

Impact of Awareness Educational Program on Knowledge and Practice Regarding Cardiac Rehabilitation of Patients With CABG Among Staff Nurses Working in The Post-Operative Cardiac Care Units in Selected Hospitals at Jaipur, Rajasthan

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Abstract:

Introduction: Cardiovascular diseases are leading causes of death in all age groups. Most of cardiac arrest outside the hospitals. However there are many factors causes caused cardiovascular. This study aimed to evaluate the cardiac rehabilitation on knowledge, and practice staff nurses working in post CABG units.

Method: This quantitative quasi experimental pretest and posttest study was conducted among staff nurses. A total of 150 participants were selected using a non-probability purposive sampling technique. Evaluated study to assess the effectiveness of health education training on cardiac rehabilitation among staff nurse on Knowledge and practice. The pretest was assessed before the intervention and the post-test assessment was assessed at the end of 6th day.

Result: On assessment of demographic variables, the majority of participants female 89(59.4%) aged between 20 and 30 years 59(39.3%), diploma holder 116(77.1%). Most of the participants had more than 10 years 59(39.4%) working cardiac ICU 56(37.3%) had had previous knowledge 45(30%) on teaching training on cardiac rehabilitation among staff nurses respectively. Data presented in above table also showed that mean pretest and posttest knowledge score among experimental group was 18.68 and 24.52 respectively. There is significance difference found between pretest and posttest score among experimental group (calculated “t” value 12.34, df 74, “p” value 0.001). Similarly, Data presented in above table also showed that mean pretest and posttest practice score among experimental group was 17.6 and 22.10 respectively. There is significant difference found between pretest and posttest score among experimental group (calculated “t” value 10.14, df 74, “p” value 0.0001).

Conclusion: Cardiac rehabilitation teaching is the most effective intervention for staff nurses. Post intervention staff nurses improved their knowledge and practice skills on post CABG units..

Keywords: Ethical, Ethical Issues In Orthodontics, Ethical Dilemma, Ethical Issues in Dentistry, Ethics, Clinical Dilemma

INTRODUCTION

Cardiac diseases are leading cause of deaths among young adults globally. The cardiovascular diseases (CVDs) burden increases the physical and emotional disabilities and economic burden to family and society. There are many factors contribute cardiac ischemic disease mainly sedentary life style, unhealthy lifestyle practice, smoking, stress and unusual diet pattern.(1)(2)(3)

However early diagnosis and appropriate management may increase the life expectancy. After surgery there was increased life expectancy among CABG patients. Although innovation of technology is another key factor of successful cardiac procedures and early recovery.(4)Health care workers crucial role in preventive and promotive aspect of life, especially role of staff nurses vital in healthcare system particularly in peripheral level.(5)

Post-operative hospital stay in Cardiac system is mainly depends on quality of care received by patients. Nurses knowledge and practice skills are crucial when deal with post CABG patients. Thus goal of cardiac rehabilitation increased the life expectancy and reduced the mental stress in terms of mood disorders, anxiety and depression. Hence many countries had developed evidence based guidelines that focused on preventive aspects. (6)

This study aimed to assess the knowledge, practice skills of staff nurses that evaluate the effectiveness of teaching training of cardiac rehabilitation in post-operative department of CABG. There are many studies have been done this topic but our studies conducted in large population with high replicable. Due to technology innovation number people following sedentary life, bad habits that will trigger advance diseases. The purpose of study to be as evaluated existing knowledge and practice skills of staff nurses working post CABG units, and provide comprehensive care.

METHOD

This quantitative quasi experimental one group pretest and post study was conducted to evaluate the effectiveness of education program on cardiac rehabilitation on knowledge and practice among staff nurses working in post-operative coronary artery bypass surgery (CABG) units in selected hospitals in Rajasthan, India. The objective of this study was to assess the knowledge and practice on cardiac rehabilitation among staff nurses. Second objective evaluate the effectiveness of education program on cardiac rehabilitation on knowledge and practice among patients among staff nurses and third objectives to find out the association between levels of knowledge on cardiac rehabilitation and selected demographic variables of nurses working in post-operative coronary artery bypass surgery (CABG) units in selected hospitals of Rajasthan.

Existing study was used non probability purposive sampling technique for requiring staff nurses in post-operative coronary artery bypass surgery (CABG) units. Sample size was determined

after calculating sample size formula; total 150 staff nurses were selected after fulfilled of sample criteria as follows namely. The participants aged between 20-60 years and available in post-operative cardiac units, they were available at time of data collection and willing sign on consent forms in in selected hospitals of Rajasthan. We excluded those staff nurse had less clinical experience and were available at time data collection.

DATA COLLECTION INSTRUMENTS

The author used three data collection instruments employed namely the first tool was used for samples characteristic. Second tool was consists of structured knowledge questionnaires, attitude scales, and last tool was practice checklists. All data collection tools were verified by experts from various departments, who later checked the feasibility and reliability of the tool by using ten percent of the population.

Intervention

The health teaching is most common tool for enhancing the health awareness among patients especially in post-operative patients. We used teaching program on post-operative care and how to minimize the post CABG complication among staff nurses working in postoperative. The teaching plan consists of introduction of CABG, immediate post-operative care, and early sign and symptoms CABG complications. Author was given teaching by using Power Point, Leaflets and Pamphlets. Post teaching we asked questions and clarify their doubts.

DATA COLLECTION PROCEDURES

We explained the study purpose and taken formula permission form the hospital authority before starts the data collection. Before teaching intervention author was collected basic information including age, gender education so on. After assess the pretest knowledge and practice skills. Followed by teaching intervention given, during intervention author clarify the participants' doubts by using suitable examples. The post test was conducted after six days of intervention.

DATA COLLECTION METHOD

We started data collection after permission from competitive authority of selected high schools. First we approached school's principal for permission after approval from principal than we contacted individual teachers for data collection. Prior to data collection investigator explained the procedure and obtained the written consent from each participant. Pretest knowledge attitude and practice test were assessed than introduced the teaching session and demonstrate the basic life support. Posttest was conducted after fifth day of intervention.

DATA ANALYSIS METHOD

After coding, the data were transferred to the master coding sheet of Microsoft excel. We used descriptive and inferential statistics for data analysis. The Knowledge scores, and practice skills were analyzed in terms of frequency, percentage, mean, and mean difference. For evaluating effectiveness of intervention between pre and posttest was assessed using paired t test. The chi square was employed to measure the association between knowledge level and selected demographic variables. The test results were subjected for testing at 0.05% level of probability. The outcome of the result interpreted using diagrams and graphs.

RESULT

Table-1 summary of sample characteristics, knowledge, chi-square and P value [n=150]

S.No	Variables	Categories	frequency	Percentage	Knowledge			Chi-square	P value
					Inadequate	Moderate	Adequate		
1	Age in years	20-30	59	39.3	19	15	19	36.4*	<0.01
		31-40	29	19.3	11	12	11		
		41-50	44	29.4	33	11	33		
		51-60	24	16	5	6	5		
2	Gender	Male	61	40.6	18	23	18	4.09	>0.1.7
		Female	89	59.4	48	19	17		
3	Qualification	Diploma	116	77.1	30	14	12	16.4	0.001
		Bachelor degree	27	18	2	3	9		
		Master degree	8	5.3	1	2	2		
		Decorate	1	0.6	0	0	0		
4	Experience in year	0-5	38	25.3	33	3	20	47.5	<0.001
		6-10	38	25.3	8	24	9		
		11-15	59	39.4	20	11	0		
		>15	15	10	7	6	9		
5	Area of working experience	Cardiac ICU	56	37.3	33	3	20	87.7	<0.001
		Cardiac ward	41	27.3	8	24	9		
		Cardiac OT	31	20.6	20	11	0		
		Cardiac OPD	22	14.8	7	6	9		
9	Attend any in-service education regarding cardiac rehabilitation	Yes	45	30	0	12	33	79.1	<0.001
		No	105	70	68	32	5		

On assessment of demographic variables, the majority of participants female 89(59.4%) aged between 20 and 30 years 59(39.3%), diploma holder 116(77.1%).Most of the participants had more than 10 years 59(39.4%) working cardiac ICU 56(37.3%) had had previous knowledge 45(30%)on teaching training on cardiac rehabilitation among staff nurses.[Table-1]

Table: 2 The result between pretest and posttest knowledge score among control and experimental group

Groups	Mean Pretest Score	Mean Posttest score	Mean Difference	Calculated “t” value	df	“p” Value
Control Group	17.587	18.147	0.5600	1.839	74	0.070
Experimental Group	18.680	24.520	5.840	12.345*	74	<0.0001

- **Significance**

Data presented in above table show that mean pretest and posttest knowledge score among control group was 17.58 and 18.14 respectively. No significance difference found between pretest and posttest score among control group (calculated “t” value 1.83, df 74 and “p” value 0.07). [Table-2]

Data presented in above table also showed that mean pretest and posttest knowledge score among experimental group was 18.68 and 24.52 respectively. There is significance difference found between pretest and posttest score among experimental group (calculated “t” value 12.34, df 74, “p” value 0.001). Therefore, it was concluded that Null hypothesis (H_{01}) rejected and result drawn that awareness educational program was effective on knowledge regarding cardiac rehabilitation of patients with CABG among staff nurses working in Post-Operative Cardiac Care Units at 0.05 level of significance.[Table-3]

RESULT

Table 3: The result between pretest and posttest practice scores among control and experimental group.[n=150]

Groups	Mean Pretest Score	Mean Posttest score	Mean Difference	Calculated “t” value	df	“p” value
Control Group	16.571	16.600	0.028	0.497	74	0.621
Experimental Group	17.671	22.100	4.4286	10.141*	74	<0.0001

Data presented in above table show that mean pretest and posttest practice score among control group was 16.57 and 16.60 respectively. No significance difference found between pretest and posttest score among control group (calculated “t” value 0.49, df 74 and “p” value 0.621).

Data presented in above table also showed that mean pretest and posttest practice score among experimental group was 17.6 and 22.10 respectively. There is significance difference found between pretest and posttest score among experimental group (calculated “t” value 10.14, df 74, “p” value 0.0001). Therefore, it was concluded that Null hypothesis (H_0) rejected and result drawn that awareness educational program was effective on practice regarding cardiac rehabilitation of patients with CABG among staff nurses working in Post-Operative Cardiac Care Units at 0.05 level of significance.

DISCUSSION

Cardiac rehabilitation is very crucial for post-operative patients that impact holistic development. There are many factors influencing post operatively recovery, mental health is major factors for physical recovery. However, these modern days technology is highly influencing the postoperative outcome and early discharge. Cardiac rehabilitation need to improve developing country like India(7) Many studies have reported that non pharmacological interventions such as training program, healthy lifestyle, exercise and good health habits influence the functions of cardiovascular system.(8)(9)(10)

The similar study was conducted to evaluated nurse led long erm interventions on patients with cardiovascular diseases. The pos test was assess at 3 months and 24 months among cardiac patients. The study revealed that there were increased the knowledge and practice, but it was not improve the health related quality of life. (11) An another way health education and training can be given in internet based services that will reach all people especially lifesty medication. Telenursing another milestone in developed countries, in that nurse can give comprehensive care using modern technology, now it widely used for helping patients, especially it will more helpful patients with chronic diseases(12)(13)

Many studies reported the mental hygiene essential for nurses in clinical and community setting. Healthcare workers especially nurses are round o'clock to help the needy people, especially those are critical care unit. The majority of multispecialty hospital; with highly equipped and provide lifesaving treatments. However, there were numbers of healthcare workers taking risk to provide holistic care, especially role of the staff nurses important while providing care in ICU setting.(14)(15)(16)

CONCLUSION

Cardiac rehabilitation training was found to significantly improve knowledge, practice skills of staff nurses. The post-intervention groups have a large influence on their confidence and skills in caring postoperative CABG patients. Current study review indicates that there appears to be an insufficient learning resource available in cardiac unit there need to be provide safe nursing environment and resources. Furthermore, a continuous supply of instructional materials and training from medical experts is recommended on a timely basis.

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ETHICAL ISSUES

This project is impart knowledge and demonstrated practice skills on manikin and did not require ethical approval as no direct information or interventions performed on humans. However author has taken written permission from school authority and individual participants.

CONFLICT OF INTEREST

The authors declare no conflict of interest in this study.

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