ORIGINAL RESEARCH PAPER

Nursing

KEY WORDS:

IDENTIFY THE KNOWLEDGE REGARDING PERMANAT PECEMAKER AMONG STAFF NURSES OF SELECTED CRITICAL CARE UNITS IN VIEW TO DEVELOP AN INFORMATIONL BOOKLET AT KOLHAPUR

Mrs. Neeta Ranbhise

Assistant Professor, Dept of Medical Surgical Nursing. D.Y. Patil College Of Nursing Kolhapur.

ABSTRACT

An artificial pacemaker can greatly improve your quality of life and for some people it can be lifesaving.5 A pacemaker is typically inserted into the patient through a simple surgery using either local anesthetic or a general anesthetic. The patient may be given a drug for relaxation before the surgery as well. An antibiotic is typically administered to prevent infection. In most cases, the pacemaker is inserted in the left shoulder area, where an incision is made below the collar bone, creating a small pocket where the pacemaker is actually housed in the patient's body. The lead or leads (the number of leads varies depending on the type of pacemaker) are fed into the heart through a large vein using a fluoroscope to monitor the progress of lead insertion. The right ventricular lead would be positioned away from the apex (tip) of the right ventricle and up on the interventricular septum, below the outflow tract, to prevent deterioration of the strength of the heart. The actual surgery typically lasts 30 to 90 minutes.6 Pacemakers are powered by small lithium batteries and include sensors that detect a patient's natural heartbeat. Nurses undergo theoretical training, allowing them to play a crucial role not only when working alongside a cardiologist during the initial insertion of the pacemaker but also maintaining the device, replacing the pacemaker's batteries, and checking up on the patient at regular intervals.7 **Objectives of the study-** 1. To identify the knowledge regarding permanent pacemaker among staff nurses working in critical care units. 2. To find out the association between knowledge scores with selected socio demographic variables of staff nurses. **Method-** The research approach adopted for the study was quantitative evaluative survey and the research design was Descriptive research. Sampling refers to the process of selecting a portion of population to represent the entire population. In this study, the investigator used the convenient sampling technique to draw the samples. **Results-** That majority of the subjects 30(50%) belonged to Aadhar hospital while 15(25%) belonged to Sai cardiac hospital & 15(25%) & belonged to D.Y Patil hospital, another is area of working, In ICU 50(83.33%) and in CCU 10(16.66), Regarding experience of staff nurses in years i.e. 0-5 years are 34(56.66%), 6-10 years are 10(16.66%), 10-15 years are 8(13.33%) & 15-20 years are 8(13.33%), While age of 21-30 years are 50(83.33%), while 10(16.66%) belonged to the age group of 31-40 years, while 0(0%) belonged to 41-50 years of age. According to gender, male are 20(33.33%) & females are 40(66.66%) staff nurses who had done P.G diploma in critical care nursing are only 5(8.33%) In terms of educational status, GNM are 38(63.33%), B.Sc. Nursing are 21(35%), P.B.B.Sc Nursing are 1(1.66%) and there are no subjects with M.Sc. Nursing status. Majority of the subjects 31(51.66%) having paying scale of Rs 8000-12000/-, 16(26.66%) having paying scale of Rs – 12000-15000/- and only 1(1.66%) are paying scale of 20000 and above and no subjects with salary less than Rs 8000/- and nurses who taken special training of pacemaker are only 3(5%) and 57(95%) have not taken any special training of pacemaker. Description of samples related to knowledge regarding permanent pacemaker Revealed that majority of subject 30(18%) had average knowledge and 25(15%) had good knowledge and 03(05%) had poor knowledge regarding permanent pacemaker. **Interpritation And Conclusion-** The present study revels that overall experience of conducting this study was satisfying and enriching. The study was a new learning experience for the investigators. The result highlights the need of improvement of knowledge on pacemaker

INTRODUCTION

Background And Objectives

The heart is a muscular organ in most animals, which pumps blood through the blood vessels of the system. Blood provides the body with oxygen and nutrients, as well as assists in the removal of metabolic wastes, In humans, the heart is located between the lungs, in the middle compartment of the chest. And has a conducting system tendency as it pumps blood with a rhythm determined by a group of pace making cells in the Sino atrial node. These generate a current that causes contraction of the heart, traveling through the atrioventricular node and along the conduction system of the heart.[1]

The heart is made up of around half a billion cells, the majority of the cells make up the ventricular walls. The rapidity of atrial contraction is such that around 100 million myocardial cells contract in less than one third of a second and it doesn't needs a power supply.[2]The human heart has a similar need for a power source and also uses electricity. Thankfully we don't need to plug ourselves in to the mains, the heart is able to create its own electrical impulses and control the route the impulses take via a specialized conduction pathway called Pacemaker a device for stimulating the heart muscle and regulating its contractions.[2]Although the SA node is the natural pacemaker causing the heart to beat at a rate of 60-100 bpm normally, if this fails the others can take up this work usually the AV node then the Purkinje system and Bundle branches. This sequence is because of the natural rate these tissues beat at.[3]When something goes wrong with the Sino atrial node, you may develop a consistently slow heartbeat (sinus bradycardia) or the normal pacemaker activity may stop entirely (sinus arrest). If sinus arrest occurs, usually another area of the heart takes over pacemaker activity. This area is called an escape pacemaker. It may be located lower in the upper right chamber of the heart, in the atrioventricular node (also located in the upper right chamber), in the heart's conduction system or even in the lower chamber of the heart, the ventricle. And as it shows symptoms like A consistently slow heart rate, Fainting, if the heart rate becomes very slow or if the heart is slow in returning to a normal rhythm after a period of rapid beating, Periods of slow heartbeats (bradycardia) that alternate with periods of fast (tachycardia), irregular heartbeats (arrhythmia), such as are found sometimes in atrial fibrillation and atrial flutter. (This is a type of sick sinus syndrome sometimes called the bradycardia-tachycardia syndrome.) And lastly weakness and tiredness.[4]The SA node is the natural pacemaker of the heart. If its function is ceases or doesn't work the artificial pacemaker will help.[4]Most pacemakers are very reliable and comfortable. They're smaller than an average matchbox and weigh about 20 to 50 grams. A pacemaker sits just under your collarbone and will have one or more leads which are placed into your heart through a vein.[5]An artificial pacemaker can greatly improve your quality of life and for some people it can be lifesaving.[5]

Objectives of the study-1. To identify the knowledge regarding permanent pacemaker among staff nurses working

in critical care units. 2. To find out the association between knowledge scores with selected socio demographic variables of staff nurses.

METHODS- Non experimental, descriptive design was used to identify the knowledge By using Non probability, Purposive sampling technique, 60 samples from various hospital working staff nurses at Kolhapur.

Those who have fulfilled inclusion criteria Samples were school going children. The reliability of the tool was established and the data was collected by using demographic data and 25 questioner on knowledge, and on Practice Yes or No Scale was given .

Ethical Consideration- Ethical clearance was taken from committee of D.Y Patil college of Nursing, Kolhapur. Apart From this, Written Information Consent was taken from authorities of the Hospital ,Kolhapur to collect data. Confidentially and Privacy of the study participants were also be maintained.

RESULT

Table-1: Frequency and percentage distribution of subjects according to their according to socio-demographic data. n=60

Sr. No	Demographic Variables	Frequency(f)	Percentage(%)
1	Name of Hospitals		
	a)D.Y.PatilHospital	15	15%
	b)sai cardiac hospital	17	17%
	c) Adhar Hospital	28	28%
	d) Sachin Superspeciality clinic	40	40%
2	Area of Working		
	ICU	85	85%
	CCU	15	15%
3	Experience in Year		
	a)0-5	88	88%
	b)6-10	10	10%
	c)10-15	2	2%
	d)15-20	0	0 %
4	Age in year		
	a)21-30	76	76%
	b)31-40	24	24%
	c)41-50	0	0%
5	Gender		
	a) Male	46	46%
	b) Female	54	54%
6	P.G. Diploma in Critical care Nursing		
	a)Yes	07	07%
	b)No	93	93%
7	Educational Status		
	a)GNM	58	58%
	B.SC(Nsg)	39	39%
	P,B,B,SC(Nsg)	3	3%
	M.sc.(Nsg)	0	0%
8	Paying Scale		
	a)Less than 8000	1	1%
	b)9000-12000	59	59%
	c)13000-15000	30	30%
	d)16000-20000	07	07%
	e)21000&above	03	03%
9	Any special training of pacemaker		
	a)Yes	07	07%
	b)No	93	93%

Table 2:-Frequency and Percentage (%) distribution of level of Knowledge of staff nurses regarding permanent pacemaker n=60

	Knowledge Score	Frequency (f)	Percentage (%)
Good	21-30	65	65%
Average	11-20	29	29%
poor	0-10	06	06%

Section 3: Calculated mean, median, mode, SD and range of knowledge of scores of staff nurses regarding permanent pacemaker. n=60

Mean	Median	Mode	Sd	Range
K 20.45	21	0	6.98	29

Section 4: Association between Knowledge with their selected socio demographic variables.

Sr. No.	demographic variables	Calculated Value	Table Value	df
1	Name of Hospitals	13.268	12.59	0.6
	a)D.Y.PatilHospital			
	b)sai cardiac hospital			
	c) Adhar Hospital			
	d) Sachin Superspeciality clinic			
2	Area of Working	0.195	5.99	02
	ICU			
	CCU			
3	Experience in Year	0.839	09.59	04
	a)0-5			
	b)6-10			
	c)10-15			
	d)15-20			
4	Age in year	0.412	5.99	02
	a)21-30			
	b)31-40			
	c)41-50			
8	Gender	2.182	5.99	02
	Male			
	Female			
9	P.G. Diploma in Critical care Nursing	1.510	5.99	02
	a)Yes			
	b)No			
10	Educational Status	7.268	9.49	04
	a)GNM			
	b)B.SC(Nsg)			
	c)P,B,B,SC(Nsg)			
	d)M.sc.(Nsg)			
11	Paying Scale	7.225	15.51	08
	a)Less than 8000			
	b)9000-12000			
	c)13000-15000			
	d)16000-20000			
	e)21000&above			
12	Any special training of pacemaker	1.021	5.99	02
	a)Yes			
	b)No			

DISCUSSION

Majority of staff nurses 80% belongs to aster aadhar hospital, 25% belongs to Sai cardiac hospital and 25% from D.Y Patil hospital.,Majority of staff nurses working area is 83.33% in intensive care unit (ICU) and 16.66% in critical care unit (CCU).Majority of staff nurses 50% belongs to 20-30 age, 12% belongs below 20 age and 8% were in 31-40 age.The majority of the staff nurses having years in experience of 0-5(56.66%), 6-10(16.66%) 10-15(13.33%) and 15-20(13.33%). Majority of the staff nurses age in year 21-30(83.33), 31-40(16.66%) and subjects with 41-50 are 0(0%)Majority of the staff nurses are female (66.66%) and males are (33.33%).Majority of staff nurses have not done P.G Diploma in critical care nursing are (91.66%) and (8.33%) mot attended P.G Diploma in critical care nursing,Majority of the staff nurses educational status are GNM (63.33%), B.Sc. are (35%) and others P.B.B.Sc. are (1.66%),Majority of the staff nurses paying scale is Rs. 8000-

12000/-(51.66%), 12000-15000/-(26.66%), 15000-20000/-(20%) and 20000/-& above (1.66%).Majority of staff nurses (95%) have not taken special training of pacemaker and only 5% had taken special training of pacemaker. method result shows that knowledge scores majority 18% had average knowledge, 03% had poor and 15% had good knowledge about permanent pacemaker.The findings of study most staff nurses did not have the correct knowledge about permanent pacemaker.The mean for knowledge was 20.45, median was 21, mode was 00, standard deviation was 6.98& range was 29 of knowledge scores of staff nurses regarding permanent pacemaker.The staff nurses need more support and guidance to know regarding permanent pacemaker. It is recommended that each staff nurses should be assessed for knowledge regarding permanent pacemaker and needed information and guide for permanent pacemaker to be given.Knowledge about importance of permanent pacemaker, indications, informational booklet helps to improve knowledge regarding permanent pacemaker.The study showed that, among 60 samples, (03%) were having poor knowledge, (18%) were having average knowledge and (15%) is had good knowledge regarding permanent pacemaker out of 60 samples. Hence, it concluded that more efforts have to make to improve the knowledge of staff nurses on permanent pacemaker.

CONCLUSION

The finding of the study can help staff nurses need more support and guidance to know regarding permanent pacemaker. It is recommended that each staff nurses should be assessed for knowledge regarding permanent pacemaker and needed information and guide for permanent pacemaker to be given.Knowledge about importance of permanent pacemaker

Implication Of The Study

The Findings of the study have implication for the Nursing administration. Nursing Personnel can develop skill in communication, health care professionals and academic performance. Future Nurses can develop the knowledge regarding pacemaker Nursing student must be motivated to conduct research studies.

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