

Technology Acceptance of a Hospital Information System: Insights from Paramedical Staff in a Tertiary Care Hospital, Kerala

Ms. Rizamol¹, Dr. Veena Santhosh Rai²

¹Doctoral Research Scholar, Institute of Management and Commerce, Srinivas University, Mangalore, India.

²Professor, Department of MBA, Srinivas Institute of Technology, Mangalore, India.

ABSTRACT

The rapid digitization of healthcare has made Hospital Information Systems (HIS) essential for improving patient care, optimizing clinical workflows, and strengthening overall hospital management. This study examined HIS acceptance among 32 paramedical professionals including laboratory technicians, radiology staff, and pharmacists in a tertiary care hospital in Kerala, applying the model of Technology Acceptance Model (TAM) as the guiding framework. Primary data were collected through a structured questionnaire and informal interview and analyzed using descriptive statistics, percentage analysis, and multiple regression. Results showed strong perceived usefulness, with over 84% of respondents agreeing that HIS improves task efficiency and documentation accuracy, and 90% rating the interface as simple and user-friendly. Despite this, about one-quarter expressed neutral or low confidence in daily operations due to limited IT exposure, and 18.8 % reported difficulty obtaining timely technical support. Regression analysis revealed that attitude toward HIS was the strongest predictor of usage intention, explaining 46.4 % of the variance. These findings highlight the need for department specific training, regular refresher programs, and responsive technical assistance to build user confidence and ensure sustainable HIS adoption, offering practical guidance for hospital administrators and policymakers aiming to advance digital health initiatives.

Keywords: Hospital information system, Paramedical staff, Technology Acceptance, Technology Acceptance Model, Digital Health, NABH

1. INTRODUCTION

The rapid digital transformation of health care has made hospital information systems (HIS), a central component of modern clinical and administrative operations. By integrating patient data, clinical information and departmental workflows into a single digital platform, HIS supports timely, evidence-based decision making and increases operational efficiency. However, the success of HIS depends not only on strong infrastructure but also on its acceptance and continued use by health professionals.

A framework for comprehending how perceived utility, usability, and associated factors affect user adoption is offered by the Technology Acceptance Model (TAM). Among healthcare workers, paramedical staff like laboratory technicians, pharmacists, radiographers, and other allied professionals

are vital in ensuring data accuracy, patient safety, and smoothness in hospital operations. Therefore, their engagement in HIS will be imperative to achieving broader goals of digital health.

In Kerala, which is known for its progressive health care system, evaluation of HIS adoption among paramedical staff could provide valuable insights. This study applies the TAM to assess key drivers and barriers to HIS use, focusing on factors such as system usability, training, workflow integration, and organizational support. The findings are intended to guide improvements in HIS design, capacity-building and policy-making for more effective digital healthcare delivery.

Technology Acceptance Model (TAM)

The Technology Acceptance Model is widely recognized in information systems and describes how users accept and use new technologies. One of the most well-known models in the study of technology adoption, TAM was first created in 1989 by Fred Davis and is based on the theory of reasoned action (TRA) (Davis, 1989) [1].

Perceived utility and perceived ease of use are two of the most important presumptions that underpin TAM. According to TAM, perceived usefulness is the extent to which a person believes that utilizing a specific system will enhance his or her performance at work, whereas perceived ease of use is the extent to which a person believes that utilizing the system will be simple. Users' attitudes toward using the technology are influenced by these beliefs, and eventually, their behavioral intention to use the technology results in system usage.

The TAM has changed significantly over time. TAM 2 brought in aspects like social influence and cognitive instrumental processes, while TAM 3 added aspects such as trust and perceived risk, more applicable to e-commerce sites. These eventually gave way to the Unified Theory of Technology Acceptance and Use or UTAUT, which combined the TAM with additional theoretical frameworks that provide a more comprehensive explanation of technology adoption.

TAM is valuable for organizations that want to predict user acceptance.

Paramedical Staff

Paramedical staff are essential health care professionals who support clinical services through specialized technical roles. They contribute significantly to patient care by operating diagnostic equipment, managing laboratory procedures, dispensing medications, and maintaining accurate documentation functions increasingly integrated with digital systems such as hospital information systems (HIS).

This group includes personnel from various departments:

- Laboratory: conducts diagnostic tests, analyzes samples and prepares reports.
- Radiology: Offers imaging services like CT, MRI, and X-rays.
- Pharmacy: Manages medication dispensing, inventory and prescription verification.
- Physiotherapy/Other: Provides therapeutic and supportive care.

These professionals often use HIS for data entry, accessing patient records, and coordination across departments. Their effective engagement with HIS is critical to maintain operational efficiency, ensure data accuracy, and support seamless patient care.

Digital Health

In order to improve the effectiveness, accessibility, and quality of medical services, digital health integrates information and communication technologies. It includes a broad range of instruments and systems, such as wearable technology, telemedicine platforms, mobile health apps, electronic health records, and hospital information systems. These technologies offer real-time monitoring and data-driven decision-making, centralized patient data management, and remote consultation. HIS for diagnostics and

administrative workflow management, telemedicine for virtual care delivery, mHealth for smartphone-based health tracking, and AI-powered analytics for predictive analytics and clinical support. Increased continuity of care, more accurate documentation, reduced incidence of medical errors, smooth facilitation of operations, and more active patient engagement through self-monitoring and personalized health tools are just some of the results from the adoption of digital health.

National Accreditation Board for Hospitals and Healthcare Providers (NABH)

NABH has played a vital role in improving the quality and safety of healthcare delivery in the country. As one of the constituent boards of the Indian Quality Council, NABH sets comprehensive standards for hospitals and health care institutions, focusing on patient rights, infection control, clinical protocols, and continuous quality improvement. NABH accreditation not only ensures conformance to globally benchmarked practices but also creates a culture of accountability and transparency within health care institutions. This framework is particularly important in the Indian context, where diverse healthcare providers operate at different levels of infrastructure and expertise. Incorporating NABH standards into health care research can lead to a deeper understanding of quality assurance mechanisms and their impact on patient outcomes, institutional efficiency, and public trust in the health care system.

2. OBJECTIVES

- To evaluate the awareness and understanding of the Hospital Information System (HIS) among paramedical staff.
- To analyze the key factors influencing HIS acceptance, including training adequacy, system usability, professional experience, and organizational support.
- To identify barriers such as technological issues, workflow challenges, and limited institutional support that hinder full implementation.
- To propose strategies for strengthening HIS training, improving integration, and providing ongoing support tailored to paramedical roles.

3. LITERATURE REVIEW

Davis introduced the Technology Acceptance Model in 1989. This framework is essential for understanding how users accept and use new technologies. The model suggests that two main factors perceived usefulness and perceived ease of use directly affect a person's intention to use a system. Perceived usefulness is about how much a person believes that using a specific system will boost his or her job performance. On the other hand, ease of use is about how effortless the user expects the system to be. TAM has been used in various contexts, including healthcare, to evaluate user acceptance of systems like HIS. Due to its straightforwardness and ability to predict outcomes, it's a useful tool for examining technology adoption among paramedical staff. It highlights both the advantages and challenges of effectively using the system (Davis, 1989) [1].

Hu et al. (1999) conducted a seminal study focused on predicting physicians acceptance of hospital information systems (HIS), emphasizing the unique challenges clinical professionals face in adopting new technologies. The study had the significance of underlining the peculiar difficulties that clinic staff encounters when obtaining for new technologies. Invoking technology adoption models (TAM), the study was able to point to the premise that health care provider's perceived usefulness and subjective norms were major determinants of the use of the system. In contrast to general users, the interaction of physicians with health information systems is mainly shaped by their working conditions, i.e., constant time pressure,

high-risk locations where the actual acceptance of HIS may not so much depend on the technical features of the system but rather on the influence of colleagues and support from management. In this context, behavioral intention to use HIS was highly influenced by attitude toward using the system as well as perceived social pressure, which amounts to supposing that the implementation strategies would have to take into consideration both individual and institutional factors. Hu et al. (1999) not only opened the door to TAM expansion into clinical settings, but also gave a precious clue in the comprehension of technology adoption by health professionals Hu et al., 1999) [2].

Chau and Hu (2002) investigated the factors that influence the adoption of technologies by health care professionals, considering the particular characteristics of the clinical environment. Their study highlighted that, in most cases, physicians and other medical staff evaluate new systems in terms not only of perceived usefulness and ease of use, proposed by the TAM, but also of professional norms and task relevance. Health care professionals are more likely to accept technology if it fits their clinical responsibilities and enhances the efficiency of decision making. In this way, Chau and Hu (2002) underline that voluntariness of adoption will increase acceptance by users who feel free to choose. This research contributed to a better refinement of the technology acceptance model by including contextual variables relevant to health care and, therefore, to the understanding of HIS adoption by paramedical staff (Chau et al., 2002) [3].

Wang et al. (2005) investigated the factors influencing the adoption of health information systems in American hospitals, emphasizing the role of organizational, technological, and environmental determinants. Their study found that hospital size, financial resources, and managerial support were significant organizational factors affecting HIS adoption, with larger hospitals and those with stronger leadership commitment being more likely to implement advanced information systems. Technological factors, including system compatibility and perceived benefits for clinical and administrative performance, also played a critical role in adoption decisions. Additionally, external pressures such as regulatory requirements and competitive environments influenced hospitals' motivation to adopt HIS. The findings highlight that HIS adoption is not solely a technological decision but a strategic organizational process shaped by internal capabilities and external environmental forces (Wang et al., 2005) [4].

Aggelidis and Chatzoglou (2009) examined hospital information system (HIS) acceptance using a modified Technology Acceptance Model (TAM) to address the complexity of healthcare environments. While traditional TAM focuses on perceived usefulness and perceived ease of use, the authors extended the model by incorporating organizational and system-related factors such as job relevance, output quality, training, technical support, and system reliability. Their findings showed that perceived usefulness was the strongest predictor of HIS acceptance, indicating that healthcare professionals are more likely to use systems that enhance job performance and efficiency. Perceived ease of use influenced acceptance indirectly through its effect on perceived usefulness, highlighting the importance of user-friendly system design. Moreover, organizational support factors, particularly adequate training and reliable technical assistance, significantly shaped users' attitudes toward HIS. The study emphasizes that successful HIS adoption is not determined solely by technological characteristics but also by organizational readiness and system reliability, making the modified TAM a valuable framework for understanding and improving HIS acceptance in hospital settings (Aggelidis et al., 2009) [5].

AlQudah, Al-Emran, and Shaalan (2021) conducted a systematic review to examine technology acceptance in healthcare, with a particular focus on theoretical models and determinants influencing adoption. The review identified the Technology Acceptance Model (TAM) as the most frequently applied

framework, followed by extended models such as UTAUT and TAM2, reflecting the need to capture the complexity of healthcare settings. Key factors influencing acceptance included perceived usefulness, perceived ease of use, social influence, facilitating conditions, and system quality, alongside individual characteristics such as users' experience and attitudes. The authors also emphasized the importance of organizational and environmental factors, including training, management support, and infrastructure readiness, in shaping healthcare professionals' acceptance of health information technologies. Overall, the review highlights that technology acceptance in healthcare is a multidimensional process influenced by technological, human, and organizational factors, and it underscores the need for integrated theoretical models to guide effective implementation and sustained use of health information systems (AlQudah et.al., 2021) [6].

4. MATERIALS AND METHODS

Research Design

Cross-sectional research design was adopted to assess the level of acceptance of HIS by paramedical staff in a tertiary care hospital in Kerala. Data regarding various aspects related to key determinants of HIS adoption were collected from paramedical professionals, including perceived usefulness, perceived ease of use, attitude toward HIS and challenges & support.

Research Setting

In a tertiary care hospital in Kerala where a functional hospital information system has been implemented in several clinical and support departments. This setting was selected due to the real-time, routine use of the HIS by paramedical staff, ensuring ecological validity of the findings. Data were collected from staff working in departments such as laboratory, radiology and pharmacy and other units that rely heavily on digital systems for tasks such as data entry, retrieval and inter-departmental communication. These departments were selected because of their high level of interaction with the HIS, making them ideal for assessing the system's usability, acceptance, and associated challenges.

Sources of Data

Primary data for this research were collected directly from the paramedic staff using a structured questionnaire to assess the level of acceptance of HIS. The instrument captured data on key variables: perceived usefulness, ease of use, attitudes toward and challenges of HIS & support.

Questionnaires were distributed to various departments such as laboratory, radiology, pharmacy and other paramedical staff to ensure wide coverage and standardized responses. This approach enabled a robust quantitative analysis of HIS acceptance and the factors influencing it.

Secondary data included hospital records, internal reports, previous academic studies related to HIS, and relevant information obtained from official websites and published documents.

Sampling Design

A random sampling technique was employed to ensure an unbiased and representative selection of paramedical staff actively using HIS. Inclusion criteria included paramedical staff currently employed in a hospital with active or prior experience using HIS, preferably from departments where HIS is routinely used. Exclusion criteria include staff members who do not interact with HIS as part of their professional duties, as well as apprentices, trainees or temporary personnel without direct systems experience.

Sample Size

This study sample consisted of 32 paramedical staff members drawn from relevant departments, including Laboratory, Radiology, Pharmacy, and other operational units where HIS is regularly used. This sample

size reflects the total population of eligible HIS users within the selected hospital setting.

Pilot Study

With five paramedical staff members from the same hospital. The purpose of this phase to evaluate clarity, reliability, and appropriateness of the questionnaire.

Data Collection Tool

A structured questionnaire based on TAM of closed questions that focused on the following constructs: Perceived usefulness, Ease of use, Attitudes toward and challenges of HIS, and support. 5-point Likert scale ranging from "strongly disagree" to "strongly agree" was used to capture responses related to the use of HIS.

Data Processing and Analysis

Upon completion of data collection, all responses were checked for completeness and accuracy before entering into statistical software such as Microsoft Excel and SPSS. Both descriptive and inferential statistical methods used for data analysis.

Frequencies, percentages, and mean scores were calculated as descriptive statistics to summarise data and describe general trends in HIS acceptance. Visual aids such as bar charts, pie charts, and tables were used to present the findings in a clear and understandable manner, especially concerning key variables like Perceived usefulness and Ease of use.

Performed multiple regression analysis for inferential analysis in identifying the level of acceptance of HIS. The independent variables were perceived usefulness, perceived ease of use, attitudes toward HIS and challenges & support. This analytical approach allowed us to evaluate the relative strength of each factor affecting overall system acceptance, determine which factors significantly predict acceptance, and inform potential interventions that can be targeted to enhance HIS adoption.

5. RESULTS AND DISCUSSION

To analyze the acceptance of HIS by paramedical staff concerning: perceived usefulness, perceived ease of use, attitude toward technology, and actual usage behavior. This research has its theoretical underpinning in the Technology Acceptance Model, which provides a robust theoretical framework for understanding user adoption of new technologies. The questionnaire contains four sections, Section A: Perceived Ease of Use, Section B: Perceived Usefulness, Section C: Attitude Towards HIS and Section D: Challenges and support.

Perceived Usefulness

Data collected through structured questionnaires from paramedical staff across departments such as Laboratory, Radiology, and Pharmacy revealed moderate to high levels of perceived usefulness. Many respondents reported improvements in work efficiency, including faster documentation, enhanced patient data management, and smoother interdepartmental coordination. This is consistent with TAM, which identifies perceived usefulness as a critical determinant of the system acceptance level.

Perceived Ease of Use

Despite the positive feedback on usefulness, a significant portion of staff reported challenges in ease of use. Common issues included limited computer training, inadequate orientation, and insufficient IT support. Some staff found the system complex and time-consuming compared to manual methods, indicating a lower perceived ease of use among certain groups. This could negatively impact overall acceptance and highlights the need for targeted interventions.

Influence of Demographics and IT Background

The study also found that age, professional experience, and prior IT exposure significantly influenced HIS acceptance. Staff with computer literacy and longer tenure demonstrated greater confidence and willingness to engage with HIS. Linear regression analysis confirmed a positive correlation between IT experience and HIS acceptance, reinforcing the importance of digital literacy and ongoing training.

Attitude Toward Technology and Organizational Support

Not surprisingly, most respondents did not exhibit technology resistance, and this is encouraging. Some degree of scepticism still existed because there was concern about workload increase, system failures, and no immediate technical support. Departments where HIS was implemented with structured training and demonstration had a higher level of acceptance. This underlines the role of organizational support, change management, and user involvement in the successful adoption of HIS.

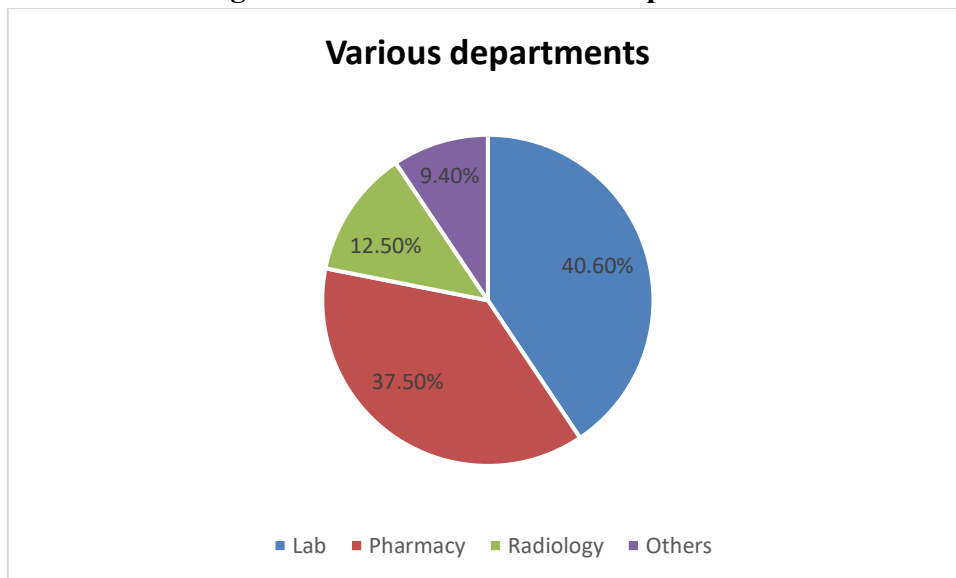
While HIS is gradually gaining acceptance among paramedical staff, its full potential can be realized only through improvements in perceived ease of use, supported by regular training, technical assistance, and system optimization. Institutional strategies that promote user education, inclusive system design, and a positive digital culture will be essential for enhancing HIS adoption and effectiveness.

Demographic Details

Table 1: Classification based on Department

Department	Responses	Percentage
Lab	13	40.6
Pharmacy	12	37.5
Radiology	4	12.5
Others	3	9.4

Fig 1: Classification based on Department



Interpretation

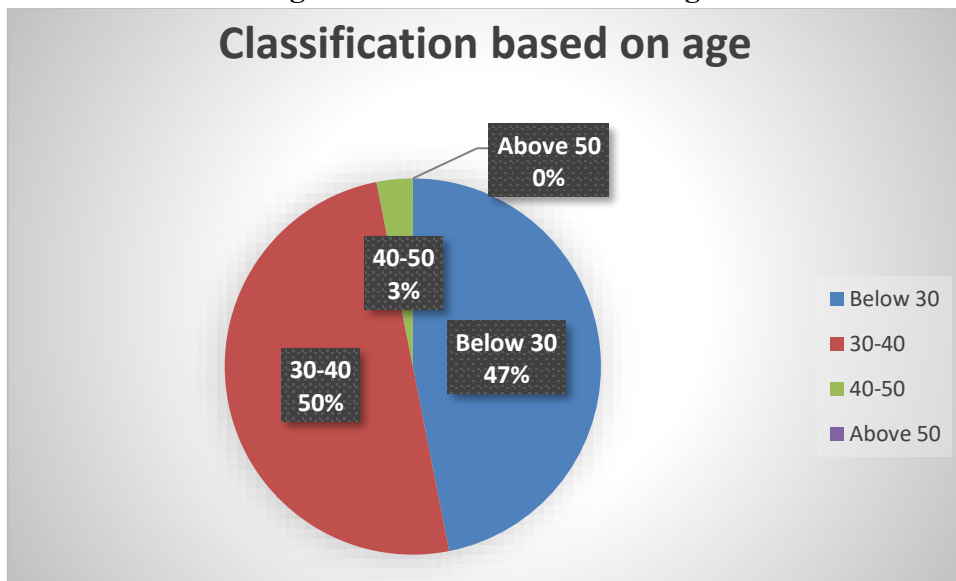
Among the 32 paramedical staff surveyed, the majority were from the Lab department (13 respondents, 40.6%) and Pharmacy (12 respondents, 37.5%), while smaller proportions represented Radiology (4 respondents, 12.5%) and Physiotherapy (3 respondents, 9.4%). This indicates that the survey sample is

heavily weighted toward Lab and Pharmacy staff, with nearly four-fifths of participants coming from these two departments, which may influence the overall assessment of hospital information system acceptance if departmental perspectives differ.

Table 2: Classification based on age

Age	Responses	Percentage
Below 30	15	46.9
30-40	16	50
40-50	1	3.1
Above 50	0	0

Fig 2: Classification based on age



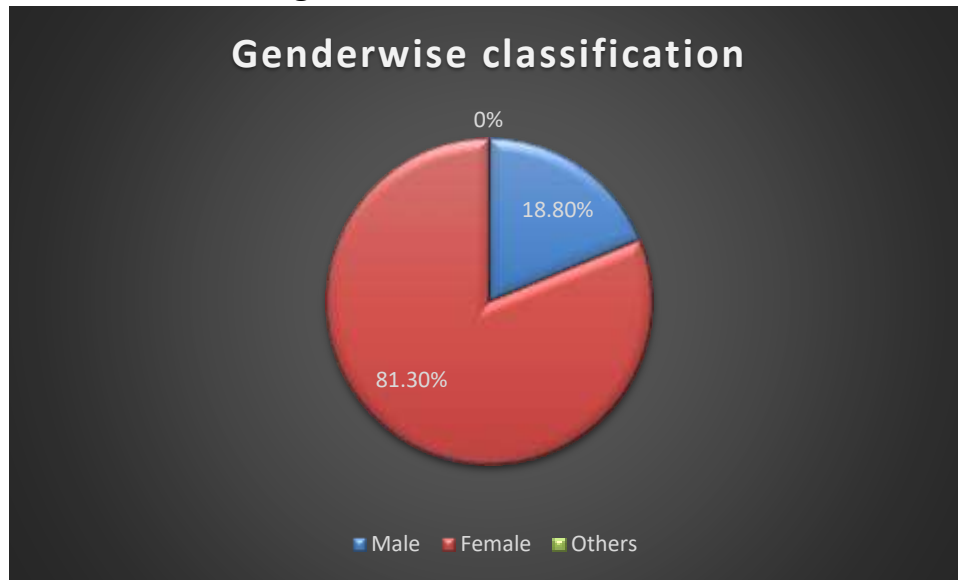
Interpretation

Among the 32 respondents, half (50%) are in the 30–40 age group, while nearly an equal share (46.9%) are younger than 30. Only a very small fraction fall into the 40–50 category, and none are above 50 years of age. This indicates that the paramedical staff are predominantly young to early middle-aged adults, with minimal representation from older age groups, which could influence technology acceptance patterns and familiarity with hospital information systems.

Table 3: Classification based on sex

Sex	Responses	Percentage
Male	6	18.8
Female	26	81.3
Others	0	0

Fig 3: Classification based on sex



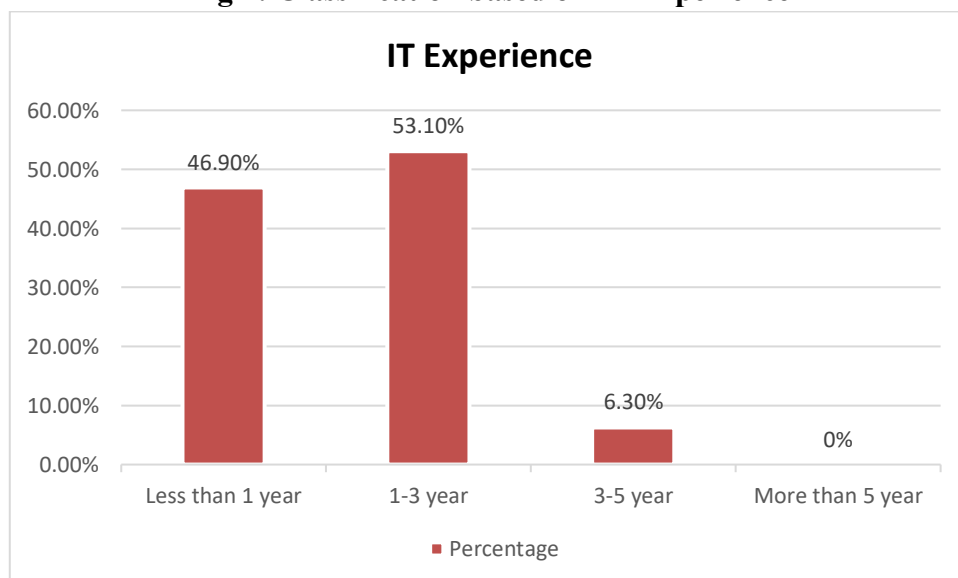
Interpretation

Among the 32 respondents, a large majority are female, accounting for 81.3%, while 18.8% are male, and no participants identified in the “others” category. This shows a predominantly female workforce among the surveyed paramedical staff, which may reflect the gender distribution typical of healthcare support roles in the hospital.

Table 4: Classification based on IT Experience

I.T Experience	Responses	Percentage
Less than 1 year	15	46.9
1-3 years	17	53.1
3-5 years	2	6.3
More than 5 years	0	0

Fig 4: Classification based on IT Experience



Interpretation

Among the 32 respondents, more than half (53.1%) reported having 1–3 years of IT experience, while 46.9% have less than 1 year. Only 6.3% have 3–5 years of experience and none have more than 5 years of experience. This indicates that the surveyed paramedical staff largely possess limited to moderate IT exposure, suggesting a relatively new but growing familiarity with technology that may influence their acceptance of the hospital information system.

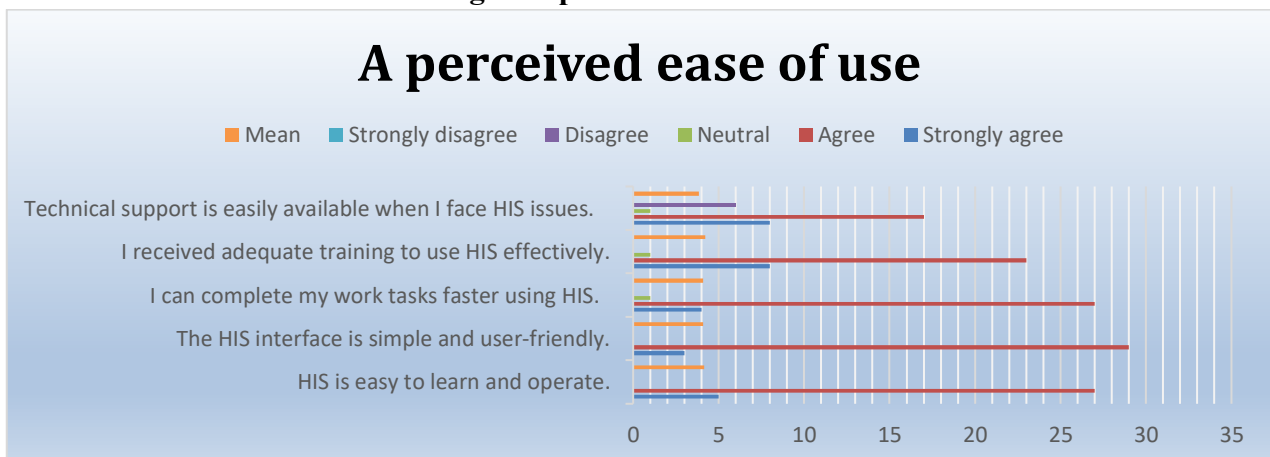
Summarization of Section A

A perceived ease of use

Table 5: A Perceived Ease of Use

Variables	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
HIS is easy to learn and operate.	5	27	0	0	0	4.15625
The HIS interface is simple and user-friendly.	3	29	0	0	0	4.09375
I can complete my work tasks faster using HIS.	4	27	1	0	0	4.09375
I received adequate training to use HIS effectively.	8	23	1	0	0	4.21875
Technical support is easily available when I face HIS issues.	8	17	1	6	0	3.84375

Fig 5: A perceived ease of use



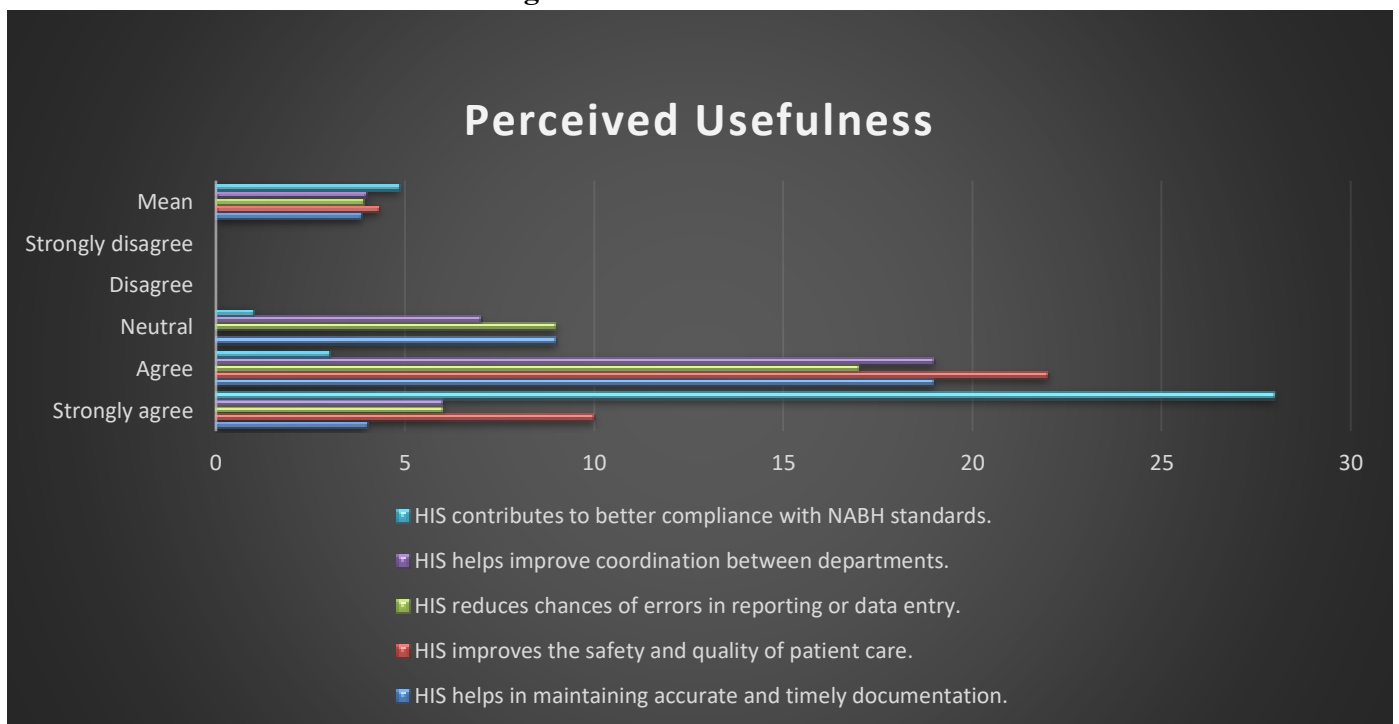
Summarization of Section B

Perceived Usefulness

Table 6: Perceived Usefulness

Variables	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
HIS helps in maintaining accurate and timely documentation.	4	19	9	0	0	3.84375
HIS improves the safety and quality of patient care.	10	22	0	0	0	4.3125
HIS reduces chances of errors in reporting or data entry.	6	17	9	0	0	3.90625
HIS helps improve coordination between departments.	6	19	7	0	0	3.96875
HIS contributes to better compliance with NABH standards.	28	3	1	0	0	4.84375

Fig 6: Perceived Usefulness



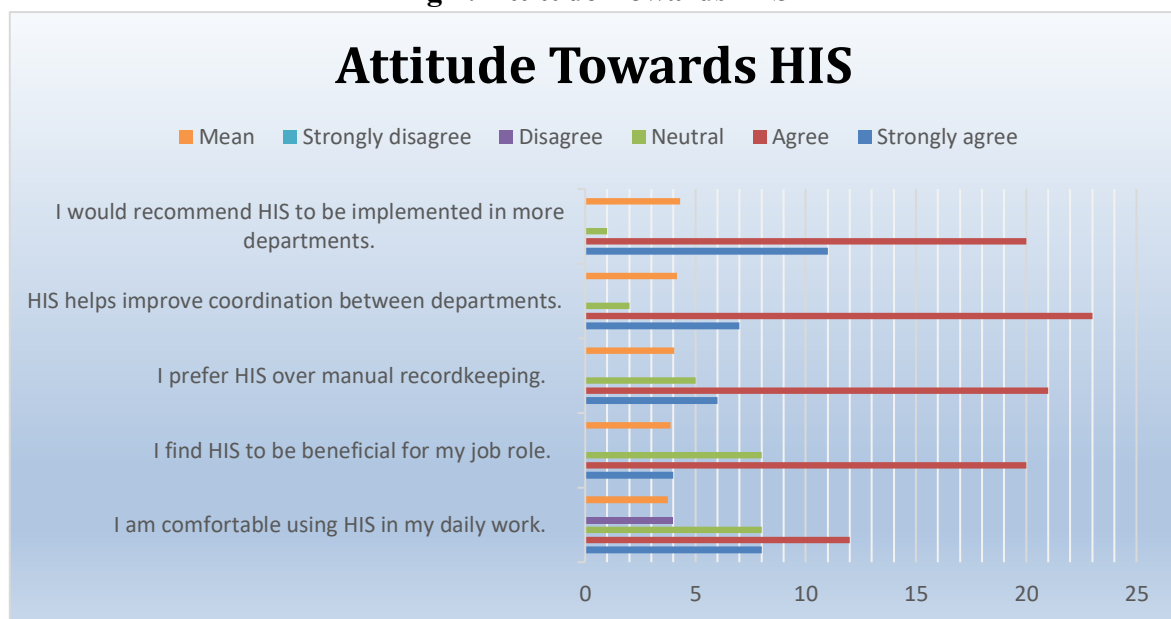
Summarization of Section C

Attitude Towards HIS

Table 7: Attitude Toward HIS

Variables	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
I am comfortable using HIS in my daily work.	8	12	8	4	0	3.75
I find HIS to be beneficial for my job role.	4	20	8	0	0	3.875
I prefer HIS over manual recordkeeping.	6	21	5	0	0	4.03125
HIS helps improve coordination between departments.	7	23	2	0	0	4.15625
I would recommend HIS to be implemented in more departments.	11	20	1	0	0	4.3125

Fig 7: Attitude Towards HIS



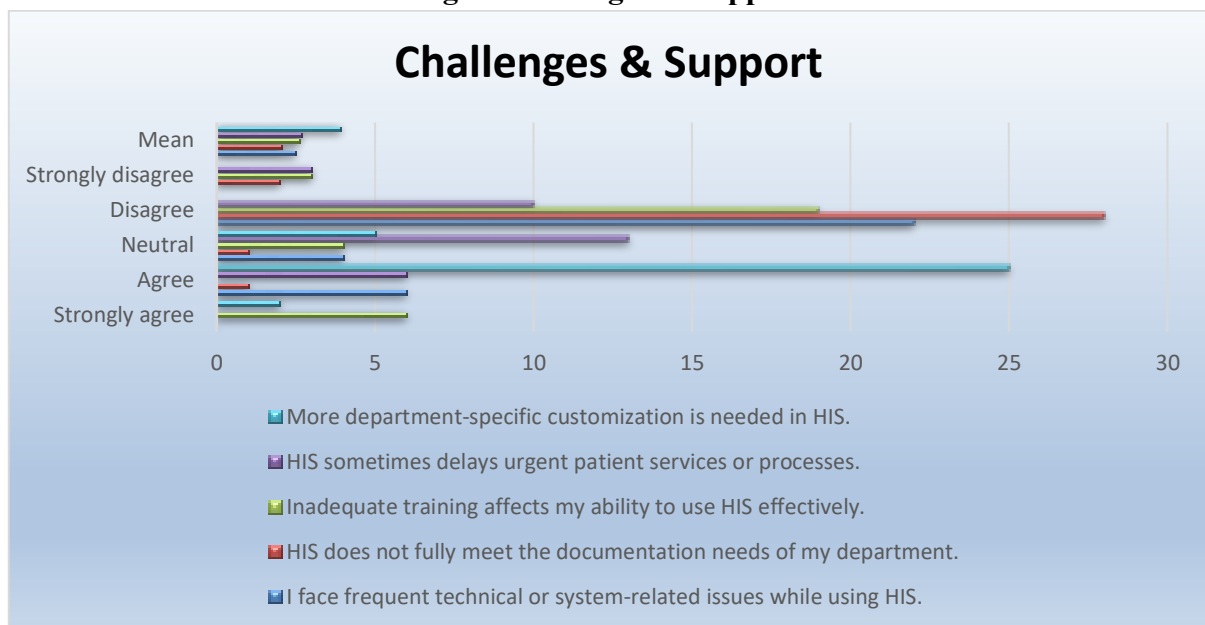
Summarization of Section D

Challenges & Support

Table 8: Challenges & Support

Variables	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
I face frequent technical or system-related issues while using HIS.	0	6	4	22	0	2.5
HIS does not fully meet the documentation needs of my department.	0	1	1	28	2	2.03125
Inadequate training affects my ability to use HIS effectively.	6	0	4	19	3	2.59375
HIS sometimes delays urgent patient services or processes.	0	6	13	10	3	2.6875
More department-specific customization is needed in HIS.	2	25	5	0	0	3.90625

Fig 8: Challenges & Support



Multiple Regression Analysis

Null Hypothesis (H₀): There is no significant relationship between perceived usefulness, ease of use, attitude, and HIS acceptance.

Alternative Hypothesis (H₁): There is a significant relationship between perceived usefulness, ease of use, attitude, and HIS acceptance.

Results

A multiple regression analysis was performed to examine the effects of perceived usefulness, ease of use, and attitude on the acceptance of HIS. The independent variables are VAR00002 (perceived usefulness), VAR00003 (ease of use), and VAR00004 (attitude or behavioral intention), while the dependent variable is VAR00001, which represents HIS acceptance.

Model Summary

The regression model was found to be statistically significant: $F(3, 28) = 8.084, p < 0.001$, so it could be concluded that the set of predictors reliably predicted HIS acceptance. The model also explained 46.4% of the variance in HIS acceptance ($R^2 = 0.464$). This was considered a moderately strong fit given an Adjusted R^2 of 0.407, after adjustment for the number of predictors. The standard error of the estimate was 0.275.

ANOVA Table

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.837	3	0.612	8.084	<.001
Residual	2.121	28	0.076		
Total	3.959	31			

Table 9: ANOVA

Coefficients Table

Predictor	B (Unstandardized)	Beta (Standardized)	Sig.
Constant	-1.200	—	—
VAR00002	-0.240	—	>.05
VAR00003	0.131	—	>.05
VAR00004	1.518	—	0.033

Table 10: Coefficients

Among these predictors, only VAR00004—one that presumably measures attitude or behavioral intention—a statistically significant predictor of HIS acceptance, with a p-value of 0.033, implying that with everything else held constant, a one-unit increase in VAR00004 is associated with a 1.518-unit increase in HIS acceptance. Perceived usefulness and perceived ease of use, proxied by VAR00002 and VAR00003, respectively, are insignificant predictors at $p > 0.05$.

Interpretation and Implications

From these findings, it would appear that VAR 00004, or attitude/behavioral intention, is the most important factor affecting HIS acceptance among the paramedical staff. Although theoretically important,

perceived usefulness and perceived ease of use were not statistically significant in this model. Interventions to enhance HIS adoption should therefore focus more on enhancing positive attitudes and behavioral intentions related to the system.

Results

The analysis of responses from 32 paramedical staff revealed several key findings:

- **High Perceived Usefulness**
 - Over 84% of respondents agreed that HIS helps complete tasks more efficiently.
 - 90.6% reported that the system interface is simple and user-friendly.
 - HIS was noted to improve patient care, documentation accuracy, and interdepartmental coordination, indicating strong perceived utility.
- **Moderate Perceived Ease of Use**
 - 84.4% found HIS easy to learn.
 - However, 25% expressed neutrality or lacked confidence in daily usage.
 - 46.9% of staff had less than one year of IT experience, which may contribute to usability challenges.
 - Positive impact on Patient Safety and Quality
 - 100% participants agreed that HIS enhances the quality of patient care.
 - 71.9% stated HIS ensures accurate documentation and reduces clinical errors.
- **Training and Support Gaps**
 - While 71.9% felt training was adequate, 25% remained neutral and 18.8% disagreed about the availability of technical support.
 - These gaps suggest the need for more consistent and accessible support mechanisms.
- **Strong Preference for HIS Over Manual Systems**
 - 84.4% preferred HIS to manual record-keeping.
 - 93.8% demonstrated a positive attitude toward HIS adoption, reflecting overall system acceptance.
- **Variation Based on Department and Demographics**
 - The majority of responses came from Laboratory (40.6%) and Pharmacy (37.5%) departments.
 - Staff under 40 years of age and those with greater IT experience showed higher levels of confidence and acceptance.

Suggestions

- **Enhance Hands-on Training**
 - Implement department-specific training programs, especially for staff with limited IT experience.
 - Incorporate scenario-based simulations and role-specific examples to improve practical understanding.
- **Improve Technical Support Accessibility**
 - Establish a dedicated HIS help desk or hotline for real-time assistance.
 - Designate “digital champions” within departments to provide peer support and guidance.
- **Conduct Regular Refresher Programs**
 - Organize quarterly sessions to update users on new features, reduce operational errors, and reinforce system confidence.
 - Establish a User Feedback Mechanism
 - Initiate monthly feedback collection to identify usability issues and improvement areas.
 - Involve paramedical staff in system updates and interface redesigns to ensure relevance and usability.

- **Simplify and Customize Interfaces**

- Collaborate with vendors to streamline workflows in HIS modules used by Laboratory, Radiology, and Pharmacy.
- Integrate language support and visual guides to accommodate diverse user needs.

- **Promote Awareness of HIS Benefits**

- Share internal success stories and case examples demonstrating HIS impact on efficiency, patient care, and NABH compliance.

- **Monitor HIS Usage Patterns**

- Utilize system analytics to track login frequency and module usage.
- Use insights to identify training needs and optimize user engagement strategies.

6. CONCLUSION

The study highlights a generally positive acceptance of the Hospital Information System (HIS) among paramedical staff, with strong indicators of perceived usefulness and a clear preference for digital systems over manual documentation. From this study, HIS as a valuable tool for improving task efficiency, patient care, and interdepartmental coordination. The system's user-friendly interface and its contribution to clinical accuracy and safety were widely appreciated, reinforcing its role in enhancing healthcare delivery. However, the findings also reveal moderate challenges in perceived ease of use, particularly among staff with limited IT experience. Gaps in training and technical support further impacted confidence and consistency in system usage. Departmental and demographic variations suggest that HIS adoption is influenced by age, experience, and role-specific exposure, necessitating tailored implementation strategies. To address these challenges and strengthen HIS utilization, the study recommends enhancing hands-on training, improving access to real-time technical support, and conducting regular refresher programs. Establishing feedback mechanisms, simplifying interfaces, and promoting awareness of HIS benefits are essential for fostering user engagement. Additionally, monitoring usage patterns through analytics can help identify training needs and optimize system performance. In summary, while HIS is well-accepted among paramedical staff, its sustained success depends on continuous education, responsive support, and user-centered system improvements. A strategic approach that integrates training, customization, and feedback will be critical to maximizing HIS adoption and advancing digital health transformation in hospital settings.

REFERENCES

1. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
2. Hu, P. J., Chau, P. Y. K., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, 16(2), 91–112. <https://doi.org/10.1080/07421222.1999.11518247>
3. Chau, P. Y. K., & Hu, P. J.-H. (2002). Investigating healthcare professionals' decisions to accept telemedicine technology: An empirical test of competing theories. *Information & Management*, 39(4), 297–311. [https://doi.org/10.1016/S0378-7206\(01\)00098-2](https://doi.org/10.1016/S0378-7206(01)00098-2)
4. Wang, B. B., Wan, T. T. H., Burke, D. E., Bazzoli, G. J., & Lin, B. Y. J. (2005). Factors influencing health information system adoption in American hospitals. *Health Care Management Review*, 30(1), 44–51. <https://doi.org/10.1097/00004010-200501000-00007>

5. Aggelidis, V. P., & Chatzoglou, P. D. (2009). Using a modified technology acceptance model in hospitals. *International Journal of Medical Informatics*, 78(2), 115–126. <https://doi.org/10.1016/j.ijmedinf.2008.06.006>
6. AlQudah, A. A., Al-Emran, M., & Shaalan, K. (2021). Technology Acceptance in Healthcare: A Systematic Review. *Applied Sciences*, 11(22), 10537. <https://doi.org/10.3390/app112210537>