

Evaluation of Early Mobilization Strategies among Post-Operative Patients: Basis for Enhanced Nursing Care Program

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Publication history: Received: May 11, 2026; Revised: June 15, 2026; Accepted: June 18, 2026

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Abstract

This study evaluated the responses of post-operative patients to early mobilization strategies rendered by nurses as basis for an Enhanced Nursing Care Program. Anchored on the Roy Adaptation Model, Orem's Self-Care Deficit Nursing Theory, and the Health Belief Model, the study used a descriptive-correlational quantitative research design. It was conducted in a selected Level 3 hospital in Pasig City, Philippines, among adult post-operative patients who were medically stable and qualified to participate. Data were gathered using a structured researcher-made questionnaire with a five-point Likert scale and were analyzed using frequency, percentage, weighted mean, standard deviation, and correlation analysis through SPSS. Findings showed that most respondents were young adult males, underwent major surgical procedures, and stayed in the hospital for three to seven days. The overall response to early mobilization strategies obtained a mean score of 4.33 with a standard deviation of 0.59, interpreted as Strongly Agree, indicating that patients highly recognized the benefits, safety, and effectiveness of nurse-led early mobilization. The highest-rated benefits included shorter hospital stay, prevention of deep vein thrombosis, faster independence, and safety for most surgical patients. Lower but still positive responses were noted in relation to pain medication use, bowel function, swelling, and hospitalization cost. No significant relationship was found between demographic profile and patient responses. The study concluded that early mobilization is broadly applicable and beneficial in postoperative nursing care. It recommended strengthening structured mobility protocols, patient and family education, safety monitoring, documentation, and the proposed MOVE FAST Program. The study supports SDG 3, with links to SDGs 8, 9, and 17 through improved recovery, hospital efficiency, evidence-based nursing systems, and multidisciplinary collaboration. Its sustainability impact lies in promoting safer recovery, reducing complications, improving resource use, and strengthening postoperative care practices.

Keywords: Bowel Function, Early Mobilization, Enhanced Nursing Care Program, MOVE FAST Program, Nurse-Led Strategies, Post-Operative Patients, Postoperative Recovery, Surgical Care

1. Introduction

Early mobilization among post-operative patients is an important component of surgical recovery and nursing care. It involves planned movement, such as sitting, standing, transferring, dangling, and ambulation within 24 to 48 hours after surgery, depending on patient stability and physician clearance. This study evaluates the responses of post-operative patients to early mobilization strategies rendered by nurses as basis for an Enhanced Nursing Care Program.

1.1 Early Mobilization as a Nursing Intervention in Post-Operative Recovery

Early mobilization is a significant nursing intervention because it promotes faster recovery and reduces the harmful effects of prolonged bed rest. It is strongly supported in Enhanced Recovery After Surgery (ERAS) programs because movement helps restore normal body function and supports healing (Ljungqvist et al., 2022). In contrast, prolonged bed rest may lead to muscle weakness, venous thromboembolism, pulmonary complications, delayed bowel function, pressure injuries, and longer hospitalization (Melloul et al., 2020). Studies show that patients who ambulate early regain independence faster and experience shorter hospitalization. Castelino et al. (2022) found that structured early mobilization programs reduced postoperative complications and improved functional outcomes. Similarly, Fiore et al. (2022) reported that early ambulation was associated with faster bowel function, fewer pulmonary complications, and improved patient satisfaction.

1.2 Patient Recovery Outcomes and Barriers in Nurse-Rendered Early Mobilization Strategies

The literature describes early mobilization as a planned, gradual, and patient-centered intervention guided by safety assessment and clinical judgment. It commonly begins with dangling, sitting, and transferring, followed by standing and short-distance walking as tolerated. This progression improves safety, confidence, and functional recovery, especially among elderly or high-risk post-operative patients (Castelino et al., 2022). Early mobilization improves circulation, lung expansion, gastrointestinal motility, muscle strength, and independence. Ripollés-Melchor et al. (2023) explained that early

movement helps maintain circulation, improve respiratory function, stimulate bowel activity, and preserve strength. It also prevents complications such as pneumonia, deep vein thrombosis, pressure injuries, muscle weakness, and delayed recovery. Fiore et al. (2022) found that early ambulation reduced respiratory complications and improved oxygenation, while Ripollés-Melchor et al. (2023) emphasized its role in reducing thrombotic complications. Despite these benefits, implementation may be affected by pain, fatigue, weakness, dizziness, fear of falling, hesitation, staff workload, limited assistance, poor communication, and lack of standardized protocols. According to AHRQ (2022), hospitals with standardized mobility protocols demonstrated better patient outcomes than those without structured systems. Patient education, nurse encouragement, family support, adequate pain control, staff training, equipment availability, and interdisciplinary coordination help promote safe and consistent mobility practice.

1.3 Early Mobilization Practices in Surgical Care Settings

Globally, early mobilization is integrated into ERAS pathways because it reduces surgical stress, supports recovery, and shortens hospital stay (Ljungqvist et al., 2022). Within ERAS protocols, mobilization works with patient education, optimized nutrition, pain management, early feeding, and interdisciplinary care. Ripollés-Melchor et al. (2023) emphasized that patients under ERAS pathways with structured mobilization often recover faster and become ready for discharge earlier than those receiving traditional postoperative care. Nurses play a central role in early mobilization by assessing vital signs, pain level, dizziness, wound status, and readiness for movement. They assist patients with turning, sitting, standing, transferring, and walking while monitoring tolerance and safety. The Agency for Healthcare Research and Quality (2022) emphasized that mobility programs contribute to improved outcomes and prevention of complications in hospitalized patients. Similarly, hospitals with nurse-led mobility systems showed better compliance and postoperative outcomes (Agency for Healthcare Research and Quality [AHRQ], 2022). In the local setting, evaluating early mobilization is important because patient responses may vary according to age, gender, type of operation, and number of hospital days. Some patients respond positively, while others hesitate because of pain, fear, weakness, or limited understanding. These differences highlight the need to assess how post-operative patients respond to early mobilization strategies rendered by nurses.

1.4 Theoretical and Conceptual Basis of Patient Responses to Early Mobilization Strategies

The study is anchored on the Roy Adaptation Model, Orem's Self-Care Deficit Nursing Theory, and the Health Belief Model. These theories explain the physical, psychological, and behavioral factors that influence patient participation in early mobilization. The Roy Adaptation Model explains how individuals adapt to internal and external changes. After surgery, patients may experience pain, weakness, anxiety, limited movement, and physiologic stress. In this study, early mobilization helps patients adapt by improving circulation, respiratory function, muscle activity, and recovery, while nurses assess responses and promote adaptive behaviors (Alligood, 2022). Orem's Self-Care Deficit Nursing Theory focuses on the patient's ability to perform activities necessary for recovery. Post-operative patients may temporarily depend on nurses because of pain, fatigue, weakness, or movement restrictions. Early mobilization helps restore self-care ability by gradually moving patients from dependence to independence through nurse-assisted activity, guidance, and encouragement (Younas, 2023). The Health Belief Model explains patient participation through perceived benefits, perceived barriers, susceptibility to complications, cues to action, and self-efficacy. Patients are more likely to cooperate when they understand that movement can reduce pneumonia, deep vein thrombosis, weakness, and prolonged hospitalization. However, fear of pain, falling, or wound disruption may hinder participation. Nurses influence patient behavior through education, reassurance, motivation, and continuous support (Rosenstock et al., 2022). Conceptually, the study follows an Input–Process–Output model. The input includes the demographic profile of post-operative patients in terms of age, gender, type of operation, and number of hospital days, as well as their responses to early mobilization strategies rendered by nurses. The process involves data gathering through a structured questionnaire and analysis using frequency, percentage, mean, standard deviation, and correlation analysis. The output is a proposed enhancement program to strengthen postoperative nursing care and improve recovery outcomes.

1.5 Research Gaps and Rationale for the Enhanced Nursing Care Program

Although early mobilization is widely recommended, its implementation remains inconsistent. Some patients delay ambulation because of pain, fear, weakness, dizziness, lack of motivation, or limited understanding. Nurses may also differ in confidence, time availability, and consistency when encouraging mobilization. These concerns show the need to assess patient responses and determine whether early mobilization strategies are effectively carried out in postoperative care. The present study addresses this gap by evaluating early mobilization among post-operative patients. It determines the demographic profile of respondents in terms of age, gender, type of operation, and number of hospital days; assesses their responses to early mobilization strategies rendered by nurses; determines whether a significant relationship exists between demographic profile and responses to early mobilization; and proposes an Enhanced Nursing Care Program based on the findings. The study hypothesizes that there is a significant relationship between the demographic profile of post-operative patients and their responses to early mobilization strategies. The study is limited to adult post-operative patients admitted in a selected hospital, particularly those from general surgery, orthopedic, and gynecologic departments who are medically stable to participate. It focuses on patient responses and self-reported perceptions, which may be influenced by pain,

understanding, feelings, or recall bias. Despite these limitations, the study provides useful evidence for improving nurse-rendered early mobilization strategies and postoperative recovery care.

1.6 Alignment of Early Mobilization in Post-Operative Nursing Care with Relevant Sustainable Development Goals

This study aligns with SDG 3 – Good Health and Well-Being because it focuses on improving postoperative recovery, reducing complications, promoting patient safety, and supporting faster functional recovery. Early mobilization helps prevent pneumonia, deep vein thrombosis, pressure injuries, muscle weakness, delayed bowel function, and prolonged hospitalization. The study also supports SDG 8 – Decent Work and Economic Growth by contributing to hospital efficiency through reduced length of stay, improved bed turnover, and effective use of healthcare resources. It also relates to SDG 9 – Industry, Innovation and Infrastructure because the proposed Enhanced Nursing Care Program may support structured and evidence-based postoperative nursing practices. Furthermore, it connects with SDG 17 – Partnerships for the Goals because early mobilization requires collaboration among nurses, surgeons, anesthesiologists, physical therapists, occupational therapists, administrators, patients, and families.

1.7 Multidisciplinary Sustainability Relevance of Early Mobilization and Enhanced Nursing Care

The study contributes to public health sustainability by promoting safer recovery practices that reduce postoperative complications and improve patient outcomes. It supports institutional sustainability by helping hospitals strengthen postoperative protocols, improve nursing care systems, and reduce avoidable discharge delays. It also contributes to socio-economic sustainability because shorter hospital stays may reduce healthcare costs, improve bed availability, and increase hospital efficiency. For nursing practice, the study emphasizes evidence-based mobility strategies, patient education, safety monitoring, and nurse-led recovery support. For hospital administrators and policy makers, the findings may guide staffing, resource allocation, protocol development, and standardized postoperative care planning. For nursing organizations and future researchers, the study provides a foundation for improving perioperative care guidelines and further research on surgical recovery, rehabilitation nursing, and patient-centered mobility interventions.

2. Material and methods

2.1 Research Design

This study utilized a descriptive-correlational research design. This quantitative design was appropriate because it described the demographic profile of post-operative patients, measured their responses to early mobilization strategies rendered by nurses, and determined whether a significant relationship existed between demographic profile and patient responses. Descriptive-correlational research is commonly used when the objective is to describe variables and examine existing relationships without manipulating them (Creswell & Creswell, 2023). The descriptive method was used to present the respondents' characteristics in terms of age, gender, type of operation, and number of hospital days, as well as their responses to early mobilization strategies through frequency, percentage, mean, and standard deviation. According to Polit and Beck (2022), descriptive designs are appropriate when researchers aim to gather accurate information about current conditions, behaviors, or perceptions of a specific population. The correlational aspect examined the association between demographic variables and responses to nurse-led mobilization interventions, allowing the researcher to determine whether age, gender, type of operation, and number of hospital days were significantly related to patient responses. Correlational studies are useful in determining the strength and direction of relationships among naturally occurring variables (Gray et al., 2022). This design was suitable because the study did not manipulate variables or apply experimental treatment. Data were gathered from respondents in their actual clinical setting during the postoperative period, which allowed the researcher to obtain factual information and analyze naturally occurring relationships among the study variables. The design also provided a basis for formulating an enhancement program to improve early mobilization practices and postoperative nursing care.

2.2 Locale of the Study

The study was conducted in a selected Level 3 hospital in Pasig City, Philippines, with an estimated 100-bed capacity. As a tertiary healthcare institution, the hospital provided medical, surgical, pediatric, obstetric, and selected specialty services. It was staffed by multidisciplinary healthcare professionals, including nurses, physicians, allied health personnel, and administrative staff, and also served as a referral facility for nearby communities. Its moderate bed capacity and regular admission of surgical patients made it an appropriate setting for evaluating early mobilization among post-operative patients (Department of Health [DOH], 2022). The locale was relevant because it reflected a hospital setting where patient recovery, efficient bed utilization, nursing care quality, and postoperative outcomes were important healthcare priorities (World Health Organization, 2022).

2.3 Respondents of the Study

The respondents were adult post-operative patients admitted to the selected hospital who met the inclusion criteria. They were 18 years old and above, had undergone surgical procedures, and were medically stable to participate in early mobilization activities during the postoperative period. They came from different surgical units, including general surgery,

orthopedic, and gynecologic wards, where nurse-led early mobilization strategies were commonly implemented. Patients were excluded if they had conditions that prevented safe mobilization, such as hemodynamic instability, severe neurological impairment, strict bed rest orders, or orthopedic restrictions limiting movement. Patients who were unable to answer the questionnaire or declined participation were also excluded. The selected respondents were appropriate because they directly represented the population needed to determine the demographic profile of post-operative patients, assess their responses to early mobilization strategies rendered by nurses, and examine the relationship between profile variables and patient responses.

2.4 Sample and Sampling Procedure

The population consisted of adult post-operative patients admitted to the selected Level 3 hospital in Pasig City, Philippines during the data collection period. These patients came from general surgery, orthopedic, gynecologic, and other related departments where early mobilization strategies were commonly rendered by nurses. The population was appropriate because it directly represented the respondents needed to address the objectives of the study, particularly in determining the demographic profile of post-operative patients and assessing their responses to early mobilization strategies (Polit & Beck, 2022). The study used random sampling to ensure that each qualified respondent had an equal chance of being selected. A list of eligible post-operative patients was obtained from the hospital census or admission records during data gathering, and respondents were selected through simple random sampling using a draw-lots method or random number procedure. Random sampling was considered suitable because it minimized selection bias and increased the representativeness of the sample (Creswell & Creswell, 2023). The inclusion criteria covered adult patients aged 18 years old and above who were admitted as post-operative patients, medically stable and cleared for movement or ambulation, able to communicate and answer the questionnaire, and willing to participate through informed consent. The exclusion criteria covered patients with unstable vital signs or conditions contraindicating movement, strict bed rest orders, severe cognitive impairment or inability to communicate, admission to intensive or critical care units, and refusal to participate. If a selected respondent refused or became ineligible, another qualified participant was selected using the same random procedure, and all recruitment and selection processes were properly documented.

2.5 Research Instrument

The study used a structured research instrument divided into two parts. The first part gathered the demographic profile of the respondents in terms of age, gender, type of operation, and number of hospital days. The second part consisted of a researcher-made questionnaire that measured the responses of post-operative patients to early mobilization strategies rendered by nurses. The statements focused on nursing interventions related to turning, sitting, standing, ambulation, encouragement to move, movement safety, pain management support, and explanation of the benefits of mobilization. Structured questionnaires are commonly used in quantitative studies because they allow systematic data collection, consistency of responses, and ease of statistical analysis (Polit & Beck, 2022). A five-point Likert scale was used to determine the level of responses, with 5 interpreted as Strongly Agree, 4 as Agree, 3 as Neutral, 2 as Disagree, and 1 as Strongly Disagree. The corresponding mean score ranges were 4.21–5.00 for Strongly Agree, 3.41–4.20 for Agree, 2.61–3.40 for Neutral, 1.81–2.60 for Disagree, and 1.00–1.80 for Strongly Disagree. This type of scale is widely used in nursing and social science research because it effectively measures attitudes, perceptions, and experiences (Gray et al., 2022). To ensure validity, the instrument was submitted to experts in nursing research, postoperative care, and clinical practice for content validation. Their suggestions were incorporated before the final administration of the questionnaire. Pilot testing was also conducted among a small group of respondents with similar characteristics to determine item clarity and tool reliability. The internal consistency of the instrument was measured using Cronbach's alpha, and the results indicated acceptable reliability for data gathering. According to Creswell and Creswell (2023), pilot testing and reliability analysis are important procedures in strengthening the quality of research instruments.

2.6 Data Gathering Procedure

The data gathering procedure followed a systematic process to ensure accuracy, reliability, and ethical integrity. Before the study was conducted, formal permission was secured from the hospital administration of the selected Level 3 hospital in Pasig City, Philippines. Approval was also obtained from the appropriate research ethics committee to protect the rights, safety, and welfare of the respondents throughout the study (World Medical Association, 2022). After approval, the researcher coordinated with the Nursing Service Department and heads of surgical units to identify qualified respondents based on the inclusion and exclusion criteria. Data collection was scheduled in a way that did not disrupt hospital operations and patient care. Qualified post-operative patients were approached personally by the researcher or designated staff, and the nature, purpose, expected time, confidentiality measures, and right to decline or withdraw were explained. Written informed consent was obtained before participation. The questionnaire was administered when respondents were physically stable and available, either in a quiet area within the surgical ward or in the patient room. Respondents were given enough time to answer, and clarification was provided when needed. After retrieval, the completed questionnaires were checked for completeness and consistency. Incomplete forms were clarified when possible to minimize missing data. The gathered data were coded, tabulated, and entered into a password-protected electronic file accessible only to the researcher.

Confidentiality and privacy were strictly maintained, and names or personal identifiers were excluded from the database. Respect for autonomy, beneficence, and justice guided every stage of the data gathering procedure (Polit & Beck, 2022).

2.7 Data Analysis Techniques

The gathered data were analyzed using descriptive and inferential statistics to address the Statement of the Problem. Statistical analysis is essential in quantitative research because it organizes data, summarizes findings, and determines significant relationships among variables (Creswell & Creswell, 2023). Frequency and percentage were used to describe the demographic profile of the respondents in terms of age, gender, type of operation, and number of hospital days. Weighted mean and standard deviation were used to assess the responses of post-operative patients to early mobilization strategies rendered by nurses. The weighted mean determined the average level of response for each indicator, while the standard deviation measured the consistency or variation of responses. These measures are commonly used in Likert-scale data analysis (Polit & Beck, 2022). Correlation analysis was used to examine whether a significant relationship existed between the demographic profile of post-operative patients and their responses to early mobilization strategies. Pearson r was applied for continuous variables, while categorical variables were coded accordingly for statistical testing. This procedure determined the strength and direction of association between variables, with a 0.05 level of significance used as the basis for accepting or rejecting the null hypothesis (Gray et al., 2022). The findings also served as the basis for formulating the proposed action plan or enhancement program intended to strengthen early mobilization practices among post-operative patients. All statistical computations were processed using the Statistical Package for the Social Sciences (SPSS) to ensure accuracy, reliability, and ease of interpretation.

2.8 Ethical Considerations

The study strictly followed ethical principles to protect the rights, dignity, safety, and welfare of the respondents. Before data gathering, approval was secured from the appropriate Ethics Review Committee, and permission was obtained from the hospital administration. Respondents were informed about the nature, purpose, objectives, and procedures of the study. They were also informed that participation was voluntary and that refusal or withdrawal would not affect the care and services they received. Written informed consent was obtained before the questionnaire was administered, and respondents were informed of their right to withdraw at any stage without penalty or negative consequences (World Medical Association, 2022). Confidentiality and privacy were maintained throughout the study. Names and personal identifiers were not written on the questionnaires, and codes were used to protect respondent identity. All gathered data were used solely for academic and research purposes. Electronic files were stored in a password-protected device, while printed materials were kept in a secure location accessible only to the researcher. Since the study involved only a survey on patient responses to early mobilization strategies, risks were considered minimal, and respondents were given enough time to answer comfortably. The principles of respect for persons, beneficence, nonmaleficence, and justice were observed throughout the research process. Respect for persons was shown through voluntary participation and informed consent. Beneficence and nonmaleficence were ensured by minimizing risks and protecting respondent welfare, while justice was observed through fair and nondiscriminatory selection of respondents (Polit & Beck, 2022). The study also complied with the Data Privacy Act of 2012 of the Philippines in protecting personal information.

3. Results and Discussion

3.1 Demographic Profile of Post-Operative Patients

3.1.1 Age Profile of the Respondents

The findings showed that the largest group of respondents were 20 to 29 years old, representing 46% of the total sample. This was followed by those aged 30 to 39 years old at 32%, those aged 50 years old and above at 18%, and those aged 40 to 49 years old at 4%. These results indicate that most respondents were young adults. The predominance of younger respondents may be relevant to early mobilization because young adult post-operative patients are generally associated with better physiologic reserve, greater mobility tolerance, and faster recovery. However, age remains an important factor in planning individualized mobility interventions because increasing age has been associated with delayed functional recovery and higher postoperative risk (Nepogodiev et al., 2022).

3.1.2 Gender Profile of the Respondents

The results showed that 64% of the respondents were male, while 36% were female. This indicates that male patients formed the majority of the respondents during the data collection period. The higher number of male respondents may reflect the surgical census or the common surgical procedures performed in the institution. Although early mobilization benefits both male and female patients, gender-related physiological differences may affect pain response, muscle strength, and postoperative recovery patterns (Potter et al., 2022).

3.1.3 Type of Operation

The findings revealed that 64% of the respondents underwent major surgical procedures, while 36% underwent minor operations. This means that the majority of the participants required closer postoperative monitoring and recovery support.

Patients who undergo major surgery generally face higher risks for pulmonary complications, venous thromboembolism, weakness, and delayed recovery. For this reason, early mobilization is considered an important component of care for patients undergoing moderate to major surgical procedures, particularly within Enhanced Recovery After Surgery guidelines (Ljungqvist et al., 2022).

3.1.4 Number of Hospital Days

The results showed that 50% of the respondents stayed in the hospital for 3 to 7 days, while 36% stayed for 1 to 3 days. Meanwhile, 10% stayed for 8 to 9 days, and 4% stayed for 10 days and above. These findings suggest that most respondents had a moderate length of postoperative confinement. The length of hospital stay is closely related to recovery progress and readiness for discharge. Since timely ambulation and structured mobility protocols have been associated with shorter hospitalization and improved outcomes, the results support the importance of early mobilization as part of postoperative care planning (Zhao et al., 2022).

3.2 Responses of Post-Operative Patients to Early Mobilization Strategies

3.2.1 Overall Response to Early Mobilization Strategies

The overall mean score for patient responses to early mobilization strategies was 4.33 with a standard deviation of 0.59, interpreted as Strongly Agree. This indicates that the respondents had a highly positive perception of the effectiveness, safety, and benefits of early mobilization strategies rendered by nurses. This finding suggests that post-operative patients generally recognized early mobilization as a beneficial nursing intervention. The positive response may be connected to the respondents' understanding that movement after surgery supports recovery, prevents complications, and promotes independence. This is consistent with evidence showing that early ambulation is associated with improved recovery outcomes among surgical patients (Ljungqvist et al., 2022; Zhao et al., 2022).

3.2.2 Highest-Rated Benefits of Early Mobilization

The highest mean score of 4.75 was obtained by four indicators: patients who mobilized early had a shorter hospital stay, early mobilization helped prevent deep vein thrombosis, patients regained independence faster, and early mobilization was safe for most surgical patients. These results show that respondents strongly recognized the major physical and recovery benefits of early movement after surgery. These findings emphasize that patients viewed early mobilization as both safe and effective in improving recovery. The strong agreement with shorter hospital stay, prevention of deep vein thrombosis, and faster independence supports current evidence that early ambulation helps reduce venous thromboembolism risk and promotes faster return to baseline function (Ljungqvist et al., 2022; Zhao et al., 2022).

3.2.3 Physical, Emotional, and Satisfaction-Related Benefits

Several indicators obtained a mean score of 4.50, interpreted as Strongly Agree. These included early mobilization speeding up physical recovery, enhancing blood circulation, reducing pressure ulcers, improving emotional well-being, increasing confidence in recovery, improving breathing and lung function, and increasing patient satisfaction. These findings show that respondents recognized the multidimensional value of early mobilization. The results indicate that early movement supports not only physical healing but also confidence, emotional well-being, and satisfaction with care. Literature supports this result by showing that early movement improves pulmonary mechanics, circulation, tissue oxygenation, and patient morale after surgery (Boden et al., 2022).

3.2.4 Prevention of Postoperative Complications and Improved Cooperation

The indicators with a mean score of 4.25 were also interpreted as Strongly Agree. These included fewer postoperative complications, reduced risk of pneumonia, faster wound healing, and improved cooperation between patients and healthcare staff. These results show that respondents acknowledged the preventive role of early mobilization in postoperative recovery. The findings suggest that nurse-rendered early mobilization strategies may encourage patients to participate more actively in their recovery. Mobility has been identified as an important nursing strategy in reducing atelectasis, pulmonary infection, immobility-related weakness, and delayed wound healing (Delmore et al., 2022).

3.2.5 Lower-Rated but Positive Responses

The lowest mean score of 3.75, interpreted as Agree, was obtained in relation to less need for pain medication, improved bowel function, reduced swelling, and lower hospitalization cost. Although these were the lowest-rated indicators, they still reflected positive responses from the respondents. These results suggest that patients recognized these benefits but may have perceived them as less immediate or more dependent on other factors, including surgical type, pain management, medication response, and physician orders. Recent studies noted that pain perception, gastrointestinal recovery, and cost reduction were influenced by multiple variables beyond mobilization alone (Gustafsson et al., 2022).

3.3 Relationship Between Demographic Profile and Responses to Early Mobilization

3.3.1 Correlation Between Profile Variables and Patient Responses

The findings showed no significant relationship between the respondents' demographic profile and their responses to early mobilization strategies. Age had an r-value of -0.104 with a significance value of 0.30, gender had an r-value of -0.134 with a significance value of 0.18, type of operation had an r-value of 0.179 with a significance value of 0.07, and number of hospital days had an r-value of -0.012 with a significance value of 0.90. Since all significance values were greater than 0.05, the relationships were interpreted as not significant. These findings indicate that age, gender, type of operation, and number of hospital days did not strongly influence how post-operative patients responded to early mobilization strategies. This suggests that early mobilization was positively accepted across different patient groups when implemented safely and appropriately. Recent literature supports this result, showing that structured mobility programs improve recovery outcomes across various patient populations when they are supervised and individualized according to clinical condition rather than demographic characteristics alone (Ljungqvist et al., 2022; Zhao et al., 2022).

3.4 Proposed Enhanced Nursing Care Program

3.4.1 Basis for the Enhanced Nursing Care Program

The proposed Enhanced Nursing Care Program was based on the overall positive response of respondents to early mobilization strategies, with an overall mean of 4.33 interpreted as Strongly Agree. However, the indicators with the lowest mean score of 3.75, interpreted as Agree, showed areas needing further improvement. These included less need for pain medication, improved bowel function, reduced swelling in the operated area, and reduced hospitalization cost. Since the demographic profile of the respondents had no significant relationship with their responses to early mobilization, the program may be implemented broadly among post-operative patients regardless of age, gender, type of operation, or number of hospital days. The program therefore focuses on strengthening pain control, bowel recovery, edema prevention, and cost-efficient discharge planning while maintaining the highly rated benefits of early mobilization.

3.4.2 MOVE FAST Program

The proposed program was titled MOVE FAST Program. It is grounded in the clinical concept of "Optimization," which shifts postoperative recovery from passive bed rest into a proactive, nurse-led therapeutic process. Studies by Gomes et al. (2025) demonstrate that such protocols are superior when driven by nursing staff, as their constant bedside presence allows them to identify "windows of opportunity" for movement that reduce hospital stays by an average of 2.6 days. The program also integrates Value-Based Education, which research shows significantly enhances a patient's functional capacity and willingness to participate in recovery. The program emphasizes Functional Activity and Safety through structured safety checklists, which are considered primary facilitators for successful mobilization by reducing risks such as falls or device dislodgement. It also aims to support bowel recovery through stimulated peristalsis, as proven by Aydın & Kılıç (2021), and reduce movement-evoked pain through specialized nursing interventions, ultimately supporting cost-efficient and high-quality recovery.

3.4.3 General Objective and Focus Areas of the Program

The general objective of the program is to strengthen early mobilization practices among post-operative patients (Gomes et al., 2023) by improving pain management support through nurse-led multimodal strategies (Zhu et al., 2021), accelerating bowel recovery and gastrointestinal motility (Aydın & Kılıç, 2021), reducing edema and venous complications (Winkelman, 2020), and achieving cost-efficient recovery outcomes by shortening hospital length of stay (Castelino et al., 2022) through structured nurse-led interventions. The program focuses on four areas for enhancement. For pain management during mobilization, nurses and physicians are expected to improve comfort during movement by assessing pain before ambulation, encouraging splinting techniques, promoting relaxation and breathing techniques, and guiding gradual position changes. For bowel function recovery, nurses and dietitians are expected to promote gastrointestinal motility through walking three times daily as tolerated, hydration reminders, monitoring of bowel sounds, flatus, and bowel movement, and education on the benefits of mobility. For reduction of swelling, nurses are expected to minimize edema and improve circulation through mobility, exercise, elevation of the affected extremity as ordered, position changes, and movement. For cost-effective recovery, nurses and case managers are expected to support faster discharge and reduced expenses through mobility milestones, early discharge teaching, and prompt coordination with rehabilitation and case management.

3.4.4 Universal Strategies and Monitoring of the Program

The universal strategies of the program include a standardized early mobilization checklist for all surgical patients to promote equal quality care, mobility within 24 hours if medically stable to support faster recovery, nurse documentation of mobility progress every shift to ensure continuity of care, family education on assisting safe ambulation to provide an added support system, and fall-risk screening before movement to ensure safety. The monitoring and evaluation plan includes specific targets such as 90% of patients being ambulated within 24 hours post-operation and 95% of patients having pain controlled before ambulation. It also aims to increase compliance with expected bowel function recovery, improve outcomes related to reduced postoperative swelling complaints, decrease average hospital stay, and increase

patient satisfaction scores. These indicators are intended to measure whether the proposed program strengthens early mobilization practices and improves the quality of postoperative nursing care.

4. Conclusion & Recommendations

The study concluded that early mobilization strategies rendered by nurses were highly beneficial, positively accepted, and appropriate in promoting postoperative recovery among patients. The respondents were mostly young adult males who underwent major surgical procedures and stayed in the hospital for three to seven days. Their overall response to early mobilization was strongly positive, showing that patients recognized its role in faster physical recovery, improved circulation, better breathing and lung function, prevention of deep vein thrombosis, shorter hospital stay, improved emotional well-being, and faster return to independence. Although lower ratings were noted in relation to pain medication use, bowel function, swelling, and hospitalization cost, these areas were still positively rated and indicated opportunities for further improvement. The study also found no significant relationship between demographic profile and patient responses, suggesting that early mobilization may be broadly applied among post-operative patients regardless of age, gender, type of operation, or length of hospital stay.

Based on the findings, early mobilization should be strengthened as a standard part of postoperative nursing care through consistent implementation of structured mobility protocols, safe ambulation assistance, proper documentation, patient and family education, and continuous monitoring of recovery outcomes. Nurses should assess patient readiness, pain level, safety risks, bowel activity, swelling, and mobility progress before and after ambulation. Hospitals should ensure adequate staffing, equipment, and support systems to promote safe early movement, while nursing education and professional organizations should provide training, workshops, and guidelines on early mobilization, fall prevention, and recovery-focused care. Future researchers may further examine the effects of early movement on pain, bowel function, swelling, cost reduction, and different surgical patient groups.

The study was limited to post-operative patients in a selected hospital setting; therefore, the findings may not fully represent all surgical patients or healthcare institutions. The study focused only on selected demographic variables such as age, gender, type of operation, and number of hospital days, and patient responses were based on their perceptions of early mobilization strategies rendered by nurses. Other possible factors affecting mobilization, such as patient diagnosis, comorbidities, pain tolerance, surgical complexity, family support, staffing patterns, and long-term recovery outcomes, were not fully covered.

Compliance with ethical standards

The study observed ethical principles to protect the rights, dignity, safety, and welfare of the respondents. Confidentiality and privacy were maintained by excluding names and personal identifiers from the questionnaires, assigning codes to protect respondent identity, and using the gathered data solely for academic and research purposes. Electronic files were stored in a password-protected device, while printed materials were kept in a secure location accessible only to the researcher. The study involved only a survey on patient responses to early mobilization strategies; therefore, the risks were considered minimal. The principles of respect for persons, beneficence, nonmaleficence, and justice were observed, and the study complied with the Data Privacy Act of 2012 of the Philippines.

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