

Factors Associated with Mobilisation in Post-Operative Laparotomy Patients at Urip Sumoharjo Hospital Bandar Lampung in 2025

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ABSTRACT

Background & Objective: The World Health Organisation (WHO) recorded 98 million laparotomy cases in 2022, while Lampung Province had the seventh highest number of laparotomy cases in 2020, accounting for approximately 21.7% of the total number of operations. Urip Sumoharjo Hospital (2024) recorded 3,307 surgical procedures performed throughout 2024, with 630 of them being laparotomy surgeries. However, approximately 35% of post-operative patients did not undergo early mobilisation. This study aims to determine the factors associated with mobilisation in post-laparotomy patients at Urip Sumoharjo Hospital in Bandar Lampung in 2025. **Method:** The type of research was quantitative with a quantitative design using a cross-sectional approach. Total sampling was used, resulting in 50 respondents. The research was conducted at Urip Sumoharjo Hospital for one month from 2 October to 2 November. The collected data were analysed statistically using the gamma test to examine the relationship between variables. **Result:** The results of the study indicate a significant relationship between family support, knowledge, motivation (p-value <0.001 (< 0.05) and mobilisation implementation. **Conclusion:** It can therefore be concluded that family support, knowledge and motivation play an important role in the successful mobilisation of patients. Patients are expected to broaden their understanding of the benefits of mobilisation and maintain high self-motivation in order to routinely increase the frequency of independent movement. In addition, active family involvement is essential as the main support in accompanying patients through the stages recommended by health workers to achieve optimal physical recovery.



Introduction

Laparotomy is a major surgical procedure that involves an incision through the layers of the abdominal wall to access abdominal organs experiencing pathological conditions such as hemorrhage, perforation, cancer, and obstruction. This procedure is commonly performed in cases of perforated appendicitis, inguinal hernia, gastric cancer, colon and rectal cancer, intestinal obstruction, chronic intestinal inflammation, cholecystitis, and peritonitis (Syamsudin & Kadir, 2021).

The World Health Organization (WHO) reported that the number of patients undergoing laparotomy procedures worldwide continues to increase annually, with an estimated prevalence increase of approximately 10%. In 2017, laparotomy surgical cases reached approximately 90 million patients, and in 2018 this number increased to about 98 million patients undergoing laparotomy procedures in hospitals worldwide (WHO, 2022). According to reports from the Indonesian Ministry of Health (Kemenkes RI, 2019), the most prevalent diseases were diarrhea, followed by pneumonia and typhoid fever. Interestingly, although not ranked at the top, surgical procedures remain among the top 10 of 50 disease categories treated in Indonesian hospitals, accounting for approximately 12.8%, with an estimated 32% of these cases being laparotomy surgeries (Krismanto & Jenie, 2021). Approximately 25–30% of post-laparotomy patients in Indonesia still experience immobilization, while international studies report delayed mobilization rates of up to approximately 48% (Kemenkes RI, 2021).

Lampung Province is also affected by laparotomy cases. The Health Profile of the Lampung Provincial Health Office in 2020 reported that laparotomy was the seventh most frequently performed surgical procedure, accounting for approximately 21.7% of the total number of surgeries. Bandar Lampung City ranked first in reporting surgical procedures for patient health management. Based on medical record data from Urip Sumoharjo Hospital (2024), a total of 3,307 surgical procedures were performed throughout 2024, with 630 of these being laparotomy surgeries. However, approximately 35% of post-laparotomy patients did not perform early mobilization optimally, which may increase the risk of postoperative complications, delay the healing process, and prolong the length of hospital stay (Urip Sumoharjo Hospital, 2024).

Early mobilization is a physical activity performed within the first 24 hours after surgery and has been proven effective in preventing complications (Briliant & Murhan, 2024). Mobilization in post-laparotomy patients is a crucial step in the recovery process, as it accelerates wound healing, improves respiratory system function, prevents complications such as pneumonia and deep vein thrombosis, and promotes overall physical recovery. However, not all patients are able or willing to perform mobilization due to various influencing factors (Appleby & Cowdell, 2021). Failure to perform mobilization can lead to respiratory complications such as atelectasis and pneumonia due to decreased lung ventilation during prolonged bed rest (Smeltzer & Bare, 2020). In addition, it may increase the risk of deep vein thrombosis (DVT) and pulmonary embolism (Potter & Perry, 2021). In the digestive system, delayed mobilization can cause constipation, abdominal distension, and paralytic ileus due to decreased intestinal activity when patients remain inactive (Nursalam, 2020). Other

impacts include muscle atrophy, joint stiffness, and loss of muscle mass, which reduce patient independence (Damayanti & Setiawan, 2021). Therefore, early mobilization is highly recommended to prevent complications and accelerate recovery.

Several factors influence patients' ability and willingness to perform mobilization, including knowledge level, family support, and motivation (Briliant & Murhan, 2024). Patients with higher levels of knowledge tend to have better awareness of the recovery process and the risks of complications. In addition, health education for families plays an important role in increasing support during the mobilization process (Appleby & Cowdell, 2021). This indicates that knowledge plays a vital role in shaping awareness of the importance of post-operative mobilization.

Family support is also an important aspect influencing the success of mobilization. Families can provide emotional encouragement, physical assistance, and ensure patient adherence to healthcare providers' recommendations. Lack of family support may cause patients to feel fearful, hesitant, or lacking confidence to begin mobilization after surgery. Fadlilah et al. (2021a) found a relationship between family support and the level of mobilization among post-laparotomy patients. Similar findings were reported by Tazreean et al. (2022), who found that patients with good family support had a greater likelihood of performing optimal early mobilization. Emotional and physical support from family members helps increase patient confidence and reduce fear when moving after surgery.

In addition, patient motivation greatly influences willingness to participate in mobilization. High motivation encourages patients to be more enthusiastic, tolerate discomfort, and take the initiative to perform light activities earlier after surgery. Conversely, low motivation can delay the recovery process and increase the risk of complications. Sari et al. (2021) stated that high motivation plays an important role in encouraging patients to remain active despite being in the post-operative condition.

Data on the number of laparotomy patients at Urip Sumoharjo Hospital during the period January–July 2025 showed approximately 315 patients, with an average of 50 patients per month. A pre-survey conducted by the researcher at Urip Sumoharjo Hospital on July 28, 2025, involving 10 post-laparotomy patients, revealed that six patients had limited knowledge regarding the importance of early mobilization and did not receive adequate family support or encouragement. As a result, they were reluctant to get out of bed and perform light activities after surgery. These patients also reported fear of wound dehiscence and lack of confidence in moving. Most patients experiencing barriers had lower to middle educational backgrounds, which was suspected to affect their understanding of the importance of post-operative mobilization. Meanwhile, the remaining four patients who had adequate knowledge, good motivation, and strong family support appeared more active and were able to perform mobilization according to healthcare providers' recommendations. Based on the above description, the researcher is interested in conducting a study entitled "Factors Associated with Mobilization Among Post-Laparotomy Patients at Urip Sumoharjo Hospital, Bandar Lampung, in 2025."

Objective

To identify the factors associated with mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, in 2025.

Method

This study employed a quantitative research method with an analytical research design using a cross-sectional approach. The study was conducted at Urip Sumoharjo Hospital, Bandar Lampung, from October 2 to November 2, 2025. The study subjects were post-laparotomy patients. The independent variables in this study included knowledge, motivation, and family support, while the dependent variable was mobilization among post-laparotomy patients. The sampling technique used was total sampling, in which the entire study population of 50 patients who met the inclusion criteria was included. The research instruments used were questionnaires and observation sheets.

Results

Characteristics of Respondents Based on Age, Gender, Education, and Occupation Among Post-Laparotomy Patients

TABLE 1. Characteristics of Respondents Based on Age, Gender, Education, and Occupation Among Post-Laparotomy Patients

	Category	Frequency	Percentage (%)
Age	10-30 tahun	10	20,0
	31-60 tahun	35	70,0
	>60 tahun	5	10,0
Gender	Laki-laki	26	52,0
	Perempuan	24	48,0
Education Level	SD	15	30,0
	SMP	7	14,0
	SMA	16	32,0
	Perguruan Tinggi	12	24,0
Occupation	Buruh	8	16,0
	PNS	15	30,0
	Swasta	14	28,0
	Tidak bekerja/IRT	4	8,0
	Wiraswasta	9	18,0

Table 1, shows that the majority of respondents were in the 31–60 years age group, totaling 35 respondents (70.0%). Meanwhile, respondents aged 10–30 years accounted for 10 respondents (20.0%), and those aged over 60 years accounted for 5 respondents (10.0%). This indicates that most post-laparotomy patients were in the productive age group. The study involved more male respondents, with 26 respondents (52.0%), compared to 24 female respondents (48.0%). This finding indicates that male patients slightly outnumbered female patients undergoing laparotomy surgery. The highest level of education among respondents was senior high school, with 16 respondents (32.0%), followed by elementary school with 15 respondents (30.0%), junior high school with 7 respondents (14.0%), and higher education with 12 respondents (24.0%). This illustrates that the majority of respondents had a secondary level of education. Most respondents worked as civil servants, totaling 15 respondents (30.0%), followed by private-sector employees with 14 respondents (28.0%), self-employed individuals with 9 respondents (18.0%), laborers with 8 respondents (16.0%), and unemployed/housewives with 4 respondents (8.0%). This indicates that the majority of respondents had stable employment.

Frequency Distribution of Respondents Based on Knowledge Among Post-Laparotomy Patients

TABEL 2. Frequency Distribution of Respondents Based on Knowledge Among Post-Laparotomy Patients

Knowledge	Frequency	Percentage (%)
Good	13	26,0
Fair	22	44,0
Poor	15	30,0
Total	50	100,0

Table 2 shows that the majority of respondents had a moderate level of knowledge, with 22 respondents (44.0%). Meanwhile, 13 respondents (26.0%) had good knowledge, and 15 respondents (30.0%) had poor knowledge. This finding indicates that most patients had a sufficient level of knowledge regarding post-operative mobilization after laparotomy surgery.

Frequency Distribution of Respondents Based on Motivation Among Post-Laparotomy Patients

TABEL 3. Frequency Distribution of Respondents Based on Motivation Among Post-Laparotomy Patients

Motivation	Frequency	Percentage (%)
High	11	22,0
Moderate	26	52,0
Low	13	26,0
Total	50	100,0

Table 3 shows that the majority of respondents had a moderate level of motivation, with 26 respondents (52.0%). This was followed by high motivation in 11 respondents (22.0%) and low motivation in 13 respondents (26.0%). These findings indicate that most patients had a moderate level of motivation in performing post-operative mobilization after laparotomy surgery.

Frequency Distribution of Respondents Based on Family Support Among Post-Laparotomy Patients

TABEL 4. Frequency Distribution of Respondents Based on Family Support Among Post-Laparotomy Patients

Family Support	Frequency	Percentage (%)
High	14	28,0
Moderate	17	34,0
Low	19	38,0
Total	50	100,0

Table 4 shows that the majority of respondents had a moderate level of family support, totaling 17 respondents (34.0%). This was followed by high family support in 14 respondents (28.0%) and low family support in 19 respondents (38.0%). These findings illustrate that most patients received family support at a moderate level.

The Relationship Between Knowledge Factors and Mobilization Among Post-Laparotomy Patients

TABEL 5. The Relationship Between Knowledge Factors and Mobilization Among Post-Laparotomy Patients

Knowledge	Mobilization						Number		P-value	Correlation coefficient
	High		Moderate		Low					
	N	%	N	%	N	%	N	%		
High	7	53,8	5	38.5	1	7.7	13	100	<0,001	-0.922
Moderate	3	13.6	16	72.7	3	13.7	22	100		
Low	1	13.6	5	33.3	9	60.0	15	100		
Total	11	22	26	52	13	26	50	100		

The results of the analysis using the Gamma test showed a p-value of < 0.001 ($p < 0.05$), indicating that there was a strong and statistically significant relationship between knowledge and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung. The correlation coefficient value of -0.922 indicates a very strong relationship between the two variables, with a negative direction, suggesting that lower levels of knowledge are associated with lower levels of mobilization. Conversely, higher levels of patient knowledge are associated with better post-operative mobilization performance.

Results of Bivariate Analysis on the Relationship Between Motivation and Mobilization Among Post-Laparotomy Patients

TABEL 6. Results of Bivariate Analysis on the Relationship Between Motivation and Mobilization Among Post-Laparotomy Patients

Motivation	Mobilization						Number		P-value	Correlation coefficient
	High		Moderate		Low					
	N	%	N	%	N	%	N	%		
High	8	57,1	5	35.7	1	7.2	14	100	<0,001	-0.982
Moderate	2	11.8	13	76.4	2	11.8	17	100		
Low	1	5.3	8	42.1	10	52.6	19	100		
Total	11	22	26	52	13	26	50	100		

The results of the analysis using the Gamma test showed a p-value of < 0.001 ($p < 0.05$), indicating a very strong and statistically significant relationship between motivation and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung. The correlation coefficient value of -0.982 indicates a very strong relationship between the two variables, with a negative direction, suggesting that lower levels of patient motivation are associated with lower levels of mobilization. Conversely, higher levels of motivation are associated with better post-operative mobilization performance.

Results of Bivariate Analysis on the Relationship Between Family Support and Mobilization Among Post-Laparotomy Patients

TABEL 7. Results of Bivariate Analysis on the Relationship Between Family Support and Mobilization Among Post-Laparotomy Patients

Family Support	Mobilization						Number		P-value	Correlation coefficient
	High		Moderate		Low					
	N	%	N	%	N	%	N	%		
High	8	57,1	5	35.7	1	7.2	14	100	<0,001	-0.980
Moderate	2	11.8	13	76.4	2	11.8	17	100		
Low	1	5.3	8	42.1	10	52.6	19	100		
Total	11	22	26	52	13	26	50	100		

The results of the analysis using the Gamma test showed a p-value of < 0.001 ($p < 0.05$), indicating a very strong and statistically significant relationship between family support and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung. The correlation coefficient value of -0.980 indicates a very strong relationship between the two variables, with a negative direction, suggesting that lower levels of family support received by patients are associated with lower levels of mobilization.

Discussion

Knowledge

The results of the study showed that the majority of respondents had a knowledge level in the moderate category, accounting for 44.0%. This finding indicates that patients' knowledge regarding postoperative care was at a moderate level, meaning that patients understood several aspects of care but had not yet fully mastered all the information required before or after surgical procedures.

These results are consistent with the findings of Wafa (2023), who reported that most patients had a moderate level of knowledge, with 24 patients (50%) falling into this category. The availability and quality of preoperative education were identified as important factors influencing patients' knowledge levels. Studies examining preoperative education practices among healthcare providers have found variations in the delivery of patient education; some healthcare workers provide structured preoperative education, while others apply less consistent practices, which may affect patients' understanding. These findings are in line with the study by Bazezewe et al. (2023), which demonstrated differences in nurses' abilities to deliver preoperative education, leading to variations in patients' knowledge levels (Bazezewe et al., 2023).

Limited information received by patients may also result from inappropriate timing of educational delivery and communication methods that are not aligned with patients' literacy levels. Reviews of preoperative education have reported that educational methods, timing, and content influence how well patients receive and retain medical information related to surgical procedures. Educational interventions delivered too close to the time of surgery or using communication approaches that do not match patients' needs tend to result in suboptimal understanding (Darville-Beneby et al., 2023).

The researcher assumes that the moderate level of patient knowledge observed in this study may be attributed to inconsistencies in the delivery of preoperative education. The researcher considers that communication strategies, timing of education, and the suitability of educational materials to patients' abilities significantly influence their level of understanding.

Motivation

The results of the study showed that the majority of respondents had a moderate level of motivation, accounting for 52.0%. This condition indicates that patients had sufficient encouragement to participate in the recovery process, although their motivation had not yet reached an optimal level. This finding differs from the study by Wafa (2023), which reported that patients' motivation to perform early mobilization was predominantly in the high category.

Patient motivation is closely related to the quality of communication and support provided by healthcare professionals. A study by Azarabadi et al. (2024)

demonstrated that effective, empathetic, and informative communication between nurses and patients increases patients' self-confidence and participation in the care process. Patients who receive clear information tailored to their level of understanding tend to be more motivated to follow mobilization programs and wound care instructions.

Psychological aspects, such as anxiety related to pain or potential complications, may also reduce motivation. Niyonkuru et al. (2025) explained that effective pain management increases patients' readiness to move and accelerates the recovery process. Based on these findings, the moderate level of motivation observed in most respondents reflects the need for enhanced educational interventions and psychosocial support to strengthen patients' motivation to actively participate in post-operative care.

The researcher assumes that the moderate level of motivation among most respondents indicates the need to strengthen educational strategies and psychosocial support from healthcare providers. The researcher believes that patient motivation can be improved through more structured information delivery and effective pain management, thereby enabling a more optimal recovery process.

Family Support

The results of the study showed that the majority of respondents received a low level of family support, accounting for 38.0%. This condition indicates that most families played a limited role in providing attention and assistance to patients or had not yet provided optimal support. This finding contrasts with the results of Fadlilah et al. (2021), who found that 19 out of 30 patients received adequate family support. Similarly, Putri et al. (2023) reported that nearly half of their respondents—32 respondents (48%)—received good family support and experienced mild anxiety.

The level of family involvement in patient care is strongly influenced by the extent to which healthcare facilities actively involve families in education and post-operative care processes. Musters et al. (2023) explained that the active involvement of family members in post-operative patient care enhances families' ability to provide both practical and emotional support. Pre-discharge education and effective communication from healthcare professionals play an important role in increasing family participation throughout the recovery process. These findings are consistent with Blöndal et al. (2022), who emphasized that clear information regarding surgical procedures and post-operative care strengthens families' confidence in accompanying and supporting patients.

The quality of family support is also determined by families' emotional readiness and available resources. Hladkowicz et al. (2022) stated that consistent family support plays a major role in the success of care transitions from hospital to home. Based on these findings, the distribution of family support in this study highlights the need to strengthen the role of families in achieving successful post-operative care.

The Relationship Between Knowledge and Mobilization Among Post-Laparotomy Patients

The results of the analysis using the Gamma test showed a $p\text{-value} < 0.001$ ($p < 0.05$). These findings indicate a very strong and statistically significant relationship between the level of knowledge and mobilization among post-laparotomy patients.

The direction of the correlation demonstrates that higher levels of patient knowledge are associated with better mobilization performance in the postoperative period.

This finding is consistent with the study conducted by Wafa (2023), which reported a *p-value* < 0.001 and a correlation coefficient (*r*) of 0.669, indicating a strong relationship between patient knowledge and mobilization following laparotomy surgery. Similarly, a study by Fadhla et al. (2023) supported these results, showing a statistically significant association between knowledge and postoperative mobilization with a *p-value* < 0.001.

Patient knowledge regarding the benefits of early mobilization, correct movement techniques, and the risks of complications due to prolonged bed rest plays a crucial role in the success of postoperative rehabilitation. Ali et al. (2024) found that comprehensive preoperative education increased patient knowledge by 41.7%, reduced anxiety levels by 36.4%, and accelerated patients' ability to stand within the first 24 hours after surgery. Educational interventions delivered through verbal communication, leaflets, and video media were proven to be more effective in improving patient readiness for recovery. This indicates that preoperative educational interventions have a direct impact on early mobilization outcomes.

These findings are further supported by Darville-Beneby et al. (2023), who reported that patients receiving preoperative education demonstrated a 34% higher compliance with mobilization compared to those who did not receive such education. Clear preoperative education was also shown to improve pain control and reduce opioid dependence, thereby increasing patients' confidence to engage in physical activity after surgery. In addition, Bazezew et al. (2023) reported that 72.3% of nurses who provided preoperative patient education had patients with a high level of knowledge regarding postoperative self-care. The ability of healthcare professionals to deliver effective education is a key determinant of successful information transfer and patient readiness for mobilization.

The researcher assumes that the presence of one respondent with a low level of knowledge but good mobilization performance may be influenced by factors other than knowledge, particularly individual characteristics. Based on respondent characteristics, the majority were within the productive age range of 31–60 years and were generally married. These factors may contribute to strong internal motivation and external support, encouraging patients to recover quickly and resume daily activities and work-related responsibilities. Individuals in the productive age group typically exhibit higher motivation to be independent and reduce dependency during the recovery period.

The Relationship Between Motivation and Mobilization in Post-Laparotomy Patients

The results of the analysis using the Gamma test showed a *p-value* of < 0.001 (*p* < 0.05). This finding indicates a very strong and statistically significant relationship between patient motivation and the implementation of mobilization after laparotomy surgery. The positive correlation demonstrates that higher levels of patient motivation are closely associated with improved ability and a greater tendency to perform physical movement following surgical procedures.

These findings are supported by the study of Wafa (2023), which reported that motivation was significantly associated with mobilization in post-laparotomy patients, with a *p-value* of < 0.0001 and a correlation coefficient (*r*) of 0.270. This result indicates a strong relationship between motivation and postoperative mobilization outcomes.

Patient motivation is influenced by both internal and external factors that interact with one another, including therapeutic communication from healthcare providers, pain management, and family support. Studies examining the implementation of Motivational Interviewing have reported that motivational interventions increase patient participation in early mobilization programs within the ERAS (Enhanced Recovery After Surgery) protocol. These studies emphasize that motivational approaches can serve as effective strategies to encourage patients to initiate movement earlier following surgery (Wiesenberger et al., 2024).

Improved pain management is one of the key pillars in maintaining patient motivation to perform mobilization. Reviews and studies related to postoperative pain management have shown that structured pain protocols and combination therapies reduce fear of movement and increase patient comfort during physical activity, thereby contributing to the achievement of mobilization targets (Wang & Zhang, 2024). In post-laparotomy patients, the application of combined analgesic therapies has been shown to reduce opioid consumption by 30% and accelerate early mobilization within the first 24 hours after surgery (Hinther et al., 2021).

Local research conducted at Sultan Agung Islamic Hospital found that 72% of post-laparotomy patients who received motivational education and active family support were able to perform early mobilization in accordance with hospital protocols (Wafa, 2023). These findings highlight that, in addition to clinical and psychological interventions, local context and family involvement play a crucial role in the success of postoperative mobilization.

Contextual factors within the hospital environment, such as mobilization protocol policies and operational barriers, also influence patient motivation and the implementation of mobilization. Qualitative studies and multi-hospital surveys have found that organizational constraints, inadequate team communication, and lack of structural support can hinder mobilization practices, even when patients are highly motivated (Ni et al., 2023).

The researchers assume that motivation plays an important role in the success of patient mobilization following laparotomy surgery. The very strong relationship between these two variables indicates that increased motivation is likely to be followed by improved patient ability to move in accordance with recovery protocols.

The researchers further assume that the presence of one respondent with low motivation but good mobilization performance was influenced by factors beyond internal motivation, particularly individual characteristics and external support. Based on occupational characteristics, the respondent was likely accustomed to engaging in physical activity in daily life. This habitual active work pattern may foster independent behavior and responsiveness to instructions, resulting in mobilization being performed as a routine activity rather than solely driven by motivation to recover.

The Relationship Between Family Support and Mobilization in Post-Laparotomy Patients

The results of the analysis using the Gamma test showed a p-value of < 0.001 ($p < 0.05$). This finding indicates a very strong and statistically significant relationship between family support and mobilization in post-laparotomy patients. The correlation coefficient of -0.980 demonstrates a very strong association between the two variables, with a negative direction, indicating that lower levels of family support are associated

with lower levels of patient mobilization after surgery. These findings suggest that family involvement plays a critical role in supporting postoperative recovery, particularly in encouraging patients to perform early mobilization. Adequate family support can provide emotional reassurance, practical assistance, and motivation, which are essential for patients to overcome fear, pain, and anxiety related to postoperative movement.

This result is in contrast to the findings of Fadilah et al. (2021), who reported that family support was adequate in 19 out of 30 post-surgical patients. Similarly, Putri et al. (2023) found that nearly half of the respondents (48%) received good family support and experienced only mild anxiety levels. Differences in these findings may be influenced by variations in hospital policies, family involvement practices, and patient education regarding postoperative care.

The level of family involvement in patient care is strongly influenced by how healthcare facilities engage families in the education and postoperative care process. Musters et al. (2023) explained that active family involvement in postoperative care enhances the family's ability to provide both practical and emotional support. Pre-discharge education and effective communication from healthcare professionals play a crucial role in increasing family participation throughout the recovery process. This finding is consistent with Blöndal et al. (2022), who emphasized that clear communication regarding surgical procedures and postoperative care strengthens family confidence in assisting patients during recovery.

The quality of family support is also determined by the family's emotional readiness and available resources. Hladkowicz et al. (2022) reported that consistent family support plays a major role in the successful transition of care from hospital to home. Therefore, the distribution of family support levels observed in this study highlights the need to strengthen family involvement to optimize postoperative care outcomes. The researchers assume that limited family support among some respondents may be attributed to insufficient education, limited understanding of postoperative mobilization benefits, or socioeconomic constraints. Strengthening family-centered education and involving family members more actively in postoperative care planning are essential strategies to improve mobilization outcomes in post-laparotomy patients.

Conclusion

Based on the results of the study, the following conclusions can be drawn:

1. The frequency distribution of characteristics of post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, showed that the majority of patients were in the 31–60 years age group, totaling 35 patients (70.0%), indicating that most post-laparotomy patients were of productive age. Male patients accounted for 26 respondents (52.0%), indicating that male patients were more predominant than female patients. The highest level of education among patients was senior high school, with 16 patients (32.0%).
2. The frequency distribution of family support factors among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, showed that out of 50 patients, 19 patients (38.0%) had low levels of family support.
3. The frequency distribution of knowledge factors among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, showed that out of 50 patients, 22 patients (44.0%) had a moderate level of knowledge.

4. The frequency distribution of motivation factors among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, showed that out of 50 patients, 26 patients (52.0%) had a moderate level of motivation.
5. There was a significant relationship between family support and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, with a p-value of < 0.001 ($p < 0.05$).
6. There was a significant relationship between knowledge and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, with a p-value of < 0.001 ($p < 0.05$).
7. There was a significant relationship between motivation and mobilization among post-laparotomy patients at Urip Sumoharjo Hospital, Bandar Lampung, with a p-value of < 0.001 ($p < 0.05$).

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