Construction of an Initial Assessment Documentation Tool for Nursing Recording System in Coronary Care Units

Dr. Mona Faraj Shamoun Dr. Samira A. Gorges

Abstract

Objective : The study was carried out to construct an initial assessment documentation tool for nursing recording system in Coronary Care Unit.

Methodology : A descriptive, purposive sample of (65) nurses was selected from CCU of main teaching hospitals (Al Karama, Al Kindy, Al Kadimia, Al Yarmmok, Baghdad teaching hospital, Ibn Al Naffis hospital) and Ibn-Al betar hospital in Baghdad city from the 15th of April 2004 to the 15th of April 2006.

The instrument was constructed and comprised of two sections: section one included the nurses' demographic characteristic; section two was the initial assessment documentation tool that contained (2) parts including: General information form and the initial assessment form. Descriptive and inferential statistical procedures were used to analyze the data. Reliability of the instrument was determined for the tool parts and it was (0.85), besides that a panel of experts determined the validity of the tool.

Results : The findings revealed that the most of the study sample were young male with nursing institute graduate and the majority of them employed with limited experience ranging between (1-5) years as general and experience in CCU. In spite of that no one of them got a training course in documenting their activities.

The present study revealed that, the distribution of nurses' responses to the health pattern indicated that the (health perception, exchanging, subjective awareness of information, nutrition-metabolic, elimination, activity and exercise, rest and sleep, cognitive-sensing, and relationship) patterns were the most appropriate, clear and comprehensive patterns for them.

Most of the international nursing diagnosis items of the tool were clear for nurses except few items.

The results also showed that there was a statistically significant influence between the nurses' responses to the (11) health patterns with the age variable except in the cognitive - sensing pattern. Moreover, the level of education patterns significantly influences the entire sample responses.

" Assistant Professor, Fundamentals of Nursing Department,College of Nursing,University of Baghdad

" Assistant Professor, Fundamentals of Nursing Department,College of Nursing,University of Baghdad

Recommendation : According to the results of the study the investigator recommended to initiate periodical educational programs for nurses toward tool application, assigned professional nurses in CCU and formulating a multidisciplinary documentation tool to provide a support in relation to the implementation of patient's care.

Key wards : Construction, Initial assessment, Documentation tool, Nursing recording system, Coronary care unit.

Introduction

Nursing documentation is accounted an important part of clinical documentation. Thorough nursing documentation, a precondition for good patient care; for efficient communication and for co-operation within the health professional team can be determined [1] It is also considered a fundamental nursing responsibility. Yet, it does not reflect the holistic nature of the nurse's practice and work [2] It is that part of the clinical record's information that are written by nurses concerning a patient's health status, nursing needs, nursing care and response to care. These clinical records facilitate care, enhance continuity of care, and help to coordinate the treatment and evaluation of the patient("

The first step in the nursing documentation is patient initial assessment, which is necessary to obtain data that enables the nurse to make a nursing diagnosis, identify and implement nursing interventions, and assess their effectiveness [4] The ability to assess the patient is one of the most important skills of the nurse, regardless of the practice setting. In all settings where nurses interact with patients and provide care, eliciting a complete health history and using appropriate assessment skills are critical to identifying physical and psychological problems and concerns experienced by the patient

Nurses are usually the primary caregivers so, the information that they put in the record is very important to inform other caregivers of patient's appearance, behavior. and responses. Besides that, accurate and complete documentation in the patient's health record is essential for maintaining effective communication among all

caregivers **(6).**

According to the Ministry of Health records, nurses of coronary care units in Iraqi hospitals have followed no documentation tool.

Therefore, the realization of this problem motivates the importance toward the construction of a tool for documenting nurses Initial Assessment. So, the present study will provide a tool to a raise the standard of patients care in these units ari organize the patient problems as possible to reduce the period of hospitalization the provide the chance for another patient admission

Methodology

A descriptive study was carried out on (65) nurses in coronary care units at **mail** teaching hospitals in Baghdad city (Baghdad, Al Kindy, Al Kadimia, Al Karama. I Yarmmok hospitals) and Ibn-Al betar hospital, through the period from the 15th | December (2004) to the 1st of June (2005) as it was shown in table (1):

Table (1) Distribution **of the sample by hospitals**

List	Hospitals		%
1	Al Karama hospital Al Kindy hospital Al	6	9.2
2	Kadimia hospital Al Yarmmok Baghdad	6	9.2
	teaching hospital Ibn Al Naffes hospital Ibn Al	6	9.2
3	Betar hospital	9	13.9
	Tota	65	1100
4		20	30.8
		10	15.4

To verify the present study, the researcher visit the coronary care units of the Iraqi hospitals and found a deficiency of tools for documenting nurses activities accept simple forms of graphic sheets, which meets only a simple part of nursing assessment, for that an initial assessment form was constructed by the investigator for the nurses recording system in coronary care unit from the reviewing of available literatures and studies (3,4,7,8,9,10).

The instrument, which constructed for the purpose of the study, composed of two sections:

1. The demographic characteristic information section that includes the nurse's sex, age, educational level, years of experience in general and in CCU.
2. The initial assessment documentation tool, consisted of two parts:
   a. The general information part, that include (13) items of the patient general information (age, sex, marital status, occupation, weight, height, date of admission, doctor name, presents to contact with, mode of admission, accompanied by and blood group.
   b. The initial assessment form, that consisted of two
   1. aspects:

      The patient health patterns aspect that composed of (140) items included in (11) patterns which are (health perception pattern, exchanging: a pattern of involving mutual giving and reserving circulation, a pattern involving the subjective awareness of information, nutritional-metabolic pattern, elimination pattern, activity and exercise pattern, rest and sleep pattern, Cognitive-sensing pattern, Relationship pattern, Sexuality pattern and copping pattern. In front of each item in the form there is either (Yes or NO) option or a suitable word, to be answered by the nurse.

   2. The International Nursing Diagnosis that include (43) items of the nursing diagnosis according to patient problems. Three options (appropriateness, clarity and comprehensiveness) were used as a mean of scaling and rating the (11) patterns, while the scaling of the international nursing diagnosis were (clear or not clear).

Twenty Experts from different fields, their years of experience range between (36-7) give their suggestions about the instrument, their comments and options were taken into consideration to establish the validity. While the reliability coefficient was (0.85) and that was statistically accepted.

The data were analyzed by using frequency, percentage and logistic regression analysis approach.

Results

Table (2) Characteristic of the Sample

Variables	F	%
*Age:		
20-30	19	29.23
31-40	28	43.98
41-50	15	23.08
51->	3	4.61
* Gender:		
Male	47	72.3
Female	18	27.7
* Marital Status		
Single	19	29.23
Married	46	70.77
* Educational Level :		
Intermediate	2	3.1
	15	23.1
Secondary	33	50.76
Institute	15	23.1
College		
* Years of Experience in general:		
1-5	18	27.7
6-10	16	24.6
11-15	9	13.85
16-20	9	13.85
21-25	5	7.7
26 ->	8	12.3
* Years of Experience in CCU:		
1-5	33	50.8
6-10	9	13.8
11-15	13	20
16-20	7	10.8
21->	3	4.6

This table shows the demographic distribution characteristic of the studied sample, in relation to age, the highest percentage (43.98%) of the sample were within the age group from (31 - 40) years. Regarding Gender most of the nurses were male (72.3%) and the remaining (27.7) were female. Their marital status revealed that most of the nurses (70.77%) were married. Concerning the educational level the highest percentage (50.76%) was at the level of institute, while the lowest percentage (3.1) of the sample had intermediate education. For the years of experience in general the highest percentage (27.7) of the sample had experience from (1-5), beside that the highest percentage (50.8) of the sample had experience form (1- 5) years in the coronary care units.

Table (3) Distribution of nurses' responses to the items of health patterns

Health patterns	Appropriateness		Clarity		Comprehensiveness	
	NO	%	NO	%	NO	%
Health perception pattern	60	92.3	58	89.2	**58**	89.2
Exchanging pattern	62	95.4	**60**	92.3	59	90.8
Subjective awareness of information pattern	61	93.8	**58**	89.2	**58**	89.2
Nutritional- metabolic pattern	60	92.3	**57**	87.7	**57**	87.7
Activity and exercise pattern	55	84.6	53	81.5	53	81.5
Elimination pattern	56	86.2	56	86.2	53	81.5
Cognitive-sensing pattern	53	81.5	57	87.7	57	87.7
Rest and sleep pattern	54	83.1	**56**	86.2	**54**	83.1
Relationship pattern	55	84.6	55	84.6	55	84.6
Sexuality pattern	47	72.3	48	73.8	48	73.8
Coping Pattern	47	72.3	**49**	75.4	**47**	72.3

This table shows that the highest percentage of nurses responses were for exchanging pattern according to its propriety (95.4), clarity (92.3) and comprehensiveness (90.8), then for the pattern involving the subjective awareness of information (93.8), (89.6) and (89.6). The lowest percentages were for sexuality pattern (72.3), (73.8), (73.8) and for coping pattern (72.3), (75.4), (72.3).

Table (4) Multiple regression coefficient of variables of independency associated with nurses' responses to the health patterns

Variables / Health / Patterns	Age		Si *ix*		**Level of Education**		**Years of experience in General**		**Years experien M in CCl**	
	SE	P Value	SE	P Value	SE	P Value	SE	P Value	SE	_- \
Health perception Pattern	0.05	0.045	0.03	0.06*	0.7	0.03	0.8	0.048	0.04	0.M
Exchanging Pattern	0.05	0.046	0.01	0.06*	0.07	0.03	0.71	0.045	0.06	0
Subjective awareness of information Pattern	0.09	0.046	0.03	0.07*	0.067	0.04	0.69	0.05*	0.08	**0.01**
Nutritional-metabolic Pattern	0.05	0.044	0.05	0.1*	0.06	0.02	0.7	0.05*	0.06	**0.01**
Activity and exercise Pattern	0.08	0.04	0.21	0.051 *	0.09	0.04	0.1	0.03	0.05	
Elimination Pattern	0.02	0.045	0.12	0.06	0.2	0.03	0.09	0.048	0.08	***QM***
Cognitive-sensing Pattern	0.2	0.05*	0.1	0.52*	0.05	0.001	0.8	0.46	0.02	
Rest and sleep Pattern	0.02	0.04	0.09	0.05*	0.02	0.04	0.09	0.040	0.08	∩ ⊂]
Relationship Pattern	0.05	0.04	0.09	0.042	0.08	0.039	0.45	0.045	0.06	**o.t***
Sexuality Pattern	0.08	0.046	0.02	0.06*	0.02	0.04	0.09	0.045	0.08	**i**
Coping Pattern	0.01	0.047	0.09	0.06*	0.7	0.04	0.07	0.03	0.09	o.d

This table shows that tl le nurs es' rest)onses to the (11) he alth pa tterns are influenced significantly by all variables except in cognitive-sensing pattern in the age variable, besides the years of experience in general for the awareness of informatior. and nutritional-metabolic patterns, while the table indicate that there is no influencing between nurses' responses to the health patterns and their sex variable except in the responses for the pattern of relationship at P<0.05.

Table (5) Distribution of nurses' responses to the items of nursing diagnosis

Variables	Clear		Not clear	
	F	%	F	%
A. Health perception pattern nursing diagnosis:				
1. High risk for injury	**65**	100		
2.Altered health maintenance.	**63**	96.23	2	3.77
B. Exchanging pattern nursing diagnosis:				
1. Ineffective breathing pattern.	**64**	98.46	1	1.54
2. Impaired gas exchange.	**65**	100	–	
3. Cardiac out put impaired.	**65**	100		
4. Fluid volume excess.	**65**	100		
5. Fluid volume deficit.	**65**	100		
6. Hypertension.	**65**	100		
7. Hypotension.	**65**	100	.	
8. Body image disturbance.	**63**	96.23	**2**	3.77
9. Hypothermia.	**65**	100	.	
10. Hyperthermia.	**65**	100		
11. Skin infection.	**65**	100		
12. Impaired skin integrity.	**65**	100		
13. Cyanosis	**65**	100	-	-
C.A pattern involving the subjective awareness of information:				
1. Chronic pain.	**65**	100		
2. Acute pain.	**65**	100	.	
3. Anxiety.	**65**	100	.	
4. Fear.	**65**	100	.	
5. Graving.	**65**	**100**	-	-
D. Nutritional-Metabolic pattern.				
1 .Altered nutrition.	**65**	100		
1. Fluid volume excess.	**65**	100		
2. Fluid volume deficit.	**65**	100		
3. Impaired swallowing.	**65**	100		
5. Mouth dryness.	**65**	100	..	
6. High risk of aspiration.	**65**	100	-	-
E. Elimination pattern:				
1. Constipation.	**65**	100		
2. Diarrhea	**65**	100		
3. Bowel incontinence.	**65**	100		
4. Urinary retention.	**65**	100		
5. Urinary incontinence.	**65**	100		

Table (5) Continued

Variables	Clear		Not clear	
	F	**%**	F	**%**
F. Activity and exercise pattern: 1. Fatigue.	**65**	100		
2. Activity intolerance.	**65**	100	~	_
3. Self care deficit.	**65**	100		
4. High risk for injury.	**65**	100	~	
	65	100		
G. Rest and sleep pattern: 1. Sleep disturbance.	**65**	100		
H. Cognitive - sensing pattern: 1. Impaired verbal communication.	**65**	100	_	-
2. Unconscious.	**65**	100	-	-
3. Sensory perception alteration.	**65**	100	-	-
4.High risk for injury.	**65**	100		
I. Relationship pattern: 1. Social isolation.	**65**	100	-	-
J. Sexuality pattern: 1. Sexual disturbance.	**65**	100	-	-
K. Copping pattern: 1. Ineffective individual copping.	**65**	100		-

This table reveals that all nurses' responses to the items of the nursing diagnoses were clear except (3.77%) for the items of altered health maintenance **and** body image disturbance, besides (1.54%) for ineffective breathing pattern were ad clear.

Discussion

Part I: Discussion of the demographic characteristics for nurses in CCU

Such characteristics concerning nurses of CCU can provide a clear view that the were young male with nursing institute graduate and the majority of them employed with limited experience, which ranged between (1-5) years as general experience **and** in coronary care units experience.

This can be interpreted as the nursing work environment changes and **the** extension of health care services in the developing countries and the severity i patient's illness in the coronary care units lead to more stress for nurses. All these situations offer less attractive to qualified female nurses to join the coronar) care unit.

The national sample survey of the registered nurses in the united status estimated that male nurses accounted (5.4%) of (2.69) million nurses, they represents (226%) increase in their numbers in the last years (U y

This fact is supported by a study indicated that the majority of the healthcare workers in cardiac wards in Baghdad city were young male nurses graduated from nursing institution as a reason of extension in the healthcare services and the changing in nursing work environment which lead to a more stress regarding the patients °and their high level of illness, so critical decision and work need to be carried in less time

In spite of the complexity and expanding of nurses responsibilities, with the importance of documentation for their professional work, the results indicates that no nurse of the sample got a training course in documenting their activities which lead to loss the chance that guides nurses through the rest of the nursing diagnosis, besides putting a baseline for evaluating the patient's progress. On other side, this will decrease the chance for the scientific communication with other health team'members.

During documentation relevant information collected from various sources and analyzed to form a complete picture for the patient, which serves as a vital communication tool for other team members and guides the nurse for detecting problems and formulating nursing diagnosis(13)

Part II: Evaluating nurses responses to the initial assessment health patterns form

The findings of the present study shows in table (4) that the patterns of (exchanging; health perception; subjective awareness of information; nutrition-metabolic; activity of daily living; elimination; cognitive - sensing; rest and sleep; and relationship) are the most appropriate, clear and comprehensive patterns for nurses in CCU, while sexuality and coping patterns are the less appropriate, clear and comprehensive for nurses.

During assessment clinical decision making based on a nurse's knowledge and expertise guides data investigation by simultaneously clustering similar data into patterns to be analyzed then proceed to the next step of the nursing process (14)

Furthermore, it was mentioned that all people have certain patterns that contribute to their health, quality of life and achievement of human potential. These patterns are the focus of nursing assessment that permits the nurse to identify and support patient needs, strengths and then qualify the care that mast be given (7)

These findings can be justified that the appropriate, clear and comprehensive patterns for nurses include the most common problems and needs for critically cardiac patient in the coronary care unit. So the important information firstly assessed from patients who are admitted to the coronary care unit depends on the patient's history, pain, oxygenation and the other information that conclude his initial status. So that the nurse's focus is limited to these areas because it gives a clear picture about the patient's immediate suffering, and then the nurse will collect the other information *which is considered less affected, after stabilizing the* patient's condition.

It was revealed that for the acutely ill cardiac patient, who is admitted to the hospital, areas that affect the hospital experience are assessed first and then as the patient's condition is stable, other functional patterns are assessed (15)

Part **III** Evaluating of the association between the nurses' responses to the **Initial** assessment health patterns form and the study variables

The finding of the present study shows that the nurses' responses to the (11) health patterns are influenced significantly by the age variable except in cognitive-sensing pattern, that can be interpreted as the nurses role and performance increase with their age in addition it may reflect the nurses' characteristics, that help the nurse to work more accurately.

This finding can be supported by a study which revealed that there was a significant relationship between the cardiac nurses performance with their age. besides it reflects the nurses' role and characteristics (

The other finding of the present study indicates that there is a significant influencing between the nurses' responses to the health patterns and their educational level, and is interpreted that the nurses must have a sound understanding of scientific principles underlying each step in any procedure to prevent possible risks, so that the higher level of educating the nurses have, a more scientific and accurate work and care they applied. That means the level of education is affected positively by the quality of knowledge and practice acquired by nurses.

This result is strongly supported by the results of a study which indicated thai nurses knowledge and practice are increased with their level of education, and then revealed that when the nurse has good background of knowledge she can applied ; f17\ good and satisfied practice

The finding congruent with those of a study which reported that the high.) educated nurses may work more accurately and scientifically than the nurses with !: < educational level because these nurses can increase their knowledge and practi>iis /io\ with frequently evaluation by themselves

Due to the other findings of the present study, the results show that the year; experience in hospital in general and in the CCU affect significantly the *nxxn-*. responses, except the years of experience in general for the awareness of informa:::i and nutritional-metabolic patterns, which do not have any significant affect on **theil** responses. This indicates that the years of experience have a big role in increasing *J nurse's ability in making intelligent observation then have useful means for respondents to perform patient's care.

There is an important role for experience factor to increase the ability of nurse; decision-making, for improving the quality of care and also the importance evaluating the patient's condition ' " Besides that it was indicated that there i highly significant relationship between nurses' responses according (appropriateness, clarity and comprehensiveness) of the designed assessment tool w their years of experience (2 "

On the other hand, the findings of the present study indicate that there is relationship between nurses' responses to the health patterns and their sex excep: the responses to the pattern of relationship, which means that the nurses' responses not affect by their sex.

This disagrees with a study revealed that there is a high significant relations[1] between Erbil and Duhok nurses immediate practices in CCU with regard to their (2!)' Moreover, a highly significant correlation was found between the nut responses according to (appropriateness, clarity and comprehensiveness) for designed assessment tool with their gender variable ("

Part IV: Evaluating the nurses' responses to the international nursing diagnosis items for the constructed tool

This part of the discussion will deal with the evaluation of (65) nurses' responses to (43) items of international nursing diagnosis that describes the patient's problems according to the (11) health patterns used in the constructed tool.

Regarding the results of table (5) we can conclude that most of the international nursing diagnosis items are clear for nurses who work in the CCU and this indicates that the items are simple and clear to be understood by nurses, who can improve the patient's care and offer an efficient form of communication and specific direction for nursing intervention. Nursing diagnosis is the pivotal second phase of the nursing process in which nurses used critical-thinlcing skills to interpret assessment data and *identify, patient strengths and health peaMetBS, which* improve the cfeh'very of care then facilitate inter-professional communication, workloads and validate nursing function (, h &

Nursing diagnosis offers an efficient form of communication, specific direction tor nursing intervention, a standardized organization and structure for education and research and effective avenues for establishing accountability (24)

Further more, nursing diagnosis positively influences the nursing profession provides consistent language, stimulates nurses to examine new knowledge provide in educational program, and a consistent structure for literature presentation of lursing knowledge and clarifies nursing as an art and a science for its members and society w,

Recommendations

Certain recommendations seem to result from the study: Adopting the constructed tool for all patients admitted to CCU. :. Further studies required for constructing or developing initial assessment documentation tools including a variety of nursing departments. Assigning more professional nurses in the units of cardiac care, to adequately apply the initial assessment documentation tool. . Training sessions should be conducted for nurses to act as a unique challenge for showing the importance of documentation and documenting nursing activities.

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