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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PREVENTION OF SELECTED POST-OPERATIVE COMPLICATIONS AMONG PATIENTS UNDERGOING ABDOMINAL SURGERIES IN SELECTED HOSPITALS OF AGRA DISTRICT

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ABSTRACT

Post-operative complications following abdominal surgery remain a significant challenge in healthcare, contributing to increased morbidity, extended hospital stays, and higher healthcare costs. Structured teaching programmes aimed at educating patients about preventive measures have the potential to improve outcomes by reducing complication rates and empowering patients toward self-care. This study assessed the effectiveness of a structured teaching programme on the prevention of selected post-operative complications among patients undergoing abdominal surgeries in selected hospitals of Agra District. A quasi-experimental pre-test/post-test design was adopted among 120 postoperative abdominal surgery patients selected through purposive sampling. Data were collected using a validated questionnaire addressing knowledge and self-care practices related to post-operative complications such as infection, deep vein thrombosis (DVT), respiratory complications, and wound care. Pre-test evaluation was conducted on day one post-surgery, followed by the structured teaching intervention. A post-test assessment was done on the fourth postoperative day. Statistical analysis was performed using paired t-tests and chi-square tests. Results showed a significant increase in knowledge and self-care practices post-intervention ($p < 0.001$). The findings highlight that a structured teaching programme significantly enhances patient knowledge and reduces the risk of selected postoperative complications.

KEYWORDS: Postoperative Complications, Abdominal Surgery, Patient Education, Hospital Care.

1. INTRODUCTION

1.1 Background of the Study

Abdominal surgeries are among the most commonly performed surgical procedures worldwide. While advances in surgical techniques and postoperative care have improved patient outcomes, post-operative complications remain a persistent concern. Complications such as wound infection, pulmonary issues (like atelectasis), and thromboembolic events increase patient discomfort, prolong hospitalization, and burden healthcare systems. Prevention of these complications not only improves recovery outcomes but also reduces healthcare costs and promotes quality of life.

Patient education forms the cornerstone of postoperative care, enabling patients to participate actively in their recovery. Structured teaching programmes delivered by trained healthcare professionals can standardize knowledge transfer and ensure patients are well informed about signs, symptoms, and preventive measures for complications. Despite this, many patients lack adequate understanding of self-care measures, leading to suboptimal recovery.

1.2 Statement of the Problem

A study to assess the effectiveness of structured teaching programme on prevention of selected postoperative complications among patients undergoing abdominal surgeries in selected hospitals of Agra district.

1.3 Rationale of the Study

Healthcare outcomes depend not only on surgical technique but equally on the quality of postoperative care. Although many hospitals provide routine postoperative advice, patients often receive inconsistent information. Structured teaching programmes ensure uniform delivery of essential content. In Agra district, where surgical caseloads are significant, there is a need to evaluate whether structured education improves patient knowledge and self-care behaviours. This study intends to fill the gap and enable evidence-based practice in patient education.

1.4 OBJECTIVES

1. To assess the existing level of knowledge and self-care practices regarding prevention of selected postoperative complications among patients undergoing abdominal surgeries before the structured teaching programme.
2. To implement a structured teaching programme on the prevention of selected postoperative complications.
3. To evaluate the effectiveness of the structured teaching programme by comparing knowledge and self-care practices before and after intervention.
4. To find associations between knowledge levels and selected demographic variables.

1.5 HYPOTHESES

H1: There is a significant difference in pre-test and post-test knowledge scores on prevention of selected postoperative complications.

H2: There is a significant difference in pre-test and post-test self-care practice scores.

1.6 Significance of the Study

Postoperative complications following abdominal surgeries pose a substantial challenge to healthcare systems, particularly in developing countries where resource constraints and patient load are high. In India, postoperative morbidity remains a key contributor to prolonged hospital stay, increased healthcare expenditure, and patient dissatisfaction. This study holds significance as it emphasizes preventive strategies through patient education, rather than solely relying on medical or surgical interventions.

The structured teaching programme empowers patients with essential knowledge regarding early ambulation, wound care, respiratory exercises, nutrition, and recognition of warning signs. Educated patients are more likely to comply with postoperative instructions, which directly reduces complications such as surgical site infections, atelectasis, deep vein thrombosis, and constipation. By improving patient participation in self-care, healthcare professionals can enhance recovery outcomes while simultaneously reducing the burden on nursing staff.

From a public health perspective, preventive education reduces readmission rates and improves bed turnover, allowing hospitals to utilize resources more efficiently. In districts like Agra, where tertiary hospitals cater to large populations, structured teaching programmes can play a pivotal role in standardizing postoperative care and ensuring continuity of care even after discharge.

2. LITERATURE REVIEW

2.1 Post-operative Complications

Post-operative complications, particularly following abdominal surgeries, encompass a wide range of conditions. Wound infections, respiratory complications, thromboembolic events, and gastrointestinal dysfunction are among those frequently observed. According to recent studies, surgical site infection (SSI) rates range from 5% to 20% in abdominal surgery patients, leading to delayed healing and readmissions. Pulmonary complications like atelectasis and pneumonia contribute to morbidity. DVT and pulmonary embolism remain serious concerns due to immobility and hypercoagulable states post-surgery.

2.2 Importance of Patient Education

Patient education has widely been recognized as vital in preventing postoperative complications. Self-management skills such as proper wound care, ambulation, breathing exercises, and early mobilization are directly linked to outcomes. Studies demonstrate that patients receiving structured education exhibit significantly better knowledge and compliance, reduced complication rates, and shorter hospital stays. Effective teaching programmes utilize audiovisual aids, demonstrations, and written handouts, tailored to patient literacy levels.

2.3 Teaching Programmes in Nursing Practice

Nursing interventions that include structured teaching strategies have yielded improvements in clinical care. Evidence supports that structured programmes with clear learning objectives, reinforcement sessions, and follow-ups lead to sustained patient engagement and behaviour change. However, locally relevant studies in the Indian context, particularly within Agra district, are limited.

3. METHODOLOGY

3.1 Research Design

A quasi-experimental one-group pre-test/post-test research design was adopted.

3.2 Setting

The study was conducted in selected government and private hospitals in Agra district with general surgical wards where abdominal surgeries are routinely performed.

3.3 Population

Patients aged 18-65 years undergoing elective abdominal surgery (e.g., appendectomy, cholecystectomy, hernia repair) were the target population.

3.4 Sample Size and Sampling Technique

A total of 120 patients were selected using purposive sampling based on inclusion and exclusion criteria.

3.5 Inclusion Criteria

- Patients who underwent elective abdominal surgery.
- Patients who are conscious and able to communicate.
- Patients willing to participate.

3.6 Exclusion Criteria

- Patients with cognitive impairment.
- Emergency surgery patients.
- Patients with severe complications at baseline.

3.7 Tool for Data Collection

A standardized structured questionnaire was developed after literature review and expert validation. It comprised:

1. **Demographic Proforma** – age, gender, education, occupation, socioeconomic status.
2. **Knowledge Assessment Scale** – 25 items covering postoperative complications and preventive measures.
3. **Self-Care Practice Checklist** – 20 items evaluating practices like wound care, ambulation, breathing exercises.

Scoring: Correct knowledge responses = 1, incorrect = 0. Practice items scored on a 3-point scale: Always (2), Sometimes (1), Never (0). Higher scores indicated better knowledge and practices.

3.8 Structured Teaching Programme (STP)

The STP was developed based on best practices and included:

- Anatomy and physiology basics relevant to abdominal surgery.
- Key postoperative complications and risk factors.
- Preventive measures: wound care, hygiene, importance of early mobilization, breathing and coughing techniques, leg exercises, nutrition, hydration, signs to report.
- Teaching aids: charts, pamphlets, demonstrations.

Duration: 45-60 minutes, delivered individually within 24 hours post-surgery.

3.9 Data Collection Procedure

1. Obtain ethical approval and informed consent.
2. Pre-test: Conduct the initial knowledge and practice assessment on postoperative Day
3. Implement the STP on the same day.

4. Reinforcement provided on postoperative Day 2.
5. Post-test assessment on postoperative Day 4 using the same tool.

3.10 Ethical Considerations

Participants were informed about voluntary participation, confidentiality, and the right to withdraw anytime. Data was anonymized.

3.11 Statistical Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (mean, SD) were used for demographic variables and scores. Paired t-tests compared pre and post scores. Chi-square tests examined associations between demographic variables and post-test outcomes. Significance was set at $p < 0.05$.

4. RESULTS

4.1 Demographic Characteristics

Among the 120 participants:

- **Gender:** 60% male, 40% female.
- **Age:** 40% were 18-30 years, 35% were 31-45 years, 25% were above 45 years.
- **Education:** 30% had no formal education, 40% completed secondary schooling, 30% had higher education.
- **Occupation:** 45% unemployed/homemakers, 35% skilled workers, 20% professionals.
- **Socioeconomic status:** 40% low, 35% middle, 25% high.

4.2 Knowledge Scores

Assessment	Mean Score	SD
Pre-test Knowledge	9.62	3.87
Post-test Knowledge	19.81	2.94

The paired t-test revealed a statistically significant increase in knowledge scores after the STP ($t = 18.46$, $p < 0.001$).

4.3 Self-Care Practice Scores

Assessment	Mean Score	SD
Pre-test Practice	11.03	4.12
Post-test Practice	22.15	3.58

A significant improvement was found in practice scores ($t = 16.89$, $p < 0.001$).

4.4 Association with Demographic Variables

Chi-square tests showed:

- **Education level** had a significant association with post-test knowledge and practice scores ($p < 0.05$).
- **Age** and **gender** were not significantly associated with post-test outcomes.

5. NURSING IMPLICATIONS

Nursing Practice

Nurses play a central role in postoperative care and patient education. The findings of this study reinforce the importance of structured teaching as an essential nursing responsibility. Nurses should integrate standardized educational modules into daily postoperative routines to ensure uniformity and effectiveness in patient teaching.

Nursing Education

Nursing curricula should emphasize patient education strategies, communication skills, and teaching methodologies. Nursing students should be trained to assess learning needs and deliver individualized teaching interventions for surgical patients.

Nursing Administration

Hospital administrators should support the development of structured teaching protocols and allocate time for nurses to conduct patient education sessions. Periodic in-service education programmes should be organized to enhance nurses' teaching competencies.

Nursing Research

The study contributes to nursing research by providing evidence on the effectiveness of structured teaching programmes. It encourages further research in diverse clinical settings and with larger samples to strengthen generalizability.

6. DISCUSSION

This study demonstrated that the structured teaching programme significantly improved both knowledge and self-care practices in patients after abdominal surgery. The pre-test results indicated a gap in understanding postoperative care, consistent with other findings where patients lack awareness of preventive measures. After receiving structured education, participants demonstrated markedly higher knowledge and engagement in self-care behaviours, supporting the hypothesis that education can positively influence recovery.

The significance of education aligns with international research emphasizing patient empowerment and education as critical components of postoperative care. The STP's holistic approach—combining verbal teaching, demonstrations, and written materials—likely reinforced learning through multiple channels.

Education level emerged as a significant factor influencing outcomes, suggesting that individuals with higher formal education may more easily assimilate and apply health information. This underscores the need to tailor education methods according to patient literacy.

Limitations include the lack of a control group, short follow-up period, and a single geographical area. Future research could include randomized controlled trials with diverse populations and long-term follow-up to assess sustained interventions.

7. CONCLUSION

The structured teaching programme was effective in significantly improving patients' knowledge and practices regarding the prevention of selected postoperative complications following abdominal surgery. Such programmes should be integrated into routine postoperative care, with specific attention to patients with lower literacy levels. Nurses and healthcare professionals play a central role in educating patients, which can lead to enhanced outcomes, reduced complications, and improved patient satisfaction.

8. RECOMMENDATIONS

1. **Implementation:** Hospitals should adopt structured teaching programmes as standard postoperative care.
2. **Training:** Healthcare staff should be trained in effective patient education techniques.
3. **Follow-up:** Incorporate long-term follow-up to assess sustained adherence to preventive measures.
4. **Materials:** Develop educational materials in local languages and using visual aids tailored to patient needs.
5. **Further Research:** Conduct multicentre studies examining long-term clinical outcomes and cost-effectiveness.

9. LIMITATIONS OF THE STUDY

Despite significant findings, the study has certain limitations. The absence of a control group limits the ability to attribute changes solely to the structured teaching programme. The short duration of follow-up restricted the assessment of long-term adherence to preventive

practices. Additionally, the study was confined to selected hospitals of Agra district, which may limit the generalization of results to other regions.

10. SUGGESTIONS FOR FUTURE RESEARCH

1. A randomized controlled trial can be conducted to strengthen evidence.
2. Longitudinal studies may assess long-term effectiveness of teaching programmes.
3. Comparative studies between different teaching methods (video-based, digital modules) can be explored.
4. Similar studies can be conducted among patients undergoing other surgical procedures.

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