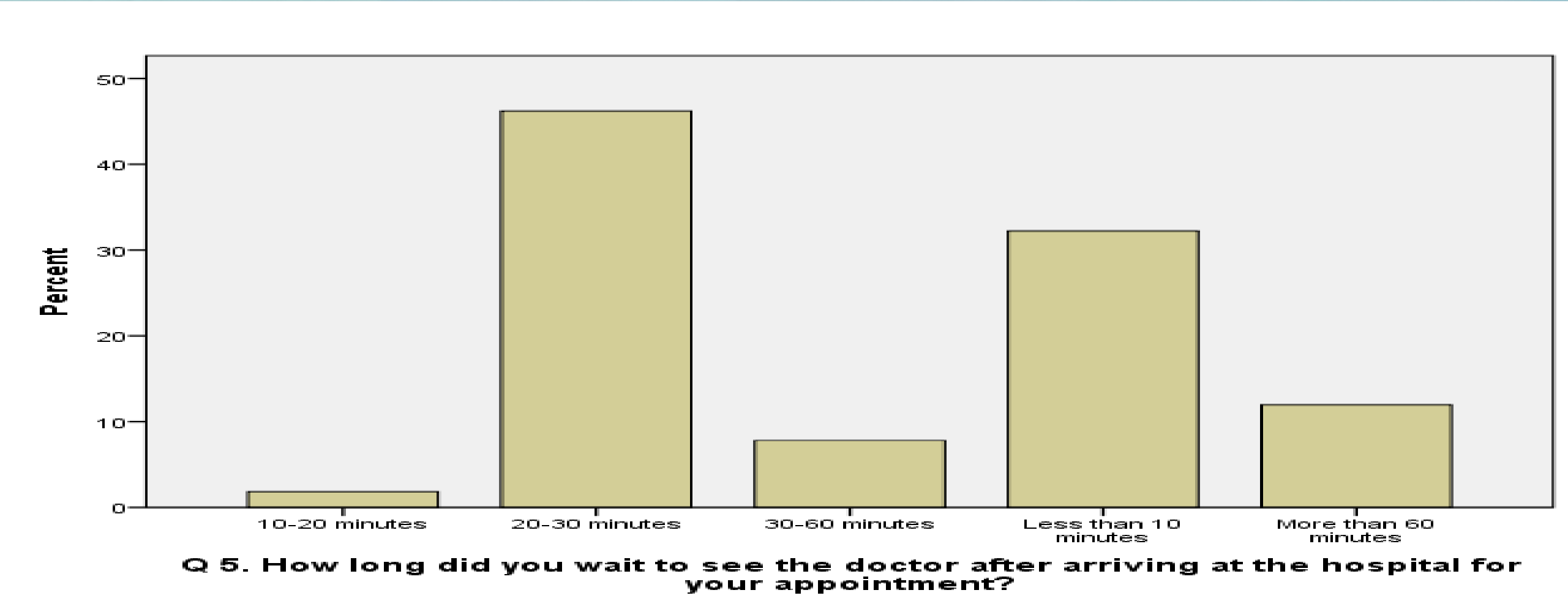
# RESULTS

## IMPACT OF PATIENT APPOINTMENT SYSTEM ON SERVICE QUALITY

| How satisfied are you (1-5 scale) with the service quality of Thumbay University Hospital's Outpatient Department in terms of staff behaviour and communication, waiting time, cleanliness and hygiene, medical equipment and facilities, privacy, and confidentiality? |           |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|
| Variables                                                                                                                                                                                                                                                               | Frequency | Percentage |
| 1. Very Dissatisfied                                                                                                                                                                                                                                                    | NIL       | NIL        |
| 2 – Dissatisfied                                                                                                                                                                                                                                                        | 197       | 51.2       |
| 3- Neutral                                                                                                                                                                                                                                                              | 166       | 43.1       |
| 4- Satisfied                                                                                                                                                                                                                                                            | NIL       | NIL        |
| 5- Very Satisfied                                                                                                                                                                                                                                                       | 22        | 5.8        |

| Did you receive a reminder for your appointment through the patient appointment system? |           |            |
|-----------------------------------------------------------------------------------------|-----------|------------|
| Variable                                                                                | Frequency | Percentage |
| No                                                                                      | 214       | 55.6       |
| Yes                                                                                     | 171       | 44.4       |

| How long did you wait to see the doctor after arriving at the hospital for your appointment? |           |            |
|----------------------------------------------------------------------------------------------|-----------|------------|
| Variables                                                                                    | Frequency | Percentage |
| Less than 10 minutes                                                                         | 124       | 32.2       |
| 10-20 minutes                                                                                | 7         | 1.8        |
| 20-30 minutes                                                                                | 178       | 46.2       |
| 30-60 minutes                                                                                | 30        | 7.8        |
| More than 60 minutes                                                                         | 46        | 11.9       |





# RESULTS

## IMPACT OF PATIENT APPOINTMENT SYSTEM ON SERVICE QUALITY

| Was the waiting area comfortable and clean? |           |            |
|---------------------------------------------|-----------|------------|
| Variables                                   | Frequency | Percentage |
| No, very uncomfortable and unclean          | 280       | 72.7       |
| Yes, somewhat comfortable and clean         | 37        | 9.6        |
| Yes, very comfortable and clean             | 68        | 17.7       |

| Did the staff at the hospital treat you with respect and kindness? |           |               |
|--------------------------------------------------------------------|-----------|---------------|
| Variables                                                          | Frequency | Valid Percent |
| Neutral                                                            | 23        | 6.0           |
| No, never                                                          | 63        | 16.4          |
| Yes, always                                                        | 299       | 77.7          |

| How likely are you to recommend Thumbay University Hospital's Outpatient Department to others? |           |               |
|------------------------------------------------------------------------------------------------|-----------|---------------|
| Variables                                                                                      | Frequency | Valid Percent |
| Very Likely                                                                                    | 265       | 68.8          |
| Somewhat Likely                                                                                | 3         | .8            |
| Neutral                                                                                        | 9         | 2.3           |
| Somewhat Unlikely                                                                              | 107       | 27.8          |
| Very Unlikely                                                                                  | 1         | .3            |



# RESULTS

The inferential analyses performed with SPSS software gave useful insights into the relationship between variables and enabled hypothesis testing to establish the importance of these correlations.

| Chi-Square Tests Results: |                      |    |                       |
|---------------------------|----------------------|----|-----------------------|
|                           |                      |    |                       |
| Chi-Square Test           | Value                | Df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square        | 768.512 <sup>a</sup> | 24 | .000                  |
| Likelihood Ratio          | 360.147              | 24 | .000                  |
| N of Valid Cases          | 385                  |    |                       |

| Symmetric Measures: Contingency Coefficient |                         |       |              |
|---------------------------------------------|-------------------------|-------|--------------|
| Inferential Analysis                        |                         | Value | Approx. Sig. |
| Nominal by Nominal                          | Contingency Coefficient | .816  | .000         |
| N of Valid Cases                            |                         | 385   |              |

| Symmetric Measures: Phi & Cramer’s V |            |       |              |
|--------------------------------------|------------|-------|--------------|
| Inferential Analysis                 |            | Value | Approx. Sig. |
| Nominal by Nominal                   | Phi        | 1.413 | .000         |
|                                      | Cramer's V | .706  | .000         |
| N of Valid Cases                     |            | 385   |              |



# DISCUSSIONS



The descriptive analyses performed in this study using SPSS software provided valuable insights into the demographic characteristics of the study participants, as well as their experiences with the patient appointment system and service quality at Thumbay University Hospital's Outpatient Department in Ajman

- In terms of demographics, the study discovered that men (73%) outnumbered women (27%). In terms of age distribution, a large proportion of participants (42.3%) were over 45 years old, followed by those aged 26 to 35 years (38.4%). When the frequency of hospital visits.



# DISCUSSIONS

The most popular method of appointment booking was by contacting the hospital (95.8%), while a lower percentage (4.2%) used online appointments through the hospital website. When asked about their overall experience with the patient appointment system, the majority of participants (50.4%) reported a neutral experience, followed by very satisfied (39%) and satisfied (2.8%) responses.

Various aspects, such as staff behavior and communication, waiting time, cleanliness and hygiene, medical equipment and facilities, privacy, and confidentiality, revealed that a significant number (51.2%) were dissatisfied or had a neutral opinion (43.1%). However, a small percentage (5.8%) reported being really satisfied.



# DISCUSSIONS

The waiting time varied, with the majority (46.2%) waiting between 20 and 30 minutes, while a significant portion of participants (55.6%) reported not receiving reminders.

This study implies that improvements to the appointment system can lead to higher levels of service quality for patients. The statistical tests' substantial relationships highlight the relevance of evaluating the patient appointment system as a critical aspect in enhancing overall service quality.



# CONCLUSION

The assessment ascertained key demographic parameters of the respondents, including age groups, gender and the frequency of visits to the hospital. An enhanced understanding of the patient experiences with the appointment booking system and service quality of the hospital has been ascertained with this research's findings

The respondents derived different levels of satisfaction from different parameters of service quality at the hospital, with a considerable number of patients demonstrating displeasure or lack of satisfaction.

These findings highlight the significance of an efficient and competent appointment system in determining the service quality outcomes of a facility. These emphasize the need for improvements in areas that include staff behavior and communication with the patients, waiting time, sanitation and hygiene, and general waiting room comfort.



# RECOMMENDATIONS

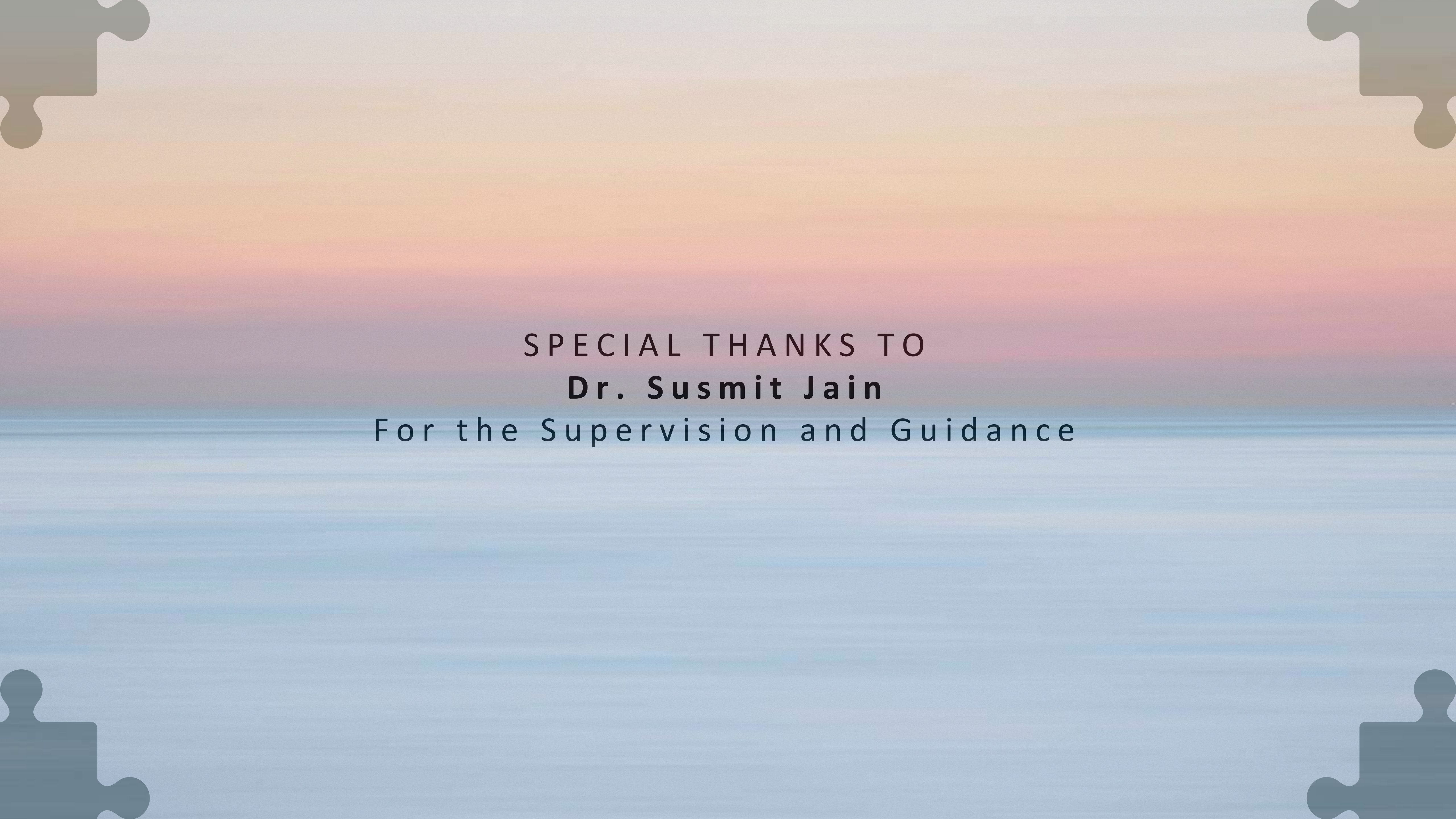
Introduce an easy-to-use online appointment booking system to make scheduling appointments more convenient and less reliant on phone calls. Ensure that the hospital's website is integrated seamlessly.

Implement initiatives to reduce waiting times, such as simplifying patient flow, improving scheduling algorithms, and maintaining effective communication amongst medical staff members

To lower no-show rates and boost patient punctuality, set up a system to deliver appointment reminders to patients via several channels (such as SMS and email).

By routinely analysing procedures, comparing them to best practices, and applying creative ideas to improve the appointment system and overall service quality, you may cultivate a culture of continuous quality improvement.





SPECIAL THANKS TO  
**Dr. Susmit Jain**  
For the Supervision and Guidance



THANK  
YOU