

Assessment of Early Post-Operative Self-Care Ability of Patients With Abdominal Surgery In Selected Tertiary Hospitals, Southwest Nigeria

Azeez F. Omobolanle¹, Nwozichi Chinomso², Olabisi Oluwaseyi³,
Adebiyi Joseph Adekunle⁴, Akinrinde Oluwafemi⁵

Babcock University, Ilishan-Remo Nigeria.^{1,2,4}

Bowen University, Iwo Nigeria.³

Obafemi Awolowo University Teaching Hospital Complex, Nigeria.⁵

Abstract

Background: There is increased focus on patient self-care within the health system, but little is known about the clinical variables which influence patients' involvement in early self-care activities as well as the strategies which will be considered helpful in encouraging the patient's involvement.

Method: A quantitative research design was employed in this study using the descriptive cross-sectional method. The purposive sampling method was used to select 126 patients from University College Hospital, Ibadan, and Lagos State University Teaching Hospital who met the inclusion criteria. Data collected were subjected to descriptive analysis of frequency counts, percentages, mean, standard deviation, inferential statistics of multiple linear regression and Pearson correlation using SPSS version 24.

Result: Socio-demographic data showed that 82 (65.1%) of respondents were female; 43 (34.1%) were between the ages of 25-34; 61 (48.4%) were self-employed, and 74 (58.7%) had tertiary education. The result of the analysis further revealed that 101 (80.2%) were not taught about early self-care activities before surgery, 116 (92.1%) have had 2nd or 3rd doses of analgesia; 75 (59.5%) had combined type of analgesia given; while 64 (50.8%) had the presence of drains, catheter, and tubes in place. Nevertheless, the mean score of the participants' level of self-care ability postoperatively within 24-48hours was 29.66 (59.3%) ±10.14. There was no significant influence between postoperative analgesia administration and type of analgesia on early postoperative self-care ability within 24-48hours while a significant relationship exists between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery.

Conclusion: The study concluded that patient with abdominal surgery had a moderate self-care ability postoperatively within 24-48hours and a relationship exist between selected clinical variable and early self-care ability postoperatively.

Key Word: assessment, abdominal surgery, self-care ability, postoperative.

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I. Introduction

There is increased focus on patient self-care within the health system, but little is known about the clinical variables which influence patients' involvement in early self-care activities as well as the strategies which will be considered helpful in encouraging the patient's involvement.¹ Although several advocacies exists on the incorporation of patients' self-care in the national health system. However, controversies exist on whether a patient with major abdominal surgery can care for themselves during the early postoperative phase i.e. within the first 24-48hours.

Poor self-care ability has been observed in the study setting amidst surgical patients and may be linked to the influence of clinical parameters such as; postoperative pain, poor self-care knowledge and the presence of drains and tubes which may predispose the patient to prolong hospitalization, delayed mobility and may be accompanied with postoperative pulmonary complications as identified in previous studies.^{2,3,4} This was further supported in a study on laparoscopic abdominal surgery, as postoperative pain and disability were identified as a challenge militating against patient self-care ability. It was discovered that patients have limited, health-associated abilities to meet their self-care demands. This supports the fact that postoperative pain must be controlled to the minimum or zero pain level, with the administration of an analgesic agent while special self-care consideration is given to the disabled surgical patients.⁵ Therefore, assessment of post-operative self-care

ability in surgical patients may assist patients to engage in self-care behaviors and further promote a reduced length of stay in the hospital and reduced rate of postoperative complications.

Some patients with colostomy also have been identified to have poor self-care knowledge of stoma care in a study conducted in 2018 and have been linked to a poor self-care ability with postoperative complications and increased re-admission rate.⁶ However, preoperative education and counseling, rehabilitation, effective teaching of nursing skills, mastery of health knowledge, literacy, and discharge training were identified to influence patients' self-care ability, quality of life, and reduced postoperative complications.^{6,7}

In Nigeria, evaluation of patients' postoperative self-care ability has not been much explored. The majority of previous studies focused more on patients with chronic medical conditions such as diabetes mellitus, hypertension, cancers, mothers' of pediatric patients with sickle cell disease, and elderly patients while scanty literature exists on self-care ability of a patient with acute abdominal surgical conditions.^{8,9,10} This is essential as it may prevent patients with acute surgical interventions like abdominal surgery from complications that could predispose such patients to chronic illness, an increased financial burden and stress on the patients, the patient's family, and the healthcare system.

Therefore, the goal of this study was to assess the early post-operative self-care ability of patients following abdominal surgery.

II. Objective

The study assessed early post-operative self-care ability and the influence of some selected clinical variables of patients following abdominal surgery in selected tertiary hospitals, Southwest Nigeria.

III. Method

Study: A quantitative cross-sectional descriptive research design was used to assess early post-operative self-care abilities of patients with abdominal surgery. The study was carried out in two selected hospitals in southwest, Nigeria: University College Hospital, Ibadan and Lagos State University Teaching Hospital. The purposive sampling technique was adopted for the selection of 126 patients accessible during data collection who met the inclusion criteria to assess early post-operative self-care abilities of patients with abdominal surgery within 24-48 hours post-surgery due to the manageable size of surgical patients in the study setting. All patients who met the inclusion criteria and are accessible during data collection constituted the sample for the study.

The instrument for Data Collection: A structured checklist was used for data collection, same was adapted from the 54-items of Lorenson's Self-Care Capability scale (LSC), the 43-item of the Exercise of Self-Care Agency scale (ESA) and by reviewing the literature of similar studies and clinical practice guidelines. In addition, data were retrieved from the patients' surgery notes and the patient was assessed on the selected variables.

Procedure for Data Collection: The checklist was administered by the Researcher and five research assistants. The research assistants were trained on data collection. The checklist was prepared in English Language and was used on respondents by the researcher and research assistant through direct observation as they are met in bed for four weeks. An approval from the Institutional Ethical review board of UCH and LASUTH was sought. Informed consent was taken from the patient. Data was collected from the 24th-hour post-surgery based on the availability of study participants on daily basis within one month.

Data analysis: Data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) version 24. Data were analyzed using descriptive statistics, frequency count, and standard deviation. Multiple regression analysis and Pearson Correlation were used to test the influence and significance of the selected clinical variables on early postoperative self-care ability.

IV. Results

The result of the analysis of the demographic variables of the study based on gender showed that 82 (65.1%) of respondents were female; 94 (74.6%) were married; 43 (34.1%) were between the ages of 25-34; 61 (48.4%) were self-employed; 74 (58.7%) had tertiary education. The self-care ability of patients with abdominal surgery postoperatively within 24- 48hours has a weighted percentage of 59.3%. It could then be said that patients have moderate self-care ability with abdominal surgery postoperatively within 24-48hours.

The results in Table 3 revealed the strength of causation of the predictor variables (postoperative analgesia administration and type of analgesia) on the criterion variable (early postoperative self-care ability within 24-48hours). It was found that the postoperative analgesia administration ($\beta = .154$; $t = 1.749$; $p = .083$) and type of analgesia ($\beta = -.148$; $t = -1.680$; $p = .096$) did not predict early postoperative self-care ability within 24-48hours. Furthermore, early postoperative self-care ability within 24-48hours yielded a coefficient of multiple regression (R) of 0.368 and a multiple correlation square of 0.135. This shows that 2.8% of the total

variance in the early postoperative self-care ability within 24-48hours is accounted for by postoperative analgesia administration and type of analgesia. The Table also indicates that the analysis of variance of the multiple regression data produced an F-ratio value significant at 0.00 level ($F_{(2,123)} = 2.811$; $P = .064$). Therefore, the hypothesis that stated no significant influence of postoperative analgesia administration and type of analgesia on early postoperative self-care ability within 24-48hours was retained.

The results in Table 4 revealed a significant relationship between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery ($r = .717$; $p = .000 < .05$). The hypothesis which stated that "There is no significant relationship between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery" is hereby rejected by this finding. This implies that a significant relationship exists between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery.

Table 1: Respondents' Socio-demographic characteristics

	Variables (N =126)	Frequency	%
Gender	Male	44	34.9
	Female	82	65.1
	Total	126	100.0
Age (years)	18-24	15	11.9
	25-34	43	34.1
	35-44	39	31.0
	45-54	9	7.1
	55-64	9	7.1
	65-74	6	4.8
	75-80	5	4.0
	Total	126	100.0
Education Level	Tertiary	74	58.7
	Secondary	43	34.1
	Primary	9	7.1
	Total	126	100.0

Table 2: The self-care ability of patients with abdominal surgery postoperatively within 24 -48hours

Items	No (%)	Moderate (%)	Fully (%)
Self-care knowledge			
Interested in learning about self-care needs	4 (3.2)	53 (42.1)	69 (54.8)
Understand own self-care needs	4 (3.2)	65 (51.6)	57 (45.2)
Possess energy to care for self	6 (4.8)	83 (65.9)	37 (29.4)
Seek information to care for self	8 (6.4)	59 (46.8)	59 (46.8)
Understand the importance of early mobilization	9 (7.1)	60 (47.6)	57 (45.2)
Understand the purpose of the medications given	11 (8.7)	66 (52.4)	49 (38.9)
Self-care mobilization			
Alert	-	23 (18.3)	103 (81.7)
Flexes joints occasionally	-	17 (13.5)	109 (86.5)
Moves in bed	2 (1.6)	16 (12.7)	108 (85.7)
Sit upright in bed	10 (7.9)	22 (17.5)	94 (74.6)
Turn self in bed.	11 (8.7)	17 (13.5)	98 (77.8)
Sit on chair by bed-side	17 (13.5)	25 (19.8)	84 (66.7)
Walk 2-6 feet around the bed/ward	24 (19.0)	34 (27.0)	68 (54.0)
Get items from the bedside drawer	15 (11.9)	25 (19.8)	86 (68.3)
Activities of daily living			

Bathe self	27 (21.4)	78 (61.9)	21 (16.7)
Observe oral hygiene	11 (8.7)	48 (38.1)	67 (53.2)
Comb hair, dress or undress self	13 (10.3)	62 (49.2)	51 (40.5)
Tidy up bed and environment	17 (13.5)	77 (61.1)	32 (25.4)
Care about operation site	15 (11.9)	76 (60.3)	35 (27.8)
Observe deep breathing exercise	4 (3.2)	35 (27.8)	87 (69.0)
Maintain proper posture for good respiration	4 (3.2)	24 (19.0)	98 (77.8)
Other universal self-care activities			
Relate well with family members, nurses and other healthcare staff	4 (3.2)	19 (15.1)	103 (81.7)
Use telephone	6 (4.8)	25 (19.8)	95 (75.4)
Get help when needed	-	21 (16.7)	105 (83.3)
Report or complaints, abdominal pain or any abnormality to the nurses or doctors	2 (1.6)	27 (21.4)	97 (77.0)
Weighted percentage score (%) = 59.3			

Table 3: Model Summary of the Regression Analysis for postoperative analgesia administration, type of analgesia on early postoperative self-care ability within 24-48hours

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	39.361	4.442		8.861	.000
Type of analgesia given	1.447	.827	.154	1.749	.083
2nd or 3rd does of analgesia	-5.541	3.299	-.148	-1.680	.096
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	562.004	2	281.002	2.811	.064 ^b
Residual	12294.607	123	99.956		
Total	12856.611	125			

R² = .209, R² = .044, Adj. R² = .028; SE 9.998

a. Dependent Variable: Self-care ability

b. Predictors: (Constant), Has had 2nd or 3rd does of analgesia, Type of analgesia given

Table 4: Relationship between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery

		Self-care education	Self-care ability
Self-care education	Pearson Correlation	1	.717**
	Sig. (2-tailed)		.000
	N	126	126
Self-care ability	Pearson Correlation	.717**	1
	Sig. (2-tailed)	.000	
	N	126	126

** . Correlation is significant at the 0.01 level (2-tailed).

V. Discussion

The self-care ability of patients with abdominal surgery postoperatively within 24-48hours has a weighted percentage of 59.3%. It could then be said that patients have moderate self-care ability with abdominal surgery postoperatively within 24-48hours. This is somehow similar to study ¹¹ which shows that there is a low-medium tendency for patients to engage in self-care activities within the first 24-48 hours post major abdominal surgery. In contrary to this, another study ⁹ showed that a higher percentage of the study participants demonstrated a high level of self-care ability while the low-level self-care ability seen in the lower percentage of participants had a statistically significant relationship with the more advanced age of participants. This implies that special consideration needs to be given to the self-care activities of the surgical patients based on the nurses' self-care ability assessment and to determine the type of care to give to the patient; whether assisted,

partially assisted, or unassisted, while special consideration is given to the self-care activities of the elderly surgical patients.

The findings from the study revealed no significant influence of postoperative analgesia administration and type of analgesia on early postoperative self-care ability within 24-48hours. Contrary to the above findings from the study, a study contributed that postoperative pain when not adequately controlled may affect self-care ability, affect the early mobilization of the surgical patient, increase the risk of postoperative complications, and might prolong the length of hospital stay.¹² Also, most participants involved in our study had combined analgesic administered with good effect as against a trial conducted on the effect of intrathecal morphine prescribed as a single dose of quality improvement from the perspective of both the patients and the healthcare providers.¹³ However, postoperative pain must be controlled to the minimum by the administration of an analgesic to avoid more stress for the patients with reduced self-care ability. The result of this study also revealed a significant relationship between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery. This finding was supported in a study that revealed that the patient's knowledge about self-monitoring, correct medication, reasonable diet, and proper exercise, along with their self-care abilities was significantly improved after the implementation of transitional care (all $P < 0.05$).¹⁴ Another study showed that the scores in self-care skills, self-concept, self-care responsibility, and health knowledge and total ESCA scores in the observation group were significantly higher than those in the control group, confirming that the continuing care intervention could effectively improve patients' self-care ability and reduce the occurrence of negative emotion, depression, and complications.¹⁵ This was also supported by the findings of a study where participants were able to identify several factors which had facilitated the initiation of their self-care activities. These include having accurate advice/information to inform decision making; having encouragement from treating healthcare professionals; having the right attitude and outlook; and having the motivation to initiate self-care. It was concluded that the identified factors which facilitated or hindered participants in adopting self-care activities have important implications for the provision of self-care advice by treating health care workers, and the delivery of self-care services more widely.¹⁶ Lastly, it was exerted that colostomates should be educated preoperatively and postoperatively periodically in the hospital setting as this will help the patients to be familiar with their self-care needs and improve their quality of life.

VI. Conclusion

The study concluded that patients with abdominal surgery had a moderate self-care ability postoperatively within 24-48hours and a relationship exists between selected clinical variables and early self-care ability postoperatively. The postoperative analgesia administration and type of analgesia did not predict early postoperative self-care ability within 24-48hours; the results revealed a significant relationship between preoperative self-care education and respondents' self-care abilities within 24-48 hours post abdominal surgery.

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