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A STUDY ON AWARENESS AND BENEFITS OF IMPLEMENTATION OF ELECTRONIC MEDICAL RECORD (EMR) IN M/ s MEENAKSHI HOSPITAL AT TANJORE.

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ABSTRACT

The relinquishment of Electronic Medical Records(EMRs) represents a vital shift in ultramodern healthcare, enhancing the effectiveness, delicacy, and availability of patient information. This exploration investigates the mindfulness and perceived benefits of EMR perpetration among healthcare professionals and institutions. A mixed- styles approach, incorporating checks and interviews, was employed to gather data from a different sample of medical interpreters, directors, and IT staff across colorful healthcare settings. The findings reveal a high position of mindfulness of EMRs, with utmost actors feting their eventuality to ameliorate patient care, streamline workflows, and reduce crimes. Still, challenges similar as cost, complexity of perpetration, and resistance to change were also linked. The study underscores the need for comprehensive training programs and support systems to grease the effective integration of EMRs. Eventually, this exploration highlights the transformative eventuality of EMRs in enhancing healthcare delivery while addressing the practical walls to their wide relinquishment.

INTRODUCTION

The relinquishment of Electronic Medical Records (EMRs) has come decreasingly current, revolutionizing the way medical information is stored, penetrated, and employed. This exploration trials to explore the mindfulness situations among healthcare professionals and the wider community regarding EMRs, as well as the multifarious benefits they offer to both healthcare providers and cases. As traditional paper- grounded medical records are gradationally phased out, the transition to EMRs presents a multitude of openings and challenges. Understanding the extent of mindfulness girding EMRs is pivotal for effectively enforcing and optimizing their operation within healthcare settings.

AWARENESS AND BENEFITS

Electronic medical records (EMRs) have revolutionized the healthcare assiduity, offering multitudinous benefits to cases, healthcare providers, and healthcare systems likewise. One of the primary advantages is the availability and portability of patient information. With EMRs, healthcare professionals can pierce a case's medical history, test results, and treatment plans incontinently, anyhow of position, leading to more effective and coordinated care. Also, EMRs enhance patient safety by reducing crimes associated with handwritten notes or lost paper records. The capability to electronically define specifics also minimizes the threat of drug crimes.

STATEMENT OF THE PROBLEM

Despite the honored benefits of Electronic Medical Records (EMRs) in enhancing patient care and streamlining healthcare operations, there remains a gap in understanding the mindfulness situations among healthcare professionals regarding the perpetration of EMRs. This knowledge gap poses a significant challenge to the successful integration of EMRs into clinical practice.

OBJECTIVE OF THE STUDY

- To study mindfulness situations regarding electronic medical records (EMRs) among healthcare professionals and cases.
- To study perceived benefits of enforcing EMRs in healthcare settings.
- To study the impact of EMR relinquishment on patient care quality and effectiveness.
- To identify walls to EMR perpetration and strategies for prostrating them.
- To estimate the overall satisfaction and usability of EMR systems among druggies

NEED OF THE STUDY

Electronic Medical Records (EMRs) are revolutionizing healthcare delivery. Research into EMR perpetration mindfulness is pivotal for healthcare efficacy. Understanding mindfulness situations aids in addressing walls to relinquishment. It helps identify gaps in knowledge and training among healthcare professionals. EMR perpetration mindfulness exploration enhances patient data security. perceptivity gained can optimize EMR systems for better case care. similar exploration fosters informed decision- making in healthcare policy.

RESEARCH METHODOLOGY

Research methodology is the systematic way to reversed problem. It may be understand as a science of studying how much is done scientifically.

RESEARCH DESIGN

The research design used in this study is descriptive analysis. Descriptive research, also known as statistical research, describes data and characteristics about the population or phenomenon being studied. It constitutes the blueprint for the collection, measurement and analysis of data. The research design is the conceptual structure within which research is conducted, it constitutes the blueprint for collection, measurement and analysis of data.

It is a plan that specifies the sources and types of information relevant to the research problem.

STUDY AREA

My study area is Meenakshi hospital at Thanjavur district.

SAMPLING TECHNIQUE

Simple Random Sampling Method is adopted to collect the primary data. This method is effective for its simplicity and unbiased nature.

Sample

The study should focus on individual directly involved with or affected by the use of EMRsin a hospital setting. This includes healthcare professionals (doctors, nurses and administrative staff), IT personnel involvedin EMR implementation, hospital management , decision makers and EMR staffs

Sample size

The total population of the hospital is above 500. The samples are collected the people who are all frequently use the EMRs in hospital . So I choose the sample size in 108.

SOURCES OF DATA COLLECTION

- **Primary Data**

Primary data are those which are collected a fresh and for the first time, and thus happen to be original in character. Under primary method of data collection, several methods are available. For this study questionnaire method is used.

- **Secondary Data**

The secondary data are those which have already been collected by someone else and which have already been passed through statistical process. Secondary data may be published or unpublished data. Industry profile, websites, articles, previous reports were widely used as a support to primary data.

3.5 RESEARCH INSTRUMENT

The research instrument adopted was structured questionnaire. The questionnaire used in this consists of 37 questions indicating the awareness and benefits of Electronic medical records (EMRs) in meenakshi hospital at thanjavur district.

3.6 STATISTICAL TOOL

The statistical tools applied for the study include the following are

- Percentage method
- Chi – square test

1. SIMPLE PERCENTAGE

The collected data is analyzed by using simple percentage method. Under this method percentage is used to compare the data collected.

FORMULAS

$$\text{Percentage} = \frac{\text{No. of respondents}}{\text{Total respondents}} \times 100$$

2.CHI-SQUARE TEST

The chi – square test, written as Ψ^2-test, is a useful measure of comparing experimentally obtained results with those expected theoretically and based on the hypothesis. It is used as a test statistics in testing a hypothesis that provides a set of theoretical frequencies with which observed frequencies are compared. In general chi – square test is applied to those problems in which we study whether the frequency with which a given event has occurred , is significantly different from the one expected theoretically.

Chi-square test is not concerned with any population distribution and its observation.

The chi-square test was first used in testing statistical hypothesis by Karl Pearson in the year. It is defined as

$$\text{Chi-square test} = \Sigma(O_i - E_i)^2/E_i$$

Where,

O_i = observed frequency of i^{th} event

E_i = expected frequency of i^{th}event

LIMITATION OF THE STUDY

- The study focuses only in Meenakshi hospital at Thanjavur. The result may or may not be applicable to other areas.
- The sample size is small and sample survey conducted to this study is limited to 108 employees.
- This study does not examine the reactions of the variables from employee with no experience in electronic medical records (EMRs).

REVIEW OF LITERATURE

A framework for modelling the electronic medical recordAL Rector, WA Nowlan, S Kay, CA Goble, 1993 provides valuable insights into the development of electronic medical record systems. The framework proposed in the paper offers a structured approach to modeling various aspects of EMRs, which is crucial for their effective implementation and utilization in healthcare settings.

The role of electronic medical records in improving the quality of health care services: Omar Ayaad, Aladeen Alloubani, Eyad Abu ALhajaa, Mohammad Farhan, Sami Abuseif, Ahmad Al Hroub, Laila Akhu-Zaheya This study delves into the impact of electronic medical records (EMRs) on enhancing healthcare quality. The authors compare various aspects across different healthcare settings. They likely discuss benefits such as improved data accuracy, streamlined communication, and better patient outcomes.

Resistance to Electronic Medical Records(EMRs): A Barrier to Improved Quality of Care David B Meinert examines the challenges and resistance faced in the adoption of electronic medical records (EMRs) and its impact on the quality of care. Meinert likely explores factors such as technological barriers, organizational resistance, and concerns about data privacy and security.

Electronic medical records management systems: Lim Chee Siang Edmund, Chennupati K Ramaiah, Surya Prakash Gulla This article provides a comprehensive overview of electronic medical records management systems, examining their key features, benefits, challenges, and implementation strategies.

Electronic medical records (EMRs), epidemiology, and epistemology: reflections on EMRs and future pediatric clinical research Richard C Wasserman explores the intersection of EMRs, epidemiology, and epistemology in pediatric clinical research. Wasserman reflects on the impact of EMRs on pediatric research methodologies, data collection, and analysis, emphasizing the potential for EMRs to enhance research efficiency and improve patient care outcomes.

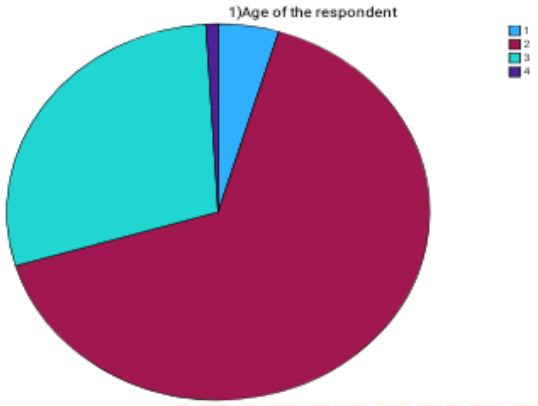
DATA ANALYSIS AND INTERPRETATION

PERCENTAGE ANALYSIS

Table no: 1

Table Name: Frequency distribution of age of the respondent

No.	Particulars	No. of respondents	Percentage
1	18-20	5	5
2	21-30	71	65
3	31-40	31	29
4	41-50	1	1
	TOTAL	108	100



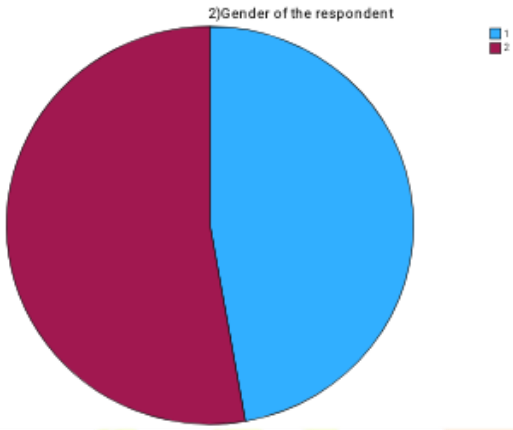
Interpretation

It is inferred that the respondents are in the age group 18-20 years 5% , 21-30 years 65% , 31-40 years 29% and 41-50 years 1%. From this analysis , majority of the respondents are between 21-30 age groups

Table no: 2

Table Name: Frequency distribution of gender of the respondent

No.	Particulars	No. of respondents	Percentage
1	Male	51	47
2	Female	57	53
	TOTAL	108	100



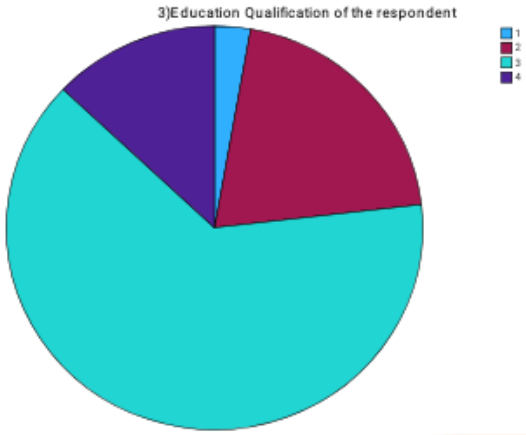
Interpretation

It is inferred that 47% of the respondents are male and 53% of the respondents are female.From this analysis , majority of the respondents are female.

Table no: 3

Table Name: Frequency distribution of education qualification of the respondent

No.	Particulars	No. of respondents	Percentage
1	SSLC& below	3	3
2	HSC	22	20
3	UG	69	64
4	PG& Above	14	13
	TOTAL	108	100



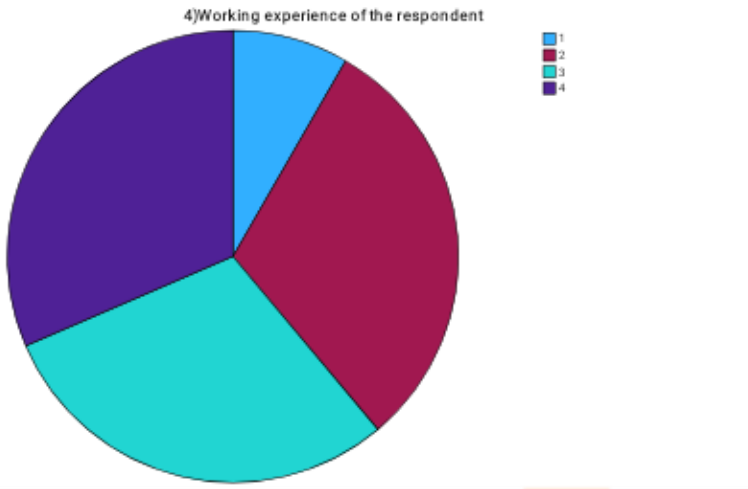
Interpretation

It is inferred that 3% of the respondents are SSLC& below , 20% of the respondents are HSC, 64% of the respondents are UG and 13% of the respondents are PG& Above. From this analysis , majority of the respondents are under graduate.

Table no: 4

Table Name: Frequency distribution of working experience of the respondent

No.	Particulars	No. of respondents	Percentage
1	0-6 months	9	8
2	6 months -1 year	33	31
3	2-3 years	32	30
4	\4 & above	34	31
	TOTAL	108	100



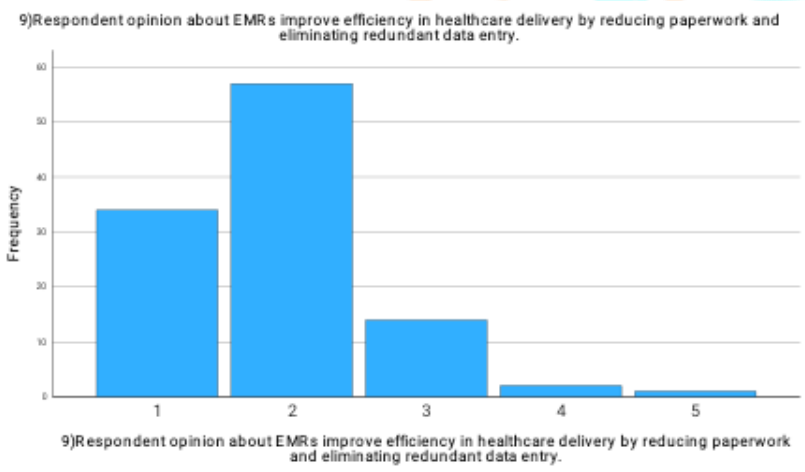
Interpretation

It is inferred that 8% of the respondents have 0-6 months experience, 31% of the respondents have 6 months -1 year experience ,30% of the respondents have 2-3years experience and 31% of the respondents have 4 & above .From this analysis , majority of the respondents have 6 months -1 year and 4 & above.

Table no: 5

Table Name: Frequency distribution of efficiency in healthcare delivery

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	34	31
2	Agree	57	53
3	Neutral	14	13
4	Disagree	2	2
5	Strongly disagree	1	1
	TOTAL	108	100



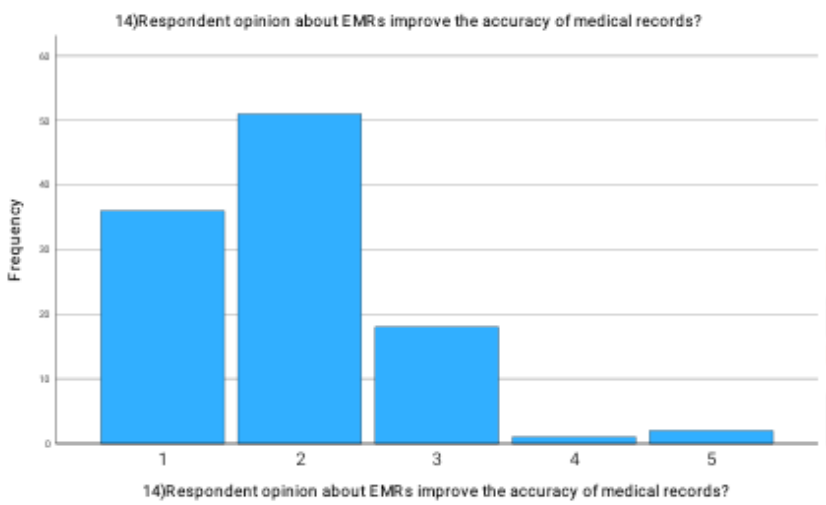
Interpretation

It is inferred that 31% of the respondents are Strongly agree , 53% of the respondents are Agree, 13% of the respondents are Neutral, 2% of the respondents are Disagree and 1% of the respondents are Strongly disagree .From this analysis , majority of the respondents are Agree with efficiency in healthcare deliver.

Table no: 6

Table Name: Frequency distribution of accuracy of medical records

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	36	33
2	Agree	51	47
3	Neutral	18	17
4	Disagree	1	1
5	Strongly disagree	2	2
	TOTAL	108	100



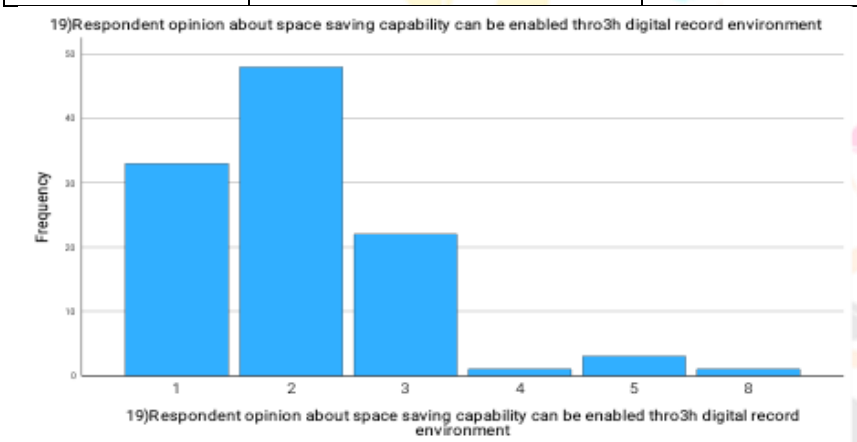
Interpretation

It is inferred that 33% of the respondents are Strongly agree , 47% of the respondents are Agree, 17% of the respondents are Neutral, 1% of the respondents are Disagree and 2% of the respondents are Strongly disagree. From this analysis , majority of the respondents are Agree with accuracy of medical records.

Table no: 7

Table Name: Frequency distribution of space saving capability

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	33	31
2	Agree	48	44
3	Neutral	22	20
4	Disagree	2	2
5	Strongly disagree	3	3
	TOTAL	108	100



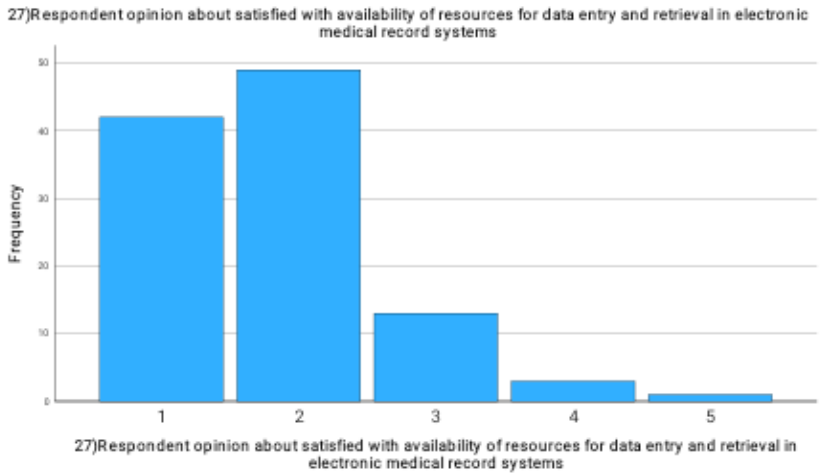
Interpretation

It is inferred that 31% of the respondents are Strongly agree , 44% of the respondents are Agree, 20% of the respondents are Neutral, 2% of the respondents are Disagree and 3% of the respondents are Strongly disagree . From this analysis , majority of the respondents are Agree with space saving capability.

Table no: 8

Table Name: Frequency distribution of availability of resources for data entry and retrieval

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	42	39
2	Agree	49	45
3	Neutral	13	12
4	Disagree	3	3
5	Strongly disagree	1	1
	TOTAL	108	100



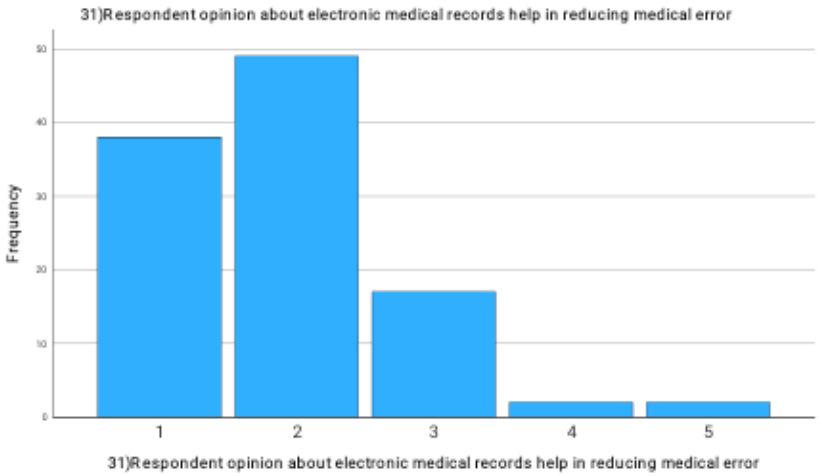
Interpretation

It is inferred that 39% of the respondents are Strongly agree , 45% of the respondents are Agree, 12% of the respondents are Neutral, 3% of the respondents are Disagree and 1% of the respondents are Strongly disagree. From this analysis , majority of the respondents are Agree with availability of resources for data entry and retrieval.

Table no: 9

Table Name: Frequency distribution of reducing medical error

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	38	35
2	Agree	49	45
3	Neutral	17	16
4	Disagree	2	2
5	Strongly disagree	2	2
	TOTAL	108	100



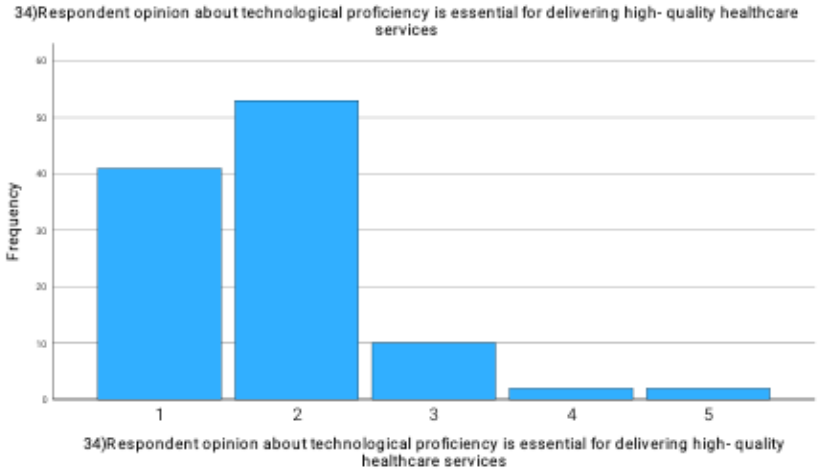
Interpretation

It is inferred that 35% of the respondents are Strongly agree , 45% of the respondents are Agree, 16% of the respondents are Neutral, 2% of the respondents are Disagree and 2% of the respondents are Strongly disagree . From this analysis , majority of the respondents are Agree with reducing medical error

Table no: 10

Table Name: Frequency distribution of technological proficiency is essential

No.	Particulars	No. of respondents	Percentage
1	Strongly agree	41	38
2	Agree	53	49
3	Neutral	10	9
4	Disagree	2	2
5	Strongly disagree	2	2
	TOTAL	108	100



Interpretation

It is inferred that 38% of the respondents are Strongly agree , 49% of the respondents are Agree, 9% of the respondents are Neutral, 2% of the respondents are Disagree and 2% of the respondents are Strongly disagree.From this analysis , majority of the respondents are Agree with technological proficiency is essentia

CHI-SQUARE TEST

1.Age and efficiency in healthcare delivery

H0: There is no significant association between age and efficiency in healthcare delivery.

H1: There is significant association between age and efficiency in healthcare delivery.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * efficiency in healthcare delivery	108	100.0%	0	0.0%	108	100.0%

Age * Efficiency in healthcare delivery							
count							
		Efficiency in healthcare delivery					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
AGE	18-20	2	3	0	0	0	5
	21-30	20	39	12	0	0	71
	31-40	12	14	2	2	1	31
	41-50	0	1	0	0	0	1
Total		34	57	14	2	1	108

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.160[a]	12	.433
Likelihood Ratio	13.337	12	.345
Linear-by-Linear Association	.289	1	.591
No. of Valid Cases	108		
a. 15 cells (75.0%) have expected count less than 5. The minimum expected count is .01.			

Interpretation

Calculated chi- square value is greater than the table value. Therefore null hypothesis, HO is rejected. There is a significant association between age and efficiency in healthcare delivery in electronic medical records.

2.Gender and enhance overall patient care

H0: There is no significant association between Gender and enhance overall patient care

H1: There is significant association between Gender and enhance overall patient care

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * enhance overall patient care	108	100.0%	0	0.0%	108	100.0%

Gender * Enhance overall patient care							
count							
		Enhance overall patient care					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Gender	Male	26	13	11	1	0	51
	Female	27	22	6	1	1	57
Total		53	35	17	2	1	108

Chi-Square Tests			
	Value	df	Asymptotic Significance(2-sided)
Pearson Chi-Square	8.564[a]	5	.128
Likelihood Ratio	9.408	5	.094
Linear-by-Linear Association	.480	1	.488
No. of Valid Cases	108		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .47.

Interpretation

Calculated chi- square value is greater than the table value. Therefore null hypothesis, HO is rejected. There is a significant association between Gender and enhance overall patient care in electronic medical records.

3.Education Qualification and availability of resources

H0: There is no significant association between Education Qualification and availability of resources for data entry and retrieval.

H1: There is significant association between Education Qualification and availability of resources for data entry and retrieval..

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Education Qualification* availability of resources for data entry and retrieval.	108	100.0%	0	0.0%	108	100.0%

Education Qualification * availability of resources							
count							
		availability of resources					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Education Qualification	SSLC & below	2	1	0	0	0	3
	HSC	9	7	2	3	1	22
	UG	26	35	8	0	0	69
	PG & above	5	6	3	0	0	14
Total		42	49	13	3	1	108

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.316[a]	12	.081
Likelihood Ratio	16.583	12	.166
Linear-by-Linear Association	.215	1	.643
No. of Valid Cases	108		
a. 13 cells (65.0%) have expected count less than 5. The minimum expected count is .03.			

Interpretation

Calculated chi- square value is greater than the table value. Therefore null hypothesis, HO is rejected. There is a significant association between Education Qualification and availability of resources in electronic medical records.

4. Working experience and overall quality of healthcare

H0: There is no significant association between working experience and overall quality of healthcare.

H1: There is significant association between working experience and overall quality of healthcare.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
working experience * overall quality of healthcare	108	100.0%	0	0.0%	108	100.0%

working experience * overall quality of healthcare							
count							
		overall quality of healthcare					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Working experience	0-6 months	2	5	2	0	0	9
	6 months -1 year	15	13	5	0	0	33
	2-3 years	12	10	10	0	0	32
	4 & above	9	18	3	2	2	34
Total		38	46	20	2	2	108

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.329[a]	12	.177
Likelihood Ratio	17.193	12	.142
Linear-by-Linear Association	1.393	1	.238
No. of Valid Cases	108		
a. 14 cells (70.0%) have expected count less than 5. The minimum expected count is .17.			

Interpretation

Calculated chi- square value is greater than the table value. Therefore null hypothesis, HO is rejected. There is a significant association between between working experience and overall quality of healthcare.

SUMMARY OF FINDINGS

From the above analysis, the findings are listed out and that helps to make suggestions. The findings are has been listed from the simple percentage analysis, simple linear regression and chi-square test.

PERCENTAGE ANALYSIS

- The majority 65% of the respondents are between 21-30 age groups.
- The majority 53% of the respondents are female.
- The majority 64% of the respondents are under graduate.
- The majority 31% of the respondents have 6 months -1 year and 4 & above.
- The majority 53% of the respondents are Agree with efficiency in healthcare delivery.
- The majority 47% of the respondents are Agree with accuracy of medical records.
- The majority 44% of the respondents are Agree with space saving capability.
- The majority 45% of the respondents are Agree with availability of resources for data entry and retrieval
- The majority 45% of the respondents are Agree with reducing medical error.
- The majority 49% of the respondents are Agree with technological proficiency is essential.

Chi-square Analysis

- To analyse whether Age influences efficiency in healthcare delivery which this chi- square test were used, from this obtained value is 12.160, table value for degree of freedom is 12 and level of significance 5% , this shows that Age is influencing efficiency in healthcare delivery
- To analyse whether Gender influences space saving capability which this chi- square test were used, from this obtained value is 8.564, table value for degree of freedom is 5 and level of significance 5% , this shows that Gender is influencing overall patient care
- To analyse whether Education Qualification influences availability of resources for data entry and retrieval which this chi- square test were used, from this obtained value is 19.316, table value for degree of freedom is 12 and level of significance 5% , this shows that Education Qualification is influencing availability of resources for data entry and retrieval
- To analyse whether working experience influences overall quality of healthcare which this chi- square test were used, from this obtained value is 16.329[a], table value for degree of freedom is 12 and level of significance 5% , this shows that working experience is influencing overall quality of healthcare

CONCLUSION

The implementation of Electronic Medical Records (EMRs) in hospitals represents a significant advancement in healthcare management, offering numerous benefits and enhancing overall operational efficiency. Awareness and adoption of EMRs are crucial for realizing these advantages, which include improved patient care, streamlined workflows, and enhanced data accuracy and accessibility. EMRs facilitate real-time access to patient information, reducing errors and enabling more informed decision-making by healthcare providers. They also enhance communication and coordination among medical staff, leading to better patient outcomes. Moreover, EMRs contribute to cost savings by minimizing paperwork, reducing duplication of tests, and optimizing resource utilization.

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