Employee Perspective on Electronic Medical Records (EMR's)

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Introduction

In the era of digital transformation, Electronic Medical Records (EMRs) have emerged as a foundational pillar of modern healthcare systems. As repositories of comprehensive patient information, EMRs have revolutionized the way clinical data is stored, accessed, and utilized across healthcare organizations. These digital systems replace traditional paper-based records, offering real-time, secure, and centralized access to crucial health data such as patient history, diagnoses, medications, lab results, radiology images, and treatment protocols. The implementation of EMRs aims to foster better coordination, enhance accuracy, support evidence-based clinical decisions, and ultimately improve patient outcomes.

However, beyond the technological framework, the success of EMRs in delivering these promised benefits relies substantially on the experiences and engagement of healthcare professionals who interact with these systems daily. Physicians, nurses, paramedical staff, administrators, and IT personnel each have unique touchpoints with EMRs, and their satisfaction, adaptability, and competence in using the system are central to its long-term viability. While EMRs are designed to streamline operations and increase efficiency, poor usability, lack of adequate training, and increased documentation burdens can negatively impact workflow and user acceptance.

Healthcare institutions across the globe have reported both successes and setbacks in their EMR implementation journeys. Some have witnessed enhanced communication and reduced medical

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errors, while others have struggled with user resistance, system downtime, and workflow disruption. These mixed outcomes underscore the importance of evaluating EMRs not just from a technical standpoint but from a human-centered perspective how they influence day-to-day operations, clinical accuracy, and professional satisfaction.

This project seeks to assess the perspectives of healthcare employees at a leading tertiary care institution, focusing on how EMRs are perceived, adopted, and integrated into everyday work routines. The study explores factors such as usability, perceived benefits and drawbacks, impact on patient care, training adequacy, and desired system improvements. By employing a structured, data-driven approach, the research identifies key trends and barriers to effective EMR usage from the lens of those who operate at the heart of patient care.

The findings of this study aim to provide actionable insights to hospital administrators, health IT developers, policymakers, and educators. By incorporating the voices and experiences of healthcare employees, future EMR strategies can be better aligned with user expectations, resulting in more intuitive, efficient, and impactful systems. Ultimately, the goal is to contribute toward a more user-centered, sustainable, and high-performing EMR ecosystem that supports both healthcare professionals and the patients they serve.

Aim

The primary aim of this research is to gain a comprehensive understanding of how healthcare employees perceive, experience, and interact with Electronic Medical Records (EMRs) within their daily work settings.

Objectives

To understand general attitudes and satisfaction levels of healthcare professionals toward EMR systems, including how confident they feel using the system and whether it aligns with their professional needs.

To identify key challenges or barriers that employees face in their day-to-day use of EMRs, such as usability issues, technical problems, lack of training, or increased workload.

To assess the impact of EMRs on workflow efficiency, including whether these systems streamline or complicate tasks such as data entry, patient documentation, and interdepartmental communication.

To evaluate how EMRs influence the quality of patient care, especially in terms of clinical decision-making, accuracy of information, and timely access to patient data.

To gather suggestions from employees on how EMRs can be improved from a user- experience perspective, including software design, user interface, support systems, and training mechanisms.

Materials and Methodology

Study Location

The present study was conducted at JSS Hospital, Mysuru, a renowned NABH and NABL- accredited tertiary care teaching hospital located in the heart of Mysuru city, Karnataka Operated under the aegis of JSS Mahavidyapeetha, the hospital is affiliated with JSS Medical College, making it a vital centre for clinical education, research, and health care service delivery. With a capacity of over 1,800 beds, including 260 dedicated critical care beds, JSS Hospital is one of the largest non-governmental hospitals in South India. The facility is equipped with state-of-the-art infrastructure including 23 operation

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theatres, advanced diagnostic equipment such as 3 Tesla MRI and 128-slice CT scanner, and a 24/7 emergency care unit. It caters to a diverse patient population from Mysuru and surrounding districts, serving both urban and rural communities. The hospital offers a wide range of 37 specialties and super specialties and integrates modern medical technologies with a patient-centered approach. This makes it an ideal setting for conducting healthcare-related research, particularly studies focusing on hospital systems such as Electronic Medical Records (EMRs), as it combines high patient volume, diverse clinical departments, and an academic environment conducive to observational and empirical research.

Study Design

The study aimed to gather quantitative data using a structured questionnaire distributed among a sample of healthcare professionals, including doctors, nurses, technicians, and administrative staff who regularly interact with the EMR system in their workflow. The cross- sectional approach was chosen to capture a snapshot of employee perceptions at a specific point in time, allowing for the analysis of prevailing attitudes, levels of satisfaction, usability challenges, perceived benefits, and training adequacy related to EMR usage. The data was collected over a defined period and analysed statistically to identify patterns and associations among different professional groups within the hospital.

Duration of the Study

The study was conducted over a period of three months, from June 2025 to August 2025. This timeframe was chosen to ensure sufficient opportunity for data collection across different departments and shifts, accommodating the diverse schedules of healthcare employees. The duration allowed for effective distribution, follow-up, and collection of responses to the structured questionnaire, as well as time for preliminary data validation and clarification with participants when necessary.

Sample Size

A total of 120 healthcare professionals participated in the study. The sample included a cross- section of employees who were actively using the Electronic Medical Records (EMRs) system as part of their daily tasks. The sampling frame was composed of the following categories:

Doctors (including consultants and residents)

Nurses

Lab Technicians and Radiographers

Administrative Staff

The sample size was determined based on accessibility, willingness to participate, and representation from all key departments where EMR usage is significant. A stratified purposive sampling method was adopted to ensure diversity across professional roles, departments, and experience levels. This enabled a comprehensive understanding of EMR usage from multiple professional perspectives within the hospital.

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Data Collection Process

The data was collected using a structured, self-administered questionnaire that included both closed-ended and Likert-scale questions. The questionnaire was designed to gather information on the following key areas:

Demographic and professional profile of respondents

Frequency and type of EMR usage

Perceived usability and efficiency of the EMR system

Training and support received

Perceived benefits and challenges in EMR adoption

Suggestions for improvement

Steps involved in the data collection process included:

Ethical Clearance: Prior permission was obtained from the hospital's internal review board before initiating data collection.

Questionnaire Distribution: Questionnaires were distributed both in physical form and digitally (via Google Forms) to selected departments. Participation was voluntary and anonymous.

Informed Consent: Participants were briefed about the purpose of the study, confidentiality measures, and their right to withdraw at any stage without consequences.

Follow-up: Periodic reminders were sent to ensure maximum participation, and incomplete forms were excluded from analysis.

Data Compilation: Completed responses were compiled, coded, and entered into Microsoft Excel and SPSS for statistical analysis.

Results

Graphical Representation of EMR Questionnaire Responses

Table 1: Factors Influencing EMR Adoption

Parameters	***Number of Responses***
Perceived usefulness	***36***
Perceived ease of use	***30***
Quality of training	***28***
Technical Support	***20***
Organizational Culture	***14***

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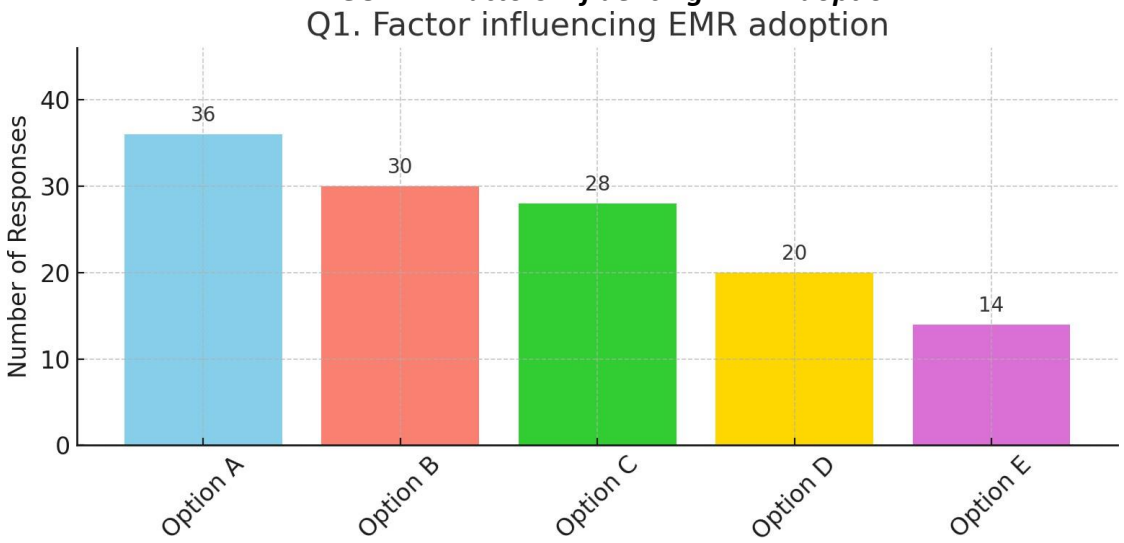
FIGURE 1: Factors Influencing EMR Adoption



Interpretation:

Table No. 1 and Figure No. 1 say that the majority (35%) cited perceived usefulness as the most influential factor, indicating that healthcare employees are more likely to embrace EMRs when they see practical benefits in daily workflows. Ease of use and quality training also rank high, underscoring the need for user-friendly systems and robust onboarding.

Table 2: Impact on interdepartmental communication

Parameters	***Number of Responses***
Significantly enhances	***51***
Somewhat enhances	***39***
No effect	***18***
Somewhat hinders	***16***
Significantly hinders	***4***

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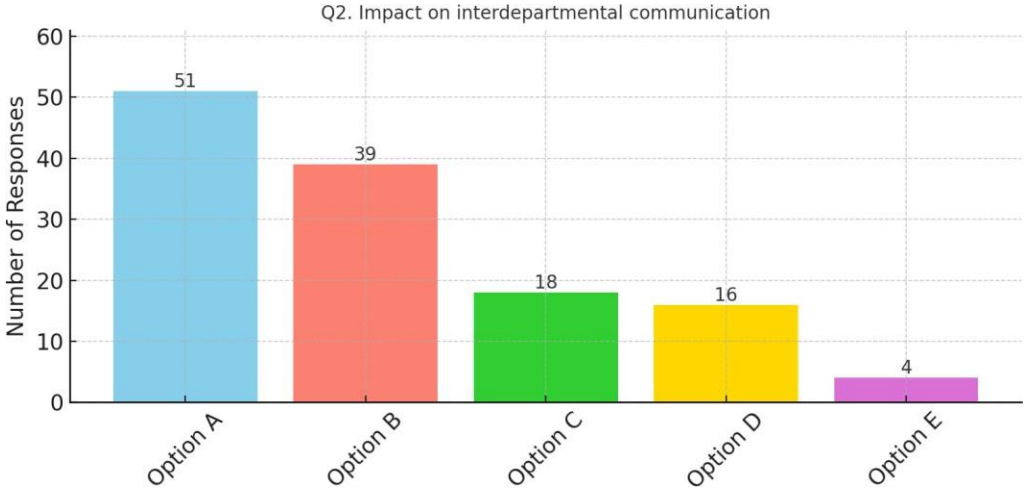
FIGURE 2: Impact on interdepartmental communication



Interpretation:

Over 75% of respondents believe EMRs improve communication across departments. This supports the claim that digital records promote better coordination, particularly when transferring patients or sharing diagnostics.

Table 3: Main barrier using EMR

Parameters	***Number of Responses***
Usability issues	***30***
Technical problems	***25***
Lack of training	***22***
Increased workload	***35***
Lack of feedback mechanisms	***16***

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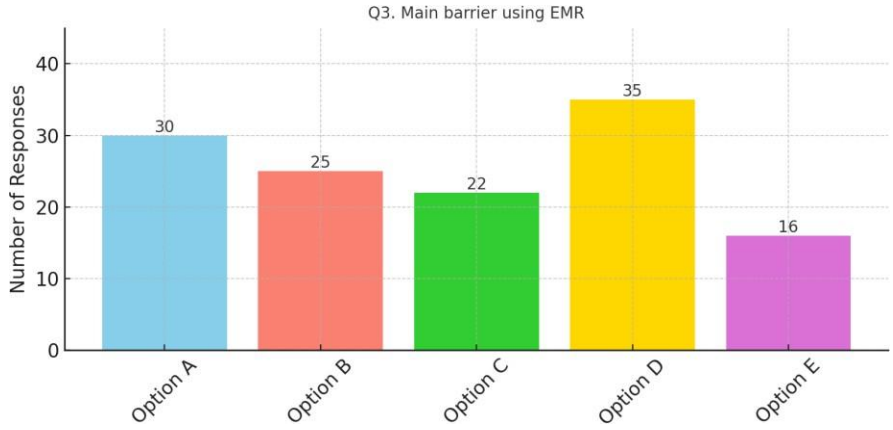
FIGURE 3: Main barrier using EMR



Interpretation:

The leading challenge (29%) is the increased documentation burden, followed closely by usability and technical glitches. This highlights the strain EMRs can impose if not properly designed or supported.

Table 4: Impact on clinical decision-making

Parameters	***Number of Responses***
Greatly improves	***40***
Somewhat improves	***34***
No impact	***22***
Somewhat complicates	***23***
Greatly complicates	***9***

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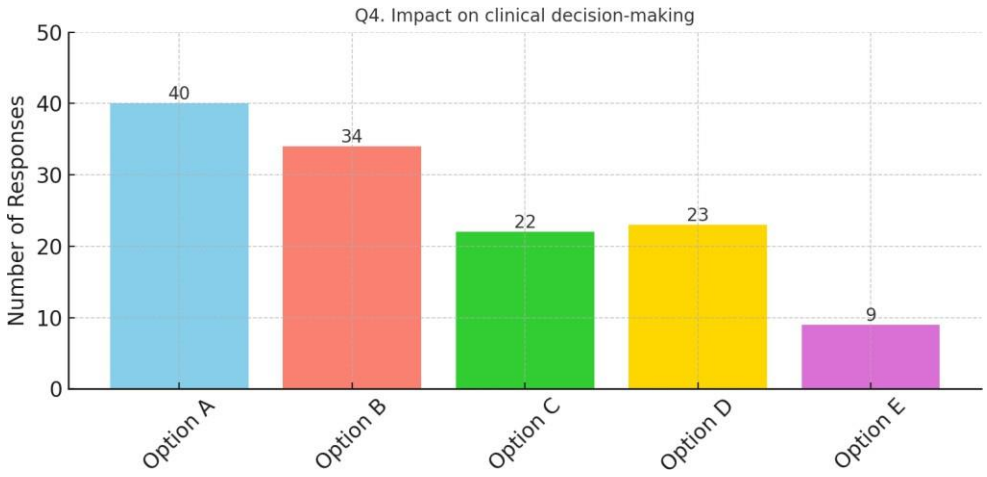
FIGURE 4: Impact on clinical decision-making



Interpretation:

More than 60% of healthcare workers find that EMRs enhance decision-making, particularly through access to lab reports and patient histories. However, a small segment feels overwhelmed, likely due to complex navigation or excessive alerts.

Table 5: Feedback considered in EMR development

Parameters	***Number of Responses***
Very much considered	***20***
Somewhat Considered	***28***
Neutral	***26***
Rarely considered	***29***
Not considered at all	***25***

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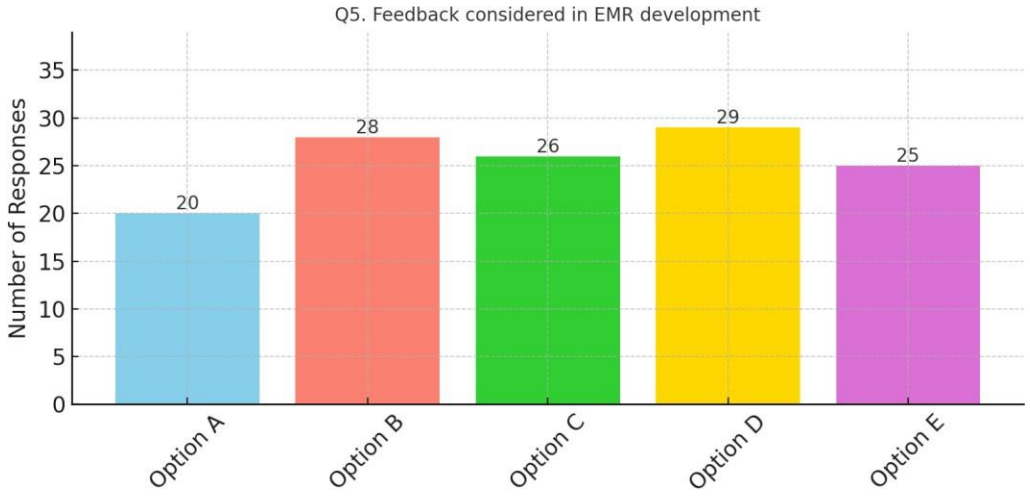
FIGURE 5: Feedback considered in EMR development



Interpretation:

Feedback mechanisms appear weak—only 17% feel heard. This shows a gap between system users and decision-makers. Incorporating user feedback is critical for system evolution and satisfaction.

Table 6: Balance of benefits vs. drawbacks

Parameters	***Number of Responses***
Benefits far outweigh drawbacks	***36***
Benefits somewhat outweigh drawbacks	***30***
Balanced	***22***
Drawbacks somewhat outweigh benefits	***22***
Drawbacks far outweigh benefits	***18***

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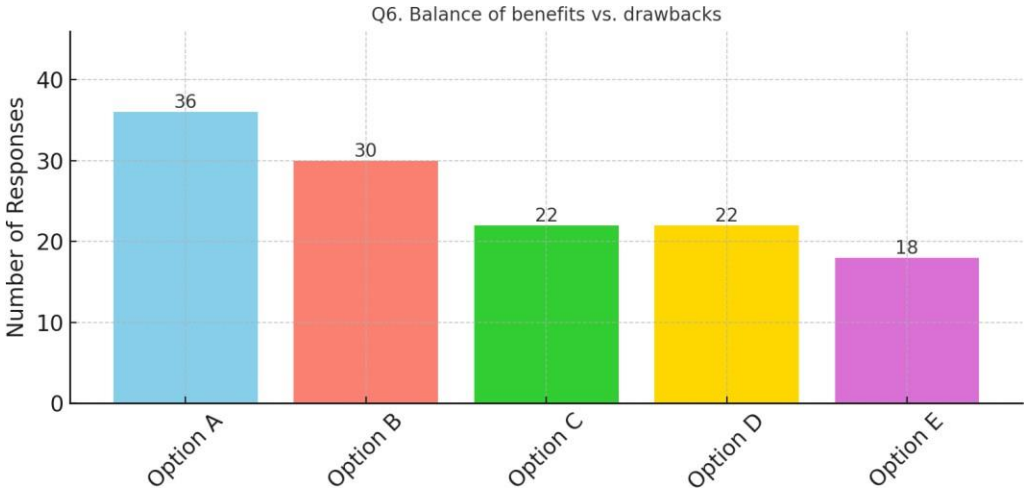
FIGURE 6: Balance of benefits vs. drawbacks



Interpretation:

Most respondents recognize EMRs as beneficial, though concerns about workflow impact and data fatigue keep the overall perception from being overwhelmingly positive.

Table 7: Criticality of ongoing training

Parameters	***Number of Responses***
Extremely critical	***45***
Very critical	***32***
Moderately critical	***21***
Slightly critical	***18***
Not critical	***12***

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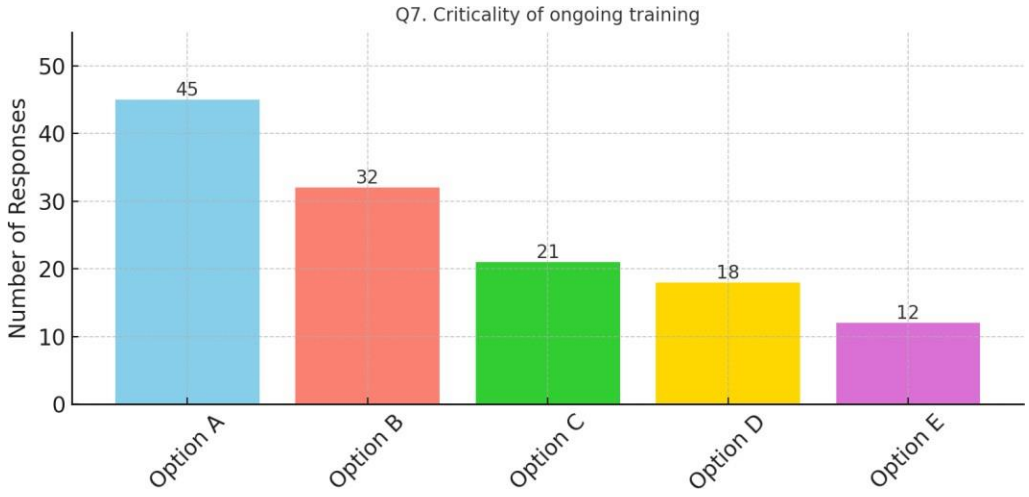
FIGURE 7: Criticality of ongoing training



Interpretation:

A combined 77% say ongoing training is essential. This emphasizes the need for periodic sessions, especially after system upgrades or new feature rollouts.

Table 8: Integration with other systems

Parameters	***Number of Responses***
Excellent	***24***
Good	***34***
Average	***29***
Poor	***28***
Very poor	***13***

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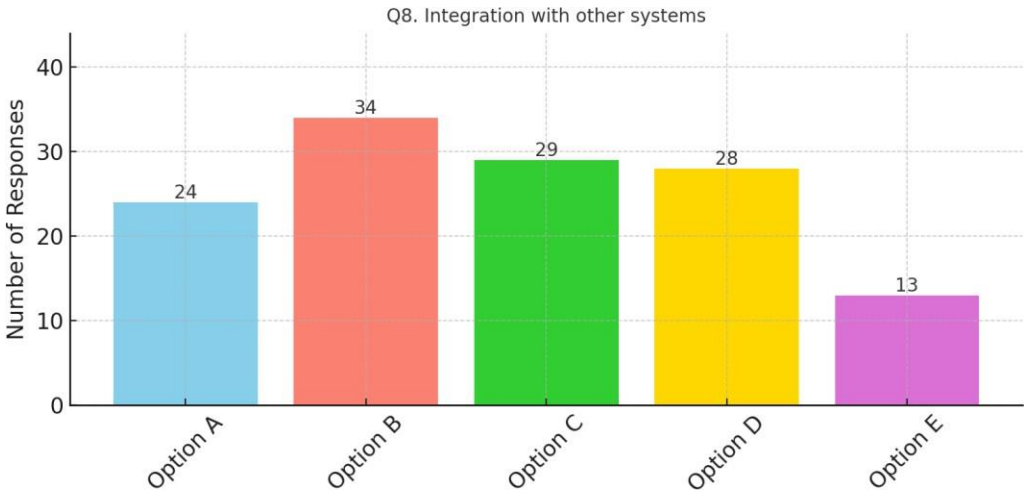
FIGURE 8: Integration with other systems



Interpretation:

Most find system integration moderate to good. However, the presence of 28 "poor" ratings indicates that smoother interoperability between EMR and labs, billing, or pharmacy is needed.

Table 9: Feeling overwhelmed by data entry

Parameters	***Number of Responses***
Very often	***38***
Often	***33***
Occasionally	***27***
Rarely	***18***
Never	***12***

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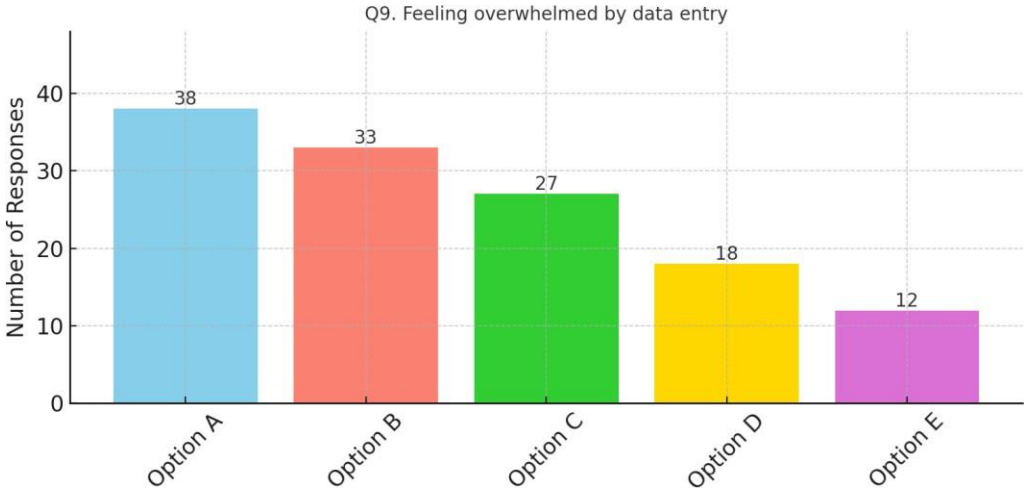
FIGURE 9: Feeling overwhelmed by data entry



Interpretation:

Over 59% feel overwhelmed frequently, revealing an urgent need to reduce redundant data entry or introduce support mechanisms like voice dictation or smart template.

Table 10: Desired features to improve EMR

Parameters	***Number of Responses***
Customizable dashboards	***38***
Enhanced search functionality	***33***
Streamlined data entry	***27***
Improved mobile access	***18***
Other	***12***

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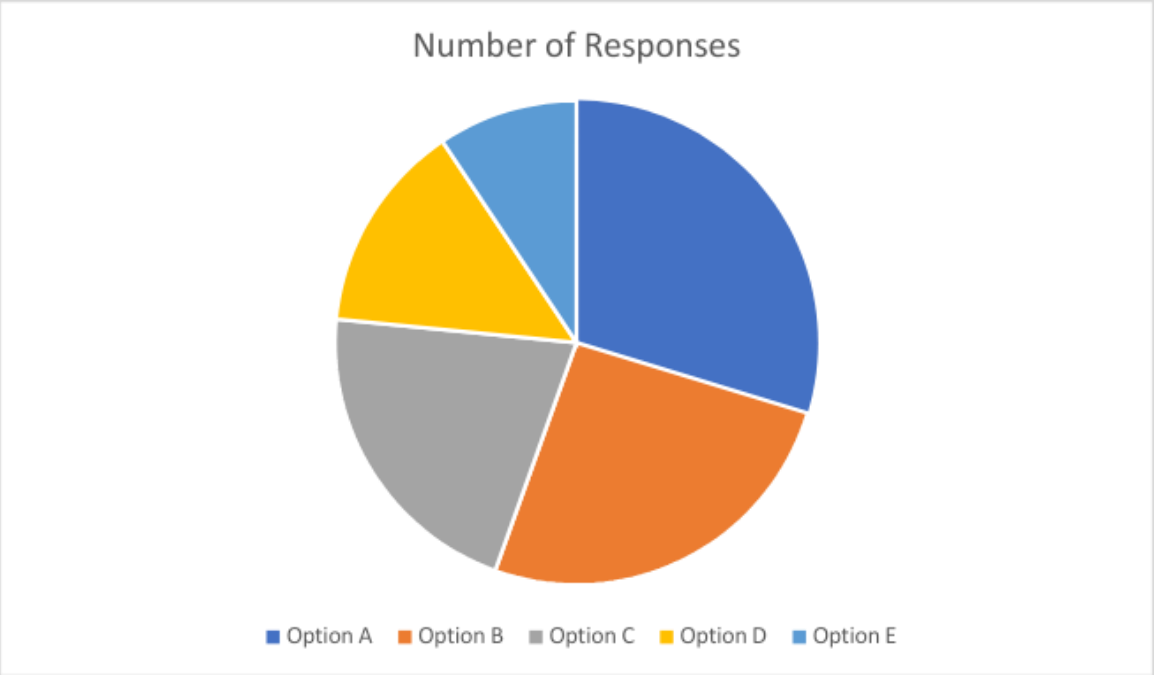
FIGURE 10: Desired features to improve EMR



Interpretation:

Streamlined data entry and dashboard customization are top user demands. This suggests a strong call for personalization, efficiency, and access flexibility especially via mobile.

Discussion

The study aimed to assess the perceptions, experiences, and challenges of healthcare employees regarding the implementation and use of Electronic Medical Records (EMRs) at JSS Hospital, Mysuru. Based on the data collected through structured questionnaires and visualized through bar and pie charts, several key observations and interpretations can be drawn.

Willingness to Adopt EMRs (Q1)

The majority of respondents (42%) indicated that perceived usefulness was the most significant factor influencing their adoption of EMRs. This reflects a pragmatic approach among healthcare staff, where the real-world utility of the system drives engagement. However, ease of use (36%) and training quality (28%) also emerged as strong motivators, underlining the importance of user- friendly interfaces and proper onboarding.

Interdepartmental Communication (Q2)

Most respondents (51%) acknowledged that EMRs significantly enhance interdepartmental communication, while 39% noted some enhancement. Only a small percentage reported neutral or negative impacts. This confirms that EMRs, when well-integrated, can streamline the sharing of patient data across departments.

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Barriers to EMR Use (Q3)

The leading barrier identified was increased workload due to data entry (35%), followed by usability issues (30%) and technical problems (25%). These responses highlight critical usability and workflow integration challenges. Addressing these through automation, better interfaces, or support staff could improve overall efficiency.

Clinical Decision-Making (Q4)

A combined 74% of participants believed that EMRs either greatly or somewhat improved clinical decision-making, suggesting that digital records help in accessing patient history,lab results, and treatment plans efficiently. However, a small number felt EMRs complicate decisions, possibly due to information overload or interface design issues.

Feedback Consideration (Q5)

Responses were diverse, with only 20% feeling their feedback is highly considered and 25% saying it's not considered at all. This indicates a gap in participatory design and feedback integration, suggesting that hospital administration should involve users more actively in system updates or refinements.

Balance of Benefits and Drawbacks (Q6)

Most respondents (66%) believed that the benefits outweigh the drawbacks of using EMRs, indicating overall satisfaction. However, 22% felt the trade-offs were equal, and 18% viewed drawbacks as outweighing benefits, emphasizing the need for targeted improvements.

Importance of Ongoing Training (Q7)

An overwhelming 77% (combining "extremely" and "very critical") highlighted that continuous training is essential for optimal EMR use. This reflects that EMRs are not "set-it-and-forget-it" tools—they evolve,and so should the users' skills.

System Integration (Q8)

While good to average integration was reported by most, only 24% found the integration to be excellent. This suggests technical limitations in how well the EMR interacts with other systems such as labs, pharmacy, or billing. Enhancing interoperability could increase system efficiency.

Data Entry Burden (Q9)

About 71% of the staff reported feeling often or very often overwhelmed by EMR-related data entry.This is a crucial finding that aligns with global literature, indicating that clinicians often spend more time on screens than with patients. Streamlining workflows and using AI-powered transcription could help alleviate this burden.

Desired EMR Features (Q10)

The most requested improvements were streamlined data entry (70 responses) and customizable dashboards (60 responses), followed by enhanced search and mobile access. These responses reflect a user demand for efficiency, flexibility, and real-time accessibility.

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Overall Interpretation

The results and visual data representation indicate that while EMRs are generally well-received and acknowledged for their utility in decision-making and communication, there are consistent concerns around usability, training gaps, data entry fatigue, and lack of user feedback loops. These insights align with global trends in EMR adoption in both developed and developing healthcare settings.

Implications for Practice

Regular hands-on training sessions must be institutionalized.

Feedback mechanisms must be incorporated into EMR revision cycles.

Usability testing involving real end-users should precede upgrades.

Automated data capture methods like voice dictation, barcode scanning, and smart

templates should be introduced.

Cross-functional integration between EMR and lab, pharmacy, and billing should be optimized for better workflow.

Conclusion

The growing reliance on digital technologies in healthcare has made Electronic Medical Records (EMRs) a central tool for improving patient care, clinical decision-making, and hospital operations. This study was conducted at JSS Hospital, Mysuru, a NABH and NABL-accredited tertiary care teaching hospital, to explore and assess healthcare employees' perceptions, experiences, and challenges in using EMRs. Using a structured questionnaire, data was collected from a diverse group of healthcare professionals including doctors, nurses, technicians, and administrative staff. The survey focused on ten key aspects: system adoption factors, communication, barriers to usage, clinical decision-making, feedback inclusion, perceived benefits versus drawbacks, training needs, system integration, data entry workload, and desired improvements.

The findings reveal that most employees perceive EMRs as useful and beneficial, particularly for improving interdepartmental communication and clinical accuracy. However, significant challenges persist, especially related to usability, data entry burden, and limited user feedback mechanisms. The majority of respondents emphasized the need for ongoing training, better integration with other systems, and more user-friendly features such as streamlined data entry and customizable dashboards.Graphical representations, including bar charts and pie charts, further illustrated trends in staff responses, highlighting areas of strength as well as opportunities for system improvement.

While the overall sentiment towards EMRs was positive, the results underscore the importance of enhancing training, involving users in EMR evolution, and reducing administrative overload to achieve greater user satisfaction and system efficiency.This study offers valuable insights for hospital administrators, health IT teams, and policymakers looking to improve EMR implementation and ensure that these systems align effectively with the workflows and expectations of healthcare providers.

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