

“ A Pre Experimental Study To Assess The Effectiveness of Planned Teaching Programme Through Booklet On Knowledge Regarding Defibrillation Among The Staff Nurses Working At Selected Hospital Bhopal (M.P.)”

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Abstract: A pre experimental study to assess the effectiveness planned teaching program through booklet on knowledge regarding defibrillation among the staff nurses at selected hospital Bhopal (M.P).The sample consisted of 40 staff nurses.The sample was selected using purposive sampling technique.Tool and planned teaching program through booklet were validated by experts. Planned teaching program through booklet was administered on the same day after the pretest and posttest was conducted on 7th day using the same tool. The study indicates that, the mean pretest knowledge score 5.23. The analysis of binding of the showed educating of staff nurses help them to improve their knowledge regarding defibrillation.The ‘t’ test calculated value for knowledge (14.69) is very high.So their is significance difference between pretest and posttest knowledge score of staff nurses regarding defibrillation .

Keywords; Planned teaching programme ;effectiveness ; knowledge level.

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I. Introduction

Defibrillation is the definitive treatment for the life-threatening cardiac arrhythmias, ventricular fibrillation and pulseless ventricular tachycardia. Defibrillation consists of delivering a therapeutic dose of electrical energy to the affected heart with a device called a **defibrillator**. This depolarizes a critical mass of the heart muscle, terminates the arrhythmia, and allows normal sinus rhythm to be reestablished by the body's natural pacemaker, in the sinoatrial node of the heart. Defibrillators can be external, transvenous, or implanted, depending on the type of device used or needed. Some external units, known as automated external defibrillators (AEDs), automate the diagnosis of treatable rhythms, meaning that lay responders or bystanders are able to use them successfully with little, or in some cases no training at all.(Lippincott 2009)¹³

II. Research Elaborations

2.1 Statement Of The Problem

A Pre Experimental Study to Assess The Effectiveness of Planned Teaching Programme Through Booklet on Knowledge Regarding Defibrillation Among The Staff Nurses Working at Selected Hospital Bhopal (M.P.)”

III. Objectives

1. To assess the pre test Score of knowledge among the staff nurses regarding defibrillation
2. To assess the post test Score of knowledge among the staff nurses regarding defibrillation
3. To compare the pre test and post test knowledge score.
4. To determine the association between pre test knowledge score and selected demographic variables.

IV. Research Hypothesis

H1: There will be significant association between pre test knowledge Score of staff nurses regarding defibrillation and selected demographic variables.

H2: The mean post test knowledge Score regarding defibrillation will be significantly higher than the mean pre test knowledge Score among the staff nurses.

V. Materials And Methods

5.1 Population; in present study the population was staff nurses.

5.2 Sample size: The sample size comprised of 40 staff nurses of selected hospital Bhopal(M.P.).who worked in

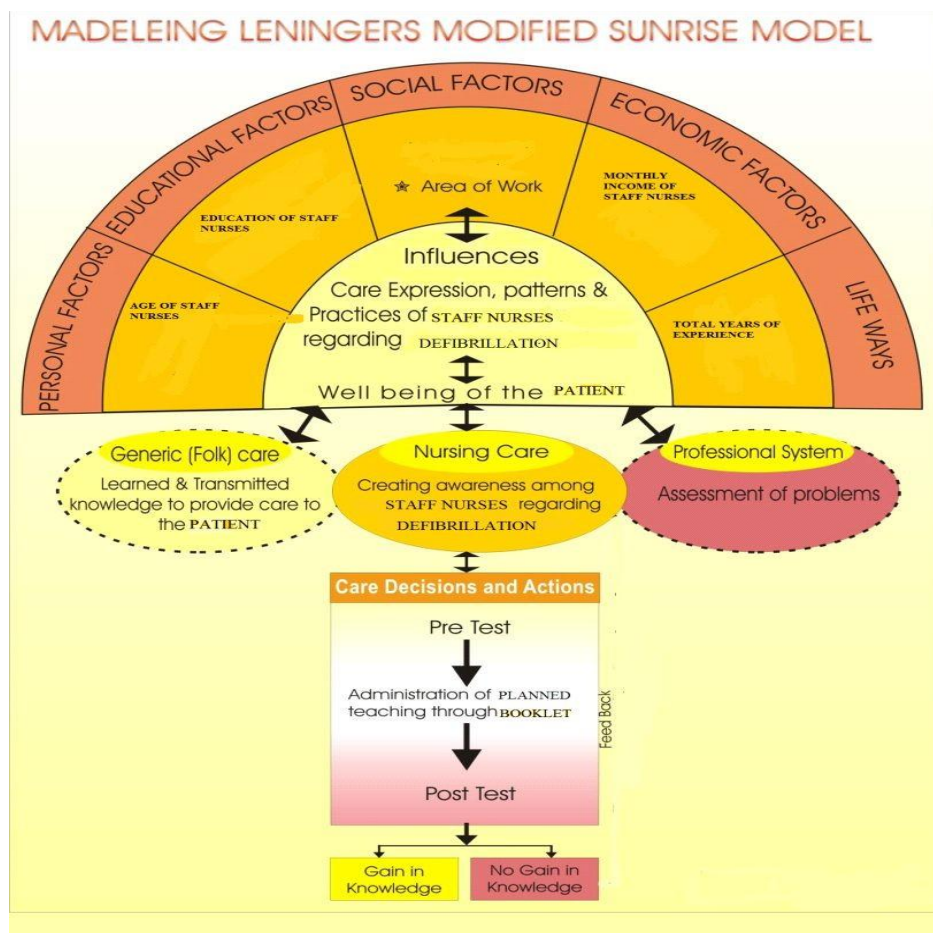
general and iccu wards.

5.3 Setting: This study was conducted at selected hospital of bhopal .It was a 300 bedded hospital area comprised of general and Iccu wards.

5.4 sampling technique: Nonpurposive sampling used in this study.

5.5 Conceptual framework: Conceptual framework is a theoretical approach to the study of problems that are scientifically based and emphasizes the selection and clarification of its concepts. A conceptual framework states the functional relationship between events and is not limited to statistical relationships (Polit and Hungler, 1999)²⁶

The conceptual framework used for this study is a modified model of cultural care diversity and universality theory known as Madeleing Leninger Sunrise Model (**ParkerE.Marilyn, 2007**) .The purpose of this theory was to discover, document, analyze and interpret cultural and caring factors influencing human beings in health, sickness or dying in order to advance and improve nursing practice.Care is the essence and central domain of nursing. What humans need is human caring to survive from birth to old age.The sunrise model was developed by Leninger to provide holistic and comprehensive conceptual picture of the major factors influencing culture care diversity and universality. The model is a valuable conceptual visual guide to discover multiple factors influencing human care and life ways. Discovery can begin at any place in the model and follow the informant’s ideas and experience about care. This model conceptually depicts various factors like age of the staff nurses, education, years of experience, area of work, sex.



VI. Variables

Variable is a characteristic or attribute of a person or object that differs among the persons or objects being studied (Nieswiadomy M. Rose, 2008)¹¹. Dependent and independent variable were considered in this study.

6.1 Dependent variable: The dependent variable is the variable that the researcher is interested in understanding, explaining or predicting. The presumed effect is termed as the dependent variable. In this study knowledge of the staff nurses was the dependent variable.

6.2 Independent variable- The presumed cause is termed as the independent variable. Planned teaching programme was the independent variable in this study.

VII. Development And Description Of The Tool

7.1 The tools used in the study are

1. **Section A:** Socio- demographic data
2. **Section B:** Structured knowledge questionnaire to assess knowledge of staff nurses regarding defibrillation.

7.2 Preparation of the blue print

A blue print was prepared prior to the construction of structured knowledge questionnaire which included:

1. Knowledge items (41.66%)
2. Comprehension items (25%)
3. Application items (33.33%)

The blue print included 8 areas in knowledge questionnaire regarding meaning of defibrillator(4.16%), procedure of defibrillator(16.66%), use of defibrillator(16.66%), types of defibrillator(20.83%), drugs(8.33%), preparation before defibrillator (8.33%), complication of defibrillator(4.16%) Structured knowledge questionnaire consisted of following sections.

7.3 Section A- Sociodemographic data

It consisted of 6 items for obtaining information on selected factors such as age, education, total experience ,sex monthly income, area of work.

7.4 Section B- Structured knowledge questionnaire

It consisted of 24 items. Each item had 4 response alternatives and the correct response among them was scored

1. The responses were scored and graded as follows:

Poor	(1-6)
Average	(7-12)
Good	(13-18)
Excellent	(19-24)

7.4 Development of booklet The booklet was developed on needs staff nurses based on review of literature, discussion with experts and personal experience of the investigator. The areas explained by the booklet included: Introduction of defibrillation, meaning of defibrillator, procedure of defibrillation, use of defibrillator, types of defibrillation, drugs, preparation before defibrillator , complication of defibrillator, nursing responsibilities during defibrillation.

VIII. Results

Section I - The Identification of the Main features and characteristics of the staff nurses.

The information related to data pertaining to the baseline information of subjects, the staff nurses and the assessments of their knowledge of defibrillation are presented in below depicted tables. The demographic variables such as age, sex, educational qualification, area of work, monthly income and work experience had been used to depict the important characteristics and main features of the studied subjects. The selected demographic variables were presented in tabular form along with diagrammatic presentation which involves analysis and interpretation of the data in terms of frequency and percentage distribution

Section II - The assessment of the pre-test and post-test knowledge regarding defibrillation among the staff nurses

The following tables concerns with the test scores measured through questionnaire in terms of the pre-test score and the post-test score. Analysis and interpretation of data is done in order to assess the gain in knowledge due to provided planned teaching programme in shape of information booklet on knowledge regarding defibrillation among the staff nurses of selected hospitals.

Table 1.7:-Frequency and percentage distribution of subjects according to pre-test scores

Category (Pre-Test Score)	Frequency (N)	Percentage (%)
Poor (0-6)	31	77.5
Average (7-12)	6	15.0
Good (13-18)	3	7.5
Excellent (19-24)	0	0.0
TOTAL	40	100.0

Table 1.7 projected the category of knowledge along with marks scored in provided pre-test by selected staff nurses regarding defibrillation. The knowledge category has been allocated on the basis of total 24 (100.0%)marks which further divided into fourequal parts of knowledge categories. Subjects who had scored from 0.0% to 25.0% marks treated under poor category while scored from 26.0% to 50.0% treated under average category. The good category was awarded to those subjects who were scored from 51.0% to 75.0% while the excellent category was assigned to those subjects who were scored from 76.0% to 100.0%The existed knowledge under four categories such as poor, average, good and excellent was measured through pre-test score and it is reflected that more than three-fourth (31, 77.5%) of the staff nurses had poor knowledge about defibrillation as measured in **poor** category which are needed careful attention towards the present problem while 6 (15.0%) staff nurses were observed in **average** category and slightly aware about defibrillation.

Only three (7.5%) staff nurses were found in **Good** category which showed awareness about defibrillationIt was also identified that none of the staff nurses attained the **excellent** category which clearly impacted that an awareness programme is needed about defibrillation which consists of delivering a therapeutic dose of electrical energy to the affected heart with a device called a defibrillator.

Table 1.8:-Frequency and percentage distribution of subjects according to post-test scores

Category (Post-Test Score)	Frequency (N)	Percentage (%)
Poor (0-6)	0	0.0
Average (7-12)	11	27.5
Good (13-18)	26	65.0
Excellent (19-24)	3	7.5
TOTAL	40	100.0

The information on category of knowledge regarding defibrillation along with marks scored in post-test by selected staff nurses is presented in the table 1.7. The knowledge category has been allocated on the basis of total 24 (100.0%) marks which further divided into four equal parts of knowledge categories. The percentage distribution of knowledge categories has been stated earlier.The clear impact of planned teaching programme (PTP) in terms of gain in knowledge regarding defibrillation among the staff nurses is detected in post-test scores. Almost all the staff nurses benefited by information booklet and showed enhancement in their respective knowledge about defibrillation in post-test as none of the staff nurse was left in **poor** category. Major proportion of staff nurses (26, 65.0%) was promoted in **good** category reflected the impact of information booklet that now they are aware about defibrillation. 11 (27.5.0%) subjects measured in **average** category reflected that after administration of booklet they are now aware about present problem.

It was also found that 3 (7.5%) of the staff nurses attained the **excellent** category which clearly impacted that after administration of PTP subjects are very much aware about defibrillation followed that administration of booklet was advantageous for selected staff nurses.

Section III - Diagrammatic Presentation Ofpre-Test And Post-Test Knowledge Scores Of Studiedstaff Nurses

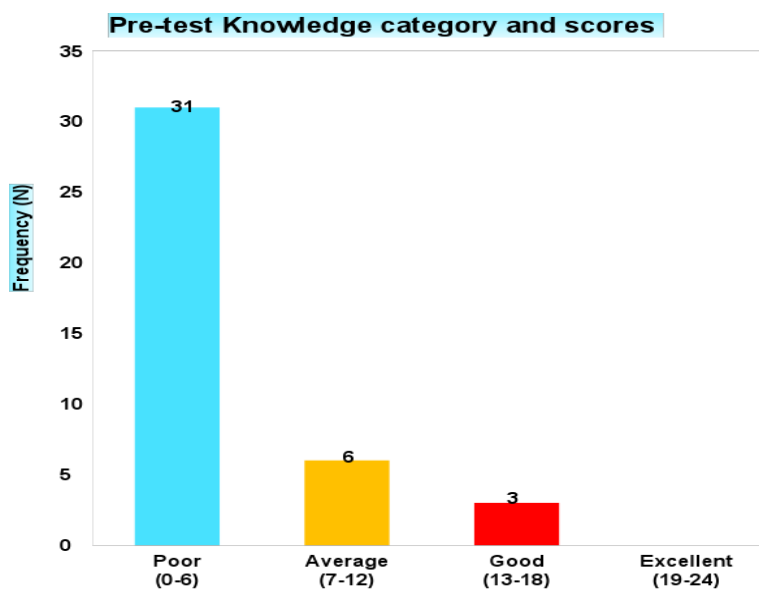


Figure 1.7-Bar diagram showing distribution of pre-test knowledge scores of staff nurses

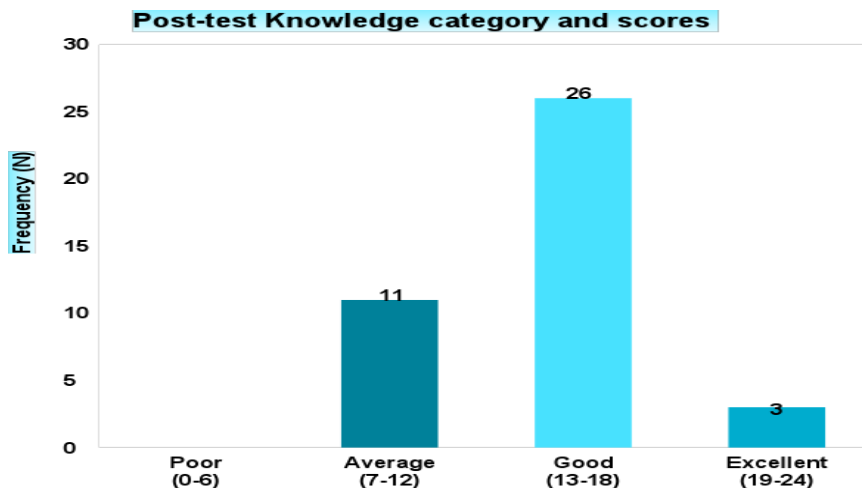


Figure 1.8-Bar diagram showing distribution of post-test knowledge scores of staff nurses

Section IV - Comparison between pre-test and post-test knowledge scores and effectiveness of information booklet on knowledge regarding defibrillation

The following tables concerns with the comparison between pre-test score and post-test score in terms of their respective means. Analysis and interpretation of data is done inorder to assess the impact of planned teaching programme through booklet which followed the effectiveness of information booklet on knowledge regarding defibrillation among the staff nurses of selected hospitals.

Table 1.9:Mean and Standard Deviation of Knowledge Scores

Knowledge	Mean ()	Mean (%)	Std. Deviation (s)
Pre-test	5.23	26.85	2.878
Post-test	14.25	73.15	3.248
TOTAL	19.48	100.00	6.126

The information regarding mean, percentage of mean and the standard deviation of pre and post test scores is shown in table 4.9. Mean knowledge score about defibrillation among the staff nurses in pre-test was 5.23 ± 2.878 while gain in knowledge score had highlighted in acquired mean score of post-test as it was rose to 14.25 ± 3.248 .

The percentage of mean knowledge scores in pre and post-test is obtained with a highly significant difference of 46.30% as it was 31.54% and 68.46%. For statistical confirmation of the highly significant difference of the mean between pre-test and post-test knowledge scores of staff nurses, a parametric test, student's paired t-test had been used which had described in next table.

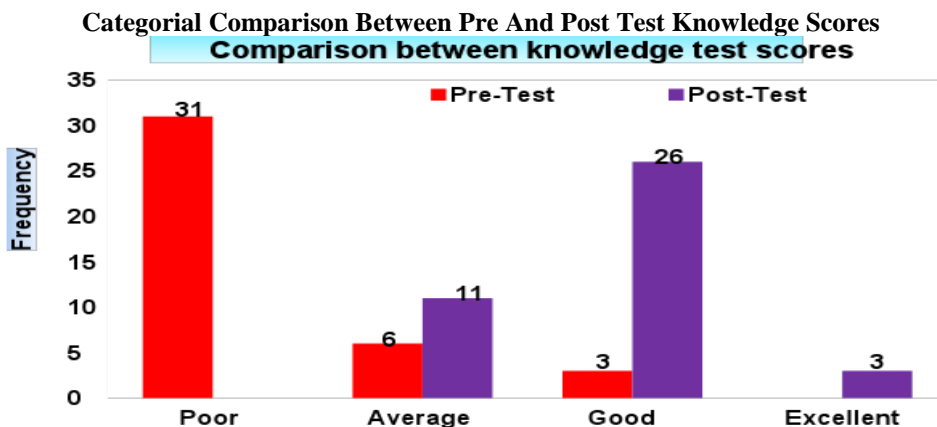


Figure 1.9-Bar Diagram Showing Categorical Comparison Of Knowledge Scores Between Pre-Test And Post-Test

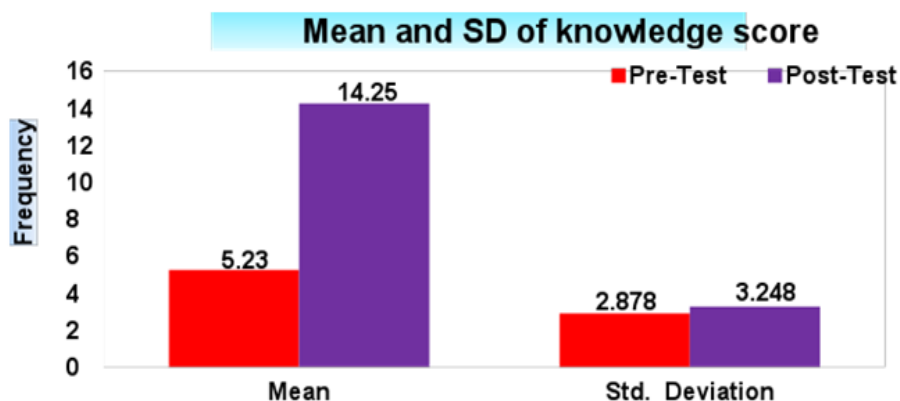


Figure 1.10-Bar diagram showing mean and standard deviation of knowledge scores of pre and post-test

Table 1.10:-Comparison between pre and post test for knowledge scores

Knowledge	Mean Diff	Std. Error of Diff	t-value	p-value (LOS)
Pre-test	9.03	0.614	14.69	0.001 ⊗
Post-test				

The mean difference is highly significant for 39 degrees of freedom at the 0.001 level of significance. LOS-level of significance It is easily seen in the table 1.10 that there is a significant mean difference of 9.03 knowledge score points between pre-test and post-test. A very highly significant value ($p < 0.001$, Two-tailed) was measured when means of pre-test and post-test scores regarding knowledge about defibrillation among the staff nurses had compared. Moreover, it is statistically concreted that pre-test and post-test scores had a real high significant mean difference. It further i[⊗] interpreted that the pre-test and post-test scores were identified different and independent showed the benefit of planned teaching programme through booklet which clearly impacted the effectiveness of information booklet on knowledge regarding defibrillation in terms of gain in knowledge related to prevention of fibrillation of the heart muscle among staff nurses of selected hospitals at Bhopal city. Furthermore, it is confirmed from the above depicted tables that there is a significant difference in means of pre and post test scores which reported the achievement of first and second objectives “To assess the knowledge regarding defibrillator among the staff nurses” and “To assess the effectiveness of planned teaching programme through information booklet regarding defibrillation among the staff nurses” of the present study.

IX. Conclusion

The main aim of the study was to abscess the effectiveness of planned teaching programme through booklet on knowledge regarding defibrillation among the staff nurses. After delayed analysis and experience of the investigator the revealed the following results The staff nurses did not have adequate knowledge regarding defibrillation. They required education to enhance their knowledge on defibrillation. mean pre test knowledge score of staff nurses regarding knowledge of defibrillation was 5.23 and mean post test knowledge score was 14.25. Planned teaching programme was on effective method for the gain in knowledge of staff nurses which was evident in the post test knowledge score, Hence on the basis of above cited findings it could be concluded that the written material prepared by the investigator in the form of booklet help the staff nurses improve their knowledge regarding knowledge of defibrillation.

The overall experience of conducting the study was enjoyable. The response of the participants to the study and their quest to gain new knowledge was an encouraging hand for the investigator. The constant help and support of the guide and co-guide provided a positive reinforcement for the successful completion of the study. The study was a new learning experience for the investigator..

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