

Nurses Attitude and Practice Regarding Patient Undergoing Abdominal Surgery

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Abstract

Background: Abdominal surgery involves a surgical operation on organs inside the abdomen. Some reasons for abdominal surgery include trauma, infection, obstruction, tumors, or inflammatory bowel disease. **Aim of study:** Was to assess nurses' role regarding patient undergoing abdominal surgery and suggested guidelines. **Subject and method: Research design:** A descriptive design was used in the current study. **Setting:** The study was conducted at the surgical ward at Elahrar Educational Hospital and at Zagazig university hospitals. **Subject:** A convenient of all available nurses participated in the study total number was 50. **Tool of data collection:** Two tools of data collection was used **Tool (I):** Structure interview sheet to collected data about personal characteristics of the studied nurses and Likert scale of nurses' attitude regarding abdominal surgery **Tool (II):** Observational check list for nurses' practice regarding abdominal surgery **Result:** the result of study indicated that 68% had negative attitude and 62 % had unsatisfactory practice. **Conclusion:** Most of the studied nurses had negative attitude and unsatisfactory practice. **Recommendations:** Conducted an in service educational and training programs to improve nurse's practice and nurses' attitude regarding patient undergoing abdominal surgery.

Key words: Abdominal surgery, Nursing attitude, practice.

Introduction

Abdominal surgery is the most common surgical intervention; including a wide range of both elective and emergency operational procedures. Abdominal surgery includes gastrointestinal, biliary and liver operations, splenectomy, herniorrhaphy, appendectomy and surgery on great vessels of the trunk. ⁽¹⁾ With 300 to 500 operations per 100,000 people annually, abdominal surgery is the most common major surgery type performed in developed countries, with volumes increasing at 2 to 5% per year. ⁽²⁾

Abdominal surgery can be categorized according to the location and length of the main incision. Upper abdominal surgery (UAS) involves an incision above or extending above the umbilicus, and lower abdominal surgery (LAS) involves incisions wholly below the umbilicus. Surgery may be open (with an incision >5cm), laparoscopic or a combination of both. ⁽³⁾ Abdominal surgery

can be categorized according to the risk (Major & Minor); Major abdominal surgery(MAS) defined as Acute high-risk abdominal pathology requiring urgent emergency laparotomy or laparoscopy, including reoperations after elective gastrointestinal surgery and reoperations after previous non-acute high-risk abdominal surgery, with the main categories being perforated viscus, intestinal obstruction, bowel ischemia, and hemorrhage, (MAS) may be defined as all upper gastrointestinal (UGI), hepatopancreatobiliary (HPB) and colorectal surgery (CRS) with either primary anastomosis and/or stoma. MAS is associated with an overall morbidity rate of 35%. ⁽⁴⁾

Minor emergency surgery such as uncomplicated appendectomies, negative laparoscopies/laparotomies,cholecystectomies, sub-acute surgery (defined as planned to be performed within 48 hours), repair of umbilical or inguinal-femoral hernias,

ischio-rectal abscess, repair of sinus or fistula surgery belong into this category. ⁽⁵⁾

The surgical nurses play an important role in caring of patients undergoing abdominal surgery during pre / postoperative time. They should also have proper knowledge and practices to provide proper nursing care, prevent complications and decrease cost of treatment. Developing nurse's knowledge and practices will help to improve patient's health condition. ⁽⁶⁾

The abdominal surgery is a specific surgical area where different patients are involved. So, the process of nursing care in abdominal surgery is specific because of the limited time of patient hospitalization, usually multiple patients' diagnosis, as well as multiple contacts and relationships with many different staff before, during, and after the hospitalization. Surgical patient participation in the process of nursing care should be based on the effective relationship and co-operation between patients, nurses, and significant others, which is necessary and imperative for the increasing of the quality of abdominal surgical nursing care. ⁽⁷⁾

Nursing care postoperatively involves maintaining the airway, monitoring vital signs, assessing the effects of anesthetic agents, assessing patients for

Significance of the study

Nurses working in surgical department have no specific training or special preparation prior to working in such specialized area. They may have lack of knowledge, improper practice and negative attitude regarding patients undergoing abdominal surgery. During researcher clinical experience, found that nurses receive inadequate information and not able to contribute in the provision of care for patients undergoing abdominal surgery to the degree that they would desire. Thus, this study carried out to assess the knowledge, attitude and practices of nurses

regarding care for patients undergoing abdominal surgery, which motivated the researcher to do a suggested guideline on pre-operative teaching, preparation and postoperative care among abdominal surgery patient and finally, the study may create an interest and motivation for conduction of further studies into this area.

complication and providing comfort and pain relief this is an immediate postoperative care which is usually provided in a Post-anesthetic Care Unit (PACU), which is before the patient is taken back to the surgical ward which represented immediate postoperative nursing care. ⁽⁸⁾

Abdominal surgeries complications arising after the surgery due to the anesthesia, prolonged bed rest, wound infections can be prevented in various aspects. One method is keeping the client informed regarding the postoperative exercises, care, diet, early ambulation etc., in this context nurses have a major role to play in helping the clients to prevent complications like atelectasis, pneumonia, Deep Vein Thrombosis and wound infections. ⁽⁹⁾

Management of postoperative discomfort relievers suffering and leads to earlier mobilization, shortened hospital stay, reduced hospital costs, and increased patient satisfaction. It is necessary for nurses to acquire the knowledge and increase their awareness of their roles in caring for patients undergoing abdominal surgery. This will improve their confidence in performing high quality care and, thereby, increase patient safety and improve patient outcomes throughout all stages of surgery. ⁽¹⁰⁾

regarding care for patients undergoing abdominal surgery, which motivated the researcher to do a suggested guideline on pre-operative teaching, preparation and postoperative care among abdominal surgery patient and finally, the study may create an interest and motivation for conduction of further studies into this area.

Aim of the Study:

This study aims to:

Evaluate the nurse's attitude and practice regarding patient undergoing abdominal surgery

Research Questions:

- 1- What is nurses' attitude regarding patient undergoing abdominal surgery?
- 2- What is the level of nursing practice regarding patient undergoing abdominal surgery?

Subject and Methods:

Research design:

A descriptive design was used in this study

Study Settings:

Study was conducted at the surgical ward at Elahrar Educational Hospital and at Zagazig university hospitals.

Study Subject:

A convenient of all available bedside nurses working in surgical department, total number was 50 nurses.

Tools of data collection:

Two tools were used to collect the necessary data:

Tool I: interviewing questionnaire:

It was developed by the researcher and consisted of two parts:

Part I: Demographic characteristics and qualification of nurses:

It consisted of 8 questions include the following: (age, gender, Marital status, qualification, Years of experience in the hospital, Years of Experience in surgical department, Training courses).

Part II: Likert scale questionnaire of nurse's attitude:

This tool developed by researcher to assess nurses' attitude regarding patients undergoing abdominal surgery. The attitude scale included a 19 items statement on 2-point Liker scale. The attitude scale included both (10) positive and (9) negative item statements with two response options: agree and disagree **N. Balasubramanian.**⁽¹¹⁾

Scoring system:

The attitude scale included both positive and negative item statements. Total score is 19 grades, the positive attitude statement was scored as 1 = agree, 0 = disagree, conversely negative attitude statements were scored 1 = agree, 0= disagree.

Tool II: Nurse's practice observational checklist:

An observation checklist to asses nurses practice who work at surgical department regarding patient undergoing abdominal surgery: It was developed and modified by the researcher based on reviewing of literature Joan et al.,⁽¹²⁾ to assess nurses' practices regarding nursing care of patient undergoing abdominal surgery to assess their practice regarding preoperative preparation, teaching for patients and postoperative nursing care such as immediate nursing care, wound care , caring of portable suction and abdominal sound auscultation

Scoring system:

The items observed to be done were scored as; done step considered as (1), and not done step considered as (0). Total score was (115). Equal or above 80% of total grades was considered satisfactory nurse's practice based on statistical analysis.

Content Validity and Reliability:

It was established for assure of content validity by a panel of 5 expertise's, two in medical staff and three in medical surgical nursing staff at Zagazig University who revised the tools for clarity, relevance, comprehensiveness, understanding, and ease for implementation and according to their opinion minor modification were applied and reliability test was done for self-administered questionnaire and reliability statistics of the study, Cronbach's Alpha was 0.75 for attitude items, and 0.74 for practice.

Field work:

Data was collected within 6 months during the period from the beginning of January 2019 to the end of June 2019. The researcher met the study subjects, each nurse was met individually, got a full explanation about the aim of study and was invited to participate. The nurse who gave his /her verbal informed consent to participate was handed the self-administrated questionnaire and was instructed during the filling. The data were collected two days a week (Saturday and Sunday) in the morning shift and afternoon shifts, the time used for fulfillment the self-administrated questionnaire ranged between 20- 30 minutes for each nurse according to nurse's physical and mental readiness and for nurses' practice, also the researcher was observed nurse's practical skills about studied procedures, the time needed to complete the observational checklist ranged between 30 – 45 minutes.

Pilot study:

It was carried on 10% of the total sample (5 nurses) to participate in the pilot testing of the questionnaire sheet and checklist. Simple modify was done based on pilot results and the sample who shared in the pilot study excluded from the study sample.

Administration and Ethical consideration:

An official permission for data collection in Zagazig University Hospitals and Elahrar Educational Hospital at Zagazig was obtained from the administrative personnel by the submission of a formal letter from the dean of the faculty of Nursing at Zagazig university explaining the aim of the study on order to obtain permission and help.

An verbal agreement was taken from nurses for permission to participate in research process. The agreement for participation of the subjects was taken after

explaining the aim of the study and component of the tool to them; they were given the opportunity to refuse to participate and to withdraw at any time. In addition, confidentiality, and anonymity of the subjects were assured through coding of all data. There was no risk in study subject during application of the research.

Statistical Analysis:

All data were collected, tabulated and statistically analyzed using SPSS 20.0 for windows (SPSS Inc., Chicago, IL, USA 2011). Quantitative data were expressed as the mean \pm SD and (range), and qualitative data were expressed as absolute frequencies (number) and relative frequencies (percentage). Percent of categorical variables were compared using Chi-square test or Fisher's exact test when appropriate. Pearson's correlation coefficient was calculated to assess relationship between various study variables, (+) sign indicate direct correlation and (-) sign indicate inverse correlation, also values near to 1 indicate strong correlation & values near 0 indicate weak correlation. All tests were two sided. p-value < 0.05 was considered statistically significant (S), and p-value \geq 0.05 was considered statistically insignificant (NS).

Results:

Table (1): showed the demographic characteristics of studied nurses. the study was consisted of 50 nurses. their age ranged from 21 to 43 years old. with median 30.5. the majority was female 64.0%, nearly about two thirds 66.0% of them were married. Regarding their qualification 44.0% of studied nurses had a technical institute graduated, 58.0 % of studied nurses having experience less than 10 years while 90.0% of studied nurses had less than or equal five years' experience in surgery unite. Furthermore, 56% of nurse's hadn't attended any training course regarding care of patient with abdominal surgery.

Table (2): Defined nurses' attitudes regarding care of patients undergoing

abdominal surgery. It defined that more than two thirds of studied nurses had negative attitudes about provide health care to patients undergoing abdominal surgery.

Table (3): Exploring Nurses' practice regarding preoperative nursing care for patients undergoing abdominal surgery. The table showed that the highest percentage about assess allergic to medication that will be given or blood 86.0%. But, the less percentage 62.0% about check the patient's chart for the type of surgery and review the medical orders. Generally, more than one thirds 36.0% of nurse's have unsatisfactory practice level regarding preoperative nursing care for patients undergoing abdominal surgery.

Table (4): Regarding nurses' practice regarding postoperative nursing care for patient undergoing abdominal surgery. The table portrayed all nurses, obtain report from post anesthesia care unit nurse and review the operating room and post anesthesia care unit data 100.0%. While the less percentage was related to performance about establish privacy by closing the door to the patient's room and verify that all tubes and drains are patent 42.0%. In general, more than two third 66.0% of nurses had unsatisfactory level of nursing practice regarding postoperative nursing care for patient undergoing abdominal surgery

Table (5): studying nurses' practice regarding a portable wound suction for patients after abdominal surgery. The table described that the highest percentage of practice was related reestablish suction. with drainage plug open, compress the unit and reinsert drainage plug, then remove and discard gloves. perform hand hygiene, after that return patient to a comfortable position followed by measure drainage and record amount, color, and any other pertinent information 86.0%. While the less percentage was related to doing hand hygiene, dressing gloves and assist patient to a comfortable position. In this topic 38.0%

of nurses had satisfactory level of practice regarding a portable wound suction for patients after abdominal surgery

Table (6): Demonstrated total nurses' practice level regarding nursing care of patients undergoing abdominal surgery, It illustrated that 62.0% of the studied nurses had unsatisfactory practice level with mean \pm SD 77.5 \pm 9.7 and range from 62 to 96.

Table (7): Showed relation between nurses 'attitude regarding abdominal surgery and their demographic data. It showed there was statistically significant relation between nurses 'attitude and their social status $p=0.028$, also experience in surgical department per years $p=0.031$. It apparent married nurses, who had experience more than 5 years at surgical department had positive attitude for patient care

Table (8): Exploring association between nurses 'attitude regarding care of patients undergoing abdominal surgery and nurses total practice items, table defined there was statistically significant association between nurses 'attitude regarding care of patient undergoing abdominal surgery and many of practice items post- operative nursing care $p=0.023$. post -operative wound care $p=0.026$, postoperative bowel sound auscultation $p=0.003$. Globally, it evidences positive attitude among nurses associated with satisfactory practice $p=0.002$.

Table (9); regarding relation between nurses 'practice level regarding abdominal surgery and their demographic data. The table demonstrated there was statistically significant relation between nurses 'practice level and their social status $p=0.033$. It obvious married nurses were had satisfactory level of practice in abdominal surgery.

Discussion:

The present study was consisted of 50 nurses. Their age ranged from 21 to 43

years old. with median 30.5. About two thirds were female and married. A female gender was higher than male due to the long history of the feminine nature of the nursing profession. This finding is supported by Eldeen. ⁽¹⁰⁾ who reported that the majority of nurses was female, and their age range between 25-30 years old.

Regarding studied nurses' qualification less than half of studied nurses had a technical institute graduated, this finding agrees with Nestler. ⁽¹³⁾ who reported that nearly half of the group had diploma in nursing or instituted of nursing. Finally, more than half of the studied nurses were having diploma degree. It may be due to the majority of Egyptian nurses were graduate of secondary nursing schools.

Finding of this study clarified that slightly more than half of studied nurses having experience less than 10 years and the most of them had less than or equal five years' experience. These finding in the same consequence with Fawzy et al ⁽¹⁴⁾ who that more than half of nurses had experience more than 3 years less than 10 years.

Finding of this study clarified that more than half of nurse's hadn't attended any training course regarding care of patient undergoing abdominal surgery and majority of them needs to training. This might be due to coast and not availability of training courses and workload. These finding in the same consequence with Deng et al ⁽¹⁵⁾ who reported that in their study participants from nurses had never attended training courses on major abdominal surgeries, that reflect unsatisfactory knowledge level.

In this study more than two thirds of studied nurses had negative attitudes about provide health care to patients undergoing abdominal surgery. This result disagreed with Menlah et al ⁽¹⁶⁾ who proved that nurses had positive attitudes toward postoperative management. Respondents had good attitudes, also identified that nurse must

anticipate patient condition before assessment and treatment. In addition, most of the respondents agreed that complication management was part of the management in postoperative care and part of the patient's rights.

Finding of this study clarified that About more than one third of the nurses have unsatisfactory practice level regarding preoperative nursing care for patients undergoing abdominal surgery. These finding in the same consequence with Abd Elhafiez et al ⁽¹⁷⁾ who reported in his thesis in title "Developing nurses performance guidelines for patients undergoing cholecystectomy based on needs assessment, at El demerdash surgical hospital" that more than two thirds of nurses had unsatisfactory level of practices of preoperative nursing care.

Finding of this study more than two thirds of nurses had unsatisfactory level of nursing practice regarding postoperative nursing care for patient undergoing abdominal surgery, according to study of Robleda et al ⁽¹⁸⁾ who was studying "Postoperative Discomfort After Abdominal Surgery" revealed that nurses play a vital role in relieving patients' suffering from postoperative care. the nurses' work as mediator between the patient and health team members so the nurses were being responsible for complete the whole process of post-operative. There is a great need to assess the knowledge, practice and attitude of nurses to improve care to patients. Therefore, this study was conducted to assess the nurses' existing of knowledge, skills and attitude regarding postoperative discomfort after abdominal surgery.

In this study more than two thirds of nurses had satisfactory level of practice regarding a portable wound suction for patients after abdominal surgery. This result agrees with Kolade et al ⁽¹⁹⁾ who reported in his thesis entitled "Knowledge, attitude and practice of surgical site infection prevention among post-operative nurses" that more

than on third of nurses had unsatisfactory level of practice regarding a portable wound suction which led to improper wound healing.

In this study total nursing practice regarding patients undergoing abdominal surgery, more than two thirds of the studied nurses had unsatisfactory practice level with mean \pm SD (77.5 \pm 9.7) and range from 62 to 96. These results agreed with Hussein et al ⁽¹⁵⁾ who reported that nurses had inadequate level of total practice scores in all items regarding pre and postoperative care for patients who had radical abdominal surgeries

There was statistically significant relation between nurses 'attitude and their social status It apparent married nurses, who had experience more than 5 years at surgical department had positive attitude for patient care. This result may due to social stability and increase years of experience make nurses gain positive attitude. There was statistically significant relation between nurses 'practice level and nurses' knowledge This result is supported by Mukaja et al ⁽²⁰⁾ who reported that there is a positive correlation between nurses' knowledge and practice

Finding of this study regarding the relationship between nursing practice and their demographic characteristics there is statistically insignificant relation. This result disagrees with Deng B et al ⁽¹⁵⁾ who was studying "Practice and Training Needs of Staff Nurses Caring for Patients with Intestinal Ostomies" found a significant difference between nurses practice scores and the age, years of experience and previous training. Where these variables effect on the performance level and relation to age, majority of nurses aged between 30-

40-years old, they had higher mean in total practice score, and there was a statistical difference between the satisfactory and unsatisfactory scores and age group.

Conclusion:

According to the results of the present study, it can be concluded that the nurses had unsatisfactory practice regarding patient undergoing abdominal surgery. Moreover, two third of studied nurses had negative attitude.

Recommendation:

Based on the results of the present study the following recommendations are suggested:

1. Continuous nursing education and in-service training programs at surgical units and equipped with the necessary educational facilities and materials necessary to upgrade their practice of nurses, and improve nursing care offered and patients' outcome.
2. Nurses should add to their routine duties the regular reading to update their performance.
3. They should always be encouraged to attend scientific meetings and conferences to keep pace with the rapid growing plenty of knowledge and practice necessary for proper effective nursing service.
4. Develop system of periodical nurses' evaluation to determine strategies for enhancing their practice.
5. Supply nurses with simple, detailed, clear Arabic nursing performance guidelines include all needed information about abdominal surgery.

Table 1: Demographic characteristics and qualification of studied nurses (n=50):

<u>Demographic data</u>	<u>No</u>	<u>%</u>
<u>Age per years</u>		
≤30	<u>25</u>	<u>50.0</u>
>30	<u>25</u>	<u>50.0</u>
<u>Mean ± SD</u>	<u>31±4.9</u>	
<u>Median(range)</u>	<u>30.5 (21-43)</u>	
<u>Gender</u>		
Male	<u>18</u>	<u>36.0</u>
Female	<u>32</u>	<u>64.0</u>
<u>Marital status</u>		
Single	<u>17</u>	<u>34.0</u>
Married	<u>33</u>	<u>66.0</u>
<u>Qualification</u>		
Diploma	<u>20</u>	<u>40.0</u>
Technical institute	<u>22</u>	<u>44.0</u>
Bachelor of nursing	<u>8</u>	<u>16.0</u>
<u>Years of experience in the hospital</u>		
<10	<u>29</u>	<u>58.0</u>
≥10	<u>21</u>	<u>42.0</u>
<u>Mean ± SD</u>	<u>9.6±5.5</u>	
<u>Median(range)</u>	<u>8 (1-23)</u>	
<u>Years of Experience in surgical department</u>		
≤5	<u>45</u>	<u>90.0</u>
>5	<u>5</u>	<u>10.0</u>
<u>Mean ± SD</u>	<u>4.2±2.4</u>	
<u>Median(range)</u>	<u>5 (1-12)</u>	
<u>Training courses</u>		
No	<u>28</u>	<u>56.0</u>
yes	<u>22</u>	<u>44.0</u>

Table (2): Nurses' attitude regarding nursing care of patients undergoing abdominal surgery (n=50):

Items	no	%
Nurses attitude regarding nursing care of abdominal surgery (19)*		
Positive	16	32.0
Negative	34	68.0
Mean ±SD	11.3±4.5	
Range	3-18	

(*)* maximum score

Table 3: frequency distribution of Nurses' practice regarding preoperative nursing care for patients undergoing abdominal surgery (n = 50):

Preoperative nursing practice	Done		Not done	
	No.	%	No.	%
Preoperative checklist				
Check the patient's chart for the type of surgery and review the medical orders	31	62.0	19	38.0
Check the diagnostic testing has been completed and results are available; identify and report abnormal results	33	66.0	17	34.0
Perform hand hygiene	39	78.0	11	22.0
Establish privacy by closing the door to the patient's room	34	68.0	16	32.0
Assess				
Patient demographic data (name - age- sex)	43	86.0	7	14.0
Allergic to medication that will be given or blood	43	86.0	7	14.0
Past history (medical- surgical)	32	64.0	18	36.0
History about reasons of abdominal surgery	34	68.0	16	32.0
Vital signs	40	80.0	10	20.0
Nursing practice regarding preoperative nursing care for patients undergoing abdominal surgery				
Satisfactory	32		64.0	
Unsatisfactory	18		36.0	

Table 4: Frequency distribution of Nurses' practice regarding postoperative nursing care for patient undergoing abdominal surgery (n = 50):

Postoperative nursing care	done		Not done	
	No.	%	No.	%
Obtain report from post anesthesia care unit nurse and review the operating room and post anesthesia care unit data	50	100.0	0	0.0
Perform hand hygiene and put on personnel protective equipment, if indicated	28	56.0	22	44.0
Identify the patient	26	52.0	24	48.0
Establish privacy by closing the door to the patient's room	21	42.0	29	58.0
Place patient in safe position (semi- or high fowlers or side lying)	22	44.0	28	56.0
Obtain vital signs. monitor and record vital signs frequently	22	44.0	28	56.0
Assess the patient's respiratory status. measure the patient's oxygen saturation level	38	76.0	12	24.0
Assess the patient's cardiovascular status	29	58.0	21	42.0
Assess the patient's neurovascular status	45	90.0	5	10.0
Provide for warmth, using heated or extra blankets as necessary. assess skin color and condition	24	48.0	26	52.0
Check dressings for color, odor, presence of drains and amount of drainage	32	64.0	18	36.0
Verify that all tubes and drains are patent	21	42.0	29	58.0
Assess and maintain iv infusion at correct rate	38	76.0	12	24.0
Assess for and relieve pain by administering medications by physician	29	58.0	21	42.0
Provide for safe environment	26	52.0	24	48.0
Remove personnel protective equipment, if used. perform hand hygiene	41	82.0	9	18.0
Nurses' practice regarding postoperative nursing care for patient undergoing abdominal surgery				
Satisfactory	17		34.0%	
Unsatisfactory	33		66.0%	

Table 5: Frequency distribution of Nurses' practice regarding a portable wound suction for patients after abdominal surgery (N =50):

Portable wound suction care	Done		Not done	
	No.	%	No.	%
Perform hand hygiene and dress gloves	16	32.0	34	68.0
Identify the patient	37	74.0	13	26.0
Close door or bed curtains and explain the procedure to the patient and patient's family	37	74.0	13	26.0
Assist patient to a comfortable position	16	32.0	34	68.0
Expose wound suction tubing and container while keeping patient draped	24	48.0	26	52.0
Examine tubing and container for patency and suction seal	18	36.0	32	64.0
Open the drainage plug	26	52.0	24	48.0
Pour drainage into a calibrated receptacle without contaminating the drainage spout. use an antiseptic swab to clean the drainage spout	35	70.0	15	30.0
Reestablish suction. with drainage plug open, compress the unit and reinsert drainage plug	43	86.0	7	14.0
Remove and discard gloves. perform hand hygiene	43	86.0	7	14.0
Return patient to a comfortable position	43	86.0	7	14.0
Measure drainage and record amount, color, and any other pertinent information	43	86.0	7	14.0
Document procedure	38	76.0	12	24.0
Nurses' practice regarding a portable wound suction for patients after abdominal surgery				
Satisfactory	19		38.0 %	
Unsatisfactory	31		62.0%	

Table 6: Total nurses' practice level regarding nursing care of patients undergoing abdominal surgery (n=50):

	no	%
Total practice regarding nursing care of abdominal surgery (115)*		
Satisfactory	19	38.0
Unsatisfactory	31	62.0
Mean ±SD	77.5±9.7	
Range	62-96	

(*) maximum score

Table 7: The relation between nurses' attitude regarding abdominal surgery and their socio-demographic data (n=50):

Demographic parameters	Nurses' attitude				No.	χ^2	p-value
	Positive		Negative				
	≥16		<34				
No.	%	No.	%				
Age per years							
≤30	7	28.00	18	72.00	25	0.37	0.54
>30	9	36.00	16	64.00	25		
Gender							
Male	8	44.44	10	55.56	18	2	0.16
Female	8	25.00	24	75.00	32		
Social status							
Unmarried	2	11.76	15	88.24	17	4.8	0.028(S)
Married	14	42.42	19	57.58	33		

Qualification							
Diploma	7	35.00	13	65.00	20		
Technical institute	6	27.27	16	72.73	22	0.42	0.81
Bachelor	3	37.50	5	62.50	8		
Years of Experience							
<10	7	24.14	22	75.86	29	1.96	0.16
≥10	9	42.86	12	57.14	21		
Years of Experience in surgical department							
≤5	12	26.67	33	73.33	45	f	0.031(S)
>5	4	80.00	1	20.00	5		
Training courses							
No	7	25.00	21	75.00	28	1.43	0.23
Yes	9	40.91	13	59.09	22		
χ^2 Chisquare test F= Fisher exact test p>0.05 statistically insignificant (S)=significant p<0.05.							

Table 8: Association between nurses 'attitude regarding care of patients with abdominal surgery and nurses' total practice items (n=50):

Total practice items	Nurses 'attitude				χ^2	p-value
	Positive		Negative			
	≥70% (n=16)		<70% (n=34)			
	No.	%	No.	%		
Preoperative nursing care						
Satisfactory	6	37.50	26	76.47	7.2	0.007(S)
Un Satisfactory	10	62.50	8	23.53		
Preoperative preparation for patient						
Satisfactory	9	56.25	14	41.18	0.99	0.32
Un Satisfactory	7	43.75	20	58.82		
Post- operative nursing care						
Satisfactory	9	56.25	8	23.53	5.2	0.023(S)
Un Satisfactory	7	43.75	26	76.47		
Post- operative wound care						
Satisfactory	12	75.00	14	41.18	4.9	0.026(S)
Un Satisfactory	4	25.00	20	58.82		
Post- operative wound suction						
Satisfactory	6	37.50	13	38.24	0.002	0.96
Un Satisfactory	10	62.50	21	61.76		
Post -operative bowel sound auscultation						
Satisfactory	15	93.75	17	50.00	9.04	0.003(S)
Un Satisfactory	1	6.25	17	50.00		
Nurses' performance						
Satisfactory	11	68.75	8	23.53	9.4	0.002(S)
Un Satisfactory	5	31.25	26	76.47		

χ^2 Chisquare test p>0.05 statistically insignificant (S)=significant p<0.05

Table 9: The relation between nurses' total practice level regarding abdominal surgery and their socio - demographic data (n=50):

Demographic parameters	Nurses' total practice level				No.	χ^2	p-value
	Satisfactory		UnSatisfactory				
	≥19		<31				
	No.	%	No.	%			
Age per years practice							
≤30	9	36.0 0	16	64.00	25	0.08	0.77
>30	10	40.0 0	15	60.00	25		
Gender							
Male	7	38.8 9	11	61.11	18	0.009	0.92
Female	12	37.5 0	20	62.50	32		
Social situation							
Unmarried	3	17.6 5	14	82.35	17	4.5	0.033(S)
Married	16	48.4 8	17	51.52	33		
Qualification							
Diploma	7	35.0 0	13	65.00	20		
Technical institute	10	45.4 5	12	54.55	22	1.17	0.56
Bachelor	2	25.0 0	6	75.00	8		
Years of Experience							
<10	10	34.4 8	19	65.52	29	0.36	0.55
≥10	9	42.8 6	12	57.14	21		
years of Experience in surgical department							
≤5	17	37.7	28	62.22	45	0.009	0.92

		8					
>5	2	40.0	3	60.00	5		
		0					
Training courses							
no	10	35.7	18	64.29	28	0.14	0.71
		1					
yes	9	40.9	13	59.09	22		
		1					

χ^2 Chisquare test $p>0.05$ statistically insignificant (S)=significant $p<0.05$.

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