

**Assessment of factors influencing doctor's acceptance of
electronic medical record for OPD consultation in SRCC
Children's Hospital, Mumbai**

Dissertation Submitted to



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For the partial fulfilment for the award of the degree of
Master of Business Administration (MBA)

in

Hospital and Health Management

by

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Under the Supervision and Guidance of

Dr. Piyusha Majumdar

DECLARATION BY STUDENT

I hereby declare that this dissertation titled **“Assessment of factors influencing doctor’s acceptance of electronic medical record for OPD consultation in SRCC Children’s Hospital, Mumbai”** is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



Name of Student: Dr. Netra Dilip Kadam

Date: 24.06.2021



CERTIFICATE

This is to certify that **Dr. Netra Dilip Kadam** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur has successfully completed her internship at **SRCC Children's Hospital, managed by Narayana Health, Mumbai**, during **March 22, 2021, to June 19, 2021**.

Place: *Mumbai*Date: *24/06/2021**[Signature]*
Preceptor/Head of the Organization

Name of the organization

SRCC Children's Hospital - Managed by Narayana Health

(A Unit of Narayana Hrudayalaya Limited) CIN: L85110KA2000PLC027497

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Appointments

186-0208-0208

Emergencies

022-71-222-333

Appendix F: Certificate from Faculty Guide and School Dean

CERTIFICATE

This is to certify that dissertation titled **“Assessment of factors influencing doctor’s acceptance of electronic medical record for OPD consultation in SRCC Hospital, Mumbai”** is a record of the research work undertaken by **Dr. Netra Dilip Kadam** in partial fulfilment of the requirements for the award of the degree of **MBA (Hospital and Health Management)** from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide

IIHMR University, Jaipur

Date

School Dean

IIHMR University, Jaipur

Date

ABSTRACT

Electronic Medical Record (EMR) offers remarkable facilities such as reducing medical errors, decreasing healthcare costs and promoting quality of healthcare services by collecting, storing and displaying information at the point of care. Aim of this study was carried out to identify the determinants of electronic medical record (EMR) adoption by presenting a comprehensive model. Methods: This was a cross-sectional study in which 60 healthcare personnel working in SRCC Children's Hospital Mumbai, were selected as the study sample. A proposed conceptual technology acceptance model (TAM) was developed to identify the determinants of EMR adoption. The results of the study showed that perceived ease of use, perceived usefulness, technological context, organization context and environmental context have significant effect on EMR adoption. Conclusions: The study findings suggest that the proposed conceptual integrated model of TAM is a favourable model for identifying the relevant factors of EMR adoption. The present study clearly recognized 4 significant determinants that affect end-users' intention when comprehensive implementation of ERM is considered.

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ABBREVIATIONS

NH	Narayana Health
EMR	Electronic Medical Record
EHR	Electronic Health Record
SRCC	Society for the Rehabilitation of Crippled Children
TAM	Technology Acceptance Model
PU	Perceived Usefulness
PEOU	Perceived Ease of Use
MoH&FW	Ministry of Health & Family Welfare
NRC	National Release Centre
SNOMEDCT	Systematized Nomenclature of Medicine -Clinical Terms
ATHMA	Advanced Total Hospital Management Application
AADI	ATHMA Application for Doctor's Insight

INTRODUCTION

In the modern world, many of inspiration are coming from fast growing technology. Electronic Medical Records (EMRs) are a revolution in healthcare. Innovation can possibly give specialists doctor the capacity to accelerate and improve their diagnostic abilities by the better-overseeing data stream. Digitalisations have an extraordinary potential to work with work process and improve quality, congruity, wellbeing and effectiveness in medical care. Progressively amazing figuring devices will help channel, sort and arrange the monstrous measures of data previously being gathered in electronic medical records so a patient's most significant wellbeing problem becomes visible more quickly. By supplanting a large number of the elements of conventional paper based clinical records, EMRs guarantee huge advances in persistent consideration. This will subsequently help physicians to more quickly arrive at an accurate diagnosis. Digitization across the medical care industry has assisted wellbeing with adjusting suppliers to make a hearty and basic framework by focusing in on the patient's requirements. Expanded utilization of EMRs by and by can prompt medical care investment funds, decrease of clinical blunders, and improvement in wellbeing.

In September 2013, the Ministry of Health & Family Welfare (MoH&FW) notified the set of principles material to Electronic Health Records from around the world keeping in see their reasonableness to and materialness in India. The Ministry kept open standards like SNOMED CT free-for-use in the country similarly as select between time Public Release Centre (NRC) to deal with this clinical expressing standard that is quick acquiring far and wide acknowledgment among the different medical services IT partner networks around the world.

With a target to present a uniform standard-based framework for creation and upkeep of Electronic Health Records (EHRs) by the medical care suppliers, Narayana Health presented cloud based advanced foundation.

Narayana Health is one of India's biggest and the world's most efficient medical care specialist organizations. It got going as an emergency clinic with 300 beds in 2001. As of now, Narayana Health has developed to a 6,594 beds medical care combination with 31 emergency clinics present in 19 areas inside the country. The entire NH network will transition to a home-grown Hospital Information System built by NH team. This software, which have affectionately

named NH-Athma, and Aadi application will be the foundation upon which Narayana Health's digital infrastructure will be developed. NH-Athma is cloud-based, fully scalable, and can integrate with all the existing infrastructure in the hospital. It has taken 2 years to develop the software, but it is the first and most important step in NH digital transformation. As a low-cost healthcare operator, NH relies on accurate and timely data to help us make important decisions.

The EHR application enables efficient management of patient data, allowing you to maintain accurate, complete, exceptional data about patients, and rapidly recover this data, depending on the situation, to settle on choices about a patient's consideration and treatment.. The application increases productivity, standardizes documentation, and enables enhanced patient care. The EHR application offers the following advantages:

1. Promotes legible, complete, and up-to-date patient medical records, thereby helping reduce medical errors.
2. Allows quick access to patient medical records, enabling improved diagnosis and treatment and a more coordinated and efficient care.
3. Displays the complete patient chart on a single screen and allows you to compare the results over a period of time.
4. Supports electronic prescriptions and investigation orders, which are automatically routed to respective pharmacies, laboratories, and imaging centres.
5. Offers integration with SNOMED-CT codes.
6. Provides easy access to test results and imaging reports.
7. Provides an automated Favourites list to store frequently used entries.
8. Performs automatic drug-to-drug and drug-to allergy interaction checking and alerts you if an unsafe combination or an allergy conflict is identified.

AADI (ATHMA Application for Doctor's Insight) is designed for the physicians to provide them quick access to patient information from their mobile devices. The application helps improve communication among the care team members and enables a more coordinated and efficient care of patients. Features

1. Communicate with the care team members via patient-specific chat platform.
2. Send text, images, audio and video messages to care team members.
3. View patient-related announcements and notifications on the chat platform.
4. Order prescriptions and investigations.
5. Get instant access to investigation results and radiology images on your mobile devices.
6. Record Progress Notes.
7. Get the Mortality Risk Score Prediction for patients.
8. Convey important events to patients' families.
9. Review and sign off Patient Discharge Summaries.

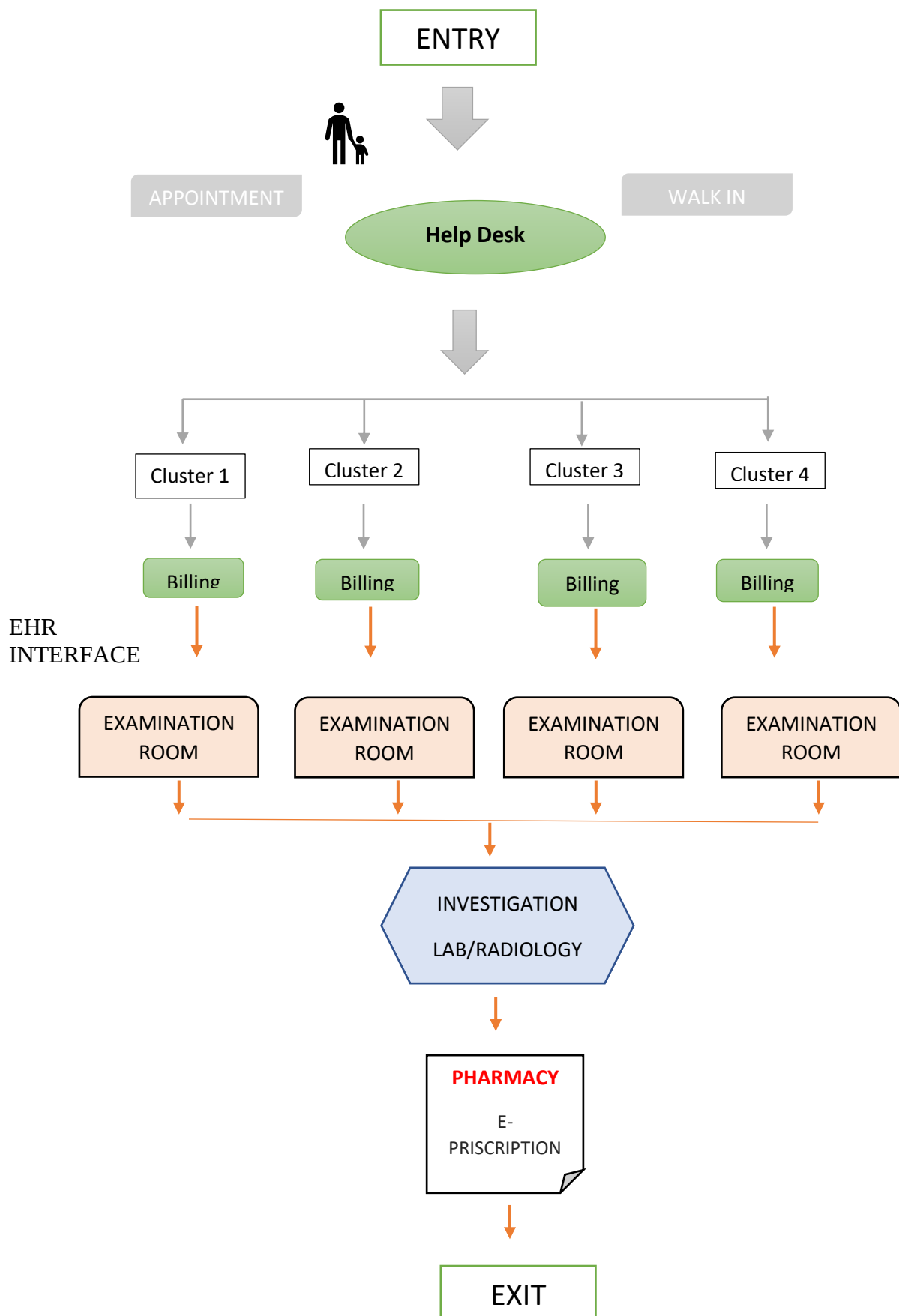
In this case study, we are finding the factors affecting EMR adoption rate among consultant of SRCC Hospital, Mumbai. SRCC Children's Hospital is the chief clinical establishment for kids in Mumbai, supported by Narayana Health, the clinic consolidates unequalled paediatric clinical involvement in a-list offices to guarantee reasonable, quality clinical consideration for babies, youngsters and youths.

SRCC Hospital have four OPD Cluster divided as services speciality like,

- **Cluster 1:** Paediatric Medicine and Rehabilitation, Paediatric developmental behavioural
- **Cluster 2:** Paediatric Gastroenterology, Orthopaedics, E.N.T., Rheumatology, Paediatric Surgery, Infectious Diseases, Pulmonology
- **Cluster 3:** Nephrology, Paediatric Surgery, Neuro Surgery, Neurology, Spine Surgery, Ophthalmology, Plastic Surgery, Dental, Genetics
- **Cluster 4:** Oncology, Cardiology, Cardiac surgery, Paediatric Endocrinology

The aim of this study was to identify the main determinants of physician acceptance of EHR in a sample of general practitioners and specialists of the SRCC Hospital, Mumbai.

Figure 1- OPD Workflow and EMR Integration



Keywords: Electronic Medical Record, Outpatient Department, Medical records systems, Technology Acceptance Model, Computerized health systems

REVIEW OF LITERATURE

A primary research was conducted based on the TAM Model (Technology Acceptance Model) survey questionnaire made for consultant checklist for comparison of the EMR software with the EMR Adoption Model, to find the exact reasons for standardization & to focus on secondary data based on literature review.

On secondary research front, a literature search was performed to identify published studies related to the views on electronic medical records, adaption needs & benefits associated. The search was limited to full paper research articles published.

In theory, any information that can be placed in a paper record can also be placed in an electronic record. However, many institutions that are migrating toward an electronic record system are facing some challenges such as difficulty in convening unstructured text, data, and images into a standard format.

Different types of patient data that can be included in an EMR system:

- Medical history of patient
- Physical examination
- Diagnosis
- Activities related to clinical work
- Diagnostic assessment
- Therapeutic efficacy (drugs, devices, procedures, rehabilitation programs)
- Data related to administration (Claims, billings, outcomes)

Benefits of using EMR systems are expected to include:

- Minimum medical errors, which are estimated to be responsible for as many as 44,000 to 98,000 deaths a year
- More efficient healthcare delivery services provision
- Reduced utilization
- Ability to manage chronic disease

In addition, it has also been estimated that adoption of electronic records could cut 10% or more from the nation's \$1.7 trillion each year in healthcare spending by the reduction in handling of paper records and unnecessary or duplicative tests elimination is an enormous cost savings.

In theory, storage of patient medical information electronically in an EMR provides various advantages over paper records, such as:

First, files in the electronic format can be accessed readily from anywhere, local or remote, within a communications link or network. Data can be retrieved easily if stored electronically. If the database has been designed appropriately and indexed millions of records can be shifted through in seconds. At a time, multiple users can have access to those records and all service providers can share the same records.

Second, in order to create a single record for individuals records that are created by multiple providers from different locations and units can be linked and shared. The information of patient care can be shared among various healthcare providers and the record fragmentation problem can also be resolved.

Third, different data views can be displayed by well-designed, computerized records for example, all the recent medications or issues; graphical display of the last 10 full blood counts; or results of various tests for an admission or date range.

Fourth, streamlined reporting functions for electronic records.

Despite of all the hurdles, still the adoption rates of EMR may be increasing, however, and in future, it is expected that the growth will increase significantly.

Around the world, the journey to Electronic Medical Record (EMR) adoption produces countless benefits including organizational efficiency and positive return on investment for both hospitals and outpatient clinics.

Healthcare providers cite a decrease in the number of staff required for both medical records management and clinical care delivery after they go live with their EMR. The advantages brought by availability and sharing of health information produces a significant amount of time and money saved.

Patient's medical information can be portable and available to his or her clinicians at the time of treatment if there is an interoperability and facility of healthcare information exchange in the system, at least to the extent that the patient wants it to be.

The reduced length of stay associated with EMR suggests that EMR might allow faster tests, medications and procedures ordering by physician, speed up the process/discharge scheduling,

and service ordering process delay reduction. In addition, EMR may also contribute in reducing length of stay through faster and accurate communication and coordination among providers.

Problem Justification Despite the existence of standards & measures there are certain loopholes, which affect the delivery of healthcare services to the clients & hinders the image of health service facilities in terms of their sustainability & growth. The focus area in the study are not only in terms of improvement of technology or economical services but should also extend its coverage towards the applicability of systematic & sequentially arranged processes to have a streamlined and robust use of the available systems.

Table 1: Review of Literature

1	Article	Successfully implementing a national electronic health record: a rapid umbrella review
	Author	Orna Fennelly, Caitriona Cunningham, Loretto Grogan, Heather Cronin, Conor O'Shea
	Research Methodology	A rapid umbrella review was completed (2019) across several search engines (PubMed, CINAHL, Scopus, Embase) and Gray literature. Identified studies (n = 5,040) were subject to eligibility criterion and identified barriers and facilitators were analysed, reviewed, discussed and interpreted by the expert panel
	Result	Twenty-seven literature reviews were identified which captured the key organizational, human and technological factors for a successful EHR implementation Governance, leadership and culture, End-user involvement, Training, Support, Resourcing, and Workflows, individual end-users have varying Skills and characteristics, Perceived benefits and incentives, and Perceived changes to the health ecosystem which were also critical to success.

2	Article	The Applicability of the Modified Technology Acceptance Model (TAM) on the Sustainable Adoption of eHealth Systems in Resource-Limited Settings
	Author	Nicole Bakhoun MD, Christian Gerhart MD, Emma Schremp BS
	Research	Prospective observational study of nurses in the emergency
	Methodology	department using a time-and-motion methodology. Three trained research assistants conducted 1:1 observations between March and September 2019.
	Result	The findings of the structural equation modeling (SEM) indicate that perceived usefulness has a significant influence on attitude and intention to use eHealth. the model portrays 56.2% of the fluctuation in social aim to utilize eHealth frameworks. Hence, the implementers should give need in upgrading the associations specialized framework, staff's IT expertise, and their disposition towards eHealth by giving nonstop help
3	Article	Electronic health record acceptance by physicians: Testing an integrated theoretical model
	Author	Marie-Pierre Gagnon, El Kebir Ghandour, Pascaline Kengne Talla David Simonyana
	Research	Electronic questionnaire sent to physician members of the Quebec
	Methodology	Medical Association Canada. They tested four theoretical models (Technology acceptance model (TAM), Extended TAM, Psychosocial Model, and Integrated Model) using path analysis and multiple linear regression analysis in order to identify the main determinants of physicians' intention to use the EHR. Study evaluated the modifying effect of sociodemographic characteristics using multi-group analysis of structural weights invariance.
	Result	The four models performed well and explained between 44% and 55% of the variance in physicians' intention to use the EHR. The Integrated model performed the best and showed that perceived ease of use, professional norm, social norm, and demonstrability of the results are the strongest predictors of physicians' intention to use the EHR. Age, gender, previous experience and specialty modified the association between those determinants and intention.

4	Article	The adoption of electronic medical record by physicians A PRISMA-compliant systematic review
	Author	Bireswar Dutta, and Hsin-Ginn Hwang
	Research	Systematic review was carried out based on literature published in
	Methodology	5 databases: PubMed, Web of Science, Scopus, The Cochrane Library, and ProQuest from 2014 to 2018, concerning barriers perceived by physicians to the adoption of EMR.
	Result	The top 5 frequently mentioned barriers are privacy and security concerns, high start-up cost, workflow changes, system complexity, lack of reliability, and interoperability. Thus an attentive analysis of the definitive condition is needed before relevant intervention is determined as the implementation of EMR must be considered as a behavioral change in medical practice

METHODOLOGY

TECHNOLOGY ACCEPTANCE MODEL

The technology acceptance model (TAM) is an information structures theory that suggests how users come to accept and use generation.

Based on the concept of Technology acceptance model, Davis (1986) evolved the model which offers extra specifically with the prediction of the acceptability of an information system.

The motive of this model is to expect the acceptability of a device and to become aware of the adjustments which should be delivered to the gadget to be able to make it ideal to users. This model indicates that the acceptability of a records gadget is determined with the aid of two major elements: perceived usefulness and perceived ease of use.

As confirmed in the idea of Reasoned action, the Technology Acceptance Model postulates that the usage of an information system, is decided through the behavioural aim, but on the other hand, that the behavioural purpose is determined with the aid of the individual's mindset toward the use of the software and additionally by using his notion of its software. According to Davis, the mindset of a user is not a complete factor that determines his use of a device but is also based totally on the effect which it could have on his overall performance.

TAM comprises core variables of user motivation: perceived ease of use, perceived usefulness, attitudes toward technology and top management and IT support. Of these elements, perceived usefulness (PU) and perceived ease of use (PEU) are considered as principal determinant that directly or indirectly explains the behavioural intention to use ("acceptance") new technology.

Perceived Usefulness (PU)

This was characterized by Fred Davis on acceptance level of individual utilizing a specific technology would upgrade their work execution. It implies whether somebody sees that innovation to be helpful for what they need to do. User's insight on the value of innovation could be influenced by outer elements. As for this unique situation, this examination tests the accompanying premises:

H1: Perceived usefulness will have a positive effect on Doctor's attitude towards use of EMR.

Perceived Ease of Use (PEU)

Perceived ease of use is the degree to which an individual accepts that a specific innovation will be easy and simple to utilize. PEU is considered as the main factor of TAM that assists with anticipating the user's acknowledgment or dismissal of innovation.

H2: Perceived ease of use will have a positive effect on Perceived usefulness of EMR.

H3: Perceived ease of use will have a positive effect on doctor's attitude towards using EMR.

Attitude Towards Using EMR

Attitude is an inclined perspective in regards to the advantages of innovation in improving work execution, time to lead their work and its impact in improving the nature of the work they do. A few examinations recommend that the attitude of clients are a huge factor in the acknowledgment and effectiveness of the utilization of innovations practically speaking. Findings from different studies show that the Healthcare provider's attitude and acceptance are vital in the success of EMR system implementation in the healthcare systems since they are the primary users of the system.

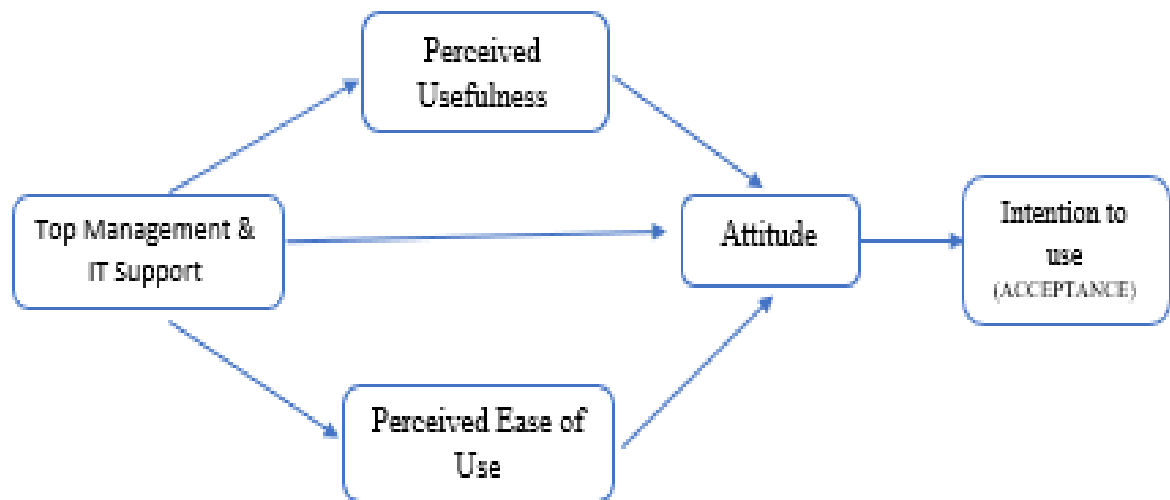
Top Management & IT Support

IT experience manages doctor's knowledge of IT, understanding the essential advantages of innovation and their openness to it. Acquainting them with EMR framework, and direct preparing them to comprehend the advantages of use of EMR for consultation. The specialized infrastructure like the accessibility of PCs to utilize EMR frameworks, the current foundation of the emergency clinic. Medical services providers with a sound degree of IT experience were found intuitive towards, clinical data frameworks, electronic medical records, and other exceptional eHealth applications. H4: Top management and IT support will have a positive effect on doctor's Perceived usefulness of EMR.

H4: Top management and IT support will have a positive effect on doctor's attitude towards EMR.

H5: Top management and IT support will have a positive effect on perceived ease of use EMR.

Figure 2: Technology Acceptance Model



RESEARCH QUESTION

What are the factors influencing Doctor's EMR adoption for outpatient consultation?

RESEARCH OBJECTIVES

1. To understand factors, influencing Doctor's EMR adoption for outpatient consultation in SRCC Hospital
2. To understand significance correlation between TAM Variables i.e., perceived usefulness, perceived ease of use, Attitude of doctors and Top management and IT Support

STUDY DESIGN

- **Study Area:** SRCC Hospital, Mumbai
- **Study Design:** Descriptive cross-sectional study design.
- **Study Population:** All OPD Consultants of SRCC Hospital, Mumbai
- **Sampling Method:** Simple random cluster sampling- Questionnaire distributed among all 110 doctors of SRCC Children's Hospital, among 60 of doctors replied to questionnaire.
- **Sample Size:** 60
- **Inclusion Criteria:** Doctor should do consultation in OPD of SRCC Children's Hospital, Doctor should well train to use EMR in consultation.
- **Exclusion Criteria:** Incomplete filled questionnaire

The primary data have been used in this research. Technology Acceptance Model questionnaire has been provided in two parts as follow:

1. First part includes demographics specificities of the doctor such as: gender, age, work experience.
2. Second part includes eighteen statements for evaluating the EMR services in Outpatient Department by doctor's experience based on the 5-point Likert scale.

Questionnaire Reliability Test

A survey questionnaire was adapted by reviewing several literatures conducted on the EMR. Validatory tests were checked using the Cronbach alpha coefficient ($C\alpha$), 18 questionnaire is divided in 4 subsets of even number, which is calculated as 0.86 which shows strong internal reliability of questionnaire.

Data Analysis

Survey is conducted through google online forms administrated to consultant. Data is extracted to SPSS. Spearman Correlation is used to measures the strength of association between two variables and the direction of the relationship. Regression analysis can explore the magnitude of the influence between variables. It can also explore the direction of the impact between variables. If two or more variables have a causal relationship, the regression equation is expected to be established between them.

RESULTS

Demographic Characteristics

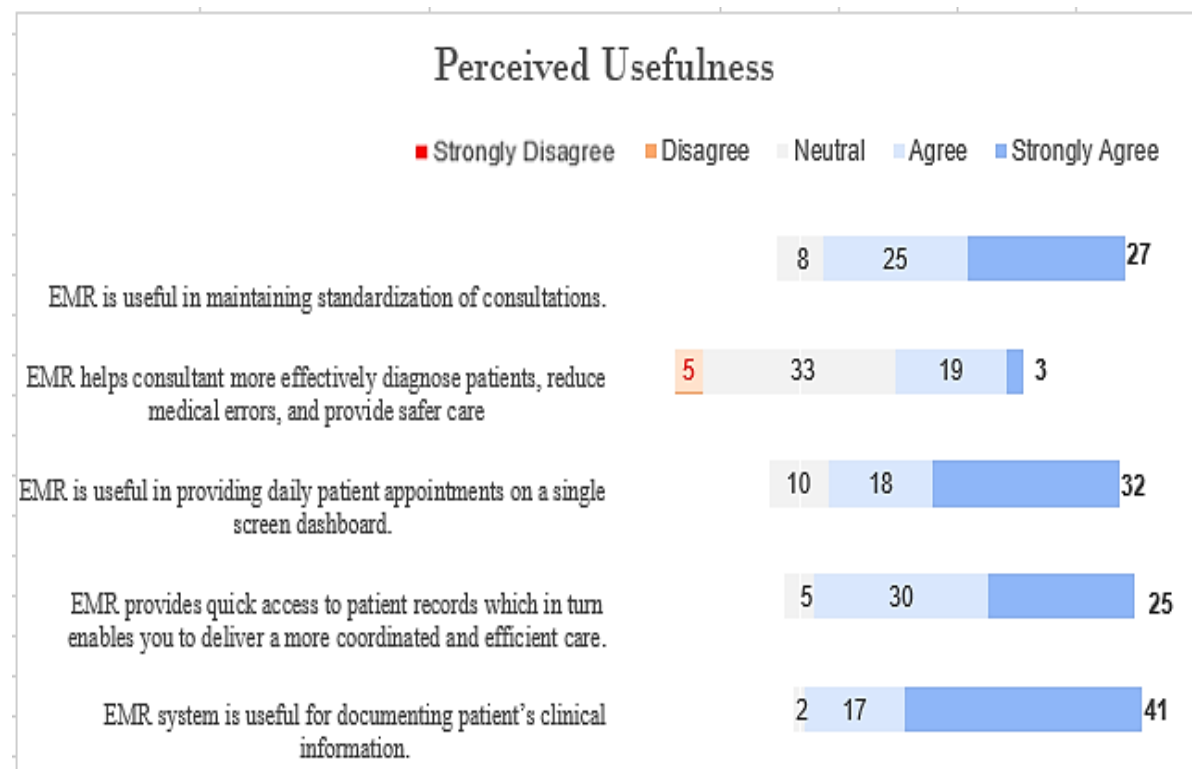
Survey conducted from 20th April 2021 till 31st May 2021. Total 110 questionnaires distributed, among which 60 were returned completed. Table 2 shows consultant's demographic characteristics. Overall, 32(53%) were female and 27(47%) were male consultants. To understand Consultant's experience in medical practice, the survey classified according to years of experience, more than 25 years is 36% consultant, with 21 to 25 years are 20%, 16 to 20 years is 8%, 11 to 15 years is 4%, 6 to 10 years of experience is 12%, less than 5 years are 20% consultants.

Table 2: Demographic Characteristics of the Sample

	Description	Frequency	Percentage
Gender	Male	28	47%
	Female	32	53%
Age	20-29	6	12%
	30-39	14	28%
	40-49	10	20%
	50-59	12	24%
	More than 60	8	16%
Years of Experience	Less than 5	10	20%
	6-10	6	12%
	11-15	2	4%
	16-20	4	8%
	21-25	10	20%
	More than 25	18	36%

Perceived Benefits of EMR

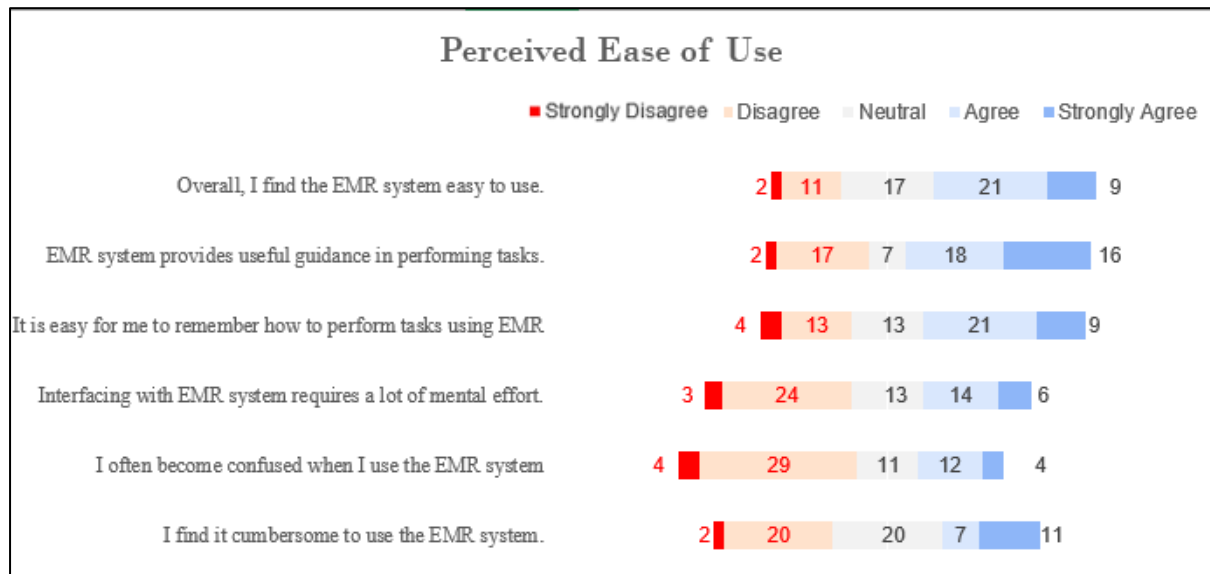
Figure 3: Consultant's responses of Perceived usefulness of EMR



In perceived usefulness, we tried to find out, consultant utilizing EMR will upgrade their OPD Consultation. According 41 Consultants among 60 said that EMR system is useful for documenting patient's medical record, while 17 consultants where agree with this statement. 25 consultants were strongly agree for statement that is EMR provides quick access to patient records which in turn enables you to deliver a more coordinated and efficient care while 30 consultant agree to this statement. 32 doctors were strongly agreed to EMR which is helpful in showing patient's appointment on one screen which reduces TAT, and 18 to 10 doctors were agreed and neutral to this statement. 19 and 3 Doctors agreed that EMR helps consultant more effectively diagnose patients, reduce medical errors, and provide safer care, while majority doctors are neutral regarding EMR uses in diagnosing patient and reducing medical error while 5 doctors are not agreed on EMR assistance in diagnosing patients and reducing medical errors. As NABH standardisation, 27 doctors are strongly agreed that EMR is useful in maintaining standardization of consultations.

Perceived Ease of Use

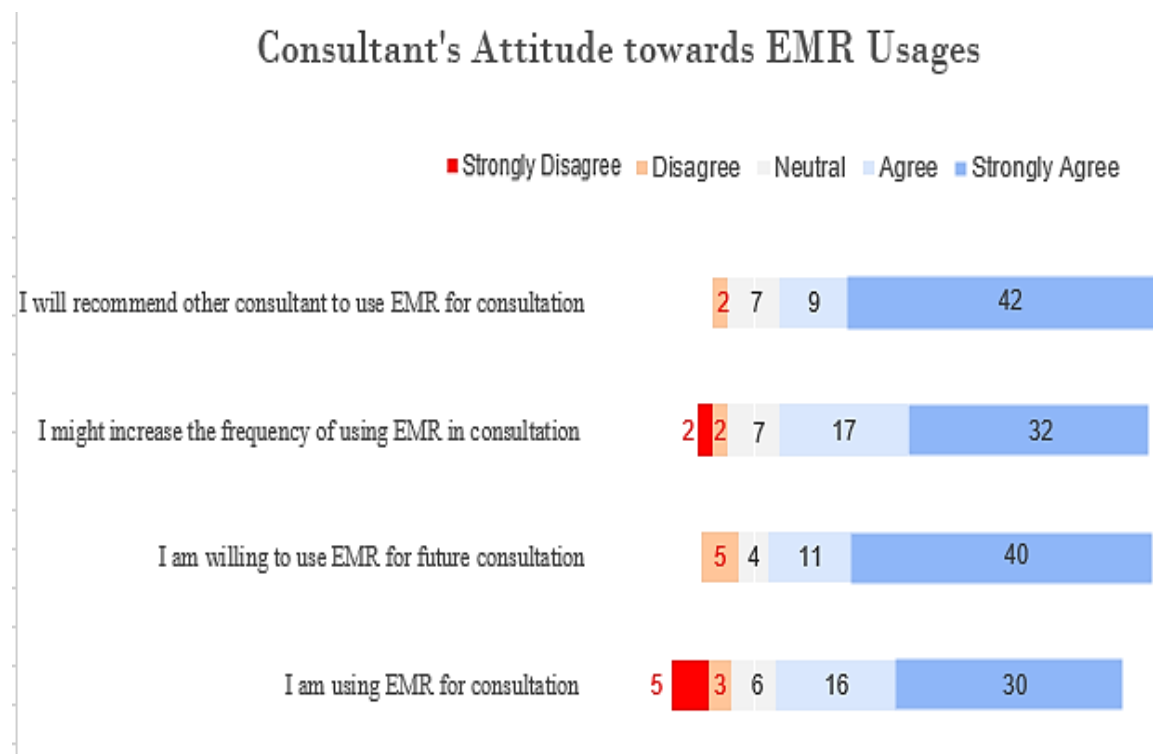
Figure 4: Consultant's perceived ease of use of EMR



Among all TAM variables PEOU is one of the important variables of TAM that assists with anticipating the consultant's acquiring or disallowance of innovation, It determine how easy to the system to use for OPD Consultation. We asked statement like is it cumbersome to use EMR, where 11 and 7 consultants were strongly agreed and agreed to this while 20 consultant were neutral and 20 were disagreed to this statement. 2 Doctors were strongly disagreed with it means they didn't find EMR that much cumbersome. We tried to get information regarding whether they get confused when they use EMR, 4 and 12 doctors are strongly agreed and agreed to this statement while 11 doctors are neutral.

Attitude towards usages of EMR

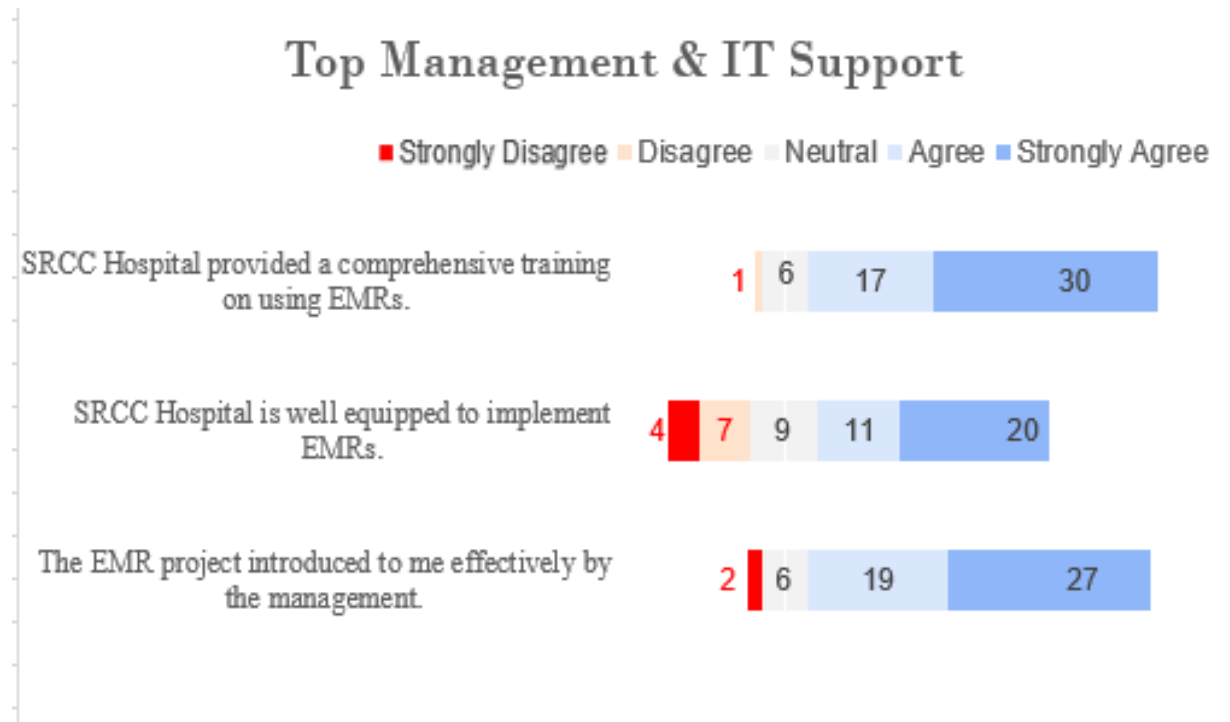
Figure 5: Consultant's Attitude towards EMR usages



We tried to understand Attitude of consultant which inclined perspective in regard to the advantages of innovation in improving work execution, time to lead their work and its impact in improving the nature of the work they do. We have asked about their usages of EMR for consultation 30 consultant said they strongly agree, and 16 consultants were agreed while 5 were strongly disagree and 3 were disagree with 6 consultants were neutral regarding this statement. Doctor are asked regarding their future acceptance of EMR, 40 consultants strongly agreed, and 11 consultants were agreed to use EMR in future, while 4 and 5 consultants are neutral and disagreed to use EMR in future. Doctors asked whether they would recommend other consultant, 42 consultants were strongly agreed and 9 are agreed while 7 doctors were neutral and 2 doctors are disagreed to recommend EMR to other doctors.

Top Management and IT Support

Figure 6: Consultant responses regarding Top Management and IT Support



To understand Top Management and IT support from doctor's perspective, we tried to ask doctor that EMR project introduced by Narayana Health Management effectively, 27 consultants were strongly agreed and 19 were agreed to it while 6 consultants were neutral and 2 were disagreed. We asked whether SRCC Hospital provided all infrastructure to implement EMR, 20 doctors strongly agreed and 11 are agreed with this statement; while 9 doctors are neutral up to 7 to 4 doctors are strongly disagreed. Doctors are asked whether they provided comprehensive training of EMR, 30 Doctors were strongly agreed, and 17 doctors were agreed while 6 are neutral and 1 were disagreed to this statement.

Table 3 Correlation among TAM Variables

Correlations			PU	PEOU	T	A
Spearman's rho	PU	Correlation Coefficient	1.000	.445**	.108	.395**
		Sig. (2-tailed)	.	.000	.413	.002
		N	60	60	60	60
	PEOU	Correlation Coefficient	.445**	1.000	.318*	.303*
		Sig. (2-tailed)	.000	.	.013	.019
		N	60	60	60	60
	T	Correlation Coefficient	.108	.318*	1.000	.298*
		Sig. (2-tailed)	.413	.013	.	.021
		N	60	60	60	60
	A	Correlation Coefficient	.395**	.303*	.298*	1.000
		Sig. (2-tailed)	.002	.019	.021	.
		N	60	60	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The correlation between variables of the proposed integrated model is shown in Table 3. Spearman's Correlation use to find relation between two variables as data is nonparametric. As seen, there is a significant correlation between TAM variables, Perceived Usefulness have significant strong positive correlations with Perceived Ease of use. Perceived usefulness has weak positive correlations with Top Management and IT Support. Perceived usefulness has strong positive correlation between Attitude of consultant to use of EMR.

Figure 2 indicates that PU and PEOU have a positive and significant effect on the Attitude of consultant's uses of EMR ($\beta = 0.395$ $P \leq 0.01$, $\beta = 0.303$ $P \leq 0.05$). However, Top management and IT support appeared to have a positive and significant effect on PU whereas no significant effect on PEOU was found.

DISCUSSION

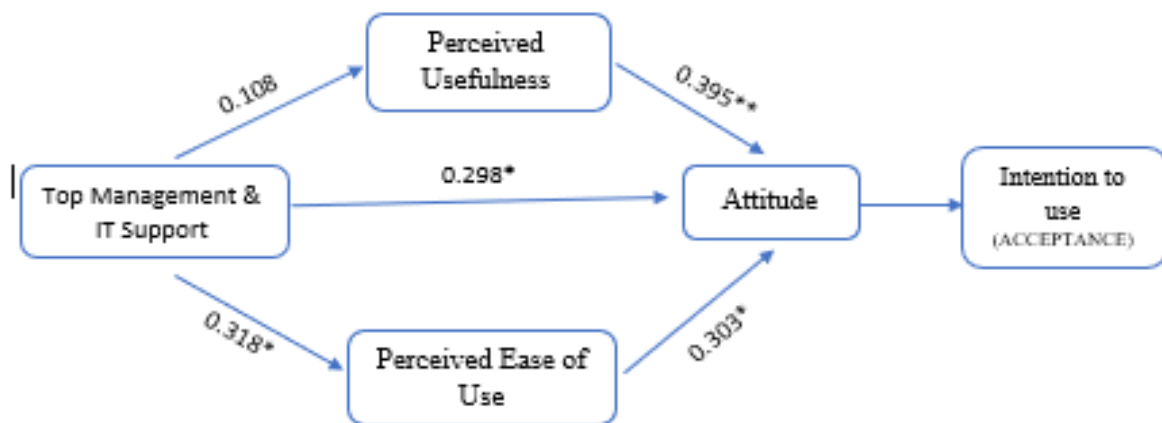
Present study results suggested that factors of Technology Acceptance Model in institutional context as well as new digital technological context are important determinants when comprehensive execution of EMR is considered.

Table 4: Hypothesis Statement Table

Hypothesis	Statement	Coefficient Value	P Value	Empirical evidence
H1	Perceived usefulness will have a positive effect on Doctor's attitude towards use of EMR.	0.395	≤ 0.01	Supported
H2	Perceived ease of use will have a positive effect on doctor's attitude towards using EMR.	0.303	≤ 0.05	Supported
H3	Perceived ease of use will have a positive effect on Perceived usefulness of EMR	0.445	≤ 0.01	Supported
H4	Top management and IT support will have a positive effect on doctor's attitude towards EMR	0.298	≤ 0.05	Supported
H5	Top management and IT support will have a positive effect on perceived ease of use EMR.	0.318	≤ 0.05	Supported
H6	Top management and IT support will have a positive effect on perceived Usefulness EMR.	0.108	≥ 0.05	Not Supported

Concerning the relation amongst PEOU and PU on one side, and the Usages of EMRs on the other, the studies show PEOU have an immediate and huge impact on EMRs usages. Accordingly, H2 was accepted. Additionally, the studies uncovered that PU strongly affected EMRs selection; henceforth, H1 was accepted. This research is in accordance with the discoveries detailed in the writing (9,10,11,12,13). It is accepted that when thorough execution of EMRs is thought of the faculty's cooperation with EMRs ought to be clear and reasonable, while the activity of EMR ought to be simple and route of such frameworks ought to be easy to use.

Figure 7: TAM Model with Path Coefficient



Concerning the relationship among PU and PEOU, the standard coefficient of PEOU and PU was 0.445 ($P = 0.05$), supporting H3, and showing see convenience have positive and critical impact on PEOU. This finding can suggest that if EMRs reception enjoyed no recognizable benefit for medical care staff, its execution would not be gladly received. With respect to the connection between TAM factors, the outcomes show that similarity has a positive and huge impact on PEOU and PU. In like manner, Rogers (2003), Chew (2004), Zhang (2008), Tung (2008) and Abdekhoda et al. (2016) found that similarity had an immediate and huge impact on TAM factors. While carrying out EMR, we ought to consider whether it is all around coordinated with the individual qualities of medical services staff and fits all the way into the work process.

Concerning connection between's Top administration and IT support without breaking a sweat of utilization, Top administration and IT support was found to have a feeble huge impact on PEOU. The writing has detailed that Top administration and IT support weakly affects execution of innovation. The discoveries suggest that when the reception of EMR is went with

less help of top administration and IT, end clients' propensity to apply this framework diminishes fundamentally. The discoveries on the connection between Top administration and IT backing and PU, recommend that help from Top administration and IT has a positive and huge impact on PU. Thus, H5 was upheld, and supports Gangwar 2015.

The execution of EMR ought to be considered as a basic change for top directors and should be completely upheld by them. Different examinations revealed that preparation ought to be considered as a significant determinant when effective execution of new innovation was followed.

The discoveries additionally uncovered that EMRs appropriation was essentially determined by exchanging accomplice support. In EMRs reception stages, exchanging accomplice backing ought to give specialized help to EMRs administrations, while leading post-execution framework survey, distinguishing blunders and improvements and checking framework execution ought to be thought about.

A rundown of proposed results for the hypothetical model are introduced in Table 4

CONCLUSION

End of this study is led to decide that huge components that lead EMR acceptance. Coming to conclusion conventional model of TAM were integrated and modified. The study results suggested that proposed model of TAM is relevant for recognizing the appropriate factors of EMRs usages. The current investigation recognized six huge determinants that influence the end client's conduct when exhaustive execution of EMRs is thought of. By and large, the studies shows that two main factors of TAM, PEOU and PU go about as intermediate factor for outer factors of modified model. On acceptance level of consultant utilizing EMR would upgrade their OPD consultation, and it is very user friendly as it is helpful to retrieve past medical information of patient and easier to detect medication error. IT experience manages doctor's knowledge of IT, understanding the essential advantages of EMR and their willingness to use. Thus analysis of consultant's attitude is needed before relevant intervention as adoption of EMR must be understood as a behavioural change in medical practice.

RECOMMENDATION

The adoption of electronic medical record by doctors and medical care suppliers has been moderately lethargic despite the apparent advantages of better hospital productivity, improved patient consideration, lower expenses and likely monetary prizes.

1. Leadership assumes a significant part in effective EHR execution. The doctor ought to urge to give greatest selection of EMR and those with most elevated compliances ought to be recognize as Super User which will support different clients.
2. Supporting Infrastructure: Consultant ought to get entire IT framework with quick Internet association with direct non intruding on meeting through EMR. Programming should made easy to understand, so specialist doesn't need to zero in on composing a lot and can draw in with patient by giving patient driven consideration.
3. Create a group environment. Everybody in your training will assume some part in the execution and utilization of your new EHR framework. In spite of the fact that a few jobs are a higher priority than others, everybody needs to comprehend that they are important to the collaboration. Their worth and their jobs ought to be obviously characterized and accentuated.
4. Raise mindfulness and excitement for the execution cycle. Timetable gatherings to talk about the significance of the venture and the advantages that an EHR offers. During these gatherings, reasonable objectives ought to be set for effectively carrying out the framework. Simultaneously, recall that everybody - from the charging administrator to the doctor - has other work to finish.
5. Have an arrangement prior to beginning the execution cycle. The accompanying assignments ought to be perceived and arranged before start to execute an EHR framework: Assess work process at training and distinguish which cycles will change. Recognize what is "nice to have" versus what you "need to have" as far as EHR capacities.

6. Focus on centre proficiency instead of too many component demands. Try not to make broad information passage cantered layouts for doctors. Make forte savvy layouts, as for Paediatric Hospital, Immunization Chart and Nutritional Chart and Trend in graphical organization ought to be accessible in understanding outline.

7. Training necessities to happen consistently. Preparing ought to incorporate essential abilities, application works and live guidance. Doctors should be an indispensable piece of the preparation as a portrayal of the significance of EHR execution and to build their own capacity to use the framework.

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ANNEXURE

Questionnaire Design:

	Description
Gender	Male
	Female
Age	20-29
	30-39
	40-49
	50-59
	More than 60
Years of Experience	Less than 5
	6-10
	11-15
	16-20
	21-25
	More than 25

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Perceived usefulness of EMR

1. EMR system is useful for documentation of clinical information of patient
2. EMR enables quick access to patient records for more coordinated, efficient care.
3. EMR useful by providing the daily patient appointments on single screen dashboard
4. EMR helps consultant more effectively diagnose patients, reduce medical errors, and provide safer care
5. EMR useful to maintain standardisation in consultation

Perceived ease of use of EMR

1. I find it cumbersome to use the EMR system.
2. I often become confused when I use the EMR system
3. Interacting with the EMR system requires a lot of my mental effort.
4. It is easy for me to remember how to perform tasks using EMR
5. The EMR system provides helpful guidance in performing tasks
6. Overall, I find the EMR system easy to use.

Attitude of using EMR

1. I am using EMR for consultation
2. I am willing to use EMR for future consultation
3. I might increase the frequency of using EMR in consultation
4. I will recommend other consultant to use EMR for consultation

Top Management and IT Support

1. The EMR project will be introduced to me effectively by the management.
2. There are sufficient technological resources to implement EMRs in our hospital.
3. My organization provided me complete training in using EMRs.