Assessment of Nurses' Knowledge Concerning Discharge Planning For Patients' With Open Heart Surgery in Cardiac Centre at Baghdad City

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Abstract- Background: Discharge planning is a process where patients' needs are identified , and a plan formed for a smooth transfer from one environment to another. A discharge plan means puts down on paper (writing) the end-goals of the care plan, which ultimately aims to empower the patient to make decisions and be resilient, to maximize his potential to live independently (Driscoll , 2000) Nurses' knowledge and inadequate information are the most common barrier for putting down patient discharge planning .

Objectives: the study aim to identifying the nurses knowledge about discharge planning , to find out the relationship between nurses' knowledge and socio – demographical variable which are gender , age , educational level , marital status , years of experiences and training course.

Methodology: quantitative descriptive design study was carried out at three cardiac hospital in Baghdad City (Ibn-Al-Bitare hospital , The Iraqi Center for cardiac surgery and Ibn – Al – Nafess hospital) . The present study started from 5th of January 2016 to the 15th of August 2016. To achieve the objectives of the study , a non probability (purposive) sample of (52) nurses who were working at surgical ward for open heart surgery , were selected. Instrument is composed of three parts, which are : socio-demographic characteristics, assessment of nurses' knowledge multiple choice questions,   and nurses knowledge assessment (sure , not sure, and don't know). The content validity of instrument has been established through a panel of experts . Reliability of the instrument scale was determined by using Cronbaghs' Coefficient alpha equation = 0.754. Data were collected by structured self report through using a questionnaire format, and they analyzed by the application of descriptive and inferential statistical methods .

Results : Throughout the course of the data analysis of the present study the finding show that 69% of the study sample were females within ,age group that (23-27) years old from Iraqi Center and Ibn-Al-Naffes hospital, (56%) of them at age group (18-22) years old in Ibn-Al-Bitare hospital, high percent of the three hospitals were married and divorced, (40%) of the sample in the Iraqi Center nurses graduated from nursing institute, (38.5%) of Ibn-Al-Naffes hospital was graduated from secondary nursing school, and (48%) of nurses in Ibn-Al-Bitare graduated from nursing school, high percent of nurses in Iraqi Center and Ibn-Al-Naffes hospital had (1 - 5)years of experiences in hospital, and (62.5%) of nurses in Ibn-Al-Bitare hospital have (6-10) year of experiences, (73.3%) of nurses in Iraqi Center have theoretical training course, (50%) of nurses in Ibn-Al-Naffes hospital had theoretical and practical training course, and (55.6%) of nurses in Ibn-Al – Bitare had practical training course

Conclusion: The level of nurses' knowledge toward discharge planning for patient with open heart surgery were deficit in different domain , main deficit in domain three (Nurses' Knowledge Toward Patients follow-up) , there was a significant relation between nurses' knowledge and marital status in Ibn-Al-Bitare hospital and there was a high significant relation between nurses' knowledge and age group in Iraqi Center for cardiac surgery .

Recommendation : Increase and improve nurses' knowledge about discharge planning for patients with open heart surgery , through educational and training programs (regular lectures for nursing staff) . Improving the expertise of nurses plays an essential role in empowering patients care. Increase nurses knowledge toward discharge planning by preparing booklets designed and presented to these nurses . Also, carryout additional studies with larger sample in other Iraqi governorates .

Index Terms- Nurses' Knowledge, Discharge Planning, Open Heart Surgery

I. INTRODUCTION

Open heart surgery is a lifesaving intervention, but the early recovery period presents a number of challenges for patients, carers and nurses. Early and adequate discharge planning based on in-depth knowledge of the post discharge experience can help to ensure optimal recovery [1]. Open heart surgery is any surgery in which the surgeon cuts open the chest to operate on the heart. Open heart surgery can treat a variety of diseases and conditions of the heart. Conditions commonly treated with open heart surgery include heart valve disease, birth defects of the heart, and coronary artery disease. Coronary artery disease is the leading cause of heart attack. Open heart surgery is a common but major surgery with significant risks and potential complications. In case of less invasive treatment options. Consider getting a second opinion about any treatment choices before having open heart surgery [2]. The last 100 years have witnessed major developments in medicine. Arguably the most dramatic progress has been made in the treatment of cardiac disease. Progressive surgical techniques have allowed for the treatment of most acquired and congenital conditions in addition to injuries caused by trauma [3]. With patients discharged home 'quicker and sicker' than in the past, the immediate post discharge

period is of concern to nurses attempting to provide continuity of care between hospital and home, and to family caregivers, who typically give assistance for longer periods than in the past. Continuous and appropriate care will continue to be important for those caring for cardiac surgical patients, given the prevalence and success of cardiac surgery in countering the leading cause of death in Australia and elsewhere [4]. For nurses, lengthened periods of home and community care require timely, appropriate and evidence-based discharge planning. For open heart surgery patients, the need for exercise programs, good nutrition and stress alleviation are recognized as components of discharge planning. However, with few exceptions [5]. The care-treatment plan should be person-centered with an expected date of discharge predicted within 24 hours of admission-to a health care facility. Nurses should ensure that the person and family members are aware of the expected date of discharge from the time of admission. This is recognized as good practice and improves the person's experience [6].

II. METHODOLOGY

Objectives of the study

1. To assess nurses knowledge concerning preparing discharge planning for patient with open heart surgery.
2. To find out the relationship between nurses knowledge and biographical variable . which as gender , age , educational level , marital status , years of experience and training course.

Design of the study: A descriptive design study was carried out to assess of nurses knowledge concerning discharge planning for patient with open heart surgery , The present study started from 5th January 2016 to the 15th August 2016.

Setting of the study: The study was conducted in three cardiac centers at Baghdad City who they have cardiac surgery patients and need for discharging to go home with optimal health instruction to go together with patient health situation and their needs ; which are Ibn AL – Bitar Specialized Center For Cardiac Surgery , Ibn AL – Nafess Teaching Hospital and The Iraqi Center for Heart Disease.

Sample of the study: A non – probability (purposive) sample of (52) nurses who were working in surgical word in cardiac hospitals and responsible for making discharge plan for patient they had cardiac surgery.

Study instrument: The questionnaire was constructed for the purpose of study which includes the following parts:

Part I: Socio - demographic Characteristics
Part II: Nurses knowledge about preparing discharge planning for patient with open heart surgery
Part III: Questionnaire in this part consist of thirty questions its answer was sure , unknown and not sure question answered by nurse and classify into this domains:

1. General information of nurses toward planning of patients discharge
2. Nurse knowledge related to medication
3. Nurse knowledge related to patients follow-up
4. Nurse knowledge related to patients activities
5. Nurse knowledge related to patients Nutrition
6. Nurse knowledge related to patients problems

Method of data collection: The data were collected through the utilization of the development questionnaire which made from articles , journals and book which it is source for nurses and patient for discharge plan and by mean of structured of self-report method with the subjects who were individually interviewed in the specialist hospitals for cardiac surgery by using the Arabic version of the questionnaire , The data collection was performed from 5th April until 15th May 2016 . Each subject spends approximately (10 – 15) minute to complete.

Validity and Reliability: The content validity of the instrument was established through a panel of (16) experts, the reliability of the items were based on the internal consistency of the checklist was assessed by calculating Cronbach s' Alpha which as= 0.75.

Statistical analysis: The statistical data analysis approach by using (SPSS-ver.20) is used in order to analyze and evaluate the data of the study. A descriptive statistical data analysis approach used to describe the study variables : Frequencies, Percentages, Mean of score, stander deviation, and relative sufficiency. Inferential statistical data analysis approach: used by application of the Chi-square, T-test and ANOVA test.

III. RESULTS

Table (1) : Distribution of the study sample by socio-demographic characteristics

Demographic Data	Ratig	Iraqi Center No= 15		Ibn-Al-Nafess No=13		Ibn-Al-Bitar No=24	
		F.	%	F.	%	F.	%
Gender	**Male**	5	33.3	5	38.5	6	24.0
	Female	10	66.7	8	61.5	18	76.0
Age group	18-22years	2	13.3	4	30.8	14	56.0
	23-27 y	5	33.3	4	30.8	10	44.0
	28-32 y	3	20	1	7.7	-	-
	33-37 y	1	6.7	3	23.1	-	-
	38- 42 Y	1	6.7	-	-	-	-
	43-47 y	1	6.7	-	-	-	-
	48 years and over	2	13.3	1	7.7	-	-
Marital status	**Nursing School**	-	-	-	-	12	48.0
	Secondary of nursing school	4	26.7	5	38.5	3	12.0
	Institute of Nursing	6	40.0	4	30.8	1	4.0
	Nursing college	4	26.7	3	23.0	2	4.0
	Higher education	1	6.6	1	7.7	7	32.0
Years in Hospital	1-5 year	6	40.0	8	61.5	14	58.4
	6 – 10 year	4	26.5	1	7.7	4	16.8
	11 – 15 year	1	6.7	1	7.7	1	4.1

		F.*	%	No.	%	No.	%
	16 – 20 year	1	6.7	2	15.4	1	4.1
	21 – 25 year	2	13.4	1	7.7	1	4.1
	26 year &over	1	6.7	-	-	3	12.5
Year of experiences	year 15-11	1	6.7	1	7.7	1	4.1
	20 year-16	1	6.7	2	15.4		
	21 – 25 year	1	6.7	1	7.7		
Training Course	Yes	11	73.3	4	30.8	9	37.5
	No	4	26.7	9	69.2	15	62.5
Number of training course	1-3 time	4	36.3	3	75	8	88.8
	4- 6 time	7	63.7	1	25	1	11.2
Type of training	Theoretical	9	81.8	2	50.0	4	44.4
	Practical	2	18.2	2	50.0	5	55.6

F.* = frequency ,% = percentage , No. = number of sample , SD = standard deviation

This table shows that the socio-demographic data of the study sample of the present study were 66.7 % was female in Iraqi center, 61.5 % female in Ibn-Al-Naffess hospital, and 76 % was female in Ibn- Al-Bitar center, at age group (23-27) years old for Iraqi center and Ibn-Al-naffes hospital, 56 % of them at age group (18-22) years old in Ibn-Al-Bitar hospital, high percent for three hospitals was married and divorced, 40 % of Iraqi center graduated from nursing institute, 38.5 % of Ibn-Al-Naffes hospital was graduated from secondary nursing school, and 48 % of nurses in Ibn-Al-Bitar graduated from nursing school, high percent of nurses in Iraqi center and Ibn-Al-Naffes hospital have (1-5) years of experiences in hospital, and 62.5 % of nurses in Ibn-Al-Bitar hospital have (6-10) year of experiences, 73.3 % of nurses in Iraqi center have theoretical training course, 50 % of nurses in Ibn-Al-Naffes hospital have theoretical and practical training course, and 55.6 % of nurses in Ibn-Al – Baettar have practical training course.

Table (2) : Level of Iraqi center Nurses knowledge Toward Discharge planning For cardiac patients

Domains		N	Min.	Max.	Mean	SD	Level
1	General information of discharge planning	15	8.00	14.00	11.67	1.562	H.
2	Nurses knowledge toward medication	15	9.00	14.00	12.47	1.301	H.
3	Nurses knowledge toward patients follow up	15	3.00	6.00	4.800	1.033	M.
4	Nurses knowledge toward patients activities	15	22.0	34.00	29.67	3.204	M.
5	Nurses knowledge toward nutrition	15	10.0	15.00	12.60	1.519	M.
6	Nurses knowledge toward patients problems	15	8.00	12.00	10.80	1.142	M.

F= frequency , per = percent , SD = standard deviation , H = High , M = middle , N. = number of sample , Min. = minimum , Max.= maximum , N. = number of sample

This table show the level of Iraqi Center nurses knowledge toward six knowledge domains which are nurses knowledge toward patients follow-up and it is level middle , nurses knowledge toward patients activities and it is level middle , nurse knowledge toward nutrition and it is level middle and nurses knowledge toward patients problems it is level middle except general information of discharge planning and nurses knowledge toward medication they are level high . Revealed this table the majority of nurse's knowledge for Iraqi center were middle for all domains of planning of discharge patients with open heart surgery.

Table (3) : Level of Ibn-AL-Naffess Nurses knowledge Toward planning for cardiac patients discharge

Domains		N	Min.	Max.	Mean	SD	Level
1	General information of discharge planning	13	10.00	14.00	12.36	1.193	H.
2	Nurses knowledge toward medication	13	10.00	14.00	12.00	1.299	H.
3	Nurses knowledge toward patients follow up	13	5.00	6.00	5.82	.373	H.
4	Nurses knowledge toward patients activities	13	22.00	32.00	27.00	2.791	M.
5	Nurses knowledge toward nutrition	13	9.00	15.00	12.55	1.54	H.
6	Nurses knowledge toward patients problems	13	7.00	12.00	10.37	1.547	H.

F= frequency , per = percent , SD = standard deviation , H = High , M = middle , N. = number of sample , Min. = minimum , Max.= maximum , N. = number of sample

Results shows that the high level nurses knowledge in domains which are , general information of discharge planning , nurses knowledge toward medication , nurses knowledge toward patients follow-up , nurses knowledge toward nutrition and nurses knowledge toward patients problems except domain four (nurses knowledge toward patients activities) it is level middle in Ibn-Al –Naffes hospital regarding to domains of planning discharge of patients.

Table (4): Level of Ibn-Al-Bitar Nurses knowledge Toward planning for cardiac patients discharge

	Domains	N	Min.	Max.	Mean	SD	Level
1	General information of discharge planning	24	8.00	14.00	11.370	1.616	H.
2	Nurses knowledge toward medication	24	10.0	15.00	12.083	1.351	M.
3	Nurses knowledge toward patients follow-up	24	3.00	7.00	5.3750	1.052	H.
4	Nurses knowledge toward patients activities	24	23.0	33.00	27.667	2.828	M.
5	Nurses knowledge toward nutrition	24	10.0	16.00	12.333	1.373	M.
6	Nurses knowledge toward patients problems	24	7.00	12.00	9.7083	1.567	M.

F= frequency , per = percent , SD = standard deviation , H = High , M = middle , N. = number of sample , Min. = minimum , Max.= maximum , N. = number of sample

This thable shows nurses knowledge domains for discharge patients in Ibn –Al-bitar hospital for domains which are nurses knowledge toward medications , nurses knowledge toward patients activities , nurses knowledge toward nutrition and nurses knowledge toward patients problems , this domains have middle level assessment , except domains general information of discharge planning and nurses knowledge toward patients follow – up have high level assessment . This table shows that the high number of nurses have middle level of knowledge regarding all domains of planning patients discharge.

Table (5): Statistical Differences between Nurses Knowledge of Iraqi Center and their socio-demographic characteristics

Variables		Sum of Squares	df	Mean Square	F	Sig. P≤0.05
gander	Between Groups	2.833	11	.258	1.545	.399 N.S
	Within Groups	.500	3	.167		
	Total	3.333	14			
age	Between Groups	1655.733	11	150.521	18.815	.017 H.S.
	Within Groups	24.000	3	8.000		
	Total	1679.733	14			
Marital status	Between Groups	8.933	11	.812	3.655	.157 N.S
	Within Groups	.667	3	.222		
	Total	9.600	14			
Level of education	Between Groups	10.567	11	.961	2.470	.247 N.S
	Within Groups	1.167	3	.389		
	Total	11.733	14			
Years in hospital	Between Groups	36.567	11	3.324	1.930	.322 N.S
	Within Groups	5.167	3	1.722		
	Total	41.733	14			
Year of experiences in units	Between Groups	26.267	11	2.388	2.686	.225 N.S
	Within Groups	2.667	3	.889		
	Total	28.933	14			
Training course	Between Groups	2.267	11	.206	.927	.602 N.S
	Within Groups	.667	3	.222		
	Total	2.933	14			
Type of training	Between Groups	1.600	7	.229	.229	.941 N.S
	Within Groups	2.000	2	1.000		

Total	3.600	9				

df = degree of freedom , p = p value of significance: ≤ 0.05 = significant , ≤ 0.01 = high significant ,
N.S = no significant , H.S = high significant

This table presented that there were statistical differences (high significant) between nurses knowledge of Iraqi center and age of nurses at P = P ≤ 0.05 level.

IV. DSCUSSION

Part I: Discussion of the Socio-demographic characteristics and nurses knowledge

The study finding shows that the socio-demographic data of the study sample of the present study were 66.7% was females in Iraqi center, 61.5 in Ibn-Al-Nafess hospital, and 76.% was female in Ibn- Al-Bitar hospital, were females. These result are agree with same study, which found the majority of the study sample was 81% of the study sample were female and 19% males [7].

At age group 23-27 years old for Iraqi center and Ibn-Al-naffes hospital, 56% of them at age group 18-22 years old in Ibn-Al-bettar hospital, this result supported by same study reference, may be explained by the fact that younger nurses were freshly graduated, more interested and motivated and much active than the older ones in this areas [8].

High percent for three hospitals was married and divorced this agree with study done by (Tsilimingras, 2008) which found most of nurses are married [9].

The result show that 40% of Iraqi Center graduated from nursing institute, 38.5% of Ibn_Al-Naffes hospital was graduated from secondary nursing school, and 48% of nurses in Ibn-Al-Bitar graduated from nursing school this result support by (Rau, 2012) they found the majority of nurses have diploma in nursing [10].

High percent of nurses in Iraqi center and Ibn-Al-Naffes hospital have (1-5) years of experiences in hospital, and 62.5% of nurses in Ibn-Al-Bitar hospital have (6-10) year of experiences, this result is agree with Danil (2011) [11].

Training course , 73.3% of nurses in Iraqi center have theoretical training course this finding disagree to the result obtained from study conducted by Danil (2011) who find that (100%) of nurses didn't attend any training session [11].

Part II: Discussion of Nurses Knowledge Toward discharge planning for patients

The study finding presented the nurses responses toward their knowledge about the planning of cardiac patients discharge which are six domains as a fallow, the nurses responses toward their information about the arrangement of discharge planning for patients was 86.7%, 69.2%, and 76% of nurses was not known when the discharge planning is preparing for patients for Iraqi center, Ibn-Al-Naffess hospital, and Ibn-Al-Betar hospital respectively. From the researcher point of view this result related to the majority of study sample graduated from nursing school and secondary nursing school. The domain of medication the nurses not known the following items, the aspirin side effect which as 80%, 76.9%, 44% for Iraqi center, Ibn-Al-Naffess hospital, and Ibn-Al-Betar hospital respectively and the item that

the pain killer medication contraindication , which as 80%, 76.9% for the Iraqi center, and Ibn-Al-Naffess hospital respectively, and Patient cannot take the descriptive medication without medical advice was 92.3 % in Ibn-Al-Naffes hospital, researcher thought this result related to shortage of training course about discharge planning and medication used by cardiac surgery patients. The follow up domain the nurses not known that which situation can the patient call the doctor which as 53.3%, and 36.1% for Iraqi center and Ibn-Al-Bitar hospital respectively. The activity of patients after surgery the nurses not known that the Patient is urged to ride a bike and swim which as 73.3%, 76.9%, and 80% for Iraqi center, Ibn-Al-Naffess, and Ibn-Al-Betar hospital respectively. The domain of nutrition was the nurses not known Signs of Speed weight gun for patient with open heart surgery, which as 80%, 84.6%, and 92 % for Iraqi center, Ibn-Al-Naffess, and Ibn-Al-Betar hospital respectively . The domain of patients problems after open heart surgery was the nurses not known that the depression is a common sign for patient which as 46.7%, 61.5%, and 60% for Iraqi center, Ibn-Al-Naffess, and Ibn-Al-Betar hospital respectively.

Part III: Discussion of Statistical Differences between Nurses Knowledge Of Iraqi Center and their Socio – demographical characteristic :

The results shows there was high significant relationship between nurses level of knowledge and age of nurses at P = P ≤ 0.05 level . In Comparison of the respondent's total scores with age group, there was a high significant between the nurse knowledge scores and their age group at p-value 0.05. This result was disagree with Tsilimingras, 2008 their finding indicate that there was non-significant association between the nurses' knowledge and their age group [9].

Danil (2011) have showed that knowledge was highest in 30-40 years old and lowest in the >50 years group of the staff .Based on the researcher's point of view, acquired knowledge may not contribute to the increasing age, that nurse who is aged (20-30) years old may had huge content of knowledge compared either nurse who is aged older than this interval, depending on their study of knowledge and their efficacy toward increasing knowledge [11].

V. CONCLUSIONS

1. Most of the study sample was female , high percentage at age were group 18 – 27 years old , most of them were married and divorced , majority of the study sample graduation from nursing school and secondary nursing school.

2. High percentage of them were 1 – 5 years of working in hospital , and most of them have 1- 10 years of experience , 54 % they do not have training course in hospitals for discharge planning , 29 % have from 1 – 3 time of training course.

3. Quarter of study sample have theoretical training course.
4. The level of nurses knowledge for discharge planning is low in different levels , Main deficits of nurses knowledge in domain three (Nurses Knowledge toward patients follow-up) in all three hospitals and the highest level of nurses knowledge concerning discharge planning for open heart surgery in domain four which it is (Nurses Knowledge toward patients activities) in all study sample.

VI.   RECOMMENDATIONS

1. Increase body of nurses knowledge by lectures related to Discharge Planning for patients with open heart surgery.
2. Encourage the nurses to use internet technology to identify the importance of discharge planning.
3. Motivate the nurses to doing study or research about nurses knowledge related to discharge planning and supported these researches by re –enforcement or appreciation.
4. Nursing staff working in the surgical wards in cardiac hospitals should be assessing after training course.
5. The researcher suggested that further study need to be done about discharge planning and quality of nursing care in all Iraqi governorate.
6. Nurses with the highest educational levels should be assigned to work in the surgical ward for open heart surgery .

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