
Evaluation Nurses' Intervention toward Potential Complication for Patient after Gastrointestinal Surgery

Alaa Ebrahim Saeed*

*Adult Nursing Department, College of Nursing, University of Al- Qadisiyah, Iraq.

Corresponding Email: *Alaa Ebrahem @qu.edu.iq

Received: 08 July 2024 **Accepted:** 26 September 2024 **Published:** 11 November 2024

Abstract: *Background: gastrointestinal surgery complication one cause of death worldwide. Objective: To determine the nurse's intervention toward potential complication for patient after gastrointestinal surgery. Methodology: A descriptive study was carried out throughout the present study to evaluation of nurses' intervention toward potential complication for patients after gastrointestinal surgery In Diwaniyah Teaching Hospital who attended the outpatient clinic department of hospitals in Al-Dewaniya governorate. The study was carried out during the period extended from the 10th of January 2024 to 1th June 2024. Results: The study showed that all ten axes are associated with the overall goal (evaluation of nurse's intervention). A statistical correlation is very strong because the mean level is less than 0.01. (And the level of indication shows that the relationship is true and stronger. Conclusion: Findings of the study indicated that there is the duration of training the findings of the present study show that highest percentage while the relationship between the all of items of questioner's depending on the coefficient of high correlation because attention to this axis will result in increased nursing care, which is the general goal. Recommendations: Carrying out strategies for nursing intervention within a context of comprehensive follow-up care, and Carrying out nursing care programmed on patients with produce of caring during treatment. Also Emphasis on the communication between the educational hospitals in relation to the exchange of clinical and surgical practical experiences through the establishment of seminars, courses and seminars, organized by the experts. In regarding about the role of health care worker should be give instruction to maintain the weight and exposure to the sunlight and identify the signs and symptoms of disease.*

Keywords: Nurses' Intervention, Potential Complication, Gastrointestinal Surgery.

1. INTRODUCTION

Surgeries are complicated and nerve-wracking experiences. Many surgical procedures that were once done in the inpatient setting are now done in the outpatient or outpatient setting



thanks to developments in anesthetic, surgical instruments, and techniques. According to Russell, Williams, and Bulstrode (2000), the majority of elective surgeries are now conducted in an outpatient or minimally invasive setting. Postoperative pain management, nausea, and vomiting have all been enhanced, and operation and recovery periods have been decreased, thanks to new pharmacological drugs and more advanced monitoring. These include short-acting opioids and more effective antiemetics. Patients in need of surgical intervention have access to a variety of techniques.

Recuperation after surgery is a crucial component of any patient's experience. Postoperative recovery as an outcome measure is just one example of the vast body of research in this field. Hospital stay duration and its determinants (Kehlett-Dahl 2003) According to Ward and Volgysi (1978) and Cortella (1995), there are three distinct stages of recovery following outpatient surgery: early, middle, and late. In elder abdominal surgery patients, functional status and self-perception of recovery are highly correlated with pain, melancholy, and exhaustion. Perceived and actual improvements in functional status characterize the postoperative healing process, according to a holistic view (Zalon 2004). Over the last ten years, the Joint Commission on Accreditation of Healthcare Organizations' updated pain treatment standards and the Agency for Healthcare Research and Quality's clinical practice recommendations have both provided support for nonpharmacological pain management. Cognitive processes like visualization, relaxation, suggestion, and distraction help lessen the feeling of pain, according to research (Dane & Kessler, 1994). Knowledge and action are said to be mediated by self-efficacy, according to self-efficacy theory (Bandura, 1977). A person's self-efficacy can be defined as their confidence in their own abilities to accomplish a goal. With the right information, one can overcome their fears and anxieties by setting reasonable expectations. Individuals can gain knowledge from their own experiences, from observing the experiences of others, from receiving encouragement and support from others, and from their own physical and emotional well-being. Expectations of efficacy and outcomes are both incorporated into self-efficacy theory. The perceived difficulty and level of confidence in doing a task form the basis of efficacy expectations. A person's expectations about the significance of an action in reaching a goal are known as outcome expectations. Evidence suggests that self-efficacy mediates performance in a challenging setting, like the time immediately following surgery. According to two studies (Gortner & Jenkins, 1990; Keller, Fleury, Gregor-Holt, & Thompson, 1999), the expectations of effectiveness explain a greater portion of the variation in actions that lead to functional outcomes. Patients may feel more prepared to handle the world following surgery if they are taught self-efficacy skills during preoperative education. This is because these skills help patients feel more in control of their lives and less anxious about what the future holds. Getting back to doing things after surgery could be as simple as building confidence in your abilities. Manyande et al.

(1995) discovered that patients who trained in relaxation and imagery before surgery reported less postoperative pain, anguish, and difficulty coping. Postoperative pain and distress, complication rates, length of hospital stays, and patient satisfaction were all positively impacted by preoperative self-care instruction in mobility, goal setting, and improving the likelihood of a positive outcome in a supportive setting (Hanucharunkui & Vinya-nguag, 1991).



2. RELATED WORKS

Based on literature from China and throughout the world, this study set out to find, assess, and synthesize information regarding colorectal cancer (CRC) patients' quicker postoperative recovery. This will provide a solid foundation for clinical practice regarding the enhancement of gastrointestinal function recovery after CRC surgery. **Methods** Our search for evidence, guidelines, expert consensus statements, clinical decision making, best practices, evidence summaries, and interventions to speed up gastrointestinal function rehabilitation after colorectal cancer surgery was based on the "6S" hierarchical evidence model. We also looked through domestic and international databases. From the date of database creation until January 2023, the search was limited. After two researchers checked the papers for quality, we pulled data and summarized the evidence from the ones that passed. **Final Product** Six guidelines, six systematic reviews, three expert consensus statements, four randomized controlled trials, and two evidence summaries were among the twenty-one papers that made up the review. Organizational management, education, intraoperative monitoring, and postoperative management were the five areas where the best evidence-based results were presented. A total of 51 outcomes were considered. **In summary** The literature on therapies to aid colorectal cancer patients' gastrointestinal function recovery after surgery is extensive and varied. Consideration of the real-world context in China informs the discussion of evidence use. Despite the prevalence of these problems, no effective management program has been developed to reduce their occurrence following gastrointestinal surgery. There is a dearth of data to support the claims that early postoperative activities help reduce problems, however several studies have made such claims. This study aims to systematically assess the impact of nurse interventions on the rate of recovery after abdominal surgery by guiding early postoperative activities. The following databases will be searched: Wanfang, Chinese Journal of Science and Technology Database, Chinese Biomedicine Database, PubMed, Embase, Web of Science, and the Cochrane Library. From the beginning of the database's establishment until January 2021, a randomized controlled study will be conducted on early participation in exercise programs following abdominal surgery. English and Chinese are the only languages available. Researchers separately extract high-quality studies, Meta analyses the included literature with RevMan5.3 software, and researchers evaluate the literature's quality. This study aims to assess the impact of nursing intervention on the speedy recovery of patients after abdominal surgery by looking at variables like postoperative quality of life score, complication rate, mortality, length of stay, and early postoperative activity guidance.

3. METHODOLOGY

Design of the Study:

Setting of the Study: Where the study takes place: The study was carried out in the outpatient department of Al-Diwaniyah Teaching Hospital to ensure the collection of accurate and thorough data.

The Sample of the Study: A purposive (non-probability) sample was chosen to provide accurate data and a representative sample. The sample included fifty-nine registered nurses.



Al-Diwaniyah Teaching Hospital's outpatient department supplied these nurses. This particular sample was research aid based on prior research, clinical experience, and in-depth interviews with healthcare professionals.

The Study Instrument: the researcher created a questionnaire and interview guide specifically for this study. On a scale from 0 to 3, where 0 shows no care and 1 suggests occasional, all items indicated that the problems persisted throughout time. Care presence, as well as its frequency and length, were evaluated using the rating scale (Polit & Hunguler, 1995). There were two sections to the questionnaire: Section I: Data Sheet on Demographics: Part II: Evaluation of postoperative nurse intervention on monitoring and management of potential complications of the patient after gastrointestinal surgery was comprised of seven items, including participants' ages, genders, educational backgrounds, years of hospital experience, years of surgical experience, training sessions pertaining to postoperative nurse interventions, and the duration of those sessions.

Method of Data Collection: The data was gathered through the use of an interview methodology and a standardized questionnaire. The researcher spoke with every single nurse on staff one-on-one. The staff nurse was informed about the study and asked to participate in each interview. Twenty to thirty minutes was the average duration of each interview. From 7:30 in the morning to 1:30 in the afternoon, data was collected. From January 1, 2024, to June 1, 2024, the selection process was This descriptive study aimed to assess the role of postoperative care nurses in the postoperative recovery of abdominal surgery patients from Al-Diwaniyah Teaching Hospital who sought treatment in hospitals in the Al-Diwaniyah Governorate. The research took place between January 10, 2024, and June 1, 2024.carried out.

Reliability of the Questionnaire: Their tasks included checking the study questionnaire for adequateness and establishing its content. Validity: for each item and its measurement, the experts' level of agreement or disagreement was used to evaluate their responses. With the exception of a few items that needed a reward, the results showed that all experts thought the items were relevant to the whole instrument. We revised the final version of the questionnaire based on the feedback and recommendations of the experts.

Data Analysis: Descriptive data analysis was among the suitable statistical methods employed by the researcher to analyze the data: We put this strategy into action by finding a. frequencies (F), and b. percentages (%). (b) Pearson's correlation Estimating the scale's reliability (test-retest) required the following coefficient, which was plugged into the appropriate equation: According to Fain (2004), Polit and Hangler (1999). Version 16.0 of the Statistical Package for the Social Sciences (SPSS) was used for the data analysis.

4. RESULTS AND DISCUSSION

This pertains to the age bracket of 20–29 for registered nurses. A large portion of the sample (64.4%) met the criteria for inclusion in the study. The age group between 40 and 59 has the lowest percentage at 5.1%. The study's findings are consistent with those of Heliovaara et al.



(1993), Tepper and Hochberg (1993), and Carlson et al. (2003). According to the results, women make up the majority of the study's sample (52.5%). Males make up the largest proportion of them (47.5%). According to the researchers, this percentage was derived from the study community's samples. Concerning the degree of instruction. Among the participating institutions, 57.6% have a nursing college and 13.6% have a nursing school, according to the present research. As it relates to medical background. From the age group of 1–5 years, the maximum proportion was 52.5%, while the lowest percentage was 5.1% for the age group of 21–25 years, according to the present study. The current study found that the age group from 1 to 5 years had the highest percentage of surgical experience (69.5%), while the age group from 11 to 15 years had the lowest rate (6.8%). This study found that the age group from 1-3 years had the highest percentage (52.5%) during the training period, while the age group from 10-12 years had the lowest proportion (6.8%).

Table (1) Distribution of demographic characteristics of (59) patients.

No	Age Groups	Frequency	Percent
1	(20-29) years	38	64.4 %
1.1	(30-39) years	15	25.4 %
1.2	(40-49) years	3	5.1 %
1.3	(50-59) years	3	5.1 %
1.4	Total	59	100
2	Gender	Frequency	percent
2.1	Male	28	47.5 %
2.2	Female	31	52.5 %
	Total	59	100 %
4.	Level of education	Frequency	percent
4-1	Secondary Nursing School	8	13.6 %
4-2	Graduate Nursing Institute	17	28.8 %
4-3	Graduate Nursing College	34	57.6 %
4-4	Total	59	100 %

Continue

No	Variables	Frequency	percent
5	Experience in Hospitals	Frequency	Percentage
5.1	(1-5) years	31	52.5 %
5.2	(6-10) years	9	15.3 %
5.3	(11-15) years	10	16.9 %
5.4	(16-20) years	6	10.2 %
5.5	(21-25) years	3	5.1 %
	Total	59	100 %
6	Experience-Surgical	Frequency	Percentage
6.1	(1-5) years	41	69.5 %
6.2	(6-10) years	14	23.7 %



6-3	(11-15) years	4	6.8 %
	Total	59	100 %
7	Duration of the training session	Frequency	Percentage
7-1	(1-3) months	31	52.5 %
7-2	(4-6) months	19	32.2 %
	(7-9) months	5	8.5 %
8	(10-12) months	4	6.8 %
8-1	Total	59	100 %

This pertains to the age bracket of 20–29 for registered nurses. A large portion of the sample (64.4%) met the criteria for inclusion in the study. The age group between 40 and 59 has the lowest percentage at 5.1%. This study's finding is in line with previous research by Carlson et al. (2003), Heliovaara et al. (1993), and Tepper and Hochberg (1993). According to the results, women made up the majority of the study's sample (52.5%). Men made up the largest gender subset (47.5%). According to the researchers, this percentage was derived from the study community's samples. Concerning the degree of instruction. The present analysis found that the School of Nursing had the lowest rate at 13.6% and the College of Nursing the greatest percentage at 57.6%. Considering the incident at the medical facility. The present study found that the age group ranging from 1 to 5 years had the highest percentage (52.5%), while the age group ranging from 21 to 25 years had the lowest proportion (5.1%). The present study found that the group with the most surgical experience had been in the field for 1–5 years (69.5%), while the group with the least experience had been in the field for 11–15 years (6.8%). The current study found that the training duration ranging from 1 to 3 years accounted for 52.5% of the total, while the training term ranging from 10 to 12 years accounted for 6.8%.

Table (2) the distribution the evaluation nurse's intervention toward potential complication for patient after gastrointestinal surgery.

Nurse’s intervention concerning Monitor and managing potential complication	Never	Sometims	Always	Men	Std. Deviatin	General Trend
Reads and check patient chart after exit from the operation carefully to see how the operation took place to avoid complication in the surgical unit	5	25	29	2.41	.646	Always
	8.5	42.4	49.2			
Measuring and monitoring vital signs every quarter of an hour for the first hour, and every half-hour for the next two hour	1	23	35	2.58	.532	Always
	1.7	39.0	59.3			
	0	8	51	2.86	.345	Always



Record vital signs: Blood Pressure	0	13.6	86.4			
Record vital signs: Pulse Rate	11	11	37	2.44	.794	Always
	18.6	18.6	62.7			
Record vital signs: Respiratory Rate	12	14	33	2.36	.804	Always
	20.3	23.7	55.9			
Record vital signs: Temperature	1	7	51	2.85	.407	Always
	1.7	11.9	86.4			
The nurse ensures that the dressing is clean, dry and intact	2	20	37	2.59	.561	Always
	3.4	33.9	62.7			
Inspects the surgical dressing and any drains for bleeding	4	17	38	2.58	.622	Always
	6.8	28.8	64.4			
Record the signs and symptoms of shock through the measurement of vital signs	5	23	31	2.44	.650	Always
	8.5	39.0	52.5			
Monitor and record signs that appear on the patient in situations of internal bleeding, such as excessive sweating and yellowing	5	24	30	2.42	.649	Always
	8.5	40.7	50.8			
Instructs the patient and family to record any change in (the color of the waste stool)	4	24	31	2.46	.625	Always
	6.8	40.7	52.5			
Assesses the patient for increased tenderness and rigidity of the abdomen	9	25	25	2.27	.715	Sometimes
	15.3	42.4	42.4			
Record the signs and symptoms of gastrointestinal (Nausea and vomiting)	3	20	36	2.56	.595	Always
	5.1	33.9	61.0			
Record the pain and abdominal distension for the patient	5	26	28	2.39	.644	Always
	8.5	44.1	47.5			
The nurse advises the patient for follow-up after discharge from the hospital regularly	5	24	30	2.42	.649	Always
	8.5	40.7	50.8			
Total	72	291	522		.40227	Always



	8.14	32.88	58.98	2.50 85		
--	------	-------	-------	------------	--	--

Table (3) Correlation between the nurses intervention toward potential complication for patient after gastrointestinal surgery:

Evaluation nurses intervention toward potential complication for patient after gastrointestinal surgery				
Study axes	Pearson Correlation	Sig.-tailed)	Delay	Type of relationship
Nurse's clinical observation concerning Monitor and managing potential complication	.906**	0.000	D.	A near perfect relationship

Assessment of the Urse Intervention Coordinate systems for research. There is a strong correlation between the assistance nurses provide in the areas of complication monitoring and management. There are 906**0.000D. Almost ideal couple Almost ideal couple* Since we were interested in studying the relationship between the quantitative values of the axes and the quantitative values of the dependent variable, we utilized Pearson's correlation coefficient.

Table 4 shows the demographic parameters' association with nurse intervention for possible patient problems following gastrointestinal surgery.

Factors	Kendall's tau_b	Sig. (2-tailed)	Delay	Type of relationship
Level of Education	0.489**	0.000	D.	Moderate relationship
Number of Years of Experience in Hospitals	0.303**	0.001	D.	Relatively weak relationship
Number of Years of Experience-Surgical	0.320**	0.003	D.	Relatively weak relationship
Duration of the training session (Month)	0.434**	0.000	D.	Moderate relationship

From the results of the table, we find that the value of the level of significance of 0.000, which is Less than 0.05, and therefore there are differences of statistical significance at a significant level 0.05 between the average responses of sample members according to the variable Level of education. From the results of the table we find that the value of the level of Significance of 0.001 Which is less than 0.05, and therefore there are differences of statistical significance at a Significant level 0.05 between the average responses of sample members depending on the variable years of service in the hospital. From the results of the table we find that the value of the level of significance of 0.003, which is less than 0.05 and therefore there are differences of statistical significance at a significant level of 0.05 between the average responses of the sample according to the variable years of service in surgery. From the results of the table we find that the value of the level of significance of 0.000, which is less than 0.05, and therefore there are



differences of statistical significance at the level of significance 0.05 between the average responses of sample members depending on the variable duration of the training course.

Discussion

In relation to patients' ages of twenty-five and thirty-nine. A large portion of the sample (64.4%) met the criteria for inclusion in the study. In the age bracket of 40–59, the proportion is 5.1. Research by Carlson et al. (2003), Heliovaara et al. (1993), and Tepper and Hochberg (1993) all found similar results, lending credence to this study's findings. According to the results, women made up the majority of the study's sample (52.5%). Men made up the largest gender subset (47.5%). According to the study's authors, that percentage was backed by (7). Concerning the degree of instruction. The College of Nursing had the lowest percentage at 13.6% and the greatest percentage at 57.6% according to the present study (2). Considering the incident at the medical facility. From the age group of 1–5 years, the maximum proportion was 52.5%, while the lowest percentage was 5.1% for the age group of 21–25 years, according to the present study. The current study found that the age group from 1 to 5 years had the highest percentage of surgical experience (69.5%), while the age group from 11 to 15 years had the lowest rate (6.8%). (3) In terms of training time, the present study found that the age group from 1-3 years had the highest percentage (52.5%) and the age group from 10-12 years had the lowest percentage (6.8%). The majority of the evaluations are positive when it comes to the post-operative nursing intervention, which is a direct outcome of the hospital's and the ministry's policies on nursing education and sufficient nursing resources (5). Evaluation of nursing care is the overarching goal, and the results demonstrate that all 10 dimensions contribute to this goal. A level below 0.01, on average, indicates a very significant statistical association. When the significance threshold is less than 0.05, we can trust the coefficient value and the relationship is valid; but, when it is larger than 0.05, we cannot trust the coefficient value and the link is not significant. Focusing on this axis leads to increasing nursing care, which is the main goal, thus the researcher can use these results to advocate focusing on one or more axes depending on the high correlation coefficient. Concerning the nurse's demographics and the strong correlation with post-operative nurse intervention evaluations: It would indicate that "age and gender" are highly correlated positively. Focusing on this axis will lead to increasing nursing care, which is the main goal, so it's recommended to focus on one or more axis depending on the high correlation coefficient. The study found a moderate association between respondents' degree and level of education, which is in line with these results (9). According to the results, the correlation between a nurse's level of experience and the assessment of postoperative interventions is poor. As a result of both the inadequate structural education of nurses working in surgical wards and the absence of effective evaluation of nursing interventions for the postoperative period, the results show that the relationship between years of experience in surgical wards and the evaluation of nurses' interventions after surgery is relatively weak. This study found a moderate correlation between the evaluation of nurses' postoperative interventions and their involvement in training sessions, the length of those sessions, and the total number of training sessions. The results demonstrate a strong correlation between the amount of education and training sessions and the performance of surgical department nurses. This finding is in line with the fact that developmental intervention in elective surgical nursing also places a strong emphasis on the educational and psychological



components of care. This study's findings have implications for the assessment of nurses' postoperative intervention, as training courses, whether in or out of Iraq, are crucial for enhancing intervention in surgical departments. It is unclear whether this is a consequence of hospital policy or the Ministry of Health's policies. Overall, the study's author recommends that surgical department nurses receive more international and domestic training, that they keep learning new skills, and that they follow established protocols when caring for patients in the postoperative period.

5. CONCLUSION AND RECOMMENDATIONS

1. The most common age groups found in the survey was that of 20- to 29-year-olds.
2. Researchers found that women made up the majority of the study's sample. The largest proportion
3. The study's findings showed that the educational level was 3. According to this study's findings, the College of Nursing had the most percentage, while the School of Nursing had the lowest.
4. The study's findings suggested that prior surgical expertise The current study found that the lowest percentage was between 11 and 15 years old, while the largest percentage was between 1 and 5 years old.
5. The study's findings showed that the training time with a score of 1-3 month, the current study found the highest proportion, while a score of 10-12 month revealed the lowest.
6. The study's results showed a strong correlation coefficient between all questionnaire paragraphs, suggesting a relationship. This is because, as stated before, the overall purpose is to promote nursing care, and interest in this axis leads to it.
7. It is suggested that one or more axes be prioritized based on the high correlation coefficient. This is because heightened interest in this axis would result in increased nursing care, which is the overall objective.
8. With regard to the assessment of postoperative nursing interventions and the correlation between training session attendance, training session length, and training session frequency
9. Make enhancing the education level of department staff a priority.
10. Ongoing and targeted assistance for the surgical departments in staff preparation
11. Provide patients with more opportunities to learn clinical surgical nursing

5. REFERENCES

1. Rudolphi D. In: Harding MM, Kwong J, Hagler D, Reinisch C, editors. Postoperative care. 12th ed. Elsevier; 2023.
2. Ghorbani, A., Sadeghi, L., Shahrokhi, A., Mohammadpour, A., Addo, M., & Khodadadi, E. (2016). Hand hygiene compliance before and after wearing gloves among intensive care unit nurses in Iran. *American journal of infection control*, 44(11), e279-e281.
3. Al-Ftlawy, D. (2014). Determination of nurses' knowledge toward care provided to patients with acute myocardial infarction in Al-Najaf City. *kufa Journal for Nursing sciences*, 2(2), 11-13.



4. Canzan F, Caliaro A, Cavada ML, Mezzalira E, Paiella S, Ambrosi E. The effect of early oral postoperative feeding on the recovery of intestinal motility after gastrointestinal surgery: protocol for a systematic review and meta-analysis. *PLoS One*. 2022;17(8):e0273085. doi: 10.1371/journal.pone.0273085 [DOI] [PMC free article] [PubMed] [Google Scholar]
5. Qing Y, Yang J, Gu Y. Emergency nursing countermeasures and experience of patients with primary liver cancer nodule rupture and hemorrhage. *Emerg. Med. Int.* 2022;2022:2744007. doi: 10.1155/2022/2744007. [DOI] [PMC free article] [PubMed] [Google Scholar]
6. Amitay EL, Carr PR, Gies A, Laetsch DC, Brenner H. Probiotic/synbiotic treatment and postoperative complications in colorectal cancer patients: systematic review and meta-analysis of randomized controlled trials. *Clin Transl Gastro.* 2020;11(12):e00268. doi: 10.14309/ctg.0000000000000268 [DOI] [PMC free article] [PubMed] [Google Scholar]
7. Majeed HM, Hassan AF, Abid RI. (2020). Evaluation of nurses' knowledge and attitudes toward pain management at Baghdad Teaching Hospitals. *Indian Journal of Forensic Medicine & Toxicology*, 14(2), 1575-1579.
8. Irani JL, Hedrick TL, Miller TE, et al. Clinical practice guidelines for enhanced recovery after colon and rectal surgery from the American society of colon and rectal surgeons and the society of American gastrointestinal and endoscopic surgeons. *Surg Endosc.* 2023;37(1):5–30. doi: 10.1007/s00464-022-09758-x [DOI] [PMC free article] [PubMed] [Google Scholar]
9. Sun B, Huang J, Wang CX. Effect of high glucose solution on gastrointestinal function recovery, inflammatory reaction and complications after laparoscopic colorectal cancer surgery. *China J Endo.* 2023;29(03):56–61. [Google Scholar]
10. Teng, C.Y.; Myers, S.; Kenkre, T.S.; Doney, L.; Tsang, W.L.; Subramaniam, K.; Esper, S.A.; Holder-Murray, J. Targets for Intervention? Preoperative Predictors of Postoperative Ileus After Colorectal Surgery in an Enhanced Recovery Protocol. *J. Gastrointest. Surg.* 2020, 25, 2065–2075. [Google Scholar] [CrossRef] [PubMed]
11. Udomkhwamsuk W, Vuttanon N, Limpakan S. Situational analysis on the recovery of patients who have undergone major abdominal surgery. *Nurs Open* 2021;8:140–6. [DOI] [PMC free article] [PubMed] [Google Scholar]
12. Acknowledgments: We acknowledge all the patients who accepted to participate in this study. Corresponding author at: Çukurova University, Faculty of Health Sciences, Nursing Department, Adana, Turkey. E-mail address: sevilaygil@gmail.com (S. Erden 2017 Department of General Surgery, Daping Hospital, The Third Military Medical University, Chongqing, China <https://nurseslabs.com/postoperative-phase> .
13. Visoni A, Shah R, Gabriel E, et al. Enhanced recovery after surgery for noncolorectal surgery: a systematic review and meta-analysis of major abdominal surgery. *Ann Surg* 2018;267:57–65.
14. Bradt, J., Dileo, C., & Shim, M. (2013). Music interventions for preoperative anxiety. *Cochrane Database of Systematic Reviews*, 6, CD006908. DOI: 10.1002/14651858.CD006908.pub2.



15. Broek R, Issa Y, Van Santbrink E, Bouvy N, et al. (2013). "Burden of adhesions in abdominal and pelvic surgery: systematic review and met-analysis". *BMJ*. 347: f5588. doi:10.1136/bmj.f5588. hdl:2066/125383.
16. Committee on Standards and Practice Parameters. *Anesthesiology*, 114, 495–511. Retrieved February 2014, at http://journals.lww.com/anesthesiology/fulltext/2011/03000=/practice_guidelines_for_preoperative_fasting_and.13.aspx#P232
17. GlobalSurg Collaborative (2016). "Determinants of morbidity and mortality following emergency abdominal surgery in children in low-income and middle-income countries". *BMJ Global Health*. doi:10.1136/bmjgh-2016-000091. PMC 5321375 . PMID28588977.
18. GlobalSurg Collaborative (2016). "Mortality of emergency abdominal surgery in high-, middle- and low-income countries". *British Journal of Surgery*. 103 (8):971–
19. Joint Commission. (2014). 2014 national patient safety goals. Retrieved January 31, 2014, from www.jointcommission.org/patientsafety/nationalpatientsafetygoals For additional resources and information.
20. Ychou M, Boige V, Pignon JP, et al. Perioperative chemotherapy compared with surgery alone for resectable gastroesophageal adenocarcinoma: an FNCLCC and FFCD multicenter phase III trial. *J Clin Oncol* 2011;29:1715–21. [DOI] [PubMed] [Google Scholar]
21. Straatman J, Harmsen AM, Cuesta MA, et al. Predictive value of c-reactive protein for major complications after major abdominal surgery: a systematic review and pooled-analysis. *PloS One* 2015;10:e0132995
22. Matt Verainternent Jan 23, 2014 Journal panel Sevily Erden PhD (Assistant Professor) a Sevban Arslan PhD (Associate Professor) a Sevgi Deniz (Research Assistant) Pinar Kayab Der ya Gezer MSc 2017 DOI of original article: <http://dx.doi.org/10.1016/j.apnr.2017.08.003>
23. Gustafsson UO, Scott MJ, Schwenk W, et al. Guidelines for perioperative care in elective colonic surgery: enhanced recovery after surgery (ERAS) society recommendations. *World J Surg* 2013;37:259–84. [DOI] [PubMed] [Google Scholar]
24. Tao Ding. Nursing intervention of early off-bed activity after abdominal surgery. *International Medicine and Health Guidance News* 2017;23:132–4
25. Hongwei Zhang, Junru Gao, Yajing Liu, et al. Quantifying the effect of early ambulation on postoperative colorectal cancer patients. *J Qilu Nurs* 2017;23:9–10
26. visit davispl.us/medsurg5 Linda S. Williams 2015 Baily and love short practice of surgery 2008 www.intuitivesurgical.com 2015
27. Visoni A, Shah R, Gabriel E, et al. Enhanced recovery after surgery for no colorectal surgery: a systematic review and meta-analysis of major abdominal surgery. *Ann Surg* 2018;267:57–65.
28. Yonghong Dong, Pengfei Li. Research progress on prevention of intestinal adhesion after abdominal operation. *Chinese Journal of Surgery of Integrated Traditional and Western Medicine* 2013;19:608–10. [Google Scholar]
29. Tao Ding. Nursing intervention of early off-bed activity after abdominal surgery. *International Medicine and Health Guidance News* 2017; 23:132–4. [Google Scholar]