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Designed by Eng. Osama Al-Moaina Ossamah245@yahoo.com

TABLE OF CONTENTS

ORIGINAL ARTICLES	PAGE
1. Tumors of the Larynx in Yemen: Prevalence	and 1-7
Treatment	
Ali Obaid Muthanna	
2. Effect of Training Program on Nurses ' Knowledge Tow	ard 8-15
Care of Patients With Myocardial Infarction in	Al-
Thowrah Hospital, Al-Hodeida City, Yemen	
Sadek Abdu Alwsaby, Nabil Ahmed Al-Rabeei, Abdelaziz Baa	ılawi
and Ali Floos	
3. Mothers' Knowledge Toward Malnutrition of Child	lren 16-22
Under 5 Years Old in Al-Sabeen Hospital, Sana'a C	City-
Yemen	
Sadek Abdu Alwsaby, Nabil Ahmed Al-Rabeei, Abdelaziz Ah	med
Baalawi, and Ali Ahmed Floos	
4. Assessment of Compliance of Written Pharmaceut	tical 23-27
Advertisements in Sana'a-Yemen to Criteria of We	orld
Health Organization	
Anes A. M. Thabit, Saleh Yagob, Abdulaziz Mofid, Abdu	allah
Alomaesi, Abdullah Helal, Akram Qahtan, Akram Almasanea, A	mar
Alsoudi, Bassam Azzam, Mohammed Seraj, Saddam Hashem, Z	Zkee
Almacheneri.	4 29.24
5. Medical Treatment for Orbital Complications Secondar	y to 28-34
Rhinosinusitis	
All Obaid Muthanna	6 25 40
o. Comparative Study of in vitro Quality Specifications	5 OI 35-40
Yemeni Brand of Glimepiride Tablets Versus Fore	eign
Brands Marketed in Yemen	
Alaa Abdulkarim Almaqtari and Anes A. M. Thabit	

Original Research



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Medical Sciences



Effect of Training Program on Nurses ' Knowledge Toward Care of Patients with Myocardial Infarction in Al-Thowrah Hospital, Al-Hodeida City, Yemen

Sadek Abdu Alwsaby^{1*}, Nabil Ahmed Al-Rabeei², Abdelaziz Baalawi¹ and Ali Floos¹

¹Nursing Division, Faculty of Medicine and Health Sciences, Al-Hodeida University-Yemen, ²Departement of Applied Medical Sciences, Faculty of Medical Sciences, Al-Razi University-Yemen

^{*}Corresponding author: Sadek Abdu Alwsaby, Nursing Division, Faculty of Medicine and Health Sciences, Al-Hodeida University-Yemen

Abstract

Background: The most common cause of myocardial infarction is occlusion of the coronary artery. Education and training the nurses provide care for myocardial infarction patient lead to decrease patient's morbidity and mortality. Aim: to assess the effect of training program on nurses' knowledge toward the care of the patient with myocardial infarction. Methods: The study was conducted in car in intensive care unit at Al-Thowrah hospital, Al-Hodeida city. A quasi-experimental design was used from October 2018 to April 2019 on 30 nurses. Simple random sampling method was applied to selected nurses to participate in the study. A questionnaire was used to collect data about nurse's knowledge toward myocardial infarction pre and post training program. According the detected need of nurses develop training program and implemented through the session to update nurses knowledge. SPSS was used to analysis of the study variables. Data was analyzed by using descriptive and inferential statistical in terms of frequency, percentage, mean, standard deviation. Paired t-test and McNemar test also used. **Results**: The results revealed statistically significant difference in nurses' knowledge related to care of myocardial infarction pre- post-training program. There was a significant relationship between nurses' knowledge and their demographic characteristic pre-post program. **Conclusion:** A statistically significant difference of nurses' knowledge pre and post-training program was found. Pre and in-service training program should be implemented to all nurses worked in ICU to update their knowledge about care of patient with myocardial infarction.

Keywords: Myocardial infarction, Nurses knowledge, Training Program, Al-Hodeida City

Introduction

The mortality rate caused by Myocardial Infarction (MI) is still high for both according world health sexes. to organization estimation it was 5674 deaths each year. The most common cause of myocardial infarction is occlusion of the coronary artery, usually

_____ precipitated by rupture of vulnerable atherosclerotic plaque and subsequent

> thrombus formation¹. After an acute myocardial infarction, the patient is discharged within a few days, often in a state of anxiety and great uncertainty. The spouse is usually even more anxious than the patient and often finds the

immediate post-discharge period extremely stressful. Most patients, but few partners, will have received some instruction from the Coronary Care Unit (CCU) nurses about the nature and treatment of the attack, but unless there are formal educational sessions, the amount learned is unpredictable². The most effective way to increase the probability that the patient will comply with self-care regimen after discharge is to provide adequate education about the disease process and to facilitate the patient's involvement in MI rehabilitation program. Working with patients in development plans to meet their specific needs.

To extend and improve the quality of life, a patient who has had MI must learn to regulate activity according to personal responses to each situation. The nurse and patient develop a program to help the patient achieve desired outcomes³. Avoiding any activity that produces chest pain, dyspnea, or undue fatigue, avoiding extremes of heat and cold and walking against the wind, losing weight, stopping smoking, alternating activity with rest periods, using personal strengths to compensate for limitations, developing regular eating patterns, adhering to medical regimen, pursuing activities that release tension and controlling of the co-morbid conditions⁴. Intensive care requires a high-level qualification and competencies. Therefore, there has been a need to examine and describe competence guidelines, standards, and frameworks of critical care nursing⁵. Nurse's role in myocardial infarction care included the chest discomfort relieving, Reduce anxiety, assess vital signs, document the mental status and level of $anxiety^6$. improving respiratory function and monitoring and managing potential complications'.

Aim of the study

This study was aimed to assess the effect of training program on nurses' knowledge toward the care of the patient with Myocardial Infarction.

Subjects and Methods

The study was carried out in intensive care unit in Al-Thowrah Hospital, Al-Hodeida city, Yemen. A quasiexperimental study design was used to assess the effect of training program on nurses' knowledge toward the care of patients with MI in Al-Thowrah Hospital, Al-Hodeida City, Yemen. 30 nurses working in the intensive care unit were selected by simple random sampling.

Data were collected by use of the questionnaire. The questionnaire was included 4 parts: Nurses 1). demographic characteristics, which includes 4 questions covering the: age, qualification, marital status, and monthly income, 2). anatomy of the cardiovascular system includes 6 questions covering the: site of the heart, weight of heart, chambers of the heart, a wall of the ventricle, cardiac output and stroke volume, 3). physiology of cardiovascular system includes 4 questions covering the: consist of the cardiovascular system, sinus of the heart, layers of the heart and important blood vessels and 4). Coronary artery disease, includes 24 questions covering the: causes of coronary artery disease, theories and risk factors of atherogenesis, pain and precipitating factors of angina, risk factors of atherosclerosis and MI, chest pain, clinical manifestation, complications, diagnostic tests. pharmacological management of MI, role, nursing diagnosis, nursing nursing intervention for patient with MI.

The training program was applied for improving nurses' knowledge related to the care of the patient with MI. The content validity was established by a panel of 5 expertise who reviewed the tool for clarity, relevance, comprehensiveness, understanding, applicability, and ease for implementation and according to their opinion minor modification were applied.

A pilot study was carried out on five nurses (12.8%) in intensive care unit to test the clarity and practicability of the tools. The results of the data obtained from the pilot study helped in the modification of the tool, item was then corrected as needed. Data collection was carried out from October 2018 to April 2019 in morning and afternoon shift, the questionnaire sheet filled by the nurses, while they were in the workplace.

The data was collected pre and posttraining program. Upon completion of data collection, variables included in each data collection sheets were organized and tabulated and code prior to computerized data entry by using SPSS. version 18. Data were summarized by using frequency, percentages, mean ±SD as an average describing central tendency of data. Used paired t-test for quantitative variable and McNemar test for the qualitative variable. **Statistical** significance was considered at P-value < 0.05.

As regards to nurse knowledge scores, a score of one was awarded for the correct answer and zero for an incorrect answer. The mean \pm SD of total knowledge score was calculated. Then a score of 60% or more was categorized as satisfactory and a score less than 60% as unsatisfactory.

The official permission to conduct the study was taken from the faculty of medicine and health Sciences, Hodeida University. Permission for data collection and implementation of the training program was obtained from the Manager of Al-Thowrah hospital and supervisors of nurses in intensive care unit (ICU). The purpose of the study was explained prior to questionnaire distribution.

At the initial interview, the researcher informed each nurse about nature. purpose, and benefits of the study, and was informed that her participation is Confidentiality voluntary. and anonymity of the subjects were also assured through coding of all data. The researcher was assured that the data information collected and were confidential and would be used only for the purpose of the study.

Results

Table 1 shows that the distribution of demographic characteristics among nurses. The results of the study showed that two-thirds (66.7%) of the nurses aged ranged from 18 to <30 years old. More than four-fifths (83.4%) of the nurses had a diploma degree in nursing. As regards marital status, the two third (66.7%) of the nurses were married and two fifths (40%) their monthly income ranged from 25000-40000 YR.

Demographic characteristics	F	%
Age (Year)		
• 18 - 30	20	66.7
• > 30	10	33.3
Qualification		
Diploma in Nursing	25	83.4
Bachelor of Nursing	5	16.6
Marital status		
Unmarried	10	33.3
Married	20	66.7
Monthly income		
• < 25000 YR	10	33.3
• 25000 – 40000 YR	12	40
• >40000 YR	8	26.7

Table 1: Distribution of demographic characteristics among nurses (n=30)

Table 2 presents that there was statistically significant differences pre and post-program among nurses in all items of knowledge (P value= 0.000 and 0.002).

Table 3 shows nurse's level of knowledge about cardiovascular system and myocardial infarction prepost program. According to the table, the nurse's level of knowledge was unsatisfactory in pre-training. At posttraining, nearly all nurses had a satisfactory knowledge about all items of the cardiovascular system and myocardial infarction. A statistically significant differences was found in nurses knowledge pre and postprogram (P=0.000 and 0.022).

Table 4 clarifies that a statistically significant differences was found in relation to age ranged from >30 years and knowledge post –training program (p<0.01). Table 5 shows that there was no statistically significant differences between nurse's marital status and their score of knowledge pre and post-program (P>0.05).

Table 6 indicates that no statistically significant differences between nurse's qualification and their knowledge pre and post- training program.

Table 2: The nurses mean score of their knowledge about the care of the patient with myocardial infarction pre and post-program (n=30)

Items	Pre-tra	ining	Post-tra	aining	Paired	P-value			
	progi	am	prog	ram	t-test				
	\overline{X}	±SD	\overline{X}	±SD					
Anatomy of Cardiovascular	41.33	18.14	89.66	14.19	12.89	0.000**			
system									
Causes, theories and risk factor	53.88	30.85	78.33	17.58	3.32	0.002**			
of Coronary Artery Disease									
Information about Myocardial	57.14	21.55	75.71	17.65	3.43	0.002**			
Infarction									
Nursing care for patient with	48.78	20.18	87.87	11.02	8.50	0.000**			
Myocardial Infarction									
-1-									

**statistically significant

Items	Pre-training program				Post-training program				<i>P</i> -
	Satisf	actory	Unsatisfactory		Satisfactory		Unsatisfactory		value*
	F	%	F	%	F	%	F	%	
Anatomy of	14	46.7	16	53.3	29	96.7	1	3.3	0.000**
Cardiovascular									
system									
Causes,	18	60	12	40	27	90	3	10	0.022**
theories and									
risk factor of									
Coronary									
Artery Disease									
Information on	18	60%	12	40	27	90	3	10	0.022**
MI									
Nursing care	13	43.3	17	56.7	28	93.3	2	6.7	0.000^{*}
for patient									
with MI									

Table 3: The nurse's level of knowledge about the care of the patient with myocardial infarction pre and post-program (n=30)

*McNemar test, ** statistically significant

Table 4: The relation between mean score of nurses knowledge and their age pre and post-program (n=30)

Nurses knowledge	Age range							
	18-30 year		>30	year	Paired	<i>P</i> -value		
	\overline{X}	$\pm SD$	\overline{X}	±SD	t-test			
Pre training program	52.27	13.19	51.36	17.86	0.158	0.876		
Post training program	83.63	9.96	95.09	8.78	4.64	0.01**		

**Statistically significant

Table	5:	Relatio	n	between	mean	score	of	nurses	knowledge	and	their	marital
status	pre	e and p	ost	t-progran	n (n=3	0)						

Nurses knowledge	Marital status							
	Unma	arried	Mar	ried	Paired	<i>P</i> -value		
	\overline{X}	±SD	\overline{X}	±SD	t-test			
Pre training program	49.1	17.01	53.40	13.48	0.758	0.455		
Post training program	85.2	7.59	85.56	10.53	0.100	0.921		

Table 6: Relation between mean score of nurses knowledge and their qualification pre and post-program (n=30)

Nurse's knowledge	Qualification							
	Bach	elor	Secon	Idary	Paired	<i>P</i> -value		
	education		t-test					
	\overline{X}	±SD	\overline{X}	±SD				
Pre training program	52.27	16.15	51.90	14.63	0.050	0.961		
Post training program	88.18	8.09	84.90	9.83	0.795	0.454		

Discussion

Regarding general characteristics of the study subjects, the results of this study clarify that more than two-thirds of the studied subjects were married, aged between 18- 30years and more than three quarters had a secondary diploma in nursing. This result is in agreement with the study conducted by Shalby, 2009⁸, who reported that the mean age of nurses who graduated from the secondary school of nursing ranged between 22-24 years and most of them are single.

Also, the present study agrees with Said, 2006⁹, who emphasized on her study at Benha University that lack of nurses' education is considered a failure in the system leading to unsatisfactory health care and that majority of nurses didn't attend any training programs for patient care with myocardial infarction, thus there was bad knowledge and care introduced to patients. This may be due to lack of service in educational programs. This study disagrees with Chun-Hua et al, 2008^{10} , who reported that the mean educational level in their study at China was bachelor above (34.1%), while the current study results revealed the main studied nurses' qualification was a secondary nursing diploma.

Regarding nurse's knowledge, the result of the present study clarifies that more than three-quarters of the studied subjects improved their knowledge scores in all items of myocardial infarction patient care after implementation of the program. This result agrees with Maysoon et al, 2011¹¹, who showed that the Jordan nurses improved their knowledge and attitudes after the implementation of the program. It also agrees with Heather et al, 2011¹², who said that showed significant Nurses improvement in knowledge (p = 0.02) and self-efficacy (p = 0.001) from baseline to post-training. It is also similar to that of Shalby, 2009⁸ who found in his study an improvement in the nurse's knowledge scores after the program with highly statistically significant differences. This finding agrees with Taha, 2006¹³ who found that the knowledge scores after implementation of the program are highly statistically significant differences. This is in line with paez et al, 2003¹⁴ who showed an achievement of teaching objects in their study on the assessment of the educational program. There might be nurses exposed to an educational program update their knowledge about the care of the patient with myocardial infarction.

Concerning the relation between the nurses' age and their mean score level of knowledge about the myocardial infarction patient care pre-post training program. The present study revealed a high statistical relation between the nurses' age and their level of post-program knowledge pre (P=.011). It shows that the nurses, aged between 30 years and above, had a high mean score of knowledge than the nurses belonged to the age group of eighteen to thirty. There might be nurses in the same age concentrate on their career so they interest in improving and updating their knowledge to get better opportunities for promoting. The younger nurses, on the other hand, are not interested in updating their knowledge because they had already fresh knowledge because most of them are a new graduate. These results were in agreement with Shalby, 2009^8 who shows that there is a statistically significant difference between nurses' knowledge, practice, and empowerment after post scores. Also, the study conducted by Taha, 2006¹³ documents a positive correlation between age and knowledge and practice. This result also agrees with Abd-Elmoniem, 2001^{15} who found that there was a

positive correlation between knowledge and nurses' age in post-test. As for the relation between the nurse's marital status and their total score of mean knowledge pre and postprogram, the study finding revealed no relation detected between nurses' marital status and their mean score of knowledge in pre - post-program. This finding was in the same line with the study conducted by Shalby, 2009⁸, at Benha University hospital, who reported no significant relation between nurse's knowledge pre and post-program and their marital status. Also, the present study finding is supported by a study of Janice et al, 2005¹⁶ who found no statistically significant difference between the study subjects' knowledge and their marital status before and after the program. But the present study finding was contradicted with Heather et al, 2011¹² who reported a positive relationship between the study practice of knowledge and their marital status after the post implementation of the program. Also, the same finding was mentioned by Adeline et al, 2008^{17} , who showed a positive correlation between the nurses' knowledge and their marital status throughout the program of health education.

The finding of the present study revealed no relationship between the nurses' level of the mean score of knowledge and their qualification in pre - post-program. There might be nurses worked in the cardiac care unit had a diploma in nursing and fewer of them had a bachelor degree. The same finding was reported by Bongalore and Kanataka, 2005¹⁸ who concluded that the qualification did not affect the knowledge and practice of the studied sample. However, this result disagrees with Shalby, 2009⁸ who reported that previous qualifications were positively correlated with knowledge scores of nurses. It also disagrees with Weber et

al, 2007¹⁹ who documented that there is a positive relationship between knowledge and qualification of the studied subjects and their knowledge throughout the program.

Conclusion

Based on the findings of the present study it can be concluded that, there were statistically significant differences in the mean score of nurses' knowledge pre and post-training program. Nurse's Knowledge toward care of the patients with myocardial infarction improved significantly posttraining program implemented.

Recommendation

Continuous in-service training programs for all nurses worked in ICU to updating their knowledge.

References

- Black N., Jenkinson C, Hayes JA, Young D, Vella K, Rowan KM, et al. . Review of outcome measures used in adult critical care. Crit Care Med; 2001, 3; 29: PP2119-2124.
- Westmacott J., Evans J., Turner S. et al. effect of a training session for relatives of myocardial infarction patients; coronary heath care journals; 2003, 3(4): PP199-204.
- Dracup K. & Moser D: Beyond Sociodemographic: factors influencing the decision to seek treatment for symptoms of acute myocardial infarction. Heart and Lung; 2005, 26: PP 253–262.
- Morton P. Morton, Dorrie F., Carolyn M. and Barbara M. Critical Care nursing A Holistic Approach, 8th ed., by J. B. lippincott Company, Philadelphia: 2005, PP 429- 446.
- 5. Riita A., Suominen T. and Leino H. Competence in intensive and critical care nursing; intensive and critical care nursing journals; 2008, 24(3): PP: 78-89.
- 6. Adrianne D. and Nancy K: Introduction to medical-surgical nursing, 3rd ed., Saunders, Elsevier

Science, Philadelphia, USA: 2003, PP 580-587.

- Smeltzer S., Bare B., Hinkle J. and Cheever K. Medical Surgical Nursing, 9th ed. Lippincott Williams and Wilkins Company: 2010, PP 530- 630.
- 8. Shalby A. Effect of training program on staff nurses performance and empowerment toward care of patient undergoing organ and tissue transplantation at Benha city, doctorate thesis, faculty of nursing, Benha University: 2009, 104-129.
- Said S. Comparative study between the nursing performance for general post-operative patient at university hospital and teaching hospital at Benha city, Master thesis, faculty of nursing, Benha University: 2006, PP 71-73.
- Chun-Hua Z., Lily H., Bi-Rong Z., Jian-Fang L., Hong-Ying W. and Jue H. Effects of a Pain Education Program on Nurses' Pain Knowledge, Attitudes and Pain Assessment Practices in China; Journal of Pain and Symptom Management; USA; Journal of Pain and Symptom Management; 2008, 36 (6): PP 616-627.
- Maysoon S., Sawsan A., Margareta W., Ingegerd B. The effect of postoperative pain management program on improving nurses' knowledge and attitudes toward pain; Nurse Education in Practice; Faculty of Nursing, The University of Jordan, Amman, Jordan; 2011, 11; (4): PP 250-255.
- 12. Heather S., David S., Christine J. et al. Training residents and nurses to work as a patient-centered care team on a medical ward; Patient Education and Counseling; 2011, 84: PP 90–97.
- 13. Taha A. Emergency nursing care for critically ill patients: impact of a designed teaching protocol on nurse's knowledge and practices at intensive care units (ICU) of Benha University and Benha teaching hospitals: thesis of

Master degree; faculty of nursing; Benha University: 2006, PP 103-109.

14. Paez G., Paredes D., Trias E., Cabr C. and Manyalich M. Transplant procurement management, les heuresuniversitat de Barcelona, transplant coordination department, transplant services foundation, hospital clinic de Barcelona, Spain. Available online 30 August 2006; http://www.sorin.com/medical-

professionals; date access on 3/6/2010.

- Abd-Elmoniem H. Effect of backrest elevation on central venous pressure readings in critically ill patients; Master thesis; Faculty of Nursing, University of Alexandria: 2001, PP42-69.
- 16. Janice M., Sophia S., Steve K., T.H. Lam, M., Iris D. and Gabriel M. Training nurses and social workers in smoking cessation counseling: a population needs assessment in Hong Kong; Preventive Medicine; 2005, 40: PP 391–397.
- Adeline N., Manju V., Deepika C., Donna M., Barbara L. and John L. HIV Knowledge Improvement among Nurses in India: Using a Train-the-Trainer Program; Journal of the Association of Nurses in Aids Care; 2008, 19 (6): PP 443-449.
- Bongalore P. and Kanataka I. Analysis of nursing work activities in relation to patient care in medicalsurgical wards of a tertiary level super specialty. Hospital at Napal.2011.
- Weber H., Stockli M., Nubling M. and Langewitz W. (Communication during ward rounds in internal medicine. An analysis of patient–nurse–physician interactions using RIAS; Patient Educ. Couns; 2007, 67 (3): PP 343–438.



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