Nurses' Practices regarding Patients Discharge Planning post Cardiac Surgery at Cardiac Centers in Baghdad city

ممارسات الممرضين المتعلقة بخطة مغادرة المرضى بعد جراحة القلب في المراكز القلبية في مدينة بغداد

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المستخلص:

الهدف: لتقييم ممارسات الممرضين المتعلقة بخطة مغادرة المرضى بعد جراحة القلب وايجاد العلاقة بين ممارسات الممرضين مع الخصائص الديموغرافية (العمر ، الجنس، المستوى التعليمي، سنوات الخبرة، سنوات الخبرة في الردهة الجراحية) .

المنهجية : اجريت دراسة وصفية في المراكز والمستشفيات القلبية في بغداد (مركز ابن البيطار التخصصي لجراحة القلب، المركز العراقي لأمراض القلب ومستشفى ابن النفيس) للفترة من ٦ شباط ٢٠١٧ الى ١ حزيران ٢٠١٨. اختيرت عينة غير احتمالية(غرضية) متكونة من (٥٨) ممرضاً (ذكور واناث) من العاملين في الردهات الجراحية . جمعت البيانات بأستعمال استبانة مكونة من جزئيين الجزء الأول للمعلومات الديموغرافية للممرضين مكون من ١٠ فقرات . أما الجزء الثاني والذي تكون من سبعة محاور (٥٢) فقرة متعلقة بممارسات الممرضين استخدمت طريقة الرصد لجمع البيانات من الممرضين. حددت مصداقية الاداة من خلال عرضها على (١٦) خبير من ذوي الاختصاص وحدد ثباتها من خلال اجراء دراسة مصغرة. كما تم تحليل البيانات باستخدام الأساليب الإحصائية الوصفية و الاستدلالية.

النتائج : اظهرت الدراسة أن مستوى ممارسات الممرضين في الردهات الجراحية المتعلقة بخطة مغادرة المرضى بعد جراحة القلب كانت ضعيفة.

التوصيات : تطبيق برنامج تعليمي بشأن خطة المغادرة من أجل تحسين ممارسات الممرضيين.

الكلمات المفتاحية: ممارسات الممرضين ، خطة مغادرة المرضى، جراحة القلب.

Abstract

Objective (s): to assess nurses' practices regarding discharge planning post-cardiac surgery and to find out the relationship between nurse practices and demographic characteristic (age, gander, level of education, years of experiences, and years of experiences in surgical ward).

Methodology: A descriptive study was carried out at cardiac centers and hospitals in Baghdad (Ibn Al- Bitar specialized center for cardiac surgery; Iraqi center for heart disease and Ibn al Nafees hospital). For the period of 6th February 2017 up to 1st of June 2018. A non-probability (purposive) sample of (58) nurses (male & female) who were working in surgical wards. The data was collected, by using of a questionnaire, which consists of two parts, part (1) demographic data form that consists of (10) items, the part (2) that consists of (7) domains (52) items concerning nurses' practices level checklist was used to collect data from nurses. The validity of the checklist was determined by presenting it to (16) specialist experts and its reliability was determined through a pilot study. The data analysis through using descriptive statistical analysis procedures and inferential analysis procedures.

Results: The study revealed that the nurses have poor practices in all aspects regarding patients discharge planning in surgical cardiac wards.

Recommendations: Conduct of an educational program regarding discharge planning in order to improve nurses' practices.

Keywords: Nurses' practices, Patients Discharge Planning; cardiac surgery.

Introduction

Open heart surgery necessary for the treatment of congenital or acquired heart disease. Coronary artery bypass grafting (CABG) is performed to treat coronary artery blockage. Valve repair or replacement is performed in patients with valvular disorder. Other types of cardiac surgery are achieved to correct congenital or acquired cardiac diseases [1]. Cardiac surgery is a significant event in a patient's life and can effect on the personal, economic, and professional life of the individual, and damage their physical functioning. Regarding of revascularization surgery patients include chance of success for the surgery, fear during the recovery period, fear of discomfort and pain of surgery, concerns about fatigue, disorders of sleeping, loss of appetite, return to normal life, activities post-surgery, drug addiction, cardiac monitoring, the period of stay in hospital, and the costs of hospitalization [2]. Discharge planning is a key element in the care of patients. It is the process of classifying and preparing the patient's health needs and the expected upon exit from the facility. As a link between the functioning in the community and hospitalization [3]. Perfectly, discharge planning occurs when patients are admitted for cardiac surgery. Discharge instructions after cardiac surgery include drug teaching, activity restrictions, healthy diet and nutrition, wound care (including bandages, if appropriate: suture removal, bath), follow-up appointments (cardiologist, primary health care provider) and signs and symptoms of postoperative complications [4]. Hospital discharge planning indicates that this is a process that occurs between admission to the hospital and the discharge event. Prehospital reporting is as important as the start of the discharge planning process: it offers the opportunity to summarize the visit, teach patients how to take care of themselves at home and address any remaining questions or concerns. Resignation planning helps patients communicate with health care professionals and primary care providers on the best way to manage their chronic needs after leaving the hospital [5]. The discharge instructions for cardiac surgery patients include signs and symptoms of swelling, sleeping condition, observe appetite of the patient, gastrointestinal problems as constipation, diet, incisional care, instruction about used of medication, activity, shower daily if they are strong enough to stand and wash the incision with a mild antimicrobial soap. Using a clean towel, the patient should perfectly dry the incision. Creams, oils, lotions, or powders should not be used. The patients also should avoid driving, sexual, sun exposure, work, lifting heavy objects, stress management and follow exercise program given to the patient by a physical therapist in the hospital [6]. 'Discharge planning'it is determined a part of managing for all patients. All patients should be referred back to their cardiologist with an appointment about one month after surgery. They should return to see the primary surgeon within one week. Again, it is important to maintain an adequate level of pain control postoperatively for patients. Therefore, it is important that prescribe adequate analgesia in both dosage and amount for them. Patients should be instructed on wound care which is daily bathing with antibacterial soap and water. Application of ointments, salves or lotions are to be avoided. Patients should walk as much as tolerated and can go up and down steps as tolerated. Lifting is limited to no more than 10 pounds for the first six weeks post-operative. Sexual activity is permitted when comfortable [7]. Educating the patient and family is the responsibility of the nursing, which is one of the most important aspects of patient preparation for discharge, and should take place during the period of stay in the hospital and don't wait until the last minute. Every day, patients must be educated about drugs, including pain medication, forecasts about activity levels, diet, Sternal precautions, and care for incisions, signs and symptoms of infection. Patients should be involved in their care as

much as they are able. Families should be participated when possible, particularly family members who will take care of patients at home. [8]

Methodology

A descriptive study to assess nurses' practices regarding discharge planning post-cardiac surgery. The study conducted in the (Ibn Al- Bitar specialized center for cardiac surgery; Iraqi center for heart disease and Ibn al Nafees hospital) for the period of 6th February 2017 up to 1st of June 2018. A non-probability (purposive) sample of (58) nurses (male & female) nurses from a different level of education, who was working in surgical wards. The study instrument consisted of two major parts: Part I: Socio-demographic Characteristics of the Study Sample: This is composed of socio-demographic characteristics sheet which consists of (10) items, they include: age, gender, level of education, marital status, years of experience, years of experience in word, the training courses, several the training course, the types of training course and place of the training course.

Part II: Observational checklist to assess nurses' practices regarding discharge planning post cardiac surgery was comprised of (52 items) in (7) domains as follows Practice-related general information of discharge planning. It's composed of 2 items

- Practice-related discharge Follow-Up and Incisions Care. It's composed of ٨ items
- Practice-related exercise program and activities after discharge. It's composed of 13 items
- Practice-related common problems post discharge. It's composed of 8 items
- Practice-related medications. It's composed of 8 items
- Practice-related nutrition. It's composed of 4 items
- Practice-related risk factor modification. It's composed of 9 items.

The data were collected through the application of observational technique, after that the investigator interviewing the nurses to collect the data regarding demographic characteristic. The observational checklist which used and took about (1-2) hours of morning and night shift, each nurse was observed on an individually. With the purpose of achieving the study objectives, the data of the study were analyzed using statistical package of social sciences (SPSS) version 23 through the descriptive (frequency, percent, cumulative percent, mean and standard deviation) and inferential statistical analyses (one-way ANOVA and independent sample t-test).

Results:

Table (1): Distribution of the sample according to demographic characteristic,

Variables	Groups	Freq	%	Cumulative Percent
Age groups	20 – 24	21	36.20	36.20
	25 – 29	10	17.24	53.44
	30 – 34	13	22.42	75.86
	35 – 39	5	8.63	84.49

Variables	Groups	Freq	%	Cumulative Percent
	40 ≥	9	15.51	100.0
	$\bar{x}$ ± SD	30.21± 8.98		
Gender	Male	17	29.32	29.32
	Female	41	70.68	100.0
Marital status	Single	26	44.82	44.82
	Married	30	51.72	96.54
	Divorced	1	1.73	98.27
	Widow	1	1.73	100.0
Level of education	Secondary Nursing School	22	37.93	37.93
	Institute of Nursing	25	43.11	81.04
	College of Nursing	11	18.96	100.0
Years of experience	< 5 yrs.	26	44.82	44.82
	5 – 9 yrs.	14	24.13	68.95
	10 – 19 yrs.	13	22.42	91.37
	< 20 yrs.	5	8.63	100.0
Years of experience in surgical ward	< 5 yrs.	34	58.62	58.62
	5 – 9 yrs.	15	25.86	84.48
	10 – 19 yrs.	8	13.79	98.27
	20 > yrs.	1	1.73	100.0
Training course	Yes	56	96.55	96.55
	No	2	3.45	100.0
Number of training course	< 5 time.	41	70.68	70.68
	5 – 9 time.	11	18.97	89.65
	10 > time.	6	10.35	100.0
Types of training course	Theoretical	46	82.14	82.14
	Practical	10	17.86	100.0
Place of training	Inside Iraq	50	89.29	89.29

Variables	Groups	Freq	%	Cumulative Percent
course	Outside Iraq	6	10.71	100.0

Freq.= frequency, % =percentage $\bar{x}$ = Mean, SD = standard deviation, yrs = years.

Table (1) revealed that the frequency counts for selected variables. Ages of the nurses ranged from 20 to 40 ≥ years, the majority of age group to the study sample were within (20-24) years (Mean age of the study sample was 30.21 ± 8.98, most of them (70.68%) were female. Regarding to marital status (51.72%) were married. Regarding to educational attainment was from an institute (43.11%). Concerning the years of experience < 5 years was (44.8 %) of the study sample. In related to years of experience in surgical ward (58.6%) < 5 years. Most nurses reported having training course (96.5 %) in. Relative to the number of training course (70.86%) of the sample were < 5 time. Regarding the types of training course the result showed the majority of the nurses (82.14%) were participating in the theoretical training course. Concerning the place of training course (89.29%) of the study sample were inside of Iraq.

Table (2): Assessment of Nurses' Practice Related to general information, follow up and wounds care and exercises and daily activity. N=58

Practice Domains	Practice Items	Mean	S.D.	Ass.
General information	Inform the patient about the discharge planning post heart surgery	1.00	.000	NAP
	Inform the patient about the importance of the discharge planning after surgery	1.00	.000	NAP
Follow up and wounds care	Inform the patient about the time of the necessary follow up after discharge and it is important	1.03	.186	NAP
	Teach the patient and his / her family how to care the sternum wound and other wounds after discharging	1.02	.131	NAP
	Explain to the patient signs of infection of the wounds	1.02	.131	NAP
	Inform the patient about how long the sternum needs to complete healing	1.00	.000	NAP
	Instruct the patient how to maintain the sternum bone from bruising and other after leaving the hospital	1.07	.256	NAP
	Tell the patient about using the protective belt for the chest area	1.22	.460	NAP
	Tell the patient about the cause of swelling of the leg that taken veins from it for surgery	1.00	.000	NAP
	Explain to the patient how to reduce the swelling of the legs after discharge	1.29	.530	NAP
program and daily activity	Inform the patient about the exercise program after discharge	1.00	.000	NAP
	Explain to patient about the types of exercise and how to perform	1.00	.000	NAP
	Explain to the patient about the time of exercise	1.03	.184	NAP

Practice Domains	Practice Items	Mean	S.D.	Ass.
	Inform the patients about signs to stop exercising	1.00	.000	NAP
	Teach the patient about the organization of his daily activity which includes:			
	Bathing	1.03	.184	NAP
	Getting dressed	1.00	.000	NAP
	Climbing stairs	1.02	.131	NAP
	Rest after activity	1.03	.186	NAP
	Driving	1.22	.497	NAP
	Lifting objects	1.12	.378	NAP
	Resume sexual activity	1.00	.000	NAP
	Return to Work (Patient's Career)	1.00	.000	NAP
	Travelling	1.00	.000	NAP

n= number of sample M.S. =Mean of the score, SD = Standard Deviation, NAP= not applied practice perfectly (less than 1.5), APS = Applied practice somewhat (1.6.-2.25), Applied practice perfectly (2.5 - 3).

Table (2) revealed all items of (general information, follow up and wound care, exercise program and daily activity) are not applied practice by the nurses.

Table (3): Assessment of Nurses' Practice Related to Common health problems, Medications, Nutrition and Modification of risk factor. N=58

Practice Domains	Practice Items	Mean	S.D.	Ass.
	Explain to the patient about common health problems after discharge	1.03	.184	NAP
Common health problems	**The patient guide on how to treat or avoid the following health problems:**			
	Pain after discharge	1.29	.530	NAP
	Sleep disorders	1.00	.000	NAP
	Swelling of the leg and hand	1.29	.496	NAP
	High fever	1.03	.184	NAP
	Constipation	1.00	.000	NAP
	Anorexia	1.00	.000	NAP
	Exposure to infection	1.21	.450	NAP
on post disc harg	**Explanation of the patient about the need to adhere to medication after discharge**	1.12	.329	NAP

Practice Domains	Practice Items	Mean	S.D.	Ass.
	Instruct the patient regarding the following medicines:			
	Blood thinners drugs	1.17	.381	NAP
	Blood cholesterol control drugs	1.07	.256	NAP
	High Blood Pressure Control drugs	1.14	.395	NAP
	Analgesic drug	1.17	.381	NAP
	Anti-arrhythmic Medications	1.00	.000	NAP
	Teaching the patient on the necessary guidelines when taking warfarin for valve replacement patients	1.02	.131	NAP
	Tell the patient about possible side effects of all classes of medications after discharge	1.00	.000	NAP
Nutrition post discharge	**Teach the patient about healthy nutrition after discharge, which includes:**			
	Avoid eating saturated and high-cholesterol foods	1.09	.283	NAP
	Minimize or abstain the sodium salts intake	1.26	.480	NAP
	Minimize the sugar intake	1.10	.307	NAP
	Increased intake of dietary fiber and antioxidants	1.00	.000	NAP
	Inform the patient on the non-modifiable risk factors for heart disease (age, heredity, sex, race)	1.00	.000	NAP
	Inform patients about modifiable risk factors for heart disease, including:			
Modification risk factors post discharge	**Smoking**	1.36	.520	NAP
	Obesity	1.03	.184	NAP
	Hypertension	1.17	.381	NAP
	diabetic	1.02	.131	NAP
	Alcohol consumption	1.00	.000	NAP
	High blood cholesterol level	1.00	.000	NAP
	Lack of activity and exercise	1.00	.000	NAP
	Teach the patient how to change lifestyle for the modifiable risk factors for heart disease	1.00	.000	NAP

n= number of sample M.S. =Mean of the score, SD = Standard Deviation, NAP= not applied practice perfectly (less than 1.5), APS = Applied practice somewhat (1.6.-2.25), Applied practice perfectly (2.5 - 3).

This table reveal items (common health problem, medication post discharge, healthy nutrition post discharge, and modification risk factors post discharge) are not applied practice by the nurses.

Table (4): Assessment of Nurses' Practice Related to discharge planning domains. (Sample number=58)

Domains	M.S.	S.D.	Ass.
General information	1.00	.000	NAP
Follow up And wounds care	1.08	0.212	NAP
Exercise program and daily activity	1.03	0.120	NAP
Common health problems	1.12	0.237	NAP
Medication	1.09	0.234	NAP
Nutrition	1.11	.267	NAP
Risk factors modification	1.06	0,135	NAP

M.S. =Mean of the score, SD = Standard Deviation, NAP= not applied practice perfectly (less than 1.5), APS = Applied practice somewhat (1.6.-2.25), Applied practice perfectly (2.5 - 3).

Table (٣) demonstrated the mean of score for nurses' practice regarding patients discharge planning were not applied practice in all domain.

Table (5) : Association between nurses' practices and demographical characteristic

Variables	Practice score	ANOVA test			
Age (years)	**Mean ± SD**	**CV**	**D.F**	**P**	**Sig**
20-24	**59.71 ± 7.88**	**1.222**	**57**	**.313**	**NS**
25-29	**59.10 ± 6.08**				
30-34	**58.15 ± 3.48**				
35-39	**63.60 ± 5.94**				
40 ≥	**56.44 ± 4.09**				
	Practice score	**T test**			
Gender	**Mean ± SD**	**CV**	**D.F**	**P**	**Sig**
Male	**61.00 ± 5.74**	**1.535**	**56**	**.131**	**NS**
Female	**58.24 ± 6.25**				
	Practice score	**ANOVA test**			
Education Level	**Mean ± SD**	**CV**	**D.F**	**P**	**Sig**
Secondary	**54.95 ± 1.39**	**19.997**	**57**	**.000**	**HS**
Institute	**59.39 ± 3.68**				
College	**65.53 ± 8.77**				
	Practice score	**ANOVA test**			

Years of experience	Mean ± SD	CV	D.F	P	Sig
< 5 yrs.	58.88 ±7.32	1.361	57	.264	NS
5 – 9 yrs.	59.21 ± 5.33				
10 – 19 yrs.	61.07 ± 5.00				
< 20 yrs.	54.60 ± 1.94				
	Practice score	ANOVA test			
Ward years	Mean ± SD	CV	D.F	P	Sig
< 5 yrs.	59.02 ± 7.28	.881	57	.457	NS
5 – 9 yrs.	60.53 ± 4.03				
10 – 19 yrs.	57.50 ± 3.81				
< 20 yrs.	52.00 ± 0.00				
	59.16 ± 6.28				

SD: standard deviation, CV: computed value, D.F: degree of freedom, p: p value ≥ 0.05, sig: significance.

This table show that the no significant differences of nurses' practices in related to age, gender, years of experiences, and experiences years in surgical ward, while there are a high significant differences of nurses' practices related to level of education at p value ≥ 0.05.

Discussion:

Part I: Discussion of demographic characteristic and some variables of study samples

1. Age of Nurses:

The results show majority of nurses age group of the sample were within (20-24) years (Mean age of the study sample was 30.21 ± 8.98). This result support with finding of the study found that the nurses' age are between (22-27) years [9].

2. Gender of Nurses:

The present results revealed that (70.68%) of the sample were female. This finding is supported by evidence which stated that the majority of nurses were female [10].

3. Marital status of Nurses:

In related to marital status the result confirms more than half of the samples were married. This result is supported by study which found that the nurses providing care to cardiac patients a majority of the nurses (84.3) of the cardiac nurses were married [١٢].

4. Nurses Level of Education:

Regarding the educational level, the findings show that the less than half (43.11%) of nurses in the sample were institute graduates. This finding is supported by study which stated that a higher percentage of the nurses in the cardiac unit were graduated from the nursing institute [11].

5. Years of Experience in nursing and years of experience in surgical ward:

The result of present study shows that the majority of sample (44.8 %) have < 5 years of experience in nursing and years of experience in surgical ward the finding confirms that the more than half of the sample have less than 5 years. This result is similar to study, they found the most study sample have less than 5 years of experience and accounted for (56.3%) [13]. the findings of the present study supportive evidence is available in the study that showed most of

the nurses (40%) and had experienced between (1–5) years. The years of experience in the cardiac unit, most of them (62%) had experienced less than (5) years [14].

6. Training Course for Nurses

The result of current study reveals most nurses reported having training course (96.5 %) in. Relative to a number of training (70.86%) of the sample were < 5 time. Regarding the types of training the result shows the majority of the nurses (82.14%) were participating in the theoretical training. Concerning the place of training (89.29%) of the study sample were inside of Iraq. This result is supported by study which stated that the highest percentages (74%) participating sometime in training courses inside or outside the country [15].

Part II: Discussion of nurses' practices concerning discharge planning post cardiac surgery

The results of current study show all items of discharge planning domains (general information, follow up and wound care, exercise program and daily activity, common health problem, medication post discharge, healthy nutrition post discharge, and modifiable risk factors post discharge) are not applied practice.

The findings reveal that the nurses' practice regarding patients discharge planning were not applied practice on all domain. (general information follows up and wounds care, Exercise program and daily activity, common health problems, medication, nutrition and risk factor modification) of nurses' practices concerning discharge planning. This finding of the present study supportive evidence is available in the study that showed the level of nurses toward discharge planning for patient with open heart surgery were deficit in different domain [16].

Part III: Discussion of statistical differences between nurses' practices with demographical characteristics and some variables.

The results of current study established there is no significant differences between the nurses' practice related to age groups, gender, their years of experiences, and years of experiences in ward

This result agree with the studies by the showed there wasn't significant difference between the nurses' age, gender with the practices [17, 18], As well study reported no significant statistical association between practice scores with various age groups and different years of experience [19].

The findings of current study shows that the there is a high significant differences in a study group between the educational level with nurses practice. These results supportive evidence is available in the study that showed that there were significant association among nurses' educational levels regarding practice [20].

Recommendations

1- Special training sessions must be presented for cardiac nurses concerning discharge planning post cardiac surgery in addition to regular evaluation of nurses' practices.

2. Conduct of an educational programs regarding discharge planning to improve nurses' practices.

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