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A study to assess the effectiveness of an informational booklet on attitude regarding basic life support among nursing officers working in selected departments of Indira Gandhi Medical College and Hospital, Shimla, Himachal Pradesh, 2019-2021

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Abstract
Heart is the vital organ primarily responsible for delivering the circulation of blood and transportation of oxygen and nutrients, as well as assisting in the removal of metabolic wastes in all parts of the body. An estimated 17.9 million people died from CVDs in 2019, representing 32% of all global deaths. Of these deaths, 85% were due to heart attack and stroke. Basic Life Support is basic medical aid which is offered to people before they reach a hospital or in situations where high-level medical care is not immediately available**.** Basic cardiac life support knowledge and practices for health care provider is a key element or pillar to decreasing the death rate and increasing survival ratio. Nursing officers are the first person who deals with the patients in hospital. So, Nursing officers need a good knowledge of cardiopulmonary resuscitation. The aim of the study was to assess the attitude regarding Basic life Support among nursing officers. Quantitative research approach was used with pre-experimental one group pre-test post-test design. Study population was nursing officers. Non- Probability Convenient sampling technique was used to select the sample. Sample size was 70 nursing officers. Mean Post-test attitude score 78.80 was significantly higher than the mean pre-test attitude score 65.70 as evident by t-test 23.704 (P value-0.001*) at 0.05 level of significance among nursing officers. It showed that an informational booklet was effective in increasing knowledge of the nursing officers. The study finding revealed that an informational booklet was highly effective to change the attitude regarding basic life support among nursing officers.

Keywords: assess, effectiveness, informational booklet, knowledge, attitude, basic life support, nursing officers, cardiopulmonary resuscitation

Introduction

Heart is the vital organ in the circulatory system, primarily responsible for delivering the circulation of blood and transportation of oxygen and nutrients, as well as assisting in the removal of metabolic wastes from all parts of the body. Failure of the bundle to conduct the normal impulses results in arrhythmias. The common cause of defective conduction through the bundle or its branches is atherosclerosis of the coronary arteries, which results in a diminished blood supply to the conducting system. This condition results in ventricular fibrillation and sudden death. Sudden Cardiac Deaths account for more than 40-45% of cardiovascular deaths in India. In India the annual incidence of Sudden Cardiac death accounts for 0.55 per 1000 population as per the Wockhardt hospitals guide to wellness, 2010. 50% of Cardio Vascular Disease related deaths in India occur in people <70 years of age and in Himachal Pradesh was 3-5%. Cardiac arrest is a sudden loss of blood flow resulting from the failure of the heart to pump effectively. Cardiac arrest may be caused by almost any known heart condition like coronary artery disease, myocardial infarction, failure of conduction system etc. Coronary Artery Disease is a serious condition caused by a buildup of plaque in your coronary arteries, the blood vessels that bring oxygen-rich blood to your heart.

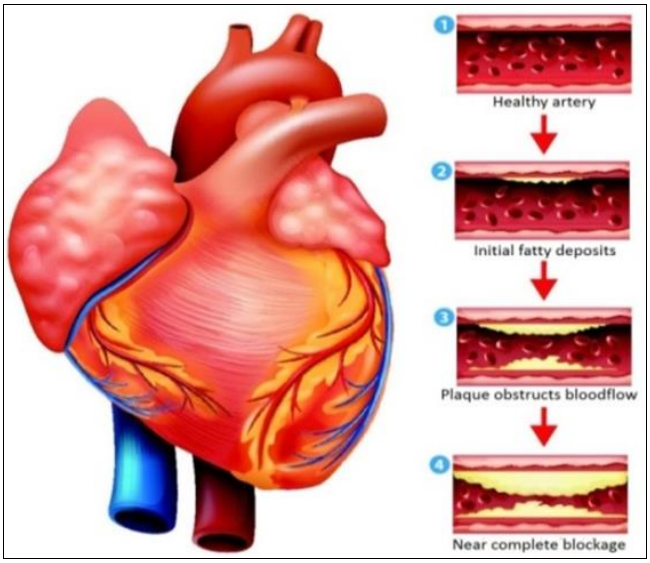

Fig 1

Some cardiac arrests are also caused by bradycardia. Common risk factors includes family history of coronary artery disease or cardiac arrest, family history of other forms of heart disease, smoking, high blood pressure, high blood cholesterol, obesity, diabetes, sedentary lifestyle, excessive alcohol consumption, advanced age, male, drug abuse, and a

nutritional imbalance such as low potassium or low magnesium levels. When patient came in emergency with cardiac arrest then it requires immediate action for management or lifesaving. Basic Life Support is a simple life-saving protocol following a cardiac arrest. It is recommended that all medical students and staff, who are exposed to patients, must be trained to offer basic life support. It has been reported that knowledge and practice of Basic life support increase the survival of patients after cardiac arrest. The American Heart Association establishes the standards for cardiopulmonary resuscitation and is actively involved in teaching basic life support to health professionals. It is a vital link in the chain of survival that supports the victim until more advanced help is available.

Fig 2

Being important members of the healthcare team, nurses are deemed to possess the basic skills and expertise which are needed to perform cardiopulmonary resuscitation. Many times, the doctor may not be present near the patient and hence the nurses are expected to provide this emergency care. To perform the procedure in a meticulous manner, the nurses should be knowledgeable and they should have expertise in the procedure. So the knowledge and practice of basic life support is a major determinant in the success of resuscitation and plays a vital role in the final outcome of acute emergency situation. Hence the attitude of nursing officers regarding basic life support is essential to improve the skills and to understand the ways or chain of survival.

Material and methods

Research methodology is the significant part of any research study, which enables the researcher to project a blueprint of the research understanding. It includes the research approach, research design, the setting, the sample and sampling technique, development and description of tool, data collection and plan of data analysis.

The research approach adopted in the study was Quantitative research approach. A Pre-experimental one group pre-test post-test design was selected for the present study. The study was conducted at Indira Gandhi Medical College & Hospital Shimla, Himachal Pradesh. Total sample were 70 nursing officers selected through Non-probability convenient sampling technique. With the extensive review of literature, guide's opinion, discussion with the experts and with the researcher's personal and professional experience, Likert five-point rating scale was developed to assess the attitude. The tool for the data collection was consists of two parts. Part I: Demographic variable is used to collect data about certain characteristics of sample population. Part II: Likert five-point rating scale was develop to assess the attitude of nursing officers regarding basic life support. Validity of tool was established by experts from nursing field for content. The reliability of tool was determined by using Split Half Method and tool was found to be highly reliable. The r value calculated was 0.81, Hence the tool was considered reliable for proceeding with the main study. Ethical approval taken from the Principal, research & ethical committee of Shimla Nursing College, Shurala. Written permission was obtained from the head of the hospital. Informed consent was taken from the nursing officers. Assurance was given to the nursing officers regarding the confidentiality of the data collected. The tool for the data collection was consists of three phases. Phase I: On 9th August, 2021 the pre-test was conducted to assess the attitude regarding basic life support among nursing officers Indira Gandhi Medical College and Hospital, Shimla. Phase II: On 10th August 2021 informational booklet was administered to the nursing officers of Indira Gandhi Medical College and Hospital, Shimla. Phase III: On 17th August 2021 the post-test was conducted to assess the attitude regarding basic life support among nursing officers of Indira Gandhi Medical College and Hospital, Shimla. Then feedback performa was given to nursing officers to seek their valuable reviews regarding informational booklet on Basic Life Support. After the collection of whole data researcher was thankful to the nursing officers or concerned authority for their full cooperation.

Result

Section A: Findings related to description of frequency and percentage of demographic variables among nursing officers

Table 1: Depicts Frequency and percentage distribution among nursing officers based on demographic variables such as Age, Religion, Residential area, Marital Status, Professional qualification.

N=70

S. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	**Age**		
	20-30	29	41.4%
	31-40	37	52.9%
	41-50	4	5.7%
	Above 50	-	-
2.	**Religion**		
	Hindu	70	100%
	Muslim	-	-
	Christian	-	-
	Sikh	-	-

	Others	-	-
3.	**Residential Area**		
	Urban	52	74.3%
	Semi- Urban	8	11.4%
	Rural	10	14.3%
4.	**Marital Status**		
	Married	52	74.3%
	Unmarried	17	24.3%
	Divorced/Separated	1	1.4%
	Widow	-	-
5.	**Professional Qualification**		
	G.N.M.	32	45.7%
	B.Sc. Nursing	24	34.3%
	Post B.Sc. Nursing	12	17.1%
	M.Sc. Nursing	2	2.9%
	Other	-	-
6.	**Duration of Clinical Experience**		
	Below 5 years	37	52.9%
	5-10 years	18	25.7%
	10-15 years	13	18.6%
	Above 15 years	2	2.9%
7.	**Area of working**		
	Cardiac Care Unit	13	18.6%
	ICU	13	18.6%
	Emergency and Trauma	14	20.0%
	CTVS ICU	9	12.9%
	Cardiac Ward	14	20.0%
	HDU	7	10.0%
8.	**Previous knowledge regarding basic life support**		
	Yes	68	97.1%
	No	2	2.9%
9.	**Source of Information**		
	Mass Media	5	7.1%
	Education/Training	54	77.1%
	Books	9	12.9%
	Others	2	2.9%
10.	**Training regarding Basic Life Support**		
	Yes	39	55.7%
	No	31	44.3%

Table 1 Showed the frequency and percentage distribution of demographical variables in terms of Age, Religion, Residential area, Marital Status, Professional qualification, Duration of clinical experience, Area of working, Previous knowledge regarding basic life support, Source of information regarding basic life support, Training regarding basic life support.

1. Percentage distribution among nursing officers as per Age

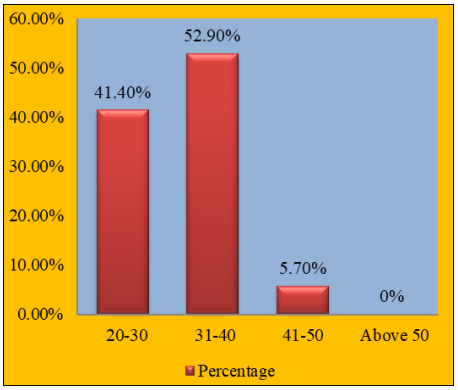

Fig 3: Reveals that majority of nursing officers i.e., 37 (52.9%) were in age of 31-40 years, 29 (41.4%) were in age of 20-30 years, 4 (5.7%) were in age of 41-50 years

2. Percentage distribution among nursing officers as per Religion

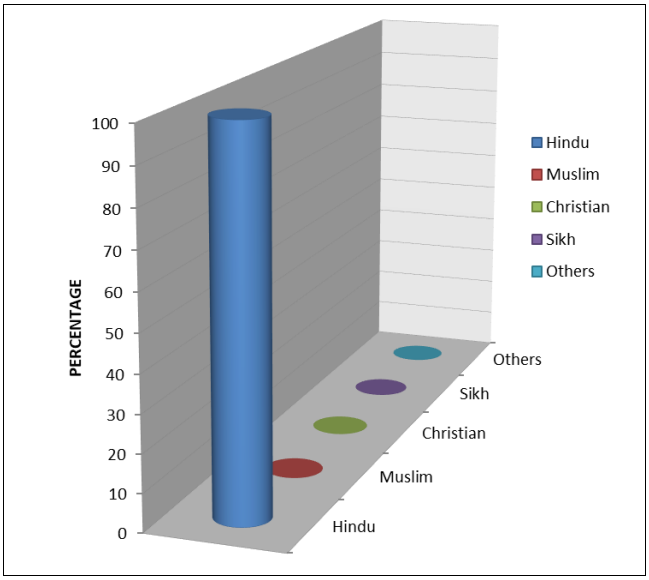

Fig 4: Reveals that 100% nursing officer were Hindu

3. Percentage distribution among nursing officers as per Residential area

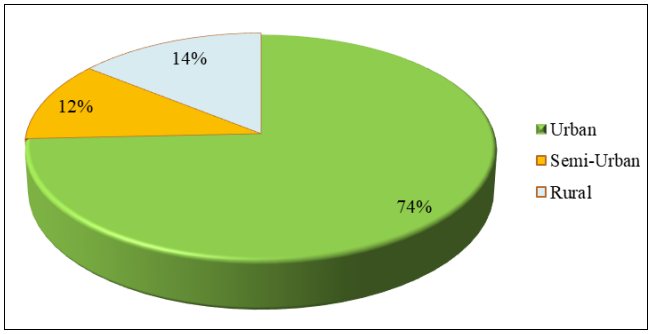

Fig 5: Reveals that majority of nursing officers i.e., 52 (74.3%) were in urban residential area, 8 (11.4%) were in Semi-urban residential area, 10 (14.3%) were in rural residential area

4. Percentage distribution among nursing officers as per Marital Status

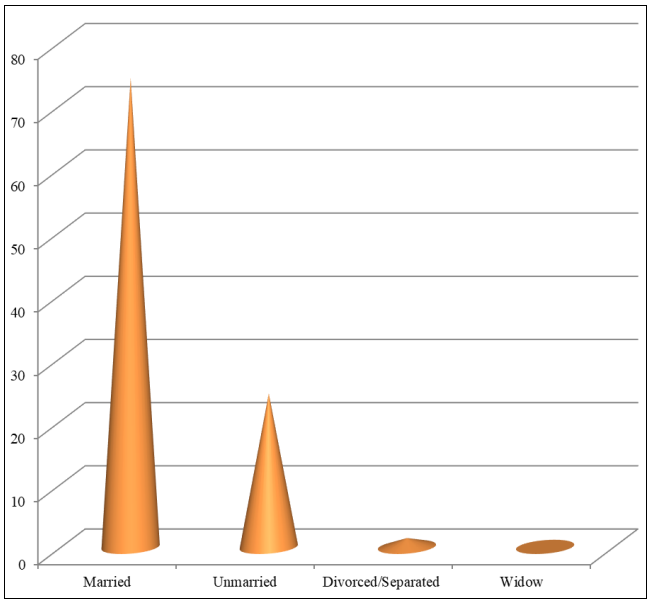

Fig 6: Reveals that majority of nursing officers i.e., 52 (74.3%) were Married, 17 (24.3%) were Unmarried, 1 (1.4%) was Divorced/Separated.

5. Percentage distribution among nursing officers as per Professional Qualification

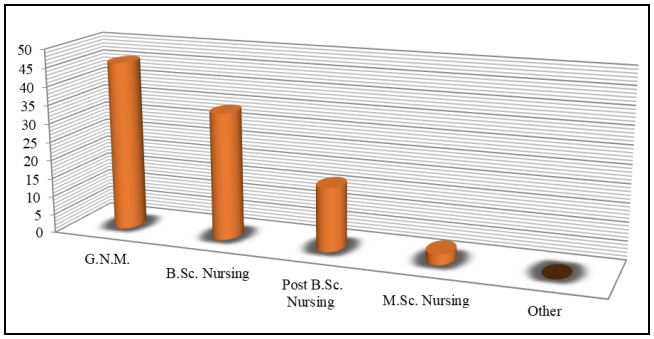

Fig 7: Reveals that majority of nursing officers i.e., 32 (45.7%) had G.N.M qualification, 24 (34.3%) had B.Sc. Nursing qualification, 12 (17.1%) had Post B.Sc. Nursing qualification, 2 (2.9%) had M.Sc. Nursing qualification.

6. Percentage distribution among nursing officers as per Duration of Experience

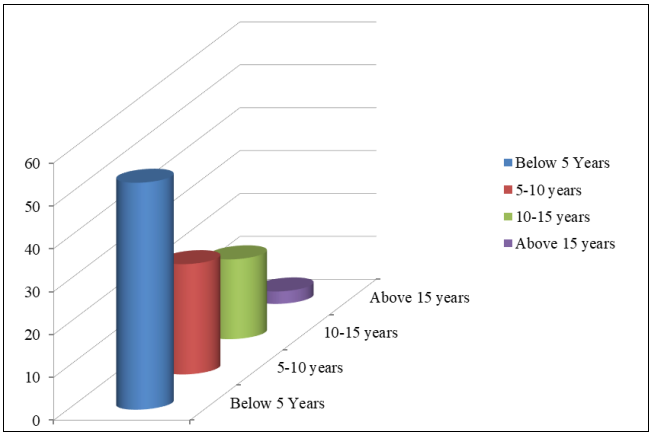

Fig 8: Reveals that majority of nursing officers i.e., 37 (52.9%) were in below 5 years of clinical experience, 18 (25.7%) were in 5-10 years of clinical experience, 13 (18.6%) were in 10-15 years of clinical experience, 2 (2.9%) were in Above 15 years of clinical experience

7. Percentage distribution among nursing officers as per Area of working

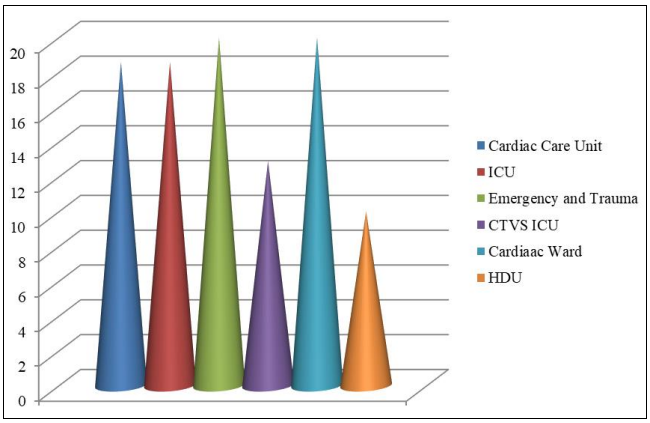

Fig 9: Reveals that majority of nursing officers i.e., 14 (20.0%) were in emergency and trauma and cardiac ward, 13 (18.6%) were in Cardiac care unit and ICU, 9 (12.9%) were in CTVS ICU, 7 (10.0%) were in HDU

8. Percentage distribution among nursing officers as per Previous knowledge regarding basic life support

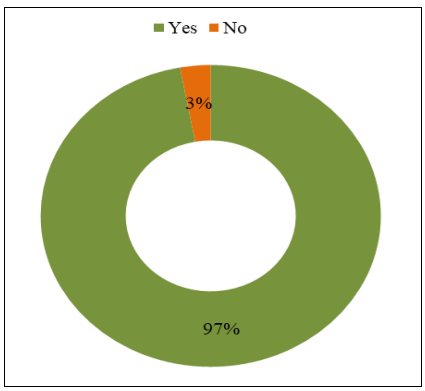

Fig 10: Reveals that majority of nursing officers i.e., 68 (97.1%) had previous knowledge of basic life support, 2 (2.9%) %) had no previous knowledge of basic life support

9. Percentage distribution among nursing officers as per Source of Information

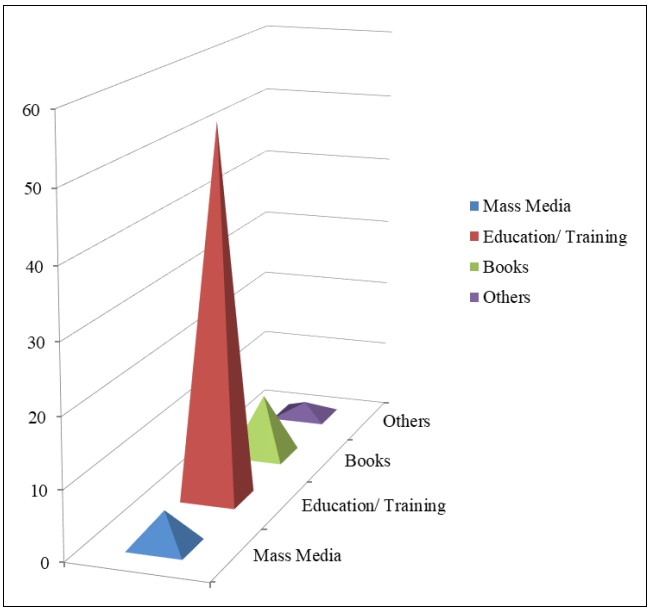

Fig 11: Reveals that majority of nursing officers i.e., 54 (77.1%) had taken information from Education/Training, 9 (12.9%) had taken information from books, 5 (7.1%) had taken information from mass media, 2 (2.9%) had taken information from others

10. Percentage distribution among nursing officers as per Training regarding basic life support

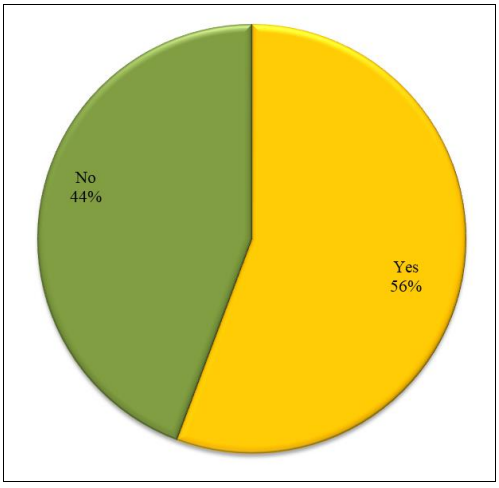

Fig 12: Reveals that majority of nursing officers i.e., 39 (55.7%) had taken Training regarding Basic Life support, 31 (44.3%) had not taken Training regarding Basic Life support

Section-B: Findings related to assessment of the pre-test and post-test attitude scores

Table 2: Depicts Frequency and Percentage distribution of Pre–test attitude scores among nursing officers

N=70

S.no	Level of attitude	Range of attitude Scores	Frequency (f)	Percentage (%)
1	Unfavourable attitude	18-42	-	-
2	Moderately favourable attitude	43-66	63	90%
3	Favourable attitude	67-90	7	10%

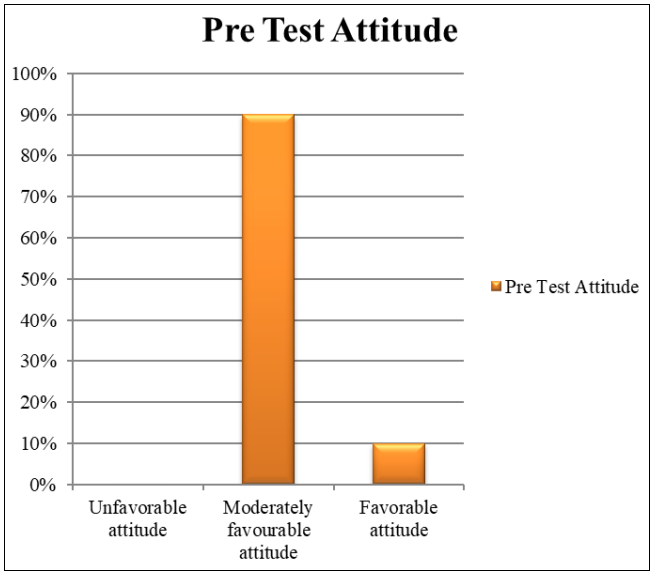

Fig 13

Pre Test

Majority of nursing officers 63 (90%) had moderately favourable attitude, 7 (10%) had favourable attitude. None of nursing officers had unfavourable attitude.

Table 3: Depicts Frequency and percentage distribution of Post-test Attitude scores among nursing officers

N=70

S.no	Level of attitude	Range of attitude Scores	Frequency (f)	Percentage (%)
1	Unfavourable attitude	18-42	-	-
2	Moderately favourable attitude	43-66	6	8.6%
3	Favourable attitude	67-90	64	91.4%

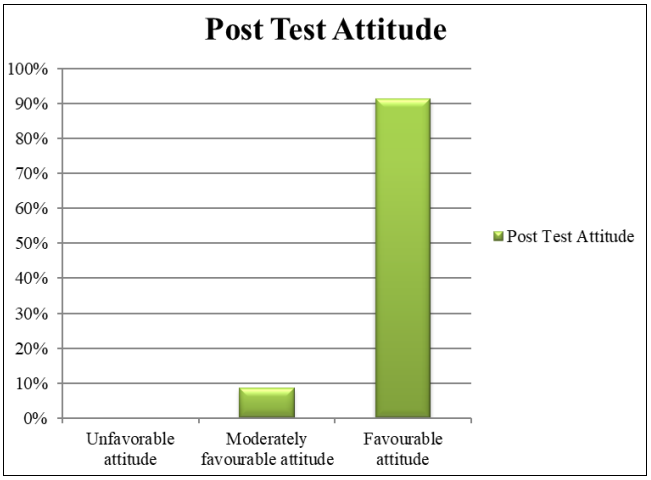

Fig 14

Post test

Majority of nursing officers 64 (91.4%) had favourable attitude, 6 (8.6%) had moderately favourable attitude. None of nursing officers had unfavourable attitude.

Section C: Findings related to comparison of pre-test and post-test knowledge scores and attitude scores among nursing officers to determine effectiveness of informational booklet

Table 4: Depicts Comparison of Pre-test and post-test Attitude scores to determine the effectiveness of informational booklet

N=70

Group	Pre-test		Post-test		M.D.	df	Paired t-test		
	Mean	S.D.	Mean	S.D.			Mean	S.D.	Mean
Research group	65.70	5.710	78.80	5.174	11.740	Research group	65.70	5.710	78.80

*Significant, NS- Non –Significant *Significant at 0.05 level

Table 4: Showed that, mean Post-test attitude scores 78.80 was significantly higher than the mean pre-test attitude scores 65.70 evident by t-test 23.704 at 0.05 level of significance among nursing officers.

It showed that an informational booklet was found effective in changing the attitude among nursing officers.

Discussion

It dealt with the discussion parts according to the result obtained from statistically analysis on the data of the study

Heart is also the first to develop—starting to beat, approximately three weeks into fetal life, even before there is blood to pump. From birth until death, it beats nearly 3 billion times. When patient came in emergency with cardiac arrest then it requires immediate action for management or lifesaving. Basic Life Support is a simple life-saving protocol following a cardiac arrest. It is recommended that all medical students and staff, who are exposed to patients, must be trained to offer basic life support. The objective of study were: First objective was to assess the attitude regarding Basic Life Support among nursing officers. The pre-test knowledge scores revealed that majority of nursing officers i.e., 63 (90%) had moderate favourable attitude, 7(10%) had favourable attitude, None of nursing officers had unfavourable attitude. Second objective was to develop and administered an informational booklet on attitude regarding Basic Life Support among nursing officers. Researcher administered an informational booklet on Basic Life Support to nursing officers. After administration of informational booklet on Basic Life Support the attitude was change regarding Basic Life Support among nursing officers. Third objective was to evaluate the effectiveness of an informational booklet on attitude regarding Basic Life Support among nursing officers. The pre-test mean score was 65.70 and post-test mean score was 78.80. Some of literature related to the research were also reviewed as followed: Saquib Shahabe A. (et.al) (2019) conducted a cross-sectional study to assess the knowledge and attitude about Basic Life Support and Emergency Medical Services amongst Healthcare Interns in University Hospitals in Abha, Saudi Arabia. The main aim of the study was to assess the knowledge, awareness and attitude towards basic life support among healthcare interns in different university hospitals across Saudi Arabia. The sample size was 865 health interns selected through randomly. Study result showed that Mean scores about the awareness and knowledge of basic life support and other emergency services among the participants was 2.74±1.02 and 4.02±1.56 respectively. Female participants revealed significantly higher awareness scores than male (p-value<0.05). Medical interns showed higher awareness level compared to rest of all the faculty interns (p-value<0.01). There was no significant difference in the attitude of interns among the different faculties. 60 to70% of interns had recommended to include basic life support training in the university curriculum. The conclusion of the study was among the participants of the study, overall attitude scores was average, whereas the knowledge scores was below average.

After reviewing the literature data was collected and analyzed. A pre-test was conducted to assess the previous attitude regarding basic life support among nursing officers. After a day an informational booklet regarding basic life support was given and thereafter a post-test was conducted after a week and the result was then analyzed on the basis of these. The finding showed that total post-test score was higher than the pre-test score and there was much difference in the attitude score of nursing officers after post-test i.e. after pre-test 63 (90%) had moderate favourable attitude, 7(10%) had favourable attitude, None of nursing officers had unfavourable attitude regarding basic life support and after the post-test 64 (91.4%) had favourable attitude, 6(8.6%) had moderately favourable attitude, none of nursing officers had unfavourable attitude. The result revealed that there was a significant change in attitude regarding basic life support among nursing officers by proving an informational booklet of basic life support.

Conclusion

The conclusion of the study revealed that there was a significant change in attitude regarding basic life support among nursing officers after providing an informational booklet.

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