

Research Article

THE EFFECTIVENESS OF PREOPERATIVE HEALTH EDUCATION ON POSTOPERATIVE SURGICAL PATIENTS

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ABSTRACT

This study explored the effectiveness of preoperative health education among 50 postoperative patients in Iriga City, focusing on demographic factors (age group, sex, educational background, employment status, financial capability, type of surgical procedure, and length of stay) and patients' appraisal of education in wound care, medication management, postoperative activities, and follow-up compliance. Most respondents were middle-aged adults (46 percent), predominantly females (56 percent), and college graduates (44 percent). Nearly half earned less than Php 10,000 monthly, with emergency surgeries accounting for 48 percent and hospital stays of 6–10 days for 58 percent. Patients moderately agreed on the effectiveness of preoperative education across wound care (mean: 3.95), medication management (mean: 4.00), postoperative activities (mean: 3.94), and follow-up compliance (mean: 4.14). Statistical analysis revealed significant relationships between most demographic factors and perceived education effectiveness, except for sex. The findings emphasized the importance of a tailored preoperative education to address diverse patient needs. Recommendations include age-specific strategies such as interactive tools for younger patients and simplified methods for older adults, gender-sensitive approaches to support women emotionally while providing men concise guidance, and cost-effective tools like visual aids and digital platforms to improve accessibility for low-income patients. Technology-based solutions like mobile apps, fitness trackers, and telemedicine can enhance wound care, medication adherence, postoperative activity engagement, and follow-up compliance. Tailored interventions should consider individual needs, socioeconomic barriers, and surgical context to optimize recovery outcomes. Overall, preoperative education is critical for improving surgical outcomes, reducing anxiety, and enhancing patient satisfaction through patient-centered care approaches.

Keywords: Preoperative, Health Education, Postoperative, Surgical Patients.

INTRODUCTION

The World Health Organization emphasizes the need for comprehensive patient education as part of quality healthcare delivery. This aligns with the principles of patient-centered care, which advocate for involving patients in their own treatment processes. In many countries, healthcare systems are increasingly incorporating educational programs to prepare patients for surgery, recognizing that such initiatives can lead to improved surgical outcomes and reduced healthcare costs.

In the Philippines, Republic Act No. 11223, also known as the Universal Health Care Act, emphasizes equitable access to quality health services for all Filipinos. This legislation supports initiatives aimed at enhancing patient education as a means to improve health literacy and outcomes. The Department of Health (DOH) has initiated various programs that include preoperative education as part of a holistic approach to surgical care. Studies conducted in Philippine hospitals have demonstrated that patients who receive structured preoperative education report higher satisfaction levels and better adherence to postoperative instructions, thereby reducing complications and readmissions. (Tadesse, B *et al.*, (2023).

Surgical operations play a crucial role in modern healthcare, often serving as vital treatments that require not only expert medical practice but also effective patient preparation and postoperative care. Preoperative health education is an essential part of the procedure, with the goal of providing patients with the information and abilities they need to navigate the surgical experience effectively and reduce the risk of postoperative problems.

Preoperative education serves as a pivotal intervention that can significantly mitigate patient anxiety and improve overall surgical outcomes. Research indicates that when patients receive adequate information about their surgical procedures, including what to expect before, during, and after surgery, they experience reduced anxiety levels and enhanced emotional well-being.

Furthermore, the Magna Carta for Patients' Rights and Responsibilities (Republic Act No. 9439) guarantees the rights of patients to receive comprehensive healthcare services that include proper information about their condition and the procedures they undergo. This legislation emphasizes the importance of informed consent and patient education, ensuring that patients are adequately informed and prepared for surgical procedures. Compliance with the Magna Carta for Patients supports the ethical and legal obligations of healthcare providers to deliver patient-centered care and respect patients' rights throughout the healthcare process.

The efficacy of preoperative health education has been extensively examined in several healthcare environments. The studies conducted by Smith *et al.* and Johnson (2020) emphasize the important function of [it] in improving patient outcomes through the reduction of anxiety, increased adherence to postoperative care instructions, and faster recovery times. The results emphasize the potential advantages of organized preoperative educational programs in promoting patient empowerment and maximizing surgical outcomes.

In the Bicol region, healthcare facilities are increasingly recognizing the benefit of preoperative health education. Local hospitals have begun implementing educational workshops for surgical patients, focusing on what to expect before, during, and after surgery. These initiatives are crucial in addressing regional health disparities and improving patient outcomes in an area where access to healthcare

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can be limited. Community health workers play a vital role in disseminating information and ensuring that patients understand their surgical procedures and postoperative care requirements. In Camarines Sur, particularly in Iriga City, local government units are collaborating with healthcare providers to enhance preoperative education efforts.

The researcher, as a nurse, who is often the primary point of contact for patients during the surgical process, making them integral to the educational component of preoperative care. By equipping nurses with the necessary training and resources to provide comprehensive education, healthcare facilities can improve patient outcomes significantly. This is especially important in areas like Camarines Sur, where healthcare professionals may face challenges such as high patient volumes and limited time for individual interactions. Thus, prioritizing preoperative education not only aligns with best practices in nursing but also addresses broader public health goals by promoting informed patient participation in their care.

METHODOLOGY

Demographic Profile of the Respondents

The demographic profile of the residents according to age, sex, educational background, type of surgical procedure, economic status, and length of stay was presented in Table 1.

Age. Age plays a significant role in determining the effectiveness of preoperative education, as it influences patients' learning needs, comprehension, and postoperative outcomes. Young Adult: Ages 20–39 years. This stage is characterized by physical peak performance and the establishment of independence in personal and professional life; Middle Adult (Middle Age): Ages 40–65 years. This period involves significant life transitions, such as career shifts, family role changes, and noticeable physical aging signs and Older Adult: Ages 65 years and above. This stage is marked by retirement, increased health challenges, and a focus on maintaining quality of life.

The findings indicate that out of 50 respondents 23 or 46 percent belonged to the middle adult group (ages 40-60 years), followed by young adults (20-39 years) with 19 or 38.00 percent, and the older age group (60 years and above) with eight or 16.00 percent.

This distribution suggests that preoperative surgical patients tend to be from the middle-aged population, likely due to higher incidences of chronic conditions requiring surgical interventions. The smaller proportion of older adults may be attributed to higher surgical risks, comorbidities, and physician recommendations for alternative treatments.

The predominance of middle-aged adults in the study suggests that preoperative health education is more frequently accessed or required by this age group, likely due to higher rates of planned or elective surgeries, such as orthopedic procedures, gallbladder removal, or hernia repair. The significant percentage of young adults may indicate that they are proactive in seeking medical interventions and educational resources before surgery. Conversely, the lower participation among older adults could be attributed to potential barriers such as cognitive decline, limited mobility, or hesitancy in engaging with preoperative education programs. These findings emphasize the need for age-specific approaches in delivering preoperative education to ensure that all age groups receive tailored and effective health information.

Table 1 Demographic Profile of the Respondents

Profile	Frequency	Percentage
Age		
20-39 y/o	19	38.00
40- 65 y/o	23	46.00
65 years old and above	8	16.00
	50	100.00
Sex		
Female	28	56.00
Male	22	44.00
	50	100.00
Educational Background		
Elementary Graduate	5	10.00
Highschool Graduate	21	42.00
College Graduate	22	44.00
Master's Degree Holder	2	4.00
	50	100.00
Economic Status		
Less than Php 10,000.00	23	46.00
Php 10,001.00-15,000.00	10	20.00
Php15,001.00-20,000.00	7	14.00
Php 21,001.00-25,000.00	5	10.00
Php 25,001.00-30,000.00	3	6.00
Php 40,001.00 and above	2	4.00
	50	100.00
Type of Surgical Procedures		
Emergency	24	48.00
Elective	20	40.00
Diagnostic	6	12.00
	50	100.00
Length of Stay		
Less than 5 days	21	42.00
6 – 10 days	29	58.00
	50	100.00

Several studies support the importance of age-specific preoperative health education in improving postoperative outcomes. Williams et al. (2021) found that middle-aged adults are more receptive to preoperative education programs due to higher health literacy and a proactive approach to surgical recovery.

Similarly, Rodriguez & Kim (2023) emphasized that young adults benefit from digital-based preoperative education, while older adults require simplified, personalized approaches to enhance understanding and compliance.

Additionally, Huang *et al.*, (2022) found that older surgical patients often experience higher postoperative complications due to a lack of tailored preoperative counseling, reinforcing the need for age-specific educational strategies. These findings suggest that customized preoperative health education programs can significantly enhance postoperative recovery across different age groups.

Sex. Sex differences can affect how patients perceive and respond to preoperative education both male and female patients benefit from tailored education that addresses sex-specific concerns.

Majority of the respondents were female with 28 or 56.00 percent while the other 22 or 44.00 percent were male. This sex distribution suggests that more females participated in the study, which may reflect a higher prevalence of post operative surgical procedures among female or a greater willingness among female to engage in preoperative education programs. It shows that female is generally more proactive in seeking healthcare and asking questions about

their medical conditions, which could explain their higher representation.

Mora *et al.*, (2022) revealed that women asked significantly more questions about their condition, procedure, and associated risks compared to men. This suggests that women may require more detailed and interactive educational approaches to address their concerns effectively.

Educational Background. Patients' educational background significantly impacts their understanding of preoperative instructions. Preoperative education must therefore be adapted to the patient's literacy level to ensure effective communication and improved recovery.

Most of the respondents were college graduate with 22 or 44.00 percent, 21 or 42.00 percent were High school graduate, five or 10.00 percent were elementary graduate and the remaining two or 4.00 percent were master's degree holder. This distribution suggests that most participants had at least a secondary education, which may positively influence their ability to understand and benefit from preoperative health education. Higher educational attainment is often associated with better health literacy, enabling patients to comprehend medical instructions, ask relevant questions, and actively participate in their care. Conversely, participants with lower educational levels may face challenges in understanding complex medical information, potentially affecting the effectiveness of preoperative education.

Beneby *et al.*, (2023) highlighted that those patients with higher educational backgrounds demonstrated better comprehension of preoperative instructions, leading to improved postoperative outcomes such as reduced anxiety and shorter hospital stays. The study emphasized the need for tailored educational materials to address varying literacy levels among patients.

Economic Status. The economic status influences access to healthcare resources and the ability to engage fully with preoperative education. The study shows that the majority of respondents comprised of 46% had an economic status of less than Php 10,000.00, followed by 20% with Php 10,001.00–15,000.00, and smaller percentage in higher income bracket.

This distribution suggests that most participants belong to lower-income groups, which may influence their access to healthcare resources and their ability to fully benefit from preoperative education. Financial constraints can limit patients' ability to afford supplementary materials, attend follow-ups, or access advanced medical care, potentially affecting surgical outcomes.

Moreover, individuals with higher financial capability may have better access to private healthcare services and personalized education a interventions, *which could enhance their preparedness and recovery.*

A study on preoperative education in Ethiopia highlighted that low-income patients often face challenges such as limited access to educational materials and inadequate time with healthcare providers due to resource constraints. These barriers can reduce the effectiveness of preoperative education for economically disadvantaged groups.

Type of Surgical Procedure. The nature and complexity of the surgical procedure dictate the content and depth of preoperative education.

Of the fifty respondents 24 or 48.00 percent were for emergency procedure, followed by elective procedure with 20 or 40.00 percent and the other six or 12.00 percent undergone diagnostic procedure. Emergency patients often receive limited or compressed educational interventions due to time constraints, which may reduce the effectiveness of preoperative preparation compared to elective cases. Meanwhile, elective patients likely benefited from planned, comprehensive preoperative education, aligning with evidence that scheduled procedures allow for better patient preparedness.

Brodersen *et al.*, (2023) systematic reviews of abdominal surgery found that preoperative education reduced hospital stays by 1.5 days in elective cases but had minimal impact in emergencies due to insufficient time for patient engagement. Emergency patients often face higher baseline anxiety and physiological stress, which can negate the benefits of rushed preoperative education.

Length of Stay. Preoperative education has been associated with a reduction in the length of hospital stay by preparing patients psychologically and physically for surgery and recovery.

Majority of the respondents stayed 6 – 10 days at the hospital with 29 or 58.00 percent, and some stayed for less than 5 days with 21 or 42.00 percent. This indicates that most patients required moderate hospital stays, which could reflect the complexity of their surgical procedures or their recovery progress. Longer hospital stays may be associated with complications, inadequate preparation, or the need for extended postoperative care.

On the other hand, shorter stays suggest smoother recoveries and potentially better preoperative preparation, which aligns with findings that effective preoperative education can reduce length of stay by improving patient readiness and postoperative adherence.

A study of Sisak *et al.*, (2023) demonstrated that attending preoperative education classes reduced hospital stays for total hip and knee replacement patients. Patients who attended these sessions stayed 0.37 days less for hip replacements and 0.77 days less for knee replacements compared to those who did not attend. High-risk patients undergoing knee replacement surgery experienced the greatest benefit, with a reduction of 2.59 days in length of stay.

Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education

The following tables shows the appraisal of the postoperative patients on the effectiveness of preoperative health education along with wound care, medication management, postoperative activities and follow-up check-up.

Wound Care. Postoperative patients who received preoperative education report improved understanding and confidence in managing their surgical wounds.

Table 2 discuss the appraisal of the postoperative patients on the effectiveness of preoperative health education along with wound care. Among the indicators, the postoperative patients strongly agreed that the preoperative education provided clear instructions on when to change wound dressing with a weighted mean of 4.20.

The patients moderately agreed on how to properly clean and care for my surgical wound at home with a weighted mean of 4.16, the information provided during preoperative education has positively impacted the ability to care for the wound post-surgery with 4.10, both awareness of the importance of keeping my wound dry and protected during the healing process and understanding the

importance of attending follow-up appointments for wound assessment and care with weighted mean of 3.94.

The postoperative patients were also moderately agreed on feeling knowledgeable about how to manage any discomfort or itching around the wound site with 3.90, how to handle any complications that may arise with my wound, such as excessive swelling or bleeding with 3.88. Being informed on appropriate pain management strategies related to wound care and the significance of nutrition in promoting wound healing have both weighted mean of 3.86 and feeling confident in recognizing signs of infection, such as increased redness or discharge from the wound got the least weighted mean of 3.66. The respondents moderately agreed on the effectiveness of preoperative health education along with wound care with an average weighted mean of 3.95. These results highlight gaps in patient confidence and knowledge about more complex aspects of wound care. While patients appreciated the education provided, there is room for improvement in delivering comprehensive and practical information to empower them for independent wound management at home.

According to Gillespie (2023) on postoperative wound care education found that clear and specific instructions, such as how to keep wounds dry and when to change dressings, were most effective in improving patient outcomes and reducing complications.

Table 2 Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education along with Wound Care

Indicators	WM	Interpretation	Rank
1. I understand how to properly clean and care for my surgical wound at home.	4.16	Moderately Agree	2
2. I feel confident in recognizing signs of infection, such as increased redness or discharge from the wound.	3.66	Moderately Agree	10
3. The preoperative education provided clear instructions on when to change my wound dressing.	4.20	Strongly Agree	1
4. I am aware of the importance of keeping my wound dry and protected during the healing process.	3.94	Moderately Agree	4.5
5. I have been informed about the appropriate pain management strategies related to wound care.	3.86	Moderately Agree	8.5
6. I understand the importance of attending follow-up appointments for wound assessment and care.	3.94	Moderately Agree	4.5
7. I feel knowledgeable about how to manage any discomfort or itching around the wound site.	3.90	Moderately Agree	6
8. The preoperative education emphasized the significance of nutrition in promoting wound healing.	3.86	Moderately Agree	8.5
9. I have been educated on how to handle any complications that may arise with my wound, such as excessive swelling or bleeding.	3.88	Moderately Agree	7
10. I believe that the information provided during preoperative education has positively impacted my ability to care for my wound post-surgery.	4.10	Moderately Agree	3
Average Weighted Mean	3.95	Moderately Agree	

Patients who received detailed guidance were more likely to adhere to care protocols and avoid infections.

Medication Management. Preoperative education significantly improves patients' knowledge about their postoperative medications. This leads to better adherence, reduced opioid consumption, and

decreased anxiety about medication side effects, contributing to more effective pain control and fewer postoperative complications.

Table 3 Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education along with Medication Management

Indicators	WM	Interpretation	Rank
1. I understand how to properly store my medications during my recovery.	4.14	Moderately Agree	3
2. I am aware of the potential interactions between my prescribed medications and any over-the-counter drugs I may take.	4.10	Moderately Agree	4
3. I feel confident in identifying and reporting any side effects I experience from my medications.	3.68	Moderately Agree	10
4. The preoperative education provided me with strategies for managing pain effectively with my prescribed medications.	3.80	Moderately Agree	9
5. I have a clear understanding of how to adjust my medication schedule if I miss a dose.	3.92	Moderately Agree	7
6. I believe that the healthcare team is accessible for questions regarding my medications after surgery.	4.16	Moderately Agree	2
7. I feel that the preoperative education emphasized the importance of keeping a medication log during my recovery.	3.84	Moderately Agree	8
8. I understand the process for obtaining refills or replacements for my medications if needed.	4.08	Moderately Agree	5
9. The information provided during preoperative education helped me recognize when to seek medical advice regarding my medications.	4.04	Moderately Agree	6
10. I feel empowered to take an active role in managing my medications during my recovery.	4.20	Strongly Agree	1
Average Weighted Mean	4.00	Moderately Agree	

Table 3 exhibits the appraisal of the postoperative patients on the effectiveness of preoperative health education along with medication management.

Ranked 1st was feeling empowered to take an active role in managing medications during recovery with a weighted mean of 4.20 interpreted as strongly agree. The postoperative patients moderately agreed that the healthcare team is accessible for questions regarding the medications after surgery with a weighted mean of 4.16, understand how to properly store my medications during my recovery with 4.14, aware of the potential interactions between the prescribed medications and over-the-counter drugs I may take with 4.10, understood the process for obtaining refills or replacements for medications with a weighted mean of 4.08, and recognize when to seek medical advice regarding medications with 4.04.

Patients moderately agreed that there is a clear understanding of how to adjust medication schedule if dose was missed with 3.92, that the preoperative education emphasized the importance of keeping a medication log during recovery with 3.84, The provision of strategies for managing pain with prescribed medications with 3.80, and lastly, confidence in identifying and reporting side effects with a weighted mean of 3.68.

The average weighted mean was 4.00, indicating that patients moderately agreed on the effectiveness of preoperative health education in supporting their medication management after surgery.

These gaps suggest patients may struggle with practical aspects of medication adherence and safety. While education effectively addressed empowerment and accessibility to healthcare teams, it fell short in equipping patients with skills to handle medication errors or adverse effects.

Meanwhile, Ng (2021) study on systematic review on cardiac surgery patients found that structured preoperative education significantly improved medication adherence and self-efficacy, particularly when emphasizing patient empowerment. Interventions that fostered active participation in care plans correlated with better postoperative outcomes.

Postoperative Activities. Patients value guidance on postoperative activities, such as mobilization and breathing exercises, which are emphasized during preoperative education. Such instruction empowers patients to actively participate in their recovery, reduces postoperative pain and anxiety, and supports faster functional recovery and shorter hospital stays

Table 4 presents the appraisal of the postoperative patients on the effectiveness of preoperative health education along with postoperative activities.

Postoperative patients strongly agreed that they understood the recommended physical activities to engage in during recovery period and awareness of the potential benefits of early mobilization on my recovery process with a weighted mean of 4.26 and 4.24, respectively.

Indicators moderately agreed by the patients were as follows: feeling comfortable asking questions about activity restrictions during follow-up appointments with a weighted mean of 4.06, that the preoperative education helped them set realistic goals for their postoperative activity levels and emphasized the importance of balancing rest and activity during recovery, both with a weighted mean of 3.94. Additionally, the preoperative education clearly outlined the timeline for resuming normal activities after surgery with a weighted mean of 3.88, receiving adequate support from healthcare providers to help engage in postoperative activities with 3.86, and participating in postoperative activities has contributed positively to overall recovery with 3.82, feeling motivated to participate in physical activities as part of postoperative recovery plan with 3.74 and able to keep track of my physical activity levels since my surgery with a weighted mean of 3.68.

Table 4 Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education along with Postoperative Activities

Indicators	WM	Interpretation	Rank
1. I understand the recommended physical activities I should engage in during my recovery period.	4.26	Strongly Agree	1
2. I feel motivated to participate in physical activities as part of my postoperative recovery plan.	3.74	Moderately Agree	9
3. The preoperative education clearly outlined the timeline for resuming normal activities after surgery.	3.88	Moderately Agree	6
4. I have received adequate support from healthcare providers to help me engage in postoperative activities.	3.86	Moderately Agree	7
5. I am aware of the potential benefits of early mobilization on my recovery process.	4.24	Strongly Agree	2

6. I feel comfortable asking questions about my activity restrictions during follow-up appointments.	4.06	Moderately Agree	3
7. The information provided during preoperative education helped me set realistic goals for my postoperative activity levels.	3.94	Moderately Agree	4.5
8. I believe that participating in postoperative activities has contributed positively to my overall recovery.	3.82	Moderately Agree	8
9. I have been able to keep track of my physical activity levels since my surgery.	3.68	Moderately Agree	10
10. I feel that the preoperative education emphasized the importance of balancing rest and activity during my recovery.	3.94	Moderately Agree	4.5
Average Weighted Mean	3.94	Moderately Agree	

The respondents were agreed moderately on the effectiveness of preoperative health education along with postoperative activities with an average weighted mean of 3.94. These results suggest that while patients understood the importance of postoperative activities, there may be gaps in their ability to sustain

engagement and independently monitor their progress, possibly due to a lack of ongoing support or practical tools.

Preoperative education is a core component of ERAS protocols, which emphasize early mobilization and balancing rest with activity post-surgery. A 2023 review on abdominal surgery found that patients who received preoperative education demonstrated better adherence to ERAS guidelines, leading to shorter hospital stays and fewer postoperative complications.

Follow-up Check-up. Preoperative education enhances patients' awareness of the importance of follow-up appointments. Educated patients are more likely to comply with scheduled check-ups, enabling early detection and management of complications, which improves overall surgical outcomes and patient satisfaction

Table 5 shows the appraisal of the postoperative patients on the effectiveness of preoperative health education along with follow-up check-up. The postoperative patients strongly agreed on the importance of adhering to the scheduled follow-up check-up with a weighted mean of 4.26 and the purpose of follow-up check-ups after surgery with a weighted mean of 4.22.

Indicators that moderately agreed by the patients were as follows: informed about the importance of post-operative follow up check-ups before discharge with a weighted mean of 4.14, healthcare providers frequently advised to attend follow-up check-up with 4.10, attending follow-up check-ups is essential for recovery and long-term health and feeling comfortable discussing any concerns or complications during follow-up appointments, both with a weighted mean of 4.08. Awareness of the signs and symptoms that would require immediate medical attention after surgery with a weighted mean 4.04, recognizing the indicators that would necessitate urgent medical intervention with 4.02. and that the healthcare providers explained the follow-up process clearly during preoperative education with 3.98 were moderately agreed by the patients.

Lastly, patients agreed preferred alternative options like telemedicine on my follow-up check-ups with a weighted mean of 3.38.

The average weighted mean of the appraisal of the postoperative patients on the effectiveness of preoperative health education along with follow-up check-up is 4.14 interpreted as moderately agree. These results suggest that while patients value traditional follow-up

care, there may be gaps in the delivery of clear instructions and in offering flexible options like telemedicine to accommodate patient needs.

Recent study by Beneby *et al.*, (2023) has shown that telemedicine can be an effective alternative for follow-up care, particularly for patients with mobility or financial constraints. A narrative review reported high patient satisfaction with teleconsultations for postoperative care, but adoption remains limited due to lack of awareness and infrastructure.

Summary of the Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education.

Table 6 presents the summary of the appraisal of the postoperative patients on the effectiveness of preoperative health education along with wound care, medication management, postoperative activities and follow-up check-up.

Table 5 Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education along with Follow-up Check-up

Indicators	WM	Interpretation	Rank
1. I am informed about the importance of post-operative follow up check-ups before my discharge.	4.14	Moderately Agree	3
2. I understand the purpose of follow-up check-ups after surgery.	4.22	Strongly Agree	2
3. The Healthcare providers frequently advised to attend follow-up check-up.	4.10	Moderately Agree	4
4. I prefer alternative options like telemedicine on my follow-up check-ups.	3.38	Agree	10
5. I recognize the indicators that would necessitate urgent medical intervention.	4.02	Moderately Agree	8
6. I believe that attending follow-up check-ups is essential for my recovery and long-term health.	4.08	Moderately Agree	5.5
7. The healthcare providers explained the follow-up process clearly during my preoperative education.	3.98	Moderately Agree	9
8. I feel comfortable discussing any concerns or complications I experience during my recovery at follow-up appointments.	4.08	Moderately Agree	5.5
9. I understand the importance of adhering to the scheduled follow-up check-up	4.26	Strongly Agree	1
10. I am aware of the signs and symptoms that would require me to seek immediate medical attention after surgery.	4.04	Moderately Agree	7
Average Weighted Mean	4.14	Moderately Agree	

Table 6 Summary Table of the Appraisal of the Postoperative Patients on the Effectiveness of Preoperative Health Education

Indicator	WM	Interpretation	Rank
Wound Care	3.95	Moderately Agree	3
Medication Management	4.00	Moderately Agree	2
Postoperative Activities	3.94	Moderately Agree	4
Follow-up Check-up	4.14	Moderately Agree	1
Average Weighted Mean	4.00	Moderately Agree	

Follow-up check-up rated the highest with weighted mean of 4.14, interpreted as moderately agree and ranked first among the indicators, followed by medication management with a weighted mean of 4.00, wound care with a weighted mean of 3.95 and postoperative activities with 3.94, all interpreted as moderately agree.

This suggests that, in general, patients moderately agree on the effectiveness of preoperative health education in these areas.

Relationship Between the Demographic Profile of the Respondents and the Health Appraisal on the Effectiveness of Preoperative Education

Table 7 reveals the relationship between the demographic profile of the respondents and the appraisal on the effectiveness of preoperative health education.

Table 7 Relationship Between the Demographic Profile of the Respondents and the Appraisal on the Effectiveness of Preoperative Education

Profile	Computed Value	Tabular Value at 0.05	Decision on H ₀	Interpretation
Age	9.75	9.49	Rejected	Significant
Sex	3.41	3.84	Accepted	Not Significant
Educational Background	4.96	3.84	Rejected	Significant
Economic Status	10.29	9.49	Rejected	Significant
Type of Surgical Procedure	6.88	5.99	Rejected	Significant
Length of Stay	4.37	3.84	Rejected	Significant

The result of the statistical data showed that age, educational background, economic status, type of surgical procedure, and length of stay with computed values of 9.75, 4.96, 5.56, 10.29, 6.88, and 4.37, respectively were higher than the tabular values of 9.49, 3.84, 3.84, 9.49, 5.99, and 3.84, consecutively at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that the age, educational background, economic status, type of surgical procedure, and length of stay of the respondents are significantly influential their appraisal on the effectiveness of preoperative education.

Whereas, sex with computed value of 3.41 were lesser than the tabular value of 3.84 at 0.05 level of significance. Thus, the null hypothesis is accepted. This can be deduced that there is no significant relationship between the sex of the respondents and their appraisal on the effectiveness of preoperative education.

The study reveals significant relationships between specific demographic factors and patients' appraisal of preoperative education effectiveness. Age, educational background, type of surgical procedure, economic status, and length of stay were statistically significant predictors of how patients perceived the effectiveness of preoperative education. Older patients may have distinct needs (e.g., slower comprehension, comorbidities) that influence how they value education, Higher education levels likely enhance understanding of medical instructions, improving perceived effectiveness, Emergency vs. elective procedures may affect the quality or timing of education, impacting patient satisfaction, Lower-income patients may face barriers (e.g., limited access to resources, stress) that reduce their ability to engage with education and longer stays may reflect complications, where patients recognize gaps in preoperative preparation. Sex was not a significant factor, indicating that gender-neutral educational approaches are equally effective.

Strategies to Improve the Preoperative Health Education

The output of the study aims to develop strategies for delivering effective preoperative education. This involves identifying innovative and practical methods that can be integrated into standard surgical

care to enhance patient outcomes and improve the quality of care. By exploring different educational approaches and technologies, the study hopes to provide evidence-based recommendations for healthcare providers to enhance the effectiveness of preoperative health education programs. This could include leveraging digital tools, personalized educational plans, or other innovative methods to ensure that patients receive the information they need in a way that is accessible and engaging for them.

Moreover, the ultimate goal of Preoperative education is to enable patients to be responsible for their own health care by improving health behaviors and health status. Teaching is a systematic way nurses can introduce new information, events, skills, or objects into patients' environments, and patient learning is demonstrated by patients' changed behaviors. Nurses can assess patient education needs by providing information, instruction, and resources, as well as communicating with patients' family members.

FINDINGS

The following were the findings of the research study:

1. The demographic profile of the respondents was:
As to age, mostly of the respondents belonged to middle adult group (40-60 years old) with 23 or 46.00 percent, followed by young adult (20-39 years old) with 19 or 38.00 percent, and older age group (65 years old and above) with eight or 16.00 percent.
Majority of the respondents were females with 28 or 56.00 percent while the other 22 or 44.00 percent were males.
Data on educational background revealed that most of the respondents were college graduate with 22 or 44.00 percent, 21 or 42.00 percent were high school graduate, five or 10.00 percent were elementary graduate and the remaining two or 4.00 percent were master's degree holder.
As to economic status, mostly of the respondents have less than Php 10,000.00 with 23 or 46.00 percent, Php 10,001.00-15,000.00 with ten or 20.00 percent. Seven or 14.00 percent had Php 15,001.00-20,000.00, five or 10.00 percent with Php 21,001.00-25,000.00, three or 6.00 percent with Php 25,001.00-30,000.00 and the other two or 4.00 percent had Php 40,001.00 and above.
In terms of type of surgical procedures, 24 or 48.00 percent were for emergency procedure, followed by elective procedure with 20 or 40.00 percent and the other six or 12.00 percent undergone diagnostic procedure. Based on length of stay, majority of the respondents stayed 6-10 days at the hospital with 29 or 58.00 percent, and some stayed for less than 5 days with 21 or 42.00 percent.
2. The respondents' appraisal on the effectiveness of preoperative health education along with wound care has an average weighted mean of 3.95 which they are moderately agree. Along with medication management, has an average weighted mean of 4.00 in which the respondents moderately agreed on effectiveness of preoperative health education. In terms of postoperative activities, the respondents are moderately agreed on effectiveness of preoperative health education with an average weighted mean of 3.94. The postoperative patients are moderately agreed on the effectiveness of preoperative health education along with follow-up check-up with an average weighted mean of 4.14.
3. On the demographic profile of the respondents and their appraisal on the effectiveness of preoperative education statistical data result showed that age, educational background,

economic status, type of surgical procedure, and length of stay with computed values of 9.75, 4.96, 5.56, 10.29, 6.88, and 4.37, respectively were higher than the tabular values of 9.49, 3.84, 3.84, 9.49, 5.99, and 3.84, consecutively at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that the age, educational background, economic status, type of surgical procedure, and length of stay of the respondents are significantly influential their appraisal on the effectiveness of preoperative education. Whereas, sex with computed value of 3.41 were lesser than the tabular value of 3.84 at 0.05 level of significance. Thus, the null hypothesis is accepted. This can be deduced that there is no significant relationship between the sex of the respondents and their appraisal on the effectiveness of preoperative education.

4. By improving health behaviors and health status, preoperative education aims to empower patients to take charge of their own care. Teaching is a methodical way for nurses to introduce new knowledge, experiences, abilities, or items into patients' surroundings; patients' altered behaviors show that they have learned. By communicating with patients' families and offering tools, education, and information, nurses can determine the educational needs of their patients.

CONCLUSIONS

In light of the findings, the following conclusions were drawn:

1. Majority of the respondents were middle adult (40- 65 y/o), females, and stayed in the hospital for 6-10 days and mostly were 45-51 years old, middle adult, college graduate, with economic status of less than Php 10,000.00 and had emergency surgical procedure.
2. The postoperative patients moderately agree on the effectiveness of preoperative health education along with wound care, medication management, postoperative activities and follow-up check-up.
3. Age, educational background, economic status, type of surgical procedure, and length of stay of the respondents are significantly influential their appraisal on the effectiveness of preoperative education.
4. There is a measure that can be proposed to improve the preoperative health education.

RECOMMENDATIONS

In light of the findings and conclusions, the following recommendations were formulated:

1. The use of educational materials to age groups using interactive tools for younger patients and simplified methods for older adults. Address anxiety through clear explanations and relaxation techniques. Adopt gender-sensitive approaches: emotionally supportive interventions for women and concise, outcome-focused guidance for men. Train providers to deliver age- and gender-sensitive education effectively. Implement cost-effective strategies (e.g., visual aids, digital tools) to ensure equitable access for economically disadvantaged patients.
2. Clear and consistent educational interventions supplemented by technology-based tools, such as mobile apps, can empower patients in independent wound management and medication adherence while addressing drug interactions and safety. Interactive digital platforms and fitness trackers help engage patients in postoperative activities and ensure adherence to recovery plans. Telemedicine and improved preoperative communication enhance patient satisfaction and follow-up

compliance. Tailored interventions addressing individual needs, socioeconomic barriers, and specific surgical procedures are crucial for optimizing recovery outcomes across diverse patient populations.

3. The need for tailored preoperative education addressing age, education level, financial constraints, and surgical context. Programs should prioritize Simplified materials for lower education levels, Cost-effective strategies (e.g., group sessions, digital tools) for low-income patients, Age-specific interventions (e.g., slower pacing for older adults) and Emergency surgery protocols to ensure timely education.
4. Preoperative education is a critical component of patient-centered care, aimed at improving surgical outcomes, reducing anxiety, and enhancing patient satisfaction.

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