

Research Article

Self-Care Knowledge and Behaviors of Post-Operative Patients: Basis for Nursing Care Plan

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Abstract:

Global health agencies emphasize that post-operative complications, particularly surgical site infection (SSI), remain major threats to patient safety despite advances in surgical techniques and infection prevention. This study examined self-care knowledge and behaviors of post-operative patients in Level I hospitals in the Rinconada Area of Camarines Sur as a basis for a nursing care plan. Using a descriptive-correlational design, data were gathered from 60 post-operative patients chosen through total enumeration, employing a validated questionnaire that measured demographic profile and extent of self-care practice in terms of knowledge and behavior. Descriptive statistics (frequency, percentage, weighted mean, ranking) and Chi-square tests were utilized to summarize the profile and significant relationship between demographic profile and self-care practice.

Findings showed that majority of the respondents were predominantly middle-aged to older adults, female, married, living farther from the health facility, having undergone emergency operations having and received combined verbal, written, and demonstration instructions. Most are college graduates and come from low to lower-middle income households. Overall, patients were very knowledgeable about self-care (AWM= 3.39) and always practiced recommended behaviors (AWM= 3.53), although relatively lower means were noted in knowledge of proper wound cleaning, recognition of infection signs, and adherence to light exercises. Statistical tests showed no significant link between age, sex, civil status, distance from home to the health care facility, type of operation, type of instruction received and self-care practices at home, but educational attainment and monthly family income were significantly related. Based on identified findings, an instructional pamphlet was proposed to enhance post-operative self-care knowledge and behaviors, providing clear, visual, and step-by-step guidance to reinforce nurse-led education and serve as a basis for strengthening the nursing care plan.

Keywords: Post-Operative Patients, Self-Care Knowledge, Self-Care Behaviors, Nursing Care Plan

1. Introduction

Despite the improvement of surgical technique and methods of infection prevention, post-operative complications, especially surgical site infection (SSI), are still considered a significant threat to patient safety by global health agencies. The World Health Organization (2026) estimates that about 11% of patients in LMICs develop a surgical site infection during or after surgery, underlining the necessity for improved postoperative care and patient education. Patient-centered care, including clear communication about wound care and activity restrictions, is a key to reducing surgical morbidity around the world, says WHO. Likewise, the Centers for Disease Control and Prevention (CDC, 2025) highlights patient involvement as a key factor in preventing healthcare-associated infections. Properly following postoperative instructions, especially when it comes to hygiene and medication compliance, can cut in half the risk of surgical site infection, reports the CDC. All these figures highlight the fact that a highly skilled surgeon in the operating theatre needs to be equally well supported in self-care practices when the patient moves away from their team.

The situation in the Philippines regarding post-operative care is understood within the context of striving for Universal Health Care and the professionalism of nursing practice. The Universal Health Care Act (Republic Act No. 11223) prioritizes a shift to primary and community-based recovery, where patients must be able to take charge of their health outside the tertiary care setting. One of the important phases of the nursing process in the post surgery phase is the provision of health education to patients as required by the Philippine Nursing Act of 2002 (Republic Act No. 9173). However, despite these legal structures, there are issues of continuity of care in the Philippine health care system, especially in rural provinces where follow-up visits may not be feasible for patients. This renders the patient's own self care behaviours as the first line of defence against complications at the local level.

Patient safety has always been given utmost importance in the National Policy on Patient Safety in Health Facilities of the Department of Health (DOH). The DOH (2023) emphasizes the importance of "discharge planning and patient education" as a key measure of quality nursing care. The DOH's recent manual on infection prevention and control emphasizes that prevention of postoperative complications cannot be solely a clinical responsibility, but must involve the patient and his or her family. The emphasis of its current marketing strategy, "Bida Solusyon," and other health promotion campaigns, shows that there is a shift towards health literacy. The Department recognizes, however, that there is a gap between the translation of health information into

actions on the part of patients, especially those who are part of the marginalized sectors. This gap indicates that information alone is not enough nursing care plans need to be personalized to the factors that either help or hinder a patient in completing the desired self-care.

Surgical care has grown at Bicol Medical Center in Camarines Sur, which is now a major referral hospital for complicated surgical cases. It has expanded its bedspace and upgraded its professional services to meet the needs of adult and aged patients for operative management. These institutional developments have led to the higher number of surgical admissions that increases the number of people that need to make a transition from hospital based to home based after surgery.

With the increasing number of surgeries performed for both acute and chronic conditions, a steadily increasing group of post-operative patients can be seen in hospitals. The period days and weeks after the operation are a vulnerable time in which the patient must make the transition from being a patient receiving constant professional care to doing more for himself. During this phase self-care knowledge and behaviours, including how to clean a wound, take medicines properly, move safely, eat well and look for danger signs, are essential to healing and to preventing complications such as infections, slow wound healing, and re-admission. If patients are not sure what to do at home, little things can go wrong that can result in serious issues that may not have occurred if they had been better informed and supported. Local studies have started to provide some answers to the quality of nursing care for surgery and education of patients. Fucio (2023) collected data of staff nurses and clients on the management of postoperative complications in a study and found that overall, the staff nurses and client were satisfied with the management of the postoperative complications by the staff nurses, indicating that the staff nurses were actively preventing the occurrence of the problems. In addition, Felix (2025) reported that structured education of patients preoperatively also improved their understanding of wound care, medication, what activities they can do postoperatively, and the importance of following-up, resulting in better knowledge and readiness for self-care. However, when combined, these studies also suggest that the quality and level of education provided to patients is not equal and that there is an opportunity to improve and standardize the education and follow up provided in the province.

Even with routine post-op self-care instructions, as a clinical instructor, researcher see that many patients have not fully grasped and have inconsistent practice of basic self-care techniques after surgery. This is similar to how they find themselves after their cesarean section overwhelmed with information about wound care, activity restrictions, and signs of trouble while in pain, exhausted, and keeping a newborn. Patients frequently do not know how to clean the wound, symptoms of infection, when to take medications, how to move around, and what to do if follow-up is necessary, and short, technical explanations are often confusing, and their health literacy and support varies.

2. Methodology

2.1 Research Design

The researcher utilized the descriptive-correlational method using a questionnaire checklist as the data-gathering instrument. A descriptive research method is concerned with gathering, classifying, presenting, tabulating, and summarizing the results to describe group characteristics of the data. It focuses on the present condition to find new truth, valuable in providing facts on which scientific judgments may be based. This method also plays a large part in developing instruments to measure many things that are employed in all types of quantitative research (Creswell, 2023).

The descriptive-correlational method was used to determine the respondents' demographic profile and the extent of self-care knowledge and behaviors among post-operative patients in Level I hospitals in the Rinconada Area. The use of correlation determined the degree of relationship between the demographic profile and the extent of self-care knowledge and behaviors.

2.2 Respondents of the Study

The researcher employed the purposive sampling technique to select the respondents for this study, focusing specifically on post-operative patients admitted in Level I hospitals within the Rinconada Area. This method enabled the researcher to intentionally identify respondents based on predetermined criteria, such as having undergone a surgical procedure and currently receiving hospital care or follow-up. Through this approach, the respondents were chosen for their direct experiences relevant to the study, ensuring that their self-care knowledge and behaviors after surgery accurately reflected the study's objectives.

The total enumeration method was utilized to include all eligible post-operative patients from each participating Level I hospital during the data collection period. This ensured that the sample represented the complete population of patients who met the study criteria, providing comprehensive and reliable data on their self-care knowledge and behaviors.

The respondents of the study were the post-cesarean mothers from the Level 1 hospitals in Rinconada. At Sta. Maria Josefa Hospital Foundation, Inc., there were 12 respondents; Catangui Health and Medical Services Corporation Lourdes Hospital had 10; Our Lady of Mediatrix Hospital with 14; Villanueva-Tanchuling Maternity and General Hospital with 11; and the Medical Mission Group Hospital and Health Services Cooperative of Camarines Sur had 13 respondents.

Table 1: Respondents of the Study

HOSPITALS	Respondents
Sta. Maria Josefa Hospital Foundation, Inc.	12

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Catangui Health and Medical Services Corporation Lourdes Hospital	10
Our Lady of Mediatrix Hospital	14
Villanueva-Tanchuling Maternity and General Hospital	11
Medical Mission Group Hospital and Health Services Cooperative of Camarines Sur	13
TOTAL	60

2.3. Data Gathering Tools

The data collection questionnaire was utilized, consisting of a questionnaire checklist as the primary data gathering tool.

Questionnaire. A questionnaire was chosen as the data collection instrument to select a tool for gathering data. In other words, questionnaire is a written instrument designed to elicit information from the subjects. The information collected using a questionnaire is similar to that collected using an interview but tends to be shallower have a profound understanding of their subject matter (Petrat, 2022). The researcher used a questionnaire for the main instrument in collecting the necessary data in conducting this study. This data collection method was selected mainly because the researcher could easily collect all the completed responses quickly. It also helped to gather information from readily available respondents who were willing to give information response promptly. To gather data and information, questionnaires were used to evaluate the areas from the respondents.

Preparation of the questionnaire. During the data collection, the researcher designed a self-made structured survey questionnaire, read through all the relevant literature and studies on self-care knowledge and behaviors among post-operative patients. The instrument was developed so that it fits with the concrete goals of the study and that each item has the ability to measure the variables identified.

The questionnaire was split in half. In Part I, the respondents' age, sex, civil status, educational level, monthly family income, distance of respondents to the health care facility and type of operation and instruction were determined. Part II evaluated the level of self-care knowledge and practice of patients at home after surgery. A well-designed rating scale was used for the validity, reliability, and accuracy of data gathered, and indicators were relevant to the areas of concern and were comprehensive in examining the self-care knowledge and behaviors of the respondents.

Validation of the questionnaire. A complete validation process was completed for the questionnaire that was designed in this study for face and content validity. According to Ranganathan (2024), face validity in this study indicated that the questionnaire on the surface measured what was intended to be measured and content validity ensured that the instrument covered the essential aspects related to self-care knowledge and behaviors of the post-operative patients as a basis for a nursing care plan.

The questionnaire and research questions were shown to the adviser for expert evaluation during the validation process. The adviser carefully checked the appropriateness, relevance and adequacy of the items to ensure that they were consistent with the objectives and conceptual framework of the study. The questionnaire was designed in a four-point Likert scale based on the adviser's recommendations, to aid in the interpretation and clarity of responses. Following the incorporation of expert feedback, a pilot test was performed with 10 patients who had undergone surgery but were not part of the sample group. The pilot test evaluated items comprehensibility, the order of the items and the flow of the questions, the understanding of the terminologies and the general acceptance of the instrument by the respondents. Ambiguous, redundant and unclear items were adjusted accordingly. The internal consistency of the questionnaire was then assessed by Cronbach's Alpha and the alpha coefficient was 0.90, which meant that the instrument had excellent internal consistency for self-care knowledge and behaviors.

In this way, the final questionnaire was deemed valid, reliable and appropriate for the measurement of self-care knowledge and self-care behaviors of the post-operative patients in the hospitals of level I of the Rinconada Area.

Administration and retrieval of the questionnaire. The questionnaires were distributed and returned via a well-designed process to ensure systematic and accurate data collection. Respondents were approached in a respectful way with regard to the ethical standards and maintaining participants' autonomy and informed consent of the post-operative patients. The researcher coordinated with the nursing staff and the hospital administration of each participating hospital of the Rinconada Area, prior to distribution, to schedule appropriate times to administer the questionnaire, without interfering with patients' rest, care and recovery routines.

The questionnaires were printed and distributed/retrieved in a manual manner. This enabled respondents to fill out the instrument either at their hospital or follow up visit, thus reducing the inconvenience and improving the accuracy of their response. The paper-based questionnaires preserved anonymity and confidentiality to enable the respondents to give honest and thoughtful responses to the questions on their knowledge and self-care practices. Completed questionnaires were picked up personally by the researcher at the agreed time. All questionnaires were thoroughly reviewed before being recorded to ensure accurate, complete and legible data. The responses were then manually entered into a secure database with two entries for each to reduce data entry error and ensure accuracy and integrity of the data set for subsequent analysis.

3. Results and Discussion

3.1. Demographic Profile

a. Age. Age is an indicator of the developmental level and physiological strength of post-operative patients, which can impact their understanding of health information and their capacity to perform health-related behaviors. Table 2 presents the age

distribution of the post-operative patient respondents. Out of 60 respondents, 33 or 55% were 38 years old and above, followed by 10 or 16.67% aged 34–37 years old. Smaller proportions were observed among those aged less than 25 years old, with eight or 13.33%, those aged 30–33 years old, with seven or 11.67%, and those aged 26–29 years old, with only two or 3.33%. The data showed that the respondents belonged to the 38 years old and above group, indicating that the majority of post-operative patients were middle-aged to older adults.

The post-operative patients were predominantly middle-aged and older adults, with relatively few younger patients undergoing surgery. This age trend suggests that there is a need to adapt the self-care education and nursing care plans to the needs, learning styles and likely comorbidities of the different age groups.

The older adult population in post-operative care situations indicates an important interplay between age and self-care skills. The study by Cao et al., (2025) is a cross-sectional study conducted in Vietnam on 200 postoperative colorectal cancer patients receiving adjuvant chemotherapy, and the mean age is 57.8 years, which indicates that age is a significant factor impacting self-care practices, with older patients potentially needing more tailored education and support to ensure effective self-care behaviors following surgery. In a similar vein, Liang et al., (2026) pointed out that even though the older individuals may want to participate in self-care, the behaviors they do may be influenced by physical limitations associated with aging, or the complexity of post-surgical instructions.

b. Sex. Sex reflects biological and sociocultural differences that may influence post-operative patients' health behaviors, perceptions of self-care, and responsiveness to nursing interventions, thereby affecting recovery outcomes and care planning. The data presented in Table 2 provides the sex distribution of post-operative. Out of 60 respondents, the majority are female, comprising 34 or 56.67% of the total population. Males account for the remaining 26 or 43.33%. The predominance of female patients may reflect underlying patterns in healthcare-seeking behavior and surgical service utilization.

The results indicate that female patients slightly outnumbered male patients among post-operative cases. This predominance of women may suggest differences in health-seeking behavior, surgical case types, or disease patterns between sexes, and highlights the need to consider gender-related preferences, roles, and support systems when designing post-operative self-care teaching and nursing care plans.

The sex composition of surgical patients is a significant in determining post-operative self-care knowledge and behavioral adherence. Petrie et al., (2022) observed that female patients often demonstrate higher levels of health-seeking behavior and a greater tendency to follow detailed self-care instructions compared to their male counterparts. Likewise, Llubes-Arrià et al. (2026) highlighted that while females may have higher theoretical knowledge, they often face higher levels of post-operative anxiety, which can sometimes interfere with the practical application of self-care behaviors.

c. Civil Status. Civil Status reflects the immediate support system and home environment of post-operative patients, which can influence their capacity to learn and engage in essential self-care behaviors during recovery. The data presented in Table 2 provides the distribution of the respondents' civil status. Out of 60 respondents, the majority were married (37 or 61.67%). This was followed by single respondents (13 or 21.67%), while those who were separated comprised eight or 13.33%. The smallest group consisted of widowed (two or 3.33%). This distribution indicated that more than half of the respondents likely had a domestic partner who could assist in the recovery process.

The predominance of married respondents suggests that many post-operative patients had a spouse or domestic partner who could provide assistance and emotional support during recovery. This may positively influence adherence to self-care instructions, while single, separated, or widowed patients might require more structured nursing support and discharge planning.

The marital status and living arrangements of the patients significantly influenced their adherence to post-surgical recovery protocols and self-management efficacy. Recent studies emphasized that social support, particularly from a spouse, acted as a primary determinant of health behavior compliance. Shen et al. (2025) found that married patients or those with strong cohabitating support systems demonstrated higher consistency in wound care and medication adherence compared to those living alone. Furthermore, Ngo et al. (2023) noted that while single or widowed patients possessed adequate theoretical knowledge of self-care, their actual behavior was often hindered by the lack of a "care partner" to reinforce routine tasks and monitor for complications.

d. Educational Attainment. Educational attainment represents the level of formal education achieved by post-operative patients, which can influence their understanding of health information, adherence to self-care practices, and ability to follow nursing instructions during recovery. The data presented in Table 2 provided the educational background of the post-operative patients. Out of the 60 respondents, the largest group consisted of college graduates (17 or 28.33%). This was closely followed by high school graduates (16 or 26.67%) and high school undergraduates (12 or 20%). Other respondents included college undergraduates (five or 8.33 percent), while elementary undergraduates and elementary graduates both with four or 6.67% each. The remaining respondents were distributed between vocational courses and no educational attainment, one or 1.67% each. This distribution indicates that most post-operative patients have at least completed secondary education, with a substantial proportion having attained tertiary education.

The findings suggest that most post-operative patients had at least a secondary education, and many completed college, which may support better understanding of self-care instructions. However, the presence of patients with low or no formal education highlights the need for nurses to tailor teaching strategies, simplify explanations, and use varied methods to ensure comprehension across all educational levels.

Educational attainment serves as a fundamental determinant of health literacy, which directly impacts a patient's ability to comprehend and execute complex post-operative recovery protocols. Recent research has emphasized that higher academic achievement often correlates with increased self-efficacy in managing health transitions. For instance, Naeini and Rafiee (2025) reported that higher health literacy significantly improved CABG patients' self-care, whereas limited e-health literacy did not predict self-care, highlighting the primacy of basic comprehension. Similarly, Assmann et al. (2023) highlighted that socio-demographic variables, specifically educational attainment, significantly impacted the health-related quality of life following surgery, as higher education often facilitated better access to and understanding of health resources.

e. Monthly Family Income. Monthly family income reflects the financial capacity of post-operative patients, which can influence their access to medications, follow-up care, and ability to sustain recommended self-care practices during recovery. The data presented in Table 2 illustrates the monthly family income distribution of the respondents. Out of the 60 respondents, 26 or 43.33% of the patients belong to the ₱10,001–₱20,000 income bracket. This is followed by those earning below ₱10,000.00 (15 or 25%). The ₱20,001–₱30,000 bracket with nine or 15%, while eight or 13.33% fall within the ₱30,001–₱40,000 range. Only one or 1.67% reported an income above ₱40,000. This distribution shows that most post-operative patients belong to low- to lower-middle-income households, which may limit their access to nutritious food, medications, transportation for follow-up visits, and digital resources, potentially constraining their ability to maintain optimal self-care behaviors and fully adhere to a prescribed nursing care plan without additional financial-sensitive support and counseling.

The results indicate that most post-operative patients came from low- to lower-middle-income families, suggesting possible financial constraints in meeting self-care needs. Limited income may affect their ability to buy medications, access nutritious food, attend follow-up visits, and utilize health information resources, highlighting the need for cost-sensitive nursing interventions and support to promote adequate self-care.

Recent literature indicates that socioeconomic status, including income, is an important determinant of postoperative outcomes and self-care capacity. A study of patients with varicose vein surgery in China reported that sociodemographic profile such as monthly income significantly affected postoperative self-management ability, with those having higher income demonstrating better self-management scores, suggesting that financial resources facilitate adherence to recommended care and follow-up (Li et al., 2026). Prabhakar et al. (2022) likewise found that lower socioeconomic status was associated with less improvement in postoperative sensory outcomes after carpal tunnel release, concluding that socioeconomic considerations are critical in risk stratification and postoperative counseling.

f. Distance from Home to Health Care Facility. Distance from home to the health care facility reflects the level of accessibility patients have to medical services, which can influence their ability to attend follow-up appointments, adhere to post-operative care instructions, and seek timely assistance when complications arise. The data presented in Table 2 illustrated the geographical distribution of the respondents in relation to the nearest healthcare facility. Out of the 60 respondents, the majority resided more than 6km away (36 or 60%). This was followed by the 4-6 km bracket (15 or 25%). Meanwhile, seven or 11.67% respondents lived within 1-3 km, and only two or 3.33% lived less than 1 km from a facility. This distribution indicated that majority post-operative patients resided at considerable distances from the health care facility, which likely made frequent visits for follow-up, wound assessment, and reinforcement of self-care instructions more burdensome in terms of time and transport cost, potentially affecting their consistency in adhering to the recommended post-operative self-care behaviors outlined in the nursing care plan.

The results suggest that most post-operative patients lived relatively far from the health care facility, which may discourage frequent follow-up visits and timely wound assessments. This distance-related burden in terms of time and transportation cost could reduce opportunities for reinforcing instructions, thereby negatively influencing adherence to recommended post-operative self-care behaviors.

Geographical proximity to healthcare providers is a critical determinant of post-operative recovery and the maintenance of health-seeking behaviors. Recent studies have emphasized that long distances often translate to increased travel costs and physical exhaustion, which discourage patients from adhering to their recovery schedules. For instance, Ramadhani et al. (2025) found that surgical patients living more than 5 kilometers from a primary clinic demonstrated a significant decrease in post-operative self-care compliance compared to those in urban centers, primarily due to the "distance decay" effect in healthcare utilization. Similarly, Mseke et al. (2024) highlighted that for patients in rural or remote areas, the lack of immediate access to healthcare professionals often resulted in self-reliance on anecdotal home remedies rather than evidence-based self-care behaviors.

g. Type of Operation. Type of operation reflects the nature and complexity of the surgical procedure undergone by patients, which can influence their level of self-care knowledge, required post-operative behaviors, and the extent of nursing interventions needed for recovery. The data presented in Table 2 illustrated the distribution of the respondents according to the nature of their surgical procedure. Out of 60 post-operative patients, the majority underwent emergency operations, representing 42 or 70%. In contrast, elective surgeries accounted for only 18 or 30%. This pattern indicated that most respondents had unplanned or urgent procedures, which were often associated with more severe clinical conditions, limited time for pre-operative education, and higher levels of stress and uncertainty compared with planned elective operations. As a result, these emergency surgical patients might have entered the post-operative period with less prior information and preparation regarding self-care, thereby increasing their need for

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structured, nurse-led teaching, close monitoring, and follow-up to develop adequate self-care knowledge and behaviors as part of the nursing care plan.

The high incidence of emergency procedures indicates that most patients undergo surgery with minimal pre-operative education. Consequently, post-operative nursing care plans must aggressively compensate for this knowledge deficit through structured, intensive discharge teaching and emotional support, ensuring patients acquire the essential self-care competencies necessary for a safe recovery.

The nature of the surgical admission, whether planned or emergent significantly influenced the patient's readiness and subsequent self-care behaviors. Recent literature has underscored that emergency surgical patients often experience higher levels of anxiety and lower retention of discharge instructions compared to elective patients. A retrospective analysis comparing emergency and elective colorectal surgery reported that emergency colorectal resections had significantly higher overall complications than elective ones, with emergency surgery independently predicting complications due to advanced disease and poorer preoperative status (Negrut et al., 2024). Likewise, Oliveira et al. (2026) emphasized that elective patients were usually healthier and more stable, while emergency patients often required prolonged ventilation, longer ICU stays, and experienced higher mortality.

h. Type of Instruction Received. The type of instruction received reflects the form, content, and delivery of health education provided to post-operative patients, which can influence their understanding, retention of information, and ability to perform appropriate self-care behaviors during recovery. The data presented in Table 2 described the type of instruction received by the 60 post-operative patients. Out of 60 patients, majority (34 or 56.67%) received a combination of verbal, written, and demonstration instructions. Only 20 or 33.33% received verbal instructions alone, while five or 8.33% received written instructions alone. A very small proportion, one or 1.67%, received demonstration only. This distribution indicated that most patients were exposed to multimodal teaching, which typically enhances comprehension and retention by addressing different learning preferences, whereas patients who received only one mode of instruction, especially written instructions or demonstration alone, might have had limited reinforcement and thus required additional nursing support to fully develop adequate self-care knowledge and behaviors for the nursing care plan.

The findings indicate that most post-operative patients received multimodal instructions (verbal, written, and demonstration), which likely supported better understanding and recall of self-care practices. However, a considerable number received only a single form of instruction, particularly verbal alone, suggesting potential gaps in reinforcement. This highlights the importance of consistently using varied teaching methods to strengthen patients' self-care knowledge and behaviors.

The methodology of patient education is a primary factor in the transition from theoretical knowledge to actual self-care behavior. Recent research has emphasized that multimodal instruction, combining visual, auditory, and kinesthetic learning is superior for post-operative recovery. For instance, Wu et al. (2026) noted that surgical patients who received a combination of written guides and return-demonstrations showed significantly higher compliance with wound care protocols than those receiving verbal instructions alone. Furthermore, Zeb et al. (2023) found that patients who received combined verbal, written, and demonstration teaching reported higher perceived therapeutic self-care ability and better adherence to post-operative regimens than those who received only one type of instruction, highlighting the value of integrating multiple teaching methods to reinforce learning.

Table 2: Demographic Profile of the Respondents

Profile	Frequency	Percentage	Rank
Age			
38 y/o and above	33	55.00	1
34-37y/o	10	16.67	2
less than 25y/o	8	13.33	3
30-33y/o	7	11.67	4
26-29 y/o	2	3.33	5
TOTAL	60	100.00	
Sex			
Female	34	56.67	1
Male	26	43.33	2
TOTAL	60	100.00	
Civil Status			
Married	37	61.67	1
Single	13	21.67	2
Separated	8	13.33	3
Widowed	2	3.33	4
TOTAL	60	100.00	
Educational Attainment			

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College Graduate	17	28.33	1
High School Graduate	16	26.67	2
High School Undergraduate	12	20.00	3
College Undergraduate	5	8.33	4
Elementary Undergraduate	4	6.67	5.5
Elementary Graduate	4	6.67	5.5
Vocational Course	1	1.67	7
No educational attainment	1	1.67	7
TOTAL	60	100.00	
Monthly Family Income			
₱10,001-20,000	26	43.33	1
Below ₱10,000.00	15	25.00	2
₱20,001-30,000	9	15.00	3
₱30,001-40,000	8	13.33	4
Above ₱40,000	1	1.67	5
TOTAL	60	100.00	
Distance from Home to Health Care Facility			
More than 6km	36	60.00	1
4-6 km	15	25.00	2
1-3 km	7	11.67	3
Less than 1 km	2	3.33	4
TOTAL	60	100.00	
Type of Operation			
Emergency	42	70.00	1
Elective	18	30.00	2
TOTAL	60	100.00	
Type of Instruction Received			
Combination of the above	34	56.67	1
Verbal instructions	20	33.33	2
Written instructions	5	8.33	3
Demonstration	1	1.67	4
TOTAL	60	100.00	

3.2. Practice self-care at home after Surgery

a. Knowledge. Knowledge reflects the cognitive understanding and acquires health literacy of post-operative patients, which can shape their competence in and adherence to practicing self-care at home after surgery. The data presented in Table 3 showed the level of post-operative patients' self-care along knowledge. With an average weighted mean of 3.39, very knowledgeable. Understanding the importance of regular follow-up visits ranked highest with a weighted mean (WM) of 3.58, very knowledgeable, followed by knowing when to seek medical help if unusual symptoms were felt (WM=3.55, very knowledgeable), and a repeated indicator regarding seeking medical help for unusual symptoms (WM=3.52, very knowledgeable). Conversely, lowest indicators were the knowledge of how to properly clean the surgical wound (WM= 3.23, very knowledgeable), followed by knowing the signs and symptoms of infection (WM, 3.12), both of which were interpreted as knowledgeable. This pattern indicated that patients were most aware of the need for follow-up and medical help but had relatively weaker knowledge about wound care specifics and infection recognition

The results suggest that post-operative patients were generally very knowledgeable about when to return for follow-up and when to seek medical help for unusual symptoms, but less confident in wound-care details and infection recognition. This imbalance implies that nursing education should place stronger emphasis on practical wound-cleaning steps and clear signs of infection, while maintaining reinforcement of existing strengths in follow-up and help-seeking behaviors.

This level of knowledge was supported by recent literature emphasizing the gap between theoretical understanding and practical self-management. Butalid et al. (2023) published a study that identified that patients recovering from surgery are generally highly literate in terms of follow-up care but are very weak when it comes to technical aspects of wound antisepsis, which requires more intensive bedside teaching. Additionally, the NIHR Global Health Research Unit on Global Surgery (2023) noted that patients' capacity to recognise signs of infection is frequently poorly developed, and the use of visual aids and discharge checklists are critical to ensure that moving from general knowledge to effective self-care behavior extends beyond the clinic.

Table 3: Practice self-care at home along Knowledge

Indicators	Weighted Mean	Verbal Interpretation	Rank
I understand the importance of regular follow-up visits.	3.58	Very Knowledgeable	1
I know when to seek medical help if I feel unusual symptoms.	3.55	Very Knowledgeable	2
I know when to seek medical help if I feel unusual symptoms.	3.52	Very Knowledgeable	3
I know how to perform self-care routines as instructed by my health provider.	3.50	Very Knowledgeable	4
I understand the purpose of the medicines prescribed to me.	3.48	Very Knowledgeable	5
I know the proper diet to help me recover faster.	3.33	Very Knowledgeable	6.5
I know how to protect my wound from getting wet or infected.	3.33	Very Knowledgeable	6.5
I know what activities I should avoid after surgery	3.27	Very Knowledgeable	8
I know how to properly clean my surgical wound.	3.23	Knowledgeable	9
I know the signs and symptoms of infection.	3.12	Knowledgeable	10
Average Weighted Mean	3.39	Very Knowledgeable	

b. Behavior. Post-operative patients' behavior is a dynamic process of translating the lessons from the surgeons to their everyday lives and is a key determinant of successful recovery and surgical complication avoidance at home. The results of self-care activities behavioral compliance in post-operative patients were presented in Table 4. With an AWM of 3.53, interpreted as always. Indicators where the WM=3.63, always, ranked highest, followed by taking medicine at the right time and right dose, both with a WM=3.62, always, followed by maintaining good personal hygiene to prevent infection, with a WM=3.33, always. In contrast, healthy foods as recommended by doctor/nurse (WM=3.48, always), followed by cleaning and dressing surgical wound regularly as directed (WM=3.47, always) and light exercise/movement as recommended (WM=3.28, always) ranked the lowest. This pattern showed that patients' compliance with hygiene and taking medications was regular, whereas light exercise and dietary adherence were less consistent.

The patients who were operated on were always following the basic hygiene, taking medicines at the right time and getting help at the right time, but they were not always following the diet, the routine of wound care, and the light exercises. The pattern indicated that although there were good habits of core protective behaviors, there was a need for further specific counselling, modelling and follow-up to reinforce adherence to nutrition, wound-care procedures and activity-related self-care.

This was corroborated by recent studies, which demonstrated that post-operative patients overall had self-care behaviors in accordance with the finding, such as hygiene and medication adherence; however, there were deficits in physical activity and diet adherence. Abraham et al. (2025) found that surgical patients were the most compliant with their meds (91.7%), but least compliant to physical protocols like weight-bearing and timed exercises (75.4%) because of pain and perceived difficulty. Likewise, Wang et al. (2025) noted that although patients could be convinced to adhere to rules of hygiene and symptom reporting, active rehabilitation training was at intermediate level that is often hampered by a lack of self-efficacy and specialized education.

3.3 Relationship between the demographic profile and extent do the respondents practice self-care care at home.

Table 5 represents the statistical relationship between the demographic profile of the respondents and their self-care at home. The results show that the null hypothesis was accepted for most demographic profile, which means that there was no significant relationship between the level of self-care practice and age age ($\chi^2 = 6.77$, $df = 16$, tabular value = 26.296), sex ($\chi^2 = 2.08$, $df = 4$, tabular value = 9.488), civil status ($\chi^2 = 0.85$, $df = 9$, tabular value = 16.919), distance from home to the health care facility ($\chi^2 = 0.85$, $df = 9$, tabular value = 16.919), type of operation ($\chi^2 = 0.09$, $df = 3$, tabular value = 7.815), and type of instruction received ($\chi^2 = 2.56$, $df = 9$, tabular value = 16.919). The results of the chi-square test indicated that the following factors showed a significant relationship between the factors of respondents' self-care practices and the null hypothesis: educational attainment ($\chi^2 = 34.35$, $df = 21$, tabular value = 32.671) and monthly family income ($\chi^2 = 22.72$, $df = 12$, tabular value = 21.026). This outcome indicates that education and financial status are significant factors in self-care post surgery, whereas other factors such as basic demographics, proximity to the hospital, and surgical details do not greatly influence self-care behaviors.

Recent literature supports the observation that education and income are key determinants of post-operative self-care, whereas several other demographic characteristics show weaker or inconsistent associations. A cross-sectional study by Sakunsuk et al., (2025) of post-cataract surgery patients in Thailand indicated that education level was the most important positive predictor of patient self-care behaviors, whereas age had only a small positive effect, suggesting that a higher level of education makes patients

better able to understand and implement more complex home-care regimens. Likewise, Cao et al., (2025) evaluated self-care after surgery and found that patients with higher levels of education and income were significantly more likely to engage in good self-care at home, highlighting the importance of socioeconomic status in facilitating access to information, resources and support that is needed to optimize recovery at home. This implies that patients with higher educational attainment likely possess better health literacy to comprehend complex discharge instructions, while a higher monthly family income provides better access to necessary post-operative resources, medications, and proper nutrition, both of which strongly facilitate effective self-care recovery at home.

Table 4: Relationship between the demographic profile and extent do the respondents practice self-care care at home

Demographic Profile	Computed Value	df	Tabular Value	Decision on Ho	Interpretation
Age	6.77	16	26.296	Accepted	Not Significant
Sex	2.08	4	9.488	Accepted	Not Significant
Civil Status	0.85	9	16.919	Accepted	Not Significant
Educational Attainment	34.35	21	32.671	Rejected	Significant
Monthly Family Income	22.72	12	21.026	Rejected	Significant
Distance from Home to Health Care Facility	0.85	9	16.919	Accepted	Not Significant
Type of Operation	0.09	3	7.815	Accepted	Not Significant
Type of Instruction	2.56	9	16.919	Accepted	Not Significant

3.4. Proposed intervention based on the findings of the study

Based on the aforementioned, the proposed educational pamphlet will improve post-operative patients' self-care knowledge and behaviors at home. The pamphlet is based on the study results of specific areas of need for infection recognition, wound care, activity restrictions and the consistency of light activity, and provides practical and visual strategies for addressing priority areas. The pamphlet aims to arm patients with clear, step-by-step instructions, color-coded signs of infection, an interactive exercise log and reminders of the importance of keeping to the patient's prescribed exercise program, so that they can perform their own accurate wound care, alert to signs of complications and keep to their prescribed physical activity, while under the assistance of nursing follow-up.

Goal:

To increase patients' knowledge about self-care and self-care practices post-surgery, particularly with regards to signs of infection, wound care procedure, limitations on activities and compliance to light exercise, with a clear explanation, provide nurse-led education reinforcement by interactive and visual home reference. Supports a regular, daily exercise routine.

Specific Objectives:

1. Use visual cues to help patients to correctly identify the 5 signs of infection (redness, swelling, warmth, pus and fever) using visual cues.
2. Help patients learn the correct step-by-step for cleaning and dressing their surgical wound.
3. Define activities to avoid and recommended light exercises to minimize risk of complications and aid in recovery.
4. Encourage more compliance with light activity, using a combined daily exercise log/checklist.
5. Use as a reinforcement tool when following up with the nurse to determine progress and gaps in understanding.

4. Conclusions

4.1 Majority of the respondents are predominantly middle-aged to older adults, female, married, living farther from the health facility, having undergone emergency operations having and received combined verbal, written, and demonstration instructions. Most are college graduates and come from low to lower-middle income households

4.2. The post-operative patients are very knowledgeable and always performed the recommended self-care in terms of behaviors.

4.3. There is no significant relationship between age, sex, civil status, distance from home, type of operation, and type of instruction and the level of self-care practice at home, while educational attainment and monthly family income showed a significant relationship. It suggests that some indicators in the profile do not determine how well post-operative patients practice self-care at home.

4.4. An educational intervention in the form of an instructional pamphlet was suggested to enhance post-operative self-care knowledge and behaviors, reinforcing nurse-led teaching through clear visual guidance, step-by-step instructions, and daily practice aids to promote safer home recovery.

5. Recommendations

5.1 In view of the predominance of middle-aged to older, married, female, college-educated patients from low to lower-middle income households and distant communities, it is recommended that tailored discharge teaching be developed that considers age, literacy, and socioeconomic constraints (e.g., using simple language, visuals, and local dialect where appropriate). Focused outreach or coordination with barangay health workers may also be instituted for those living more than 6 km away or with limited financial resources to support follow-up and reinforcement of instructions at home.

5.2 Given the generally high but still incomplete self-care performance, especially in wound cleaning, infection recognition, diet, and light exercises, it is recommended that nurses provide focused, skills-based sessions on these specific areas before discharge.

5.3 Return-demonstration, checklists, and simple take-home guides may be used to ensure patients can correctly perform wound care, identify early warning signs, plan appropriate meals, and carry out safe, graded physical activity at home.

5.4 The nurses prioritize clear, simplified discharge teaching and focused support for patients with lower education and limited income, using easy-to-understand instructions, visual aids, and linkage to financial or community resources to help them perform effective self-care at home.

5.5 Considering the need for an educational intervention, it is recommended that the proposed instructional pamphlet be developed and formally integrated into the discharge process. Regular updates of the pamphlet based on feedback and outcomes, along with orientation of nurses on how to use it effectively during teaching sessions and follow-up, will help sustain improvements in self-care knowledge and behaviors at home.

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