

DISSERTATION SYNOPSIS

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1. TITLE: "Optimizing Waiting Time and Operational Efficiency in the Radiology Department: A Case Study of Manipal Hospital, Varthur Road, Bengaluru"

2. INTRODUCTION: This section will provide a brief overview of the significance of waiting time and operational efficiency in the radiology department of healthcare organizations. It will highlight the importance of reducing patient waiting times for diagnostic procedures, enhancing operational efficiency to meet patient demand, and improving overall patient satisfaction. The purpose of the study will be to investigate strategies for optimizing waiting time and operational efficiency in the radiology department at Manipal Hospital.

3. RESEARCH QUESTION: How can waiting time be reduced and operational efficiency be improved in the radiology department at Manipal Hospital?

4. OBJECTIVES:

- To assess current waiting times for diagnostic procedures in the radiology department.
- To identify factors contributing to waiting time and operational inefficiencies.
- To propose strategies for reducing waiting time and improving operational efficiency.
- To evaluate the effectiveness of the proposed strategies in enhancing patient flow and departmental performance.

5. HYPOTHESIS:

- Null hypothesis: There is no significant relationship between implementation of strategies to reduce waiting time and improvement in operational efficiency in the radiology department at Manipal Hospital.
- Alternative hypothesis: Implementation of strategies to reduce waiting time will lead to a significant improvement in operational efficiency in the radiology department at Manipal Hospital.

6. MATERIAL AND METHODS:

- **STUDY DESIGN:** Descriptive study design.
- **SETTING:** Manipal Hospital, Varthur Road, Bengaluru.
- **STUDY POPULATION:**
 - **Inclusion criteria:** Patients undergoing diagnostic procedures in the radiology department during the study period.
 - **Exclusion criteria:** None.
- **STUDY TOOLS:** Observation checklists, and operational data analysis.
- **DURATION OF STUDY:** From March 26, 2024, to June 26, 2024.
- **SAMPLE SIZE:** Convenient sampling of 200 patients.
- **SAMPLING TECHNIQUE:** Convenient sampling.
- **DATA COLLECTION PROCEDURE:** Questionnaires will be administered to patients to gather feedback on waiting times and satisfaction levels. Operational data will be collected from hospital records.
- **OPERATIONAL DEFINITIONS:** Waiting time defined as the duration from patient registration to completion of diagnostic procedure. Operational efficiency defined as the ability to maximize patient throughput while minimizing resource utilization.

7. DATA ANALYSIS PLAN:

- **Descriptive Statistics:** Calculate means, standard deviations, and frequencies to summarize survey responses and describe satisfaction levels and perceptions of operational processes.
- **Inferential Statistics:** Conduct correlation analysis and regression analysis to examine relationships between variables and identify predictors of satisfaction.
- **Comparative Analysis:** Compare satisfaction levels between patient and employee groups and explore differences based on demographic and organizational factors.

8.ETHICAL CONSIDERATIONS: Informed consent will be obtained from all participants. Data security, privacy, and confidentiality will be ensured. Patients' identities will be anonymized in all reports and publications.

9.IMPLICATIONS OF RESEARCH: The research findings will provide insights into strategies for reducing waiting time and improving operational efficiency in radiology departments, thereby enhancing patient satisfaction and overall departmental performance. These implications will be valuable for healthcare organizations aiming to optimize radiology services.

10.REFERENCES:

- <http://dx.doi.org/10.21474/IJAR01/8388>
- <https://bmjopen.bmj.com/content/2/6/e001255.share>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9640865/#:~:text=Reducing%20Wait%20Times%20for,and%20Joseph%20P.%20Erinjeri>

