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A PRE EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PACEMAKER AMONG THE STAFF NURSES WORKING AT SELECTED HOSPITAL OF INDORE (M.P.)"

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Abstract:

In this study pre experimental design was used with samples consisting of 60 staff nurses who were selected by Non- probability convenient sampling technique. Structured questionnaire was used to assess the knowledge level of staff nurses. Pre test was conducted by using structured knowledge questionnaire and after 30 days post test was conducted using the same structured questionnaire for assessing the effectiveness of self instructional module. Mean percentage of the knowledge score of post test 24 was higher than pre test 7.7. The 't' value for pre test and post test was 23.6, ≤ 0.005 level. The data was analyzed in terms of descriptive and inferential statistics.

Key Words: Pacemaker, SIM, Staff Nurses

INTRODUCTION:

BACKGROUND OF THE STUDY:

According to American Heart Association in 2010, dysrhythmias caused or contributed to 479,000 or more than 2,400,000 deaths in United States. Dysrhythmias are historically linked to human awareness of the strength and rhythm of the palpable pulse.

When an arrhythmia is serious, you may need urgent treatment to restore a normal rhythm. This may include Electrical "shock" therapy (defibrillation or cardio version),

Implanting a temporary pacemaker to interrupt the arrhythmia, Medications given through a vein (intravenous). Pacemakers provide an artificial SA node or purkinjie system. A pacemaker is indicated if the conduction system fails to transmit impulses from the sinus node to the ventricles, to generate an impulse spontaneously, or to maintain primary control of the pacing function of the heart. The condition may necessitate a pacemaker Ablation, Acute myocardial infarction, Autonomic nervous system failure, Cardiac surgery, Electrolyte imbalance, myocardial ischemia and Drug toxicity.

The population for pacemaker implant is not limited by age, sex, or race. Over 100,000 pacemakers are implanted per year in the United States. The occurrence is more frequent in the elderly with over 85% of implants received by those over age 65. A history of myocardial infarction (heart attack), congenital defect, or cardiac transplant also increases the likelihood of pacemaker implant.

Cardio vascular diseases are becoming a leading cause of morbidity and mortality in industrialized countries and they are also emerging as prominent national health problem in developing countries. As per World Health Organization cardiac diseases are the 1st leading cause of death in developing and under developed countries (9.4%), immediately after lower respiratory tract infection. The picture is worsening in developed countries, where cardiac problems cause 13.4% of total deaths. On a whole, total deaths due to cardiac diseases worldwide are 7.20 million (12.2%).

The projections of increased mortality and increased life expectancy suggest that by the year 2020, cardiovascular diseases will be the principle cause of mortality throughout the world.

OBJECTIVES:

1. To assess the knowledge regarding pacemaker among the staff nurses.

2. To assess the effectiveness of self instructional module regarding pacemaker among the staff nurses.

3. To find out the association between Post-test knowledge score with the selected demographic variables.

MATERIAL AND METHODS:

A pre experimental research deign is used having pre experimental one group pre test post test design is used. There is no control group. The independent variable is self instructional module and the dependent variable is knowledge regarding pacemaker among staff nurses.

The sample was selected through a non-probable purposive sampling technique.

The present study tends to describe the knowledge of staff nurses regarding pacemaker and to evaluate the effectiveness of self instructional module.

Sample comprised of 60 staff nurses those who are working in selected hospital, Indore (M.P.).

A structured knowledge questionnaire was prepared to assess the knowledge of staff nurses. The tool consisted of two sections

Sections A: Demographic data - It describes the selected sample characteristics. It comprises of 6 items for obtaining information regarding age, gender, marital status, educational status, years of experience & knowledge gained through which source regarding pacemaker.

Section B: It consists of 30 items, regarding the introduction & definition of pacemaker, indications and contra-indications, the modes and setting of pacemaker and nursing care of patient with pacemaker.

The tool was submitted to experts including nursing personnel from the field of medical-surgical nursing along with the criteria checklist. The reliability of the test was found out using Karl Pearson's correlation coefficient formula. The reliability was found to be 'r =0.834' for knowledge questionnaire.

Pilot study was conducted after obtained written permission from the concerned authority prior to the study. The topic was explained to the sample group and confidentiality was assured. No further changes were made in the tool and the self instructional module after the pilot study.

Discussion

SECTION – A: SAMPLE DESCRIPTION

Table-1 Frequency & Percentage distribution of staff nurses by their demographic characteristics.

Sl. No.	Demographic variables	Characters	Frequency (f)	Percentage (%)
1	Age	20 – 25 Years	29	48.3
		26 -30 Years	14	23.3
		31 – 35 Years	8	13.3
		36 & Above	9	15
2	Sex	Male	33	55
		Female	27	45
3	Marital Status	Single	42	70
		Married	18	30
		Widowed	-	-
		Divorced	-	-
4	Education Qualification	General Nursing & Midwifery	32	53.3
		B.Sc Nursing	15	25
		Post Basic B.Sc Nursing	13	21.7
		M.Sc Nursing	-	-
5	Years of Experience	0-5 Year	40	66.7
		6-10 Years	7	11.7
		11-15 Years	7	11.7
		16 Years & Above	6	10
6	Knowledge on pacemaker is gained through	Books & news Papers	30	50
		Conference & seminar	14	23.33
		Internet	6	10
		Other's	10	16.66

Age :

The data in Table 1 show that majority 49% of staff nurses were in the age group of 20-25 years, 24% of staffs were in the age group of 26-30 years, 13% of staffs were in the age group of 31-35years and 15% were in the age group of 36years & above. Over all majorities of staff were in the age group of 20-25years.
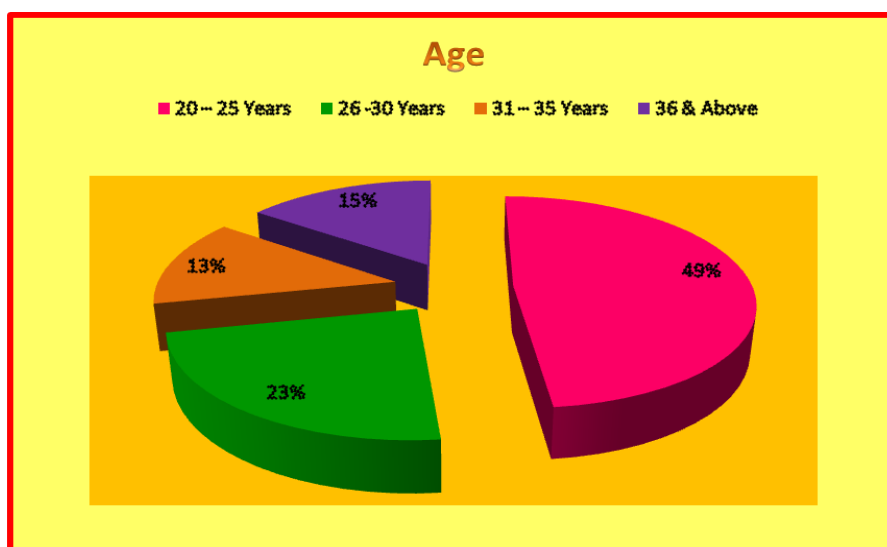

Figure 1: Pie diagram showing distribution of subjects according to the age

Sex :

Figure 2: Pie diagram showing distribution of subjects according to the Sex

The data in Table 1 show that the sex majority of staffs were male that is 55% and the female staffs were 45%.
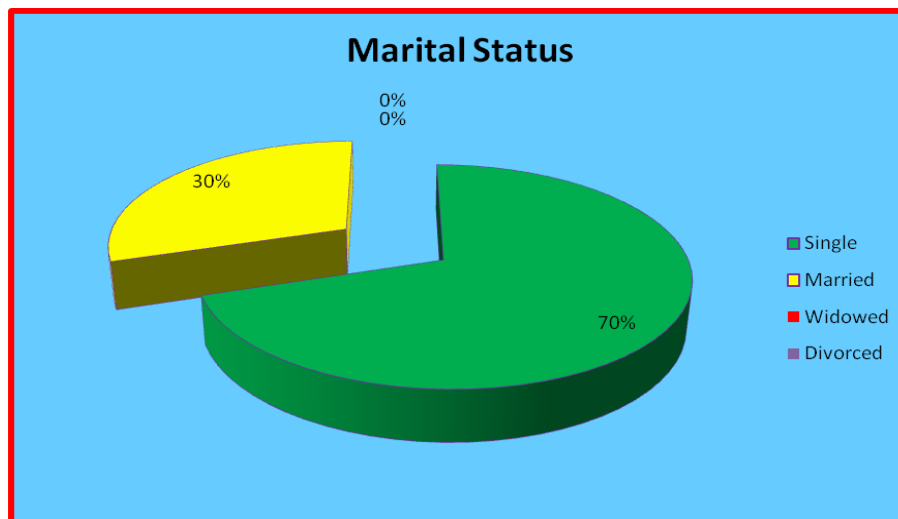
Marital Status:

Figure 3: Pie diagram showing distribution of subjects according to the marital status

The data in Table 1 show that majority of staff nurses were single that is 70% and only 30% staffs were married.

Educational Qualification:

The data in Table 1 show that educational qualifications of the staff nurses were 54% GNM (General Nursing and Midwifery), 25% Basic B.Sc. Nurses and only 22% were Post Basic B.Sc Nurses. Over all the employees were from general nursing and midwifery.
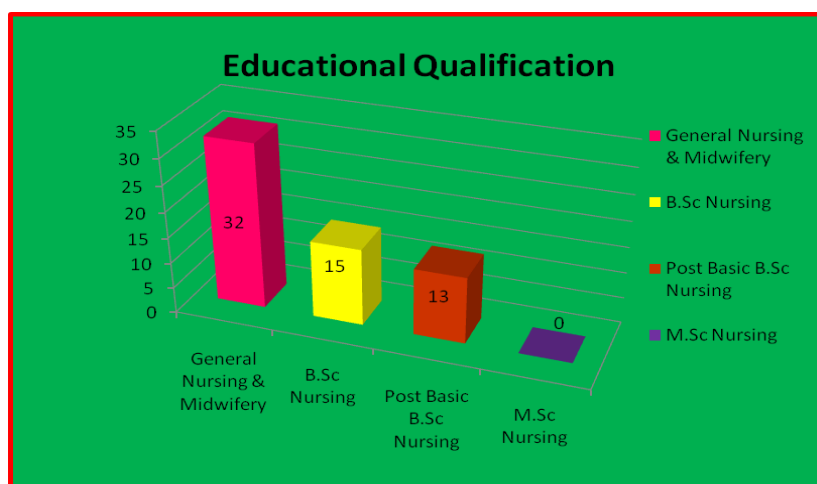

Figure 4: Pie diagram showing distribution of subjects according to the education.

Years of Experience:

The data in Table 1 show that 67% staff nurses have 1-5 years of experience, 11% of staff nurses have 6-10 years of experience, 11.7% have 11-15 years of experience and only 10% staffs have more than 16 years experience.
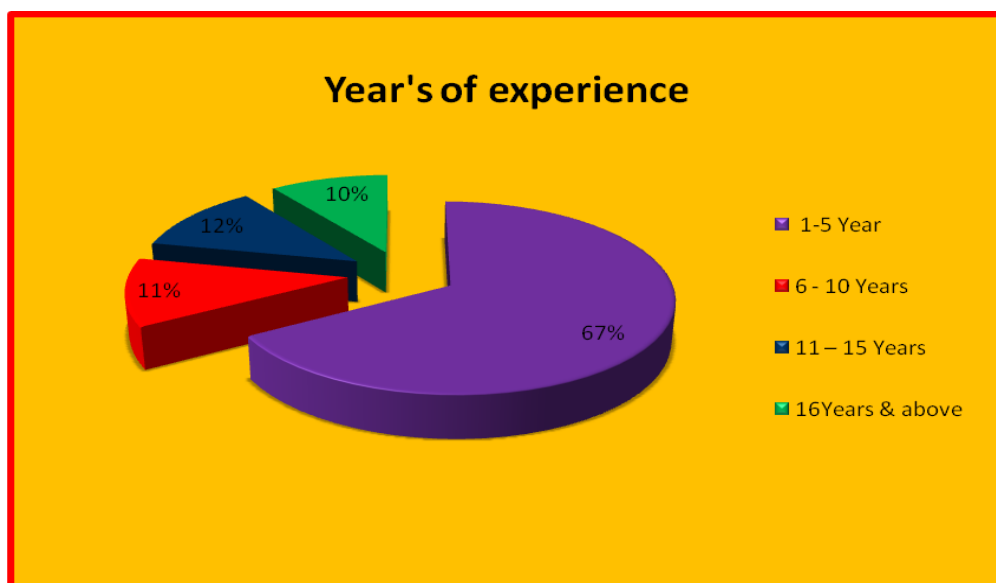

Figure 5: Pie diagram showing distribution of subjects according to the experience

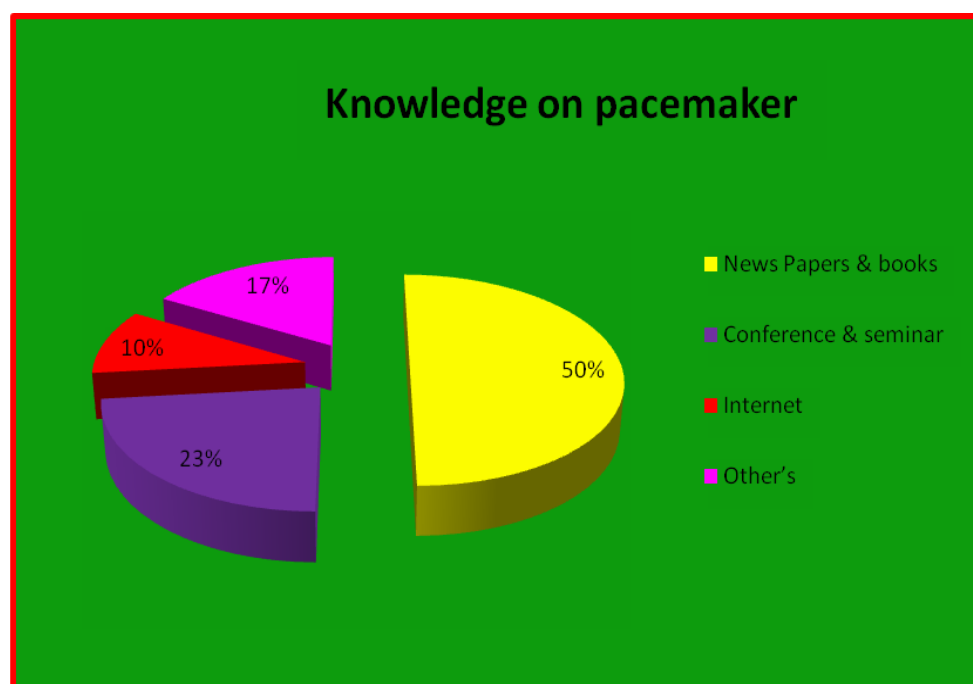## Knowledge on Pacemaker gained through which source:

Figure 6: Pie diagram showing distribution of subjects according to their source

The data in Table 1 show that 50% of staff nurses gain knowledge through books & news papers, 24% by Conference & Seminar, 10% by Internet and 16% by other sources. Over all nurses gained knowledge from books & news papers.

RESULT :

Frequency & Percentage distribution of pre test knowledge of staff nurses regarding pacemaker.

| Level of knowledge	Range of score	Frequency (f)	Percentage %
Excellent	25 – 30	-	-
Good	19 – 24	04	6.66
Average	13 – 18	06	10
Poor	7 – 12	22	36.66
V. Poor	1 - 6	28	46.66
Total		**60**	**100 %**

Frequency & Percentage distribution of post- test knowledge of staff nurses regarding pacemaker.

Level of knowledge	Range of score	Frequency (f)	Percentage (%)
Excellent	25 – 30	30	50
Good	19 – 24	25	41.66
Average	13 – 18	05	8.33
Poor	7 – 12	-	-
V. Poor	1 - 6	-	-
Total		**60**	**100 %**

Data shows that 50% of staff nurses have excellent knowledge regarding pacemaker and 41 % of staff nurses have good knowledge regarding pacemaker and only 9% staff have average knowledge regarding pacemaker.

Association between Pre-test and Post-test knowledge score

Knowledge Score	Range	Mean ($\overline{X}$)	Median	S. D. (s)
Pre-test	1-18	7.7	7.04	1.39
Post-test	13-30	24	24.5	1.51
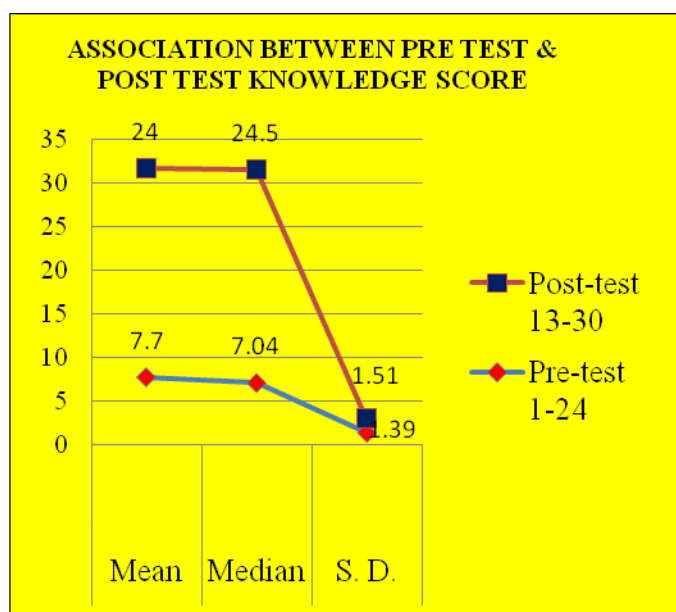
The findings of the study revealed that a significant increase of post-test knowledge score in total (mean of x_2 = 24) and in all the areas of discipline. Comparing with the pre-test (7.04%). The paired 't' test showed significant difference in the post-test knowledge scores (t $_{(59)}$ = 32.95, P > 0.05). This confirms that self instructional module is an effective teaching strategy.

Majorities of staff were in the age group of 20-25years 49%, 24% of staffs were in the age group of 26-30 years, 13% of staffs were in the age group of 31-35years and 15%

were in the age group of 36years & above. The majority of staffs were male that is 55% and 45% were female.

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