



Nurses' Knowledge and Practice Concerning Pre and Post-Operative Care in Nineveh Governorate

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ABSTRACT

A descriptive study was conducted throughout the period (1st of November/2007 – 16th of August/2008) in order to assess nurse's knowledge and practice concerning pre and post operative care in six general teaching hospitals in Nineveh governorate. The sample of study included (350) nurses of the nursing staff working in those hospitals. An anonymous questionnaire was constructed to gather data concerning the subject of the study. The content validity of tool is determined through a panel (14) of experts, while the reliability of it was measured by applying on (10) nurses, it was (0.89). The finding of the study indicated that (88.29%) of the sample were males, and (13.14%) were graduates of Nursing College, and (50.57%) of them have less than five years as a duration in nursing experience. The analysis of findings shows that there is no significant differences according to the variable under study, except that of pre-operative knowledge in respect to age and educational variables of nurses. It shows that the excellent percentage of overall knowledge items was (43.1%), overall practice steps was (5.8%), while it was for all together (24.5%). The study concluded that masculine feature threatens the feminine feature of the nursing profession and there is a high shortage of advanced nursing certificates. It recommended to enhance the feminism of the profession by various social and legislative arrangements, and appointment of the advanced nursing certificates as well as nursing faculties in the clinical nursing field.

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INTRODUCTION

Nurse's work is a challenge, as nurses are involved in all aspects of a patient's care, from providing comfort and hygiene to administering injections and IV's, updating medical records, as well as minor therapeutic and diagnostic procedures and processes. Nurses assist in operating rooms with equipment and supplies from pre-surgical preparation to post-operative care (HCN, 2008).

The surgical nurse must possess substantial knowledge, judgment and skill based on principles of the biological, physiological, behavioral and social sciences in order to meet the needs of the patient who is undergoing surgical intervention. Through use of nursing process, the surgical nurse provides direct care to the surgical patients, with primary emphasis on the intra-operative period and responsibility for pre-operative assessment

Methodology

A descriptive study design carried out for the period between the "1st November 2007 to 16th August 2008" at six general teaching hospitals in Nineveh governorate (A, B, C, D, E and E) on a sample of (350) nurses chosen randomly from the abovementioned hospitals. An anonymous questionnaire was designed and constructed through extensive review of relevant literatures to the phenomena under study. It composed of two parts; Part one- Demographic characteristics of

and care planning and post-operative evaluation. This peri-operative role incorporates both technical and professional components of nursing practice and endeavors to assure continuity of care for the surgical patient (Hodgkinson et al, 200). Proper client education is essential to ensure positive surgical outcomes. Clients who are admitted for surgical inpatient hospital stays experience much shorter lengths of stay as well. This presents a challenge to nurses working in the peri-operative setting to adjust pre-operative and post-operative care to afford clients the best possible surgical experience and outcome. (Gershenson et al, 1999)

The study aimed to assess nurses' knowledge and practices concerning pre and post-operative care

nurses as Gender, Age, Educational level, Duration of nursing experience and Specialized training courses. Part two- knowledge and Practices of pre and post operative care (Knowledge composed from 24 items for pre-operative care and 27 items for post-operative care, while practice composed from 22 items for pre-operative care and 29 items for post-operative care). Each item of knowledge had three options (doesn't know=0, uncertain=1 and know=2), while each item

of practice had three options also (never=0, sometimes=1 and always=2). Data were collected through the use of the questionnaire which were distributed to the sample and one week later they were collected at a scheduled time for each hospital. Many nurses of the sample needed some explanations from the researchers which was accomplished through interview with them. To ensure the validity of the tool, it was presented to (14) experts in many fields, few comments were pointed which were taken into consideration in the final draft of the tool,

while the reliability of the tool was measured through application on (10) nurses for the period (12th April 2008 to 14th April 2008). It was ($r=0.84$). The results of the study presented through frequency and percentages, mean of score at which they are divided into three categories "> 1 = weak, 1-1.84= acceptable, < 1.84= excellent" (Ventura, 1996) and analyzed by using t-test and ANOVA to determine the differences between scores of (knowledge, practice of nurses) in regard to the subjects' variables

RESULTS

Table- 1; Demographic Characteristics of the Study Subjects (N = 350)

Variable	No.	%
Gender		
Male	309	88.29
Female	41	11.71
Total	350	100%
Age		
Under 25 years	60	17.14
25-34 years	198	56.57
35-44 years	52	14.86
45 years or more	40	11.43
Total	350	100%
Educational level		
Nursing course graduate	13	3.71
Primary Nursing school graduate	29	8.29
Secondary Nursing school graduate	159	45.43
Diploma in Nursing	102	29.14
Baccalaureate and higher certificate in Nursing	47	13.14
Total	350	100%
Duration of nursing experience		
Under 5 years	177	50.57
6-10 years	73	20.86
11-15 years	20	5.71
16-20 years	21	6
21 years or more	59	16.86
Total	350	100%

Specialized training courses		
Never	229	65.43
One course	32	9.14
Two courses	27	7.71
Three courses and more	61	17.72
Total	350	100%

The table shows that the highest percentages of the variables undertaken were; 88.29% as males; 56.57% were from the age group (25-34) yrs. old, 45.43%

were secondary school graduates, 50.57% had less than five years and 65.43% were not subjected to any specialized training course during their work period.

Table- 2; Categories of Knowledge and Practices regarding Pre and post-Operative Care.

Domains	Categories		
	Excellent	Acceptable	Weak
Knowledge;			
Pre-operatively	15 ; 62.5%	9 ; 37.5%	-
Post-operatively	7 ; 25.9%	18 ; 66.6%	2 ; 7.4%
Practice;			
Pre-operatively	3 ; 13.6%	17 ; 77.2%	2 ; 6.8%
Post-operatively	-	27 ; 93.1%	2 ; 6.8%
Overall Knowledge	22 ; 43.2%	27 ; 52.9%	2 ; 3.9%
Overall Practice	3 ; 5.9%	44 ; 86.3%	4 ; 7.8%
Overall Knowledge and Practice	25 ; 24.5%	71 ; 69.7%	6 ; 5.8%

It is obvious from table (2) that the highest percentages of domains of operative care were; 62.5% of pre-operative knowledge as excellent items, 93.1% of post-operative practices as

acceptable, while at all, 52.9% of knowledge items was acceptable and 86.3% of practices items was acceptable also.

Table – 3; Relation between the Operative Nursing Care Domains with Gender of the Sample by using Independent T. Test.

Nursing Care Domains	Gender	No.	\bar{X}	SD.	D.F.	T. observed	Sig.
Pre-operative knowledge	Male	309	42.336	4.246	348	0.238	0.812
	Female	41	42.170	3.794			
Pre-operative practice	Male	309	34.336	4.669	348	0.371	0.711
	Female	41	34.048	4.663			
Post-operative knowledge	Male	309	42.809	7.170	348	-0.560	0.576
	Female	41	43.463	5.852			
Post-operative practice	Male	309	44.595	7.078	348	-1.003	0.317
	Female	41	45.756	6.015			

Table (3) shows that there are no significant differences at any level regarding all nursing care domains according to the gender of the sample.

Table – 4; Relation between the Operative Nursing Care Domains and the Age of the Sample by using ANOVA Test

Nursing Care Domains		S.S.	D.F.	M.S.	F. observed	Sig.
Pre-operative knowledge	Between groups	221.729	4	55.932	3.237	0.05
	Within groups	5908.069	345	17.125		
	Total	6129.797	349			
Pre-operative practice	Between groups	188.172	4	47.043	2.193	N.S.
	Within groups	7399.725	345	21.448		
	Total	7587.897	349			
Post-operative knowledge	Between groups	109.337	4	27.334	0.551	N.S.
	Within groups	17112.091	345	49.6		
	Total	17221.428	349			
Post-operative practice	Between groups	99.109	4	24.777	0.508	N.S.
	Within groups	16829.645	345	48.782		
	Total	16928.754	349			

It appears from the table (4) that the pre-operative knowledge of the sample has a significant difference at (P. < 0.05), while the other domains haven't any significant differences at any level with respect to the age variable of the sample.

Table – 5; Relation between the Operative Nursing Care Domains and the Educational Level of the Sample by using ANOVA Test

Nursing Care Domains		S.S.	D.F.	M.S.	F. observed	Sig.
Pre-operative knowledge	Between groups	265.339	4	44.223	2.587	0.05
	Within groups	5864.458	345	17.098		
	Total	6129.797	349			
Pre-operative practice	Between groups	112.811	4	18.802	0.863	N.S.
	Within groups	7475.897	345	21.793		
	Total	7587.897	349			
Post-operative knowledge	Between groups	472.367	4	78.728	1.612	N.S.
	Within groups	16749.062	345	48.831		
	Total	17221.429	349			
Post-operative practice	Between groups	377.038	4	62.840	1.301	N.S.
	Within groups	16551.717	345	48.256		
	Total	16928.754	349			

Table (5) shows that there is a significant difference in the pre-operative knowledge of the sample at (P.< 0.05), while the other domains don't show any significant differences at any level with regard to the educational level of the sample.

Table – 6; Relation between the Operative Nursing Care Domains and the Duration of Work of the Sample by using ANOVA Test

Nursing Care Domains		S.S.	D.F.	M.S.	F. observed	Sig.
Pre-operative knowledge	Between groups	66.669	4	16.667	0.948	N.S.
	Within groups	6063.128	345	17.574		
	Total	6129.797	349			
Pre-operative practice	Between	50.492	4	12.623	0.578	N.S.

	groups					
	Within groups	7537.405	345	21.848		
	Total	7587.897	349			
	Between groups	166.136	4	41.534		
Post-operative knowledge	Within groups	17055.292	345	49.436	0.84	N.S.
	Total	17221.429	349			
	Between groups	174.439	4	43.61		
Post-operative practice	Within groups	16754.315	345	48.563	0.848	N.S.
	Total	16928.754	349			

It is obvious from table (6) that all nursing care domains haven't any significant difference at any level with respect to the sample duration of work .

Table – 7; Relation between the operative nursing care categories and the specialized training courses by using ANOVA test

Nursing Care Domains		S.S.	df	M.S.	F. Observed	Sig.
	Between groups	46.622	3	15.541		
Pre-operative knowledge	Within groups	6086.878	346	17.592	0.883	N.S.
	Total	6133.500	349			
	Between groups	27.931	3	9.310		
Pre-operative practice	Within groups	7557.923	346	21.844	0.426	N.S.
	Total	7585.854	349			
	Between groups	174.230	3	58.077		
Post-operative knowledge	Within groups	17056.86	346	49.297	1.178	N.S.
	Total	17231.09	349			
	Between groups	103.780	3	34.593		
Post-operative practice	Within groups	16799.32	346	48.553	0.712	N.S.
	Total	16903.10	349			

It is obvious from table (7) that all the nursing care domains haven't any significant difference at any level with respect to the training courses of the sample.

DISCUSSION

The "practice of nursing" means the performance of services for compensation in the provision of

diagnosis and treatment of human responses to health or illness. "Professional nursing practice"

encompasses the full scope of nursing practice and includes all its specialties and consists of application of nursing theory to the development, implementation, and evaluation plans of nursing care for individuals, families, and communities. Professional nursing practice requires substantial knowledge of nursing theory and related scientific, behavioral, and humanistic disciplines (Guido, 2001 ; ANA, 1990). The

Peri-operative care and variables:

All the variables undertook in the study show non-significant

Gender:

Worldwide, everyone knows that the vast majority of nurses are women and even today men comprise less than 15% of all nurses anywhere. Nursing – in Nightingale's time, and now - embodies the classical ideologies of what it is to be a woman. As Nightingale put it: every woman is a nurse by virtue of her capacity for maternity and the so-called 'feminine' characteristics of caring, nurturing and mothering (Walker, 2008). So, from

Age:

More than half of the sample (56.57%) of this study were from the same age group (25-34 yrs.), so their acquisition of knowledge and mastering of practice were approximately similar or identical, with some differences, due to their mutual approximation, and may overlap other age groups acquisition. For this reason and perhaps other reasons this study didn't find any The level of education may affect the performance of nurses as AL-Simady (2006) and Shayma' (2004) agreed upon. Also Coile (2005) referred that education helps to define what a nurse is able to do and what he or she can be expected to do, nurses abilities and

percentages of nursing care domains as knowledge and practice pre-operatively and post-operatively as in table (2) reflects that perception of what the surgery needs as knowledge and practices from the nurse are available, in general, except that of the practices pre-operatively, which may be caused by less experience they have due to the delay admission of the patient prior surgery.

differences with relation to the peri-operative care (**Tables: 3,4,5,6,7**).

this inherent nature and role of caring, women should be more efficient knowledgably and practically, but in the study it may be due to the high percentages of males versus females (88.29% vs. 11.71%) in the nursing field many previous economical and social factors imposed, this character or nature opposes (**Table-3**) which reflects non significant differences at any level with relation to the peri-operative care.

significant differences at any level (**Table-4**). In contradiction to this study results AL-Augoid(2000), stated that general and theoretical information increase with the increase of age, and AL-Simady (2006) stated that older nurse had more experience and the nurses should be aware of different practical measures in minimizing the problems that might happen and provide the best nursing care for patients.

Educational level:

limitations for designing, providing and managing nursing care to any time arise from initial education, experience, continuing education, and developed nursing skills, while in this study results as (**Table-5**) demonstrates non significant differences with peri-

operative care "knowledge & practices", except that of pre-operative knowledge, this may be due to the predominance of secondary nursing school graduates (45.43%) versus other. Despite the diversity of educational programs preparing RNs, and a logical (but unconfirmed) connection between education and clinical judgment, little if anything is known about the impact of nurses' education on patient outcomes (Hickam et al, 2003). Results of some studies have suggested that baccalaureate-prepared nurses are more likely to demonstrate professional behaviors important to patient safety such as problem solving, performance of complex functions, and effective communication (Minnick et al, 1997; Young et al, 1991). However, few studies have examined the effect of nurse education on patient. Some studies findings indicate that surgical patients cared for in hospitals in which higher proportions of direct-care RNs held bachelor's degrees experience substantial survival advantage over those treated in hospitals in which fewer staff nurses had BSN or higher degrees. Similarly, surgical patients experiencing serious complications during hospitalization

Duration of nursing experience:

When considering non-experienced nurse applicants for employment, they require a minimum of one year of general medical surgical nursing experience before they will be considered for caring surgical patients (Hodgkinson et al, 2000). The findings of the study revealed that there are no significant differences with relation to the peri-operative care "knowledge and practices" as in (Table-6). Over fifty (50.57%) of the sample were from the same period group in working, this may reflect less differences in acquisition of knowledge and

graduates from other educational levels, and this could be the reason for acquisition of the same knowledge and handling the same skills in practice.

outcomes, and their findings have been inconclusive (Blegen, 2001). Several studies showed that nurses with more education deliver more cost effective care and it is not always easy for nurses with higher education to remain in clinical and public health settings and they have often no senior position available within the systems, so, those nurses within higher education do not reach a position where they can implement change and are not rewarded for their additional education by appreciating remuneration or promotion. (Coile,2005; Dorothea, 1991).

were significantly more likely to survive in hospitals with a higher proportion of nurses with baccalaureate education. The improved outcomes associated with higher levels of BSNs in a hospital were found to be independent of and additive to the associations of superior outcomes in hospitals with better nurse staffing (ANA, 2000).

practices. Hener (1991) indicated that nurses despite their presence for many hours everyday morning, evening and at night and experience which are gained by continuous care for patients, as well as joining some of the special training and development courses which lead to the development of their skills and their scientific, practical experiences, maintain high level of expertise in nursing. Also AL-Simady (2006) and Shayma'a (2004) emphasized the duration of employment in nursing practice to enhance the performance of nurses.

Specialized training courses:

The training session is important in developing the work of nurse, the nursing staff should have an advanced level of skill to provide safe and excellent patient care (Brook and Crouch, 2004). Tension and discomfort of nurses during the work resulted from decrease in the training and development (Al-Hadeedi, 2006). In

this study, the findings reflect no significant differences with relation to peri-operative care "knowledge and practices" as in (Table-7). The majority of the sample (65.43%) were not subjected to any specialized training session which may be the cause of this statistical result.

CONCLUSSIONS

1. Masculine feature overlaps the feminine feature of nursing profession.
2. Shortage of high qualification in nursing in health services.

3. Need for experts in nursing field is urgent.
4. The curriculum of nursing schools at all levels is efficient somewhat in covering peri-operative preparations and follow-up.

RECOMMENDATIONS

1. Enhance the feminism feature of nursing profession by many social and legislative arrangements undertaken by Ministry of Health and Ministry of Scientific Researches and Higher Education and other related agencies.
2. Appointment of the advanced nursing certificates in addition to

- nursing faculties in the clinical nursing field.
3. Development of nursing curricula to encompass all nursing care procedures including the specialists and in depth.
4. In depth researches contributing peri-operative care of specialized surgeries, should be carried out.

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