A Study on effectiveness of patient reported experiences measures in CT and MRI at a Multispecialty Hospital in Chennai

Mr.S.Samuel rajkumar [1], Ms.S.Mahasambavi[2]

[1]*Assistant Professor, Department of Hospital Administration, Dr. N.G.P Arts and Science College*

[2]*Student, Department of Hospital Administration, Dr. N.G.P Arts and Science College*

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Abstract—This research assesses how effective Patient-Reported Experience Measures (PREMs) are in improving patient satisfaction and experiences within Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) departments. A combination of surveys and interviews was employed, utilizing a mixed-methods approach to collect patient input on various factors such as communication, comfort level, waiting periods, and the professionalism of staff members. The results emphasize the capability of PREMs to pinpoint areas needing enhancement and guide initiatives aimed at quality improvement. The study shows that PREMs can serve as an important resource for radiology departments to advance patient-centered care, boost satisfaction, and cultivate trust in healthcare services. The findings have significant implications for devising effective strategies for implementing PREMs and optimizing patient care within radiology departments.

1.INTRODUCTION:

The study aims to evaluate the effectiveness of Patient Reported Experience Measures (PREMs) in radiology, specifically CT and MRI diagnostic imaging procedures. It seeks to understand the relationship between clinical results, patient satisfaction, and areas for improvement in radiology services. The research will also assess the effectiveness of communication about these procedures.

Patient Reported Experience Measures (PREMs) are tools that gather individual feedback on medical care quality, focusing on aspects like communication, comfort, and satisfaction, especially crucial in fields like radiology.

2. THE OBJECTIVES OF THE STUDY:

- To Study the patient satisfaction level about their CT and MRI scan.
- To analyze the factor influencing patient experience in radiology.
- To recommend or suggest measures to improvise patient measures in radiology.

3. REVIEW OF LITERATURE:

1. According to Muhammad Khalilur Rahman, et all[1] (2023), Halal Healthcare Services: Patients Satisfaction and Word of Mouth Lesson from Islamic-Friendly Hospital. Sustainability (2023), 15(2), 1493. Purposive and non-probability random sampling techniques were used in this investigation. With a response rate of 61.8%, the partial least square (PLS) technique was employed to analyse the data of 309 Muslim patients.

2. According to **Rezarta Kalaja,[3] (2023),** this research paper aims to explore the field of patient satisfaction in health care, by performing a literature review on existing healthcare articles that analyse determinants of patient's satisfaction and theories on patient satisfaction assessment. Patient satisfaction is one of the most important factors to determine the success of health care providers.

3.According **to KaioJia Bin, et al[4] (2023),** telemedicine has been widely employed to provide medical care since the

pandemic's onset and can be used to help patients in remote, hard-to-reach areas, including riverfront towns in the Brazilian Amazon region.

4. METHODOLOGY:

This study employed a quantitative research design to evaluate the effectiveness of Patient Reported Experience Measures (PREMs) in the CT and MRI scan section of the radiology department at Mutlispeciality hospital..

4.1 Design of Research:

The research design used in this study is descriptive research. Descriptive research design is a scientific approach employed to systematically observe, document, and examine information about a subject without exerting any influence on it. Its main aim is to deliver a precise and comprehensive depiction of a specific phenomenon, group, or circumstance.

4.2 Data collection

Questionnaire method is used in this study.

A questionnaire in research is a structured set of written or digital questions designed to gather information from individuals or groups for the purpose of data collection and analysis. It is a common research tool used to systematically collect data on various topics, including opinions, attitudes, behaviors, and demographic.

4.3 Study Setting and Period

The study was carried out at a Chennai hospital. The period from December 9, 2024, to February 28, 2025, was used for data collecting and processing.

4.4. Analysis tool

Simple percentage analysis is a technique for examining data or information by representing values as percentages of a whole or a baseline. It includes comparing individual values or elements to the total or a reference point to grasp their relative significance or contribution. This analysis is frequently applied in numerous fields including finance, business, statistics, and economics to make data clearer and easier to understand.
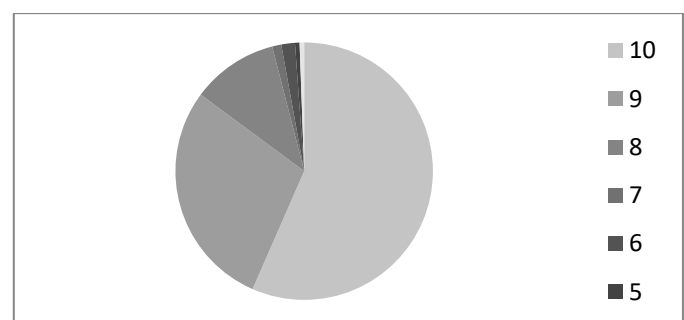
5. ANALYSIS:

CHART- 1.1
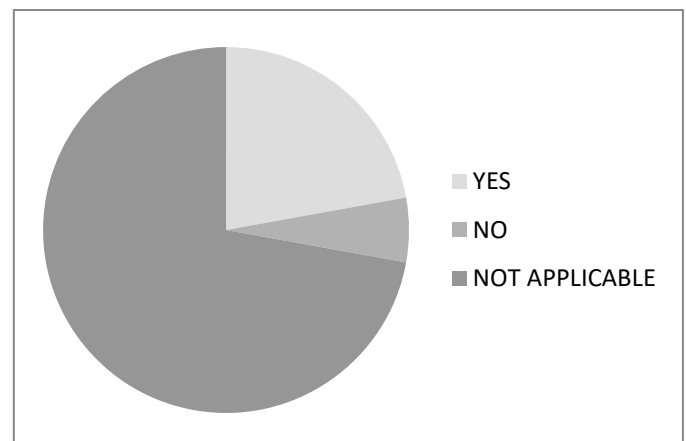
The above table shows that 23% of the respondent have responded as for CT - Did the staff ask you about your last menstruation date and check for any plan for pregnancy. Remaining 5% and 72% of the respondent have responded as no and not applicable.

CHART – 1.2

The above table shows that 99% of the respondents have responded as 10 score.50% of the respondents have responded as 9 score.19% of the respondents have responded as 8 score.2% of the respondents have responded as 7% score. 3% of the respondents have responded as 6 score.1% of the respondents have responded as 5 score.1% of the respondents have responded as 4 score.1% of the respondents have responded as 3 score.

6. FINDINGS AND RECOMMENDATION:

The following results were obtained from the study:

- ➢ 23% of the respondent have responded as for CT - Did the staff ask you about your last menstruation date and check for any plan for pregnancy. Remaining 5% and 72% of the respondent have responded as no and not applicable.

- ➢ 35% of the respondent have responded as the doctor advise for blood tests, which is required before the contrast-enhanced MRI/CT (S. Creatinine & S. Urea). And remaining 12% and 53% of the respondent said that the doctor not advise for blood tests, which is required before the contrast-enhanced MRI/CT (S. Creatinine & S. Urea).

- ➢ 99% of the respondents have responded as 10 score.50% of the respondents have responded as 9 score.19% of the respondents have responded as 8 score.2% of the respondents have responded as 7% score. 3% of the respondents have responded as 6 score.1% of the respondents have responded as 5 score.1% of the respondents have responded as 4 score.1% of the respondents have responded as 3 score.

Recommendation:

- ➢ To provide better communication with patient.
- ➢ PREM'S should be easy understandable to the patient.
- ➢ To provide the staff training and practice.
- ➢ To give clear instruction regarding the procedure, including any pre-scan preparation.
- ➢ Patient should have knowledge about CT\ MRI Scan.
- ➢ Instruct the patient about side effects during scan and contrast.
- ➢ Check whether the menstruation date for the female patient.
- ➢ Documentation should be maintain privacy .

7. CONCLUSIONS:

This research emphasizes the considerable potential of Patient-Reported Experience Measures (PREMs) in improving the quality of care within the CT and MRI divisions of radiology. The results highlight that when effectively implemented, PREMs deliver important insights into patients' views of their care experiences, which can directly impact service enhancements. By gathering feedback on vital elements such as communication, comfort, waiting durations, and staff professionalism, radiology departments can pinpoint areas for focused improvement. Moreover, engaging patients in the feedback process promotes a patient-centered approach to care, aiding in overall satisfaction and trust in healthcare services.

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