

Assessment of Nurses Knowledge toward Pre and Post Nursing Interventions Laparoscopic Cholecystectomy at AL-Imam AL-Hussein Teaching Hospital in AL-Nasiriya City

تقييم معارف الممرضين تجاه التدخلات التمريضية قبل وبعد استئصال المرارة بالمنظار في ردهات الجراحة في مستشفى الإمام الحسين التعليمي في مدينة الناصرية

Badr Kareem Ibrahim*

Suad Jasim Muhamad**

الخلاصة:

خلفية البحث: استئصال المرارة بالمنظار هو العلاج القياسي الذهبي لحصى المرارة. بسبب المزايا العديدة للجراحة المفتوحة، مثل الشقوق المحدودة، والإقامة القصيرة في المستشفى، وعدم استخدام أنبوب التصريف وأنبوب المعدة، وقلة المسكنات وتقليل المضاعفات.

الاهداف: تهدف هذه الدراسة إلى تقييم معارف الممرضين تجاه التدخلات قبل وبعد استئصال المرارة بالمنظار، وتحديد العلاقة بين معارف الممرضين وبياناتهم الاجتماعية الديموغرافية.

المنهجية: أجريت دراسة وصفية للفترة من 21 كانون الأول / 2020 إلى 1 حزيران / 2021 في مستشفى الإمام الحسين التعليمي بمدينة الناصرية. من خلال عينة غرضية غير احتمالية اختيرت من الممرضين الذين يعملون في الردهات الجراحية. وتحقق الاعتماد على موثوقية الاستبانة من خلال دراسة تجريبية ومن ثم عرضها على خبراء لتثبيت مصداقيتها. من خلال استخدام الاستبيان، جمعت البيانات وحلت من خلال تطبيق الإحصاء الوصفي والاستنتاجي.

النتائج: تشير النتائج إلى أن عمر الممرضين بمتوسط 24.2، (54٪) إناث، (52٪)، دبلوم تمريض (46٪) لديهم خبرة 1-5 سنوات ولم يشاركوا في الدورات التدريبية. أظهرت النتائج أن الممرضات كانت لديهن معارف متوسطة فيما يتعلق باستئصال المرارة بالمنظار، والتدخلات قبل وبعد الاستئصال بمتوسط 1.43 و 1.47 و 1.39 على التوالي. لم تكن هناك علاقة ذات دلالة إحصائية بين معارف الممرضين وبياناتهم الديموغرافية عند القيمة $p > 0.05$.

الاستنتاج: عبروا الممرضون الذين يعملون في الردهات الجراحية عن معارف غير مرضية قبل وبعد التدخلات التمريضية لاستئصال المرارة بالمنظار بسبب انخفاض التحصيل التعليمي ونقص التدريب.

التوصيات: أوصت الدراسة بضرورة تخصيص دورات تدريبية خاصة بكل الممرضين الذين يعملون في الردهات الجراحية للتدخلات التمريضية بعد العملية الجراحية (مرضى استئصال المرارة بالمنظار) داخل العراق أو خارجه، وتخصيص كتيبات وتقديمها لجميع الممرضين الذين يعملون في الردهات الجراحية، بالإضافة إلى زيادة أعداد الممرضين من خريجي كليات التمريض في الردهات الجراحية.

الكلمات المفتاحية: المعارف، التدخلات التمريض، استئصال المرارة بالمنظار.

ABSTRACT:

Background: Laparoscopic cholecystectomy is the gold standard treatment for gallstones. Because of the numerous advantages of open surgery, such as limited incisions, short hospital stay, no drainage tube and stomach tube use, fewer analgesic and fewer complications.

Aims of the study: This study aimed at assess nurses knowledge towards pre and post nursing interventions laparoscopic cholecystectomy; and determine the relationship between nurses knowledge and their socio-demographic data.

Methodology: A descriptive study was conducted for the periods of December 21th 2020 to June 1st 2021. The study is carried out at the AL-Imam AL-Hussein Teaching Hospital in AL- Nasiriya city. Non-probability purposive sample was selected from nurses who working at surgical wards. The sample consists of (50) nurses. The validity of questionnaire achieved through a panel of experts and reliability achieved through a pilot study. By used the questionnaire, data were collected and analyzed through the application of descriptive and inferential statistics.

Results: Findings demonstrated that the nurses were moderately knowledge related to gallbladder and laparoscopic cholecystectomy, interventions before and after the laparoscopic cholecystectomy at mean equal 1.43, 1.47, and 1.39 respectively. There were no-significant relationship between nurses knowledge and their demographic data at $p\text{-value} > 0.05$.

Conclusion: Nurses who working at surgical wards were express unsatisfactory knowledge pre and post nursing interventions laparoscopic Cholecystectomy due to low level of education and lack of training.

Recommendations: The study recommended that special training session, concerning all nurses' surgical wards for postoperative nursing interventions (Laparoscopic Cholecystectomy Patient) at inside or outside Iraq, and booklets should be designated and presented to all nurses' surgical wards, in addition to increasing the number of professional nurses' graduate from the colleges of nursing to the enrolled in surgical wards.

Keywords: Knowledge, Nursing Interventions, Laparoscopic Cholecystectomy.

* Academic Nurse \ Dhi-Qar Health Directorate \ Ministry of Health \ Iraq.

Email: badr.kareem1202a@conursing.uobaghdad.edu.iq.

** Assist. Prof. \ Adult Nursing Department \ College of Nursing \ University of Baghdad \ Iraq.

Email: suadjassim@conursing.uobaghdad.edu.iq.

INTRODUCTION

The gallbladder is a pear-shaped organ situated under the liver on the right side of the upper abdomen (stomach). Bile that comes from the liver is processed and assists in food digestion. Bile is delivered to the intestines through the bile duct ⁽¹⁾. Cholecystectomy is a surgical removal through open surgery and laparoscopy of the gallbladder. Cholelithiasis and cholecystitis are frequent conditions which may cause this procedure. Laparoscopic cholecystectomy is a minimally invasive treatment for removing a gallbladder that has been damaged ⁽²⁾. Laparoscopic cholecystectomy is currently recommended for the treatment of cholecystitis (acute/chronic), symptomatic Cholelithiasis, biliary dyskinesia, calculus cholecystitis, pancreatitis of the gallstone, and polyps / gallbladder mass, knowledge and practice of health care providers play an major roles in patients management ⁽³⁾.

The nurse is the patient's chief advocate in the surgery. The care of the nurse continues to the patient as long as the surgical procedure is planned and advised in the immediate pre-operative phase, the surgical stage and the recovery from anesthesia. The patient wants to make sure that someone offers protection during the operation and is anesthetized, since surgery is generally a traumatic experience ⁽⁴⁾. The postoperative period of the surgical experience lasts from the moment the patient is moved to the recovery room or post-anesthesia care unit until he or she is transported back to the surgical unit, released from the hospital until the follow-up care is completed ⁽⁵⁾. The surgical nurses play an important role in caring of patients undergoing cholecystectomy during pre / postoperative time. They should also have knowledge and practices to provide proper nursing care, prevent complications and decrease proper cost of treatment ⁽⁶⁾. Developing nurses' knowledge and practices will help to prepare a planned nursing care for improving patients' health condition ⁽⁷⁾. Preoperative and postoperative care is important to reduce hospital stays and contain costs and enhance the healing without complication. Has resulted in patients undergoing cholecystectomy preadmission testing and preoperative preparation before admission to the hospital many facilities have a pre surgical services department to facilitate testing and to initiate the nursing assessment process, which may focus interventions laparoscopic cholecystectomy.

AIMS OF THE STUDY:

1. Assess nurses' knowledge towards pre and post nursing interventions laparoscopic cholecystectomy.
2. To find out the relationship between nurses knowledge and their socio-demographic data.

METHODOLOGY

To investigate the knowledge, a cross sectional study was conducted for the periods of December 21th 2020 to June 1st 2021. The study was carried out at AL-Imam AL-Hussein Teaching Hospital in AL- Nasiriya city. The sample consists of (50) nurses, by non-probability purposive sample selected from nurses who working at surgical wards. A questionnaire consists of the following parts including:

Part 1: Socio-demographic data of nurses.

Part 2: This part deal with nurses' knowledge and divided into three domains include:

- Nurses' knowledge Gallbladder and Laparoscopic Cholecystectomy which composed of (10) items.
- Nurses' knowledge about nursing interventions before the Laparoscopic cholecystectomy which composed (10) items.
- Nurses' knowledge about the nursing interventions after the Laparoscopic cholecystectomy which composed (11) items.

A content validity was achieved through a (11) panel of experts and reliability were achieved through a pilot study. The data collection process uses the questionnaire and analyzed through the descriptive and inferential statistic.

RESULTS:

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

Basic Information	Groups	Frequency	Percent
Age groups	20-25 years	10	20.0
	26-30 years	20	40.0
	31-35 years	12	24.0
	36-40 years	5	10.0
	41 and more	3	6.0
	$\bar{x} \pm S.D.$	24.2± 1.108	
Gender	Male	23	46.0
	Female	27	54.0
Education level	Middle school Nursing	17	34.0
	Nursing Institute	26	52.0
	College of Nursing	7	14.0
The number of years of Experience:	1- 5 years	13	26.0
	6-10 years	16	32.0
	11-15 years	11	22.0
	16-20 years	6	12.0
	More 21 years	4	8.0
Number of years of work in surgical wards:	1- 5 years	23	46.0
	6-10 years	15	30.0
	11-15 years	11	22.0
	16-20 years	1	2.0
Participation courses before and after the laparoscopic cholecystectomy	No	46	92.0
	Yes	4	8.0
Participation courses before and after the laparoscopic cholecystectomy	No	49	98.0
	Yes	1	2.0
The Number of Sessions	0	45	90.0
	1	5	10.0
Duration of the Course	None	45	90.0
	One Week	3	6.0
	Two week	2	4.0
The Course Place:	None	45	90.0
	Inside Iraq	5	10.0
	Outside Iraq	0	0.0

This table indicates the socio-demographic distribution of nurses in terms of frequencies and percentage.

Table (2): Nurses' Knowledge about Gallbladder and Laparoscopic Cholecystectomy

No.	Items related to Nurses' knowledge*	M.S.	S.D.	Ass.
1	The gallbladder is located on the ____ side of the body and is located under the _____. Its function is to store _____	1.58	0.499	M

2	Sections of the gallbladder are :	1.10	0.303	L
3	Which of the following signs and symptoms is not an indication of acute cholecystitis _____:	1.48	0.505	M
4	When a positive Murphy's sign is observed in a patient with acute cholecystitis, it means _____:	1.16	0.370	L
5	One of the reasons for removing the gallbladder _____	1.56	0.501	M
6	Which of the following elements, when combined with each other, is there a high risk of gallstones:	1.28	0.454	L
7	_____ is a surgical operation in which the doctor removes the gallbladder through four incisions instead of one	1.36	0.485	L
8	All the following paragraphs are among the benefits of laparoscopic cholecystectomy except for _____:	1.62	0.490	M
9	Which of the following steps for a laparoscopic cholecystectomy is correct _____:	1.70	0.463	H
10	Among the possible complications after a laparoscopic cholecystectomy _____:	1.48	0.505	M
Overall		1.43	0.457	M

M.S. = Mean of score, S.D. = Standard, Level of Assessment: (1-1.33) = Low; (1.34-1.67) = Moderate; (1.68-2.00) = High.

This table shows that nurses knowledge were low level at all items of the scale except, items number (1, 3, 5, 8, and 10) the responses were moderate level. As well as the items number (9) the responses were high. By the majority, findings demonstrated that the nurses were moderately knowledge related to gallbladder and laparoscopic cholecystectomy at mean equal 1.43.

Table (3): Nurses' knowledge about the Nursing Interventions before the Laparoscopic cholecystectomy

No.	Items related to Nurses' knowledge*	M.S.	S.D.	Ass.
1	The nurse who provides nursing care introduces himself to the patient _____.	1.66	0.479	M
2	The nurse explains the details of the laparoscopic surgery to the _____ patient.	1.50	0.505	M
3	What is the most important pre-operative _____ procedure?	1.56	0.501	M
4	The appropriate time for the patient to learn the special exercises after the operation is:	1.22	0.418	L
5	What is the most effective way to get an accurate blood pressure reading from a _____ patient?	1.44	0.501	M
6	When preparing a patient's blood bags before entering the surgery, he should _____:	1.50	0.505	M
7	What is the nurse's response that is likely to stimulate further discussion between patient and nurse to reduce preoperative fear _____?	1.44	0.501	M
8	Training the patient before surgery should include _____:	1.50	0.505	M
9	Which of the following items in a patient's preoperative lab results indicate the need to contact a surgeon _____?	1.52	0.505	M
10	All the following paragraphs contain the validity of the patient's written consent to perform the surgery, except for _____	1.44	0.501	M
Overall		1.47	0.492	M

M.S. = Mean of score, S.D. = Standard, Level of Assessment: (1-1.33) = Low; (1.34-1.67) = Moderate; (1.68-2.00) = High

Table 3 shows that nurses knowledge were moderate knowledge at all items of the scale except, items number (4) the responses were low level. By the majority, findings demonstrated that the nurses were moderately knowledge related to interventions before the laparoscopic cholecystectomy at mean equal 1.47.

Table (4): Nurses' knowledge about Nursing Interventions after Laparoscopic Cholecystectomy

No.	Items related to Nurses' knowledge*	M.S.	S.D.	Ass.
1	Which of the following items is recommended for postoperative pain relief	1.50	0.505	M
2	Which of the following complications can be avoided after the operation by using coughing and slow-deep breathing exercises..	1.40	0.495	M
3	After transferring the patient to the surgical ward with the wound drainage tube in place, which of the following nursing procedures should the nurse avoid _____:	1.42	0.499	M
4	Which of nursing procedures must be performed first when you notice an increase in the amount of secretions from the site of the surgical operation when changing the dressing for a patient who has undergone a laparoscopic cholecystectomy _:	1.31	0.485	L
5	After laparoscopic cholecystectomy, the nurse observes _____	1.42	0.499	M
6	After the nurse notices the location of the operation, any of the following steps is considered normal _____:	1.44	0.501	M
7	Which of the following signs must be monitored by the nurse first	1.33	0.479	L
8	Which of the following nursing procedures should be performed first when caring for a patient suffering from instability of vital signs when moving from the operating room after a laparoscopic cholecystectomy _	1.42	0.499	M
9	When the nurse takes care of the patient after the operation, she must give fluids according to the order of (1 to 4): (1- full fluids. 2- Nothing by mouth (NPO)), 3- clear fluids such as (water), 4- Soft liquids). What is the right choice _____:	1.44	0.501	M
10	From the exit guidelines for the patient after laparoscopic cholecystectomy	1.16	0.370	L
11	After the patient goes home, he is advised to _____:	1.50	0.505	M
Overall		1.39	0.485	M

M.S. = Mean of score, S.D. = Standard, Level of Assessment: (1-1.33) = Low; (1.34-1.67) = Moderate; (1.68-2.00) = High

This table shows that nurses knowledge were moderate knowledge at all items of the scale except, items number (4, 7, and 10) the responses were low level. By the majority, findings demonstrated that the nurses were moderately knowledge related to interventions after the laparoscopic cholecystectomy at mean equal 1.39.

Table (5): Relationship between nurses' knowledge and their socio-demographic data

Demographic variables	F	d.f.	p-value
Age	4.956	49	0.232
Gender	0.400	49	0.196
Education level	2.568	49	0.066
Years of experience	5.922	49	0.642

Number of years of work in surgical wards	8.688	49	0.642
Participation courses about laparoscopic cholecystectomy	0.992	49	0.324
Participation in courses for nursing about laparoscopic cholecystectomy	1.282	49	0.263

Findings presented there were no-significant relationship between nurses knowledge and their demographic data at p-value >0.05.

DISCUSSION

The study sample consists of (50) nurses working in the surgical wards of AL-Imam Al-Hussein Teaching Hospital.

According to table (1), findings indicated that 20 (40.0%) of the nurses are in the age group (26-30) years with an average of (24.2) years. This result was supported by findings of study investigated performance among nurses regarding laparoscopic cholecystectomy patients. Their findings showed that nurses (20-30 years) are (52%) with mean age (31.4±2.8) ⁽⁸⁾. Nurses in surgical wards need to be young.

With respect gender, cooperative in study the majority of study sample were female 27 (54.0%) of all study sample. This result disagree with findings of study has been assessed postoperative nurses' interventions in Baghdad Teaching Hospitals, which indicated that two-third of the nursing staff are male ⁽⁹⁾. In fact, the surgical wards need to males nurses due to workload and covers all duties.

With regard to the educational qualifications of the studied sample, the current study indicated that almost half of them are from technical institutes and their percentage is 26 (52.0%) and less than half of them (6-10) years of experience 16 (32.0%). This result agreed with study of AbdElgil et al. (2020), where it was found that less than half of the sample 24 (48%), have a technical institute of nursing, while less than half of them, 20 (40%), have an experience of 5 to less than 10 years in the hospital with the mean of (9.18±8.4) ⁽¹⁰⁾. Hospitals insinuations were depends on nurses institute graduated due to the academic nurses were numbers are still small, unlike the institutions that graduate diplomas.

Regarding the number of years working in the surgical wards, the majority of the study sample ranges between (1-5 years) and represents 23 (46.0%) of the entire sample. This result is agreed with (Kadhim, 2014) that was conducted in Baghdad hospitals, which showed the results of the study sample in the surgical wards of (1-5) years, they represented 23 (46%). These results contrast with findings evaluated nurses' practices toward postoperative wound dressing in surgical wards. It reported that most of the nurses had 24 (43.6%) of (6-10) years of experience in surgical wards ⁽¹¹⁾. These results come because the diploma graduated immediately after graduation, they are appointed.

Regarding the question (participation in nursing intervention courses before and after laparoscopic cholecystectomy, which the hospital conducts periodically), the majority of the study sample had answers with (No participation) and represented 46 (92.0%) of all the study sample.

Regarding the question (participation in courses of nursing interventions before and after laparoscopic cholecystectomy, which are conducted by other hospitals), the majority of the study sample had answers with (No participation) and represented 49 (98.0%) of the entire study sample.

And regarding the question (number of training sessions), the majority of the study sample was 45 (90.0%) of all study sample individuals who did not have a share in any training sessions. While only 5 (10%) of the course participants answered. To the question (duration of the course), the majority of the study sample had answers with (No participation) and represented 45 (90.0%) of all the study sample individuals. While those who answered

(yes participation), of them 3 (6%) for one week and 2 (4%) for two weeks and therefore did not have sufficient time or the duration of the training session.

These results are consistent with findings of Kadhim (2014), who mentioned that there was significant relationship between sharing in training sessions which established (by the hospital or by other hospitals), duration of the training session, number of training sessions and which reported that the majority of the results answered (No) 47 (94%) of the study sample did not have the opportunity to participate in the training sessions related to nurse surgical interventions for patients with (LC) established by the hospital. All study samples answered (No) 50 (100%) did not have the opportunity to participate in training sessions related to nursing interventions for (LC) established by other hospitals. Regarding the topics of "number of training sessions", the majority of the sample, 47 (94%), did not have a share in any training sessions, while only 3 (6%) answered that their participation was less than a week and therefore they did not have sufficient time or duration for the training session ⁽⁹⁾.

With regard to the question (place of the session), the majority of the study sample had their answers (inside Iraq) and they represented 45 (90.0%) of the total study. This study is supported by study investigated the effectiveness of the educational program in the knowledge of nurses in relation to nursing management before and after surgery, demonstrated findings that all the courses held inside Iraq, in addition to the absence of any of the sample members who had a training course outside Iraq ⁽¹²⁾.

By the majority, findings demonstrated that the nurses were moderately knowledge related to gallbladder and laparoscopic cholecystectomy at mean equal 1.43. In this regards, knowledge about Cholecystectomy clarify that more than (57%) of nurses partially known of Cholecystectomy definition, and majority of them known about indication of cholecystectomy ⁽¹²⁾. Partially knowledge as being the nurses express a low level of education and those importance issues need to be inclusion in education curricula within diploma degrees.

By the majority, findings demonstrated that the nurses were moderately knowledge related to interventions before the laparoscopic cholecystectomy at mean equal 1.47. This results come because nurses with lack of training and less years of experience. Findings come in the same line with findings El demerdash surgical Hospital. Nearly two thirds of the studied nurses had unsatisfactory level of knowledge in relation to caring of patients undergoing laparoscopic cholecystectomy ⁽¹³⁾. This recommends that further research studies are needed to identify the effect of implementing the developed guidelines on performance of nurses caring for patients undergoing cholecystectomy.

By the majority, findings demonstrated that the nurses were moderately knowledge related to interventions after the laparoscopic cholecystectomy at mean equal 1.39. This findings come with findings who stated that all nurses (100%) had an partially and inadequate level of knowledge regarding nursing care for patients post open laparoscopic cholecystectomy. It was found that there was a positive relationship between total knowledge score and total practice score, due to the study participants with limitation of training ⁽¹⁴⁾. Nurses` knowledge and practice regarding nursing care of patient post laparoscopic cholecystectomy are at a moderate and inadequate level and need developing nursing care standards to improve nurses` knowledge and practice.

On the same line, most of studied nurses with more than 10 years of experiences had satisfactory of knowledge in regards with patient`s management who undergo laparoscopic cholecystectomy ⁽¹⁵⁾.

The shortage of nurses' number that didn't let them have time to attend courses or lack of awareness about the effect of training courses on performance of the nurses, resulted in poor knowledge in caring of patient undergoing cholecystectomy ⁽¹⁶⁾. Moreover, It is need to be conducted a continuous education programs are recommended to improve and maintain nurses' competency level regarding patients undergoing cholecystectomy.

Findings presented there were no-significant relationship between nurses knowledge and their demographic data at $p\text{-value} > 0.05$. There was no significant relationship between nurses' gender, age, years of experience and their assessment of postoperative nurses' interventions for the patients with laparoscopic cholecystectomy at Baghdad Teaching Hospitals ⁽⁹⁾, as being nurses' knowledge no influenced by their socio-demographic data, more training and more years of experience which indeed develop their knowledge.

CONCLUSION

Nurses who work in surgical wards were express unsatisfactory knowledge pre and post nursing interventions laparoscopic Cholecystectomy due to low level of education and lack of training.

RECOMMENDATIONS

The study recommended that special training session, concerning all nurses' surgical wards for postoperative nursing interventions (Laparoscopic Cholecystectomy Patient) at inside or outside Iraq, and booklets should be designated and presented to all nurses' surgical wards, in addition to increasing the number of professional nurses' graduate from the colleges of nursing to the enrolled in surgical wards.

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