ISSN: 0976-3031

Available Online at http://www.recentscientific.com

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 10, Issue, 07(F), pp. 33688-33691, July, 2019

International Journal of Recent Scientific Research

DOI: 10.24327/IJRSR

Research Article

A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE REGARDING INTERPRETATION OF ELECTROCARDIOGRAM (ECG) AMONG NURSES WORKING IN CARDIAC CARE UNIT (CCU) IN SELECTED HOSPITALS, GUWAHATI, ASSAM

Darikynti Basanshrieh., Rikupar Iawim and Pallabi Chetia

Department of Medical- Surgical Nursing, Assam downtown University, Guwahati, Assam

DOI: http://dx.doi.org/10.24327/ijrsr.2019.1007.3725

ARTICLE INFO

Article History:

Received 13th April, 2019
Received in revised form 11th May, 2019
Accepted 8th June, 2019
Published online 28th July, 2019

Key Words:

Electrocardiogram (ECG), Cardiac Care Unit (CCU), Staff Nurses, Interpretation.

ABSTRACT

Electrocardiography is the most commonly used diagnostic test in cardiology. It contributes significantly to the diagnosis and management of patients with cardiac disorders. As such, nurses need to develop their skills and knowledge to care for their client group. The study aimed to assess the level of knowledge and practice regarding interpretation of Electrocardiogram (ECG) among the nurses working in Cardiac Care Unit (CCU). Survey research design was adopted. The sample consisted of 53 staff nurses. Convenience sampling technique was used. Data was collected by using structured knowledge questionnaire and observational checklist. The findings of the study revealed that majority of the staff nurses had moderate knowledge (52%) regarding interpretation of ECG and in practice the findings revealed that there is good practice (72%) of the staff nurses regarding interpretation of ECG. There is significant association found between knowledge of staff nurse with Exposure to any In-service education related to Interpretation of ECG ($\chi 2$- 9.5), also there is significant association found between practice of staff nurse with Years of clinical experience ($\chi 2$- 15.3), and there is significant correlation found between knowledge and practice (r- 0.40) which were highly significant at $p<0.05$ levels. On the basis of findings the researcher conclude that having a continuing nursing education and in-service topic related to interpretation of Electrocardiogram can further help the nurse in gaining more knowledge and be competent enough to detect or diagnose early if presence of any cardiac disorders.

INTRODUCTION

Electrocardiography is the most commonly used diagnostic test in cardiology. If properly interpreted, it contributes significantly to the diagnosis and management of patients with cardiac disorders. Importantly, it is essential to the diagnosis of cardiac arrhythmias and the acute myocardial ischemic syndromes. As such, nurses need to develop their skills and knowledge to care for their client group. Competency in cardiac rhythm monitoring is beneficial to identify changes in cardiac status, assess response to treatment, diagnosis and postsurgical monitoring.[1]

According to the American Heart Association's 2017 Heart Disease and Stroke Statistics Update, the number of adults living with heart failure increased from about 5.7 million (2009-2012) to about 6.5 million (2011-2014). Globally, 80% of CVD deaths take place in low- and middle-income countries and occur almost equally in males and females.[2]

MATERIALS AND METHODS

Survey research design was adopted. The sample consisted of 53 staff nurses. Convenience sampling technique was used. Data was collected by using structured knowledge questionnaire and observational checklist. Ethical permission was obtained from the Medical Superintendent of Hayat Hospital, Guwahati and written consent was taken from the staff nurses. Staff nurses who are working in Operation theatre, General Medicine Ward and Years of experience less than (<) 1 year were excluded from the study. Data analysis was done using descriptive and inferential. Statistical analysis was done manually.

RESULT AND DISCUSSION

The findings of the study showed that Majority of the staff nurse were in the age group of 21-30 years i.e 71.1%. Majority of the staff nurse were female i.e 100%**.** Most of the staff nurse were having 4-5 years clinical experience i.e 41.5%**.** Most of the staff nurse were working in ICCU i.e 37.7 %**.** Most of the

Corresponding author:* **Darikynti Basanshrieh
Department of Medical- Surgical Nursing, Assam downtown University, Guwahati, Assam

staff nurse were GNM i.e 66%**.** 52.8% of the staff nurse were exposed to In-service education related to interpretation of ECG.

Table 1 Frequency and percentage distribution of demographic variables.

n=53

SL. NO.	Frequency (f)	Percentage (%)
Q.1. Age in years		
a. 21-30	38	71.7
b. 31-40	15	28.3
c. 41-50	-	-
d. >50	-	-
Q.2. Gender		
a. Male	0	0
b. Female	100	100
Q.3. Years of clinical experience		
a. 1 year	10	18.9
b. 1-3 years	15	28.3
c. 3-5 years	22	41.5
d. >5 years	6	11.3
Q.4. Area of working		
a. Cardiology ward	15	28.3
b. Intensive Cardiac Care Unit (ICCU)	20	37.7
c. CTVS	18	34
Q.5. Educational qualification		
a. GNM	35	66
b. BSC	16	30.2
c. P.BSc	2	3.8
d. MSc	0	
Q.6. Exposure to any In-service education programme related to Interpretation of ECG		
a. Yes	28	52.8
b. No	25	47.2

The data presented in Table 1 show frequency and percentage distribution of demographic variables of staff nurses. Data analysis showed that most of the staff nurse 71.7% belong to age group of (21-30 years). Among the staff nurse 100% were female, most of the staff nurse 41.5% were having (3-5 years) of clinical experience, maximum of the staff nurse 37.7% were working in Intensive Cardiac Care Unit (ICCU), most of the staff nurse 66% were GNM, most of the staff nurse 52.8% were exposed to in-service education related to Interpretation of ECG.

Table 2 Knowledge scores regarding interpretation of ECG.

n=53

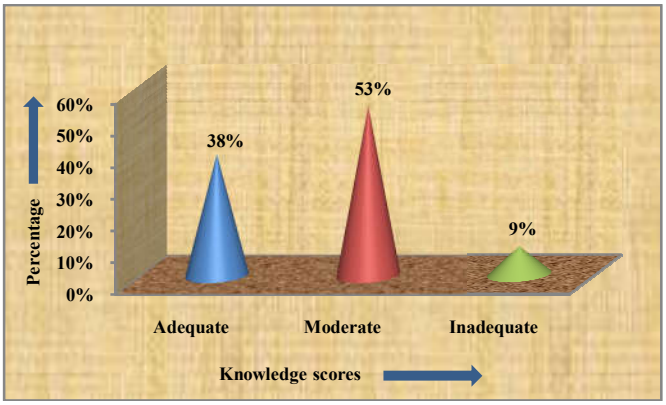

Fig 3 Cone Bar diagram presentation of Knowledge scores

The data presented in Table 2 shows that majority of the staff nurse had moderate knowledge (53%), 38% had adequate knowledge and 5% had inadequate knowledge regarding interpretation of Electrocardiogram (ECG).

Table 3: Practice scores regarding interpretation of ECG.

n=53

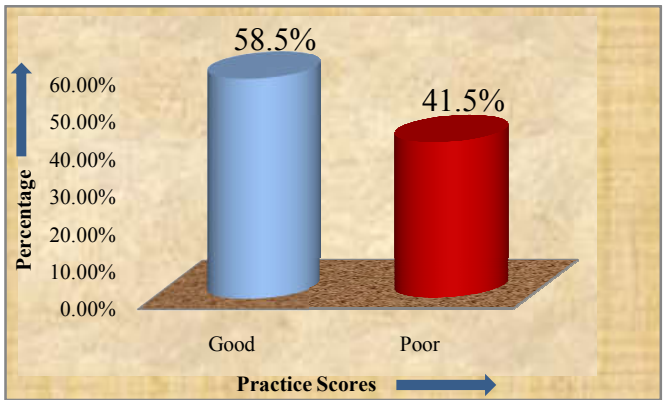

Fig 4 Cylindrical Bar diagram presentation of Practice scores

The data presented in Table 3 shows that majority of the staff nurse had good practice (58.5%), 41.5% had poor practice regarding interpretation of Electrocardiogram (ECG).

The data presented in the Table IV shows that there is no significant association found between knowledge of staff nurse with the selected demographic variables viz. Age in years, Gender, Years of clinical experience, Area of working, Educational qualification. Hence the null hypothesis is accepted and research hypothesis is rejected. There is significant association found between knowledge of staff nurse with selected demographic variable viz. Exposure to any In-service education related to Interpretation of ECG. Hence, the null hypothesis is rejected and research hypothesis is accepted.

The data presented in the Table 5 shows that there is no significant association found between practice of staff nurse with the selected demographic variables viz. Age in years, Gender, Area of working, Educational qualification and exposure to any In-service education related to Interpretation of ECG.. Hence the null hypothesis accepted and research hypotheses is rejected. There is significant association found between practice of staff nurse with selected demographic variable viz. Years of clinical experience. Hence, the null hypothesis is rejected and research hypothesis is accepted.

Table 4 Association of knowledge with selected demographic variable

n=53

Demographic variables	Knowledge Score			χ2	df	p-value	Inference
	Adequate	Moderate	Inadequate				
1. Age in years							
a. 21-30	12	22	4				
b. 31-40	8	6	1				
c. 41-50	-	-	-	2.4	6	12.59	NS
d. >50	-	-	-				
2. Gender							
a. Male	0	0	0	0	2	5.99	NS
b. Female	20	28	5				
3. Years of clinical experience							
a. 1 year	3	4	3				
b. 2-3 years	7	6	2				
c. 4-5 years	6	16	-	12.3	6	12.59	NS
d. >5 years	4	2	-				
4. Area of working							
a. Cardiology ward	8	5	2				
b. ICCU	7	10	3	6.8	4	9.49	NS
c. CTVS	5	13	-				
5. Educational qualification							
a. GNM							
b. B.Sc	12	20	3				
c. P.BSc	8	6	2				
d. MSc	-	2	-	3.1	6	12.59	NS
	-	-	-				
6. Exposure to any In-service education programme related to ECG							
a. Yes							
b. No							
	16	10	2	9.5	2	5.99	S
	4	18	3				

χ^2 at df (2) = 5.99, df(4) = 9.49, df(6) = 12.59 p< 0.05 *NS= Not significant
*S= Significant

Table 5 Association of practice with selected demographic variable

n=53

Demographic variables	Practice Score		χ2	df	p-value	Inference
	Good	Poor				
1. Age in years						
a. 21-30	18	20				
b. 31-40	13	2				
c. 41-50	-	-	7	6	12.59	NS
d. >50	-	-				
2. Gender						
a. Male	-	-	0	2	5.99	NS
b. Female	31	22				
3. Years of clinical experience						
a. 1 year	2	8				
b. 2-3 years	6	9				
c. 4-5 years	18	4	15.3	6	12.59	S
d. >5 years	5	1				
4. Area of working						
a. Cardiology ward	6	9				
b. ICCU	16	4	6.4	4	9.49	NS
c. CTVS	9	9				
5. Educational qualification						
a. GNM	16	19				
b. B.Sc	13	3				
c. P.BSc	2	-	7.2	6	12.59	NS
d. MSc	-	-				
6. Exposure to any In-service education programme related to ECG						
a. Yes						
b. No	19	9	2.2	2	5.99	NS
	12	13				

χ^2 at df (2) = 5.99, df(4) = 9.49, df(6) = 12.59 p< 0.05
*NS= Not significant *S= Significant

Table 6 Correlation between knowledge and practice in interpretation of ECG

n=53

Category	Mean	r-value	p-value	Inference
Knowledge	15.8			
Practice	4.6	0.40	0.27	S

p< 0.05, *S=Significant

The data presented in the Table 6 shows that there is a relationship found between knowledge and practice of staff nurses regarding interpretation of Electrocardiogram (ECG). Hence the null hypothesis is rejected and research hypothesis is accepted.

DISCUSSION

The frequency and percentage distribution of staff nurses regarding interpretation of Electrocardiogram (ECG) by Age, Gender, Years of clinical experience, Area of working, Educational qualification, and Exposure to any In-service education programme related to ECG. With regard to the age majority (71.7%) of the staff nurses were in the age group of (21-30 years). With regard to gender majority (100%) were females. With regard to the years of clinical experience majority (41.5%) had (3-5 years) of clinical experience. With regard to area of working majority (37.7%) were working in Intensive Cardiac Care Unit (ICCU). With regard to educational qualification majority (66%) were from GNM background. With regard to exposure to any in-service education programme related to interpretation of ECG majority (52.8%) were exposed to the in-service education. The statistical findings of the present study reveals that in majority 53% of staff nurses have moderate knowledge regarding interpretation of Electrocardiogram and 58.5% of staff nurses have good practice regarding interpretation of Electrocardiogram. The statistical findings of the present study reveals that in majority 58.5% of staff nurses have good practice regarding interpretation of Electrocardiogram.

CONCLUSION

The present study was conducted to assess the knowledge and practice regarding interpretation of Electrocardiogram (ECG) among nurses working in Cardiac Care Unit (CCU). The study reveals that majority of the staff nurses had moderate knowledge and good practice.

Thus, on the basis of findings the researcher conclude that having a continuing nursing education and in-service topic related to interpretation of Electrocardiogram can further help the nurse in gaining more knowledge and be competent enough to detect or diagnose early if presence of any cardiac disorders.

References

1. Corabianpaula Health Technology Assessment Alberta heritage foundation for medical research 25. [Internet] 2012 [cited 2017 dec 20] Available from: https://biomedres.us/pdfs/BJSTR.MS.ID.000572.pdf
2. Heart Disease and Stroke Statistics 2017 Update: A Report From the American Heart Association. [Internet]. 2017 [cited 2018 jan 1]. Available from: http://circ.ahajournals.org

How to cite this article:

Darikynti Basanshrieh and Rikupar Iawim., 2019, A Study to Assess the Knowledge and Practice Regarding Interpretation of Electrocardiogram (ECG) Among Nurses Working in Cardiac Care Unit (CCU) in Selected Hospitals, Guwahati, Assam. *Int J Recent Sci Res.*10 (07), pp.33688-33691. DOI: http://dx.doi.org/10.24327/ijrsr.2019.1007.3725

****