Clinical Audit

From policy to practice: Transforming nurse competence through a restraint management recall program

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Abstract

Background: Physical restraint (PR) involves the use of mechanical or physical devices to restrict a patient's movement and is widely used in ICUs, wards, neurosurgery, psychiatry, and geriatric settings to prevent harm. Inappropriate or uninformed use may cause agitation, injury, delirium, or post-traumatic stress disorder.

Keywords: Physical restraint, nursing education, recall program, knowledge, attitude, practice, hospital policy.

Aim: To assess the effectiveness of a structured Restraint Management Recall Program in improving knowledge, attitude, and practice (KAP) regarding restraint policy among nurses.

Methods: A true experimental design was used, with 74 nurses in the experimental group and 57 in the control group (total n=131) from various departments (ER, ICU, OT, wards). Cluster sampling was applied. The intervention included a six-day structured educational program (NCRACE modules) for the experimental group. Data were collected using a socio-demographic proforma, a structured knowledge questionnaire, and rating scales for attitude and practice, before and after intervention. The control group received regular CNE without the specialized program.

Results: Post-intervention, the experimental group showed a statistically significant improvement in KAP scores compared to the control group ($p < 0.05$). Knowledge sustainability was higher in the experimental group.

Conclusion: The Restraint Management Recall Program was effective in improving and sustaining nurses' KAP regarding restraint policy, supporting its integration into regular nursing education programs.

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1. Introduction

Physical restraint is defined as the use of physical or mechanical devices, materials, or equipment attached to or adjacent to a patient's body that restricts free movement and cannot be easily removed. Commonly used in critical care, neurosurgery, psychiatry, and geriatric care, PR aims to prevent self-harm, accidental removal of life-support devices, and injury to others. Despite its use, PR can have negative physical and psychological consequences, including skin injury, reduced mobility, infection, agitation, delirium, and post-traumatic stress disorder. Globally, there is a shift toward minimizing restraint use and ensuring ethical, patient-centred care. This requires nurses to have updated knowledge, ethical sensitivity, and skills in restraint alternatives and safe application. In Kauvery Hospital, preliminary observations during routine rounds indicated that nurses had limited knowledge of hospital restraint policy, varied attitudes, and inconsistent adherence in practice. This study aimed to address these gaps through a structured educational recall program.

2. Literature Review

- Eskandari et al. (2017) found that nurses had moderate knowledge, limited alternative methods usage, and a strong intention to use PR, recommending supportive working cultures and training programs.
- Hasan & Abulattifah (2018) highlighted the central role of nursing staff in PR decision-making, showing improved attitudes and practices post-training.
- Lee et al. (2021) reported that nurses with higher educational levels had better attitudes and knowledge toward PR, and recommended ongoing training for ethical sensitivity and adherence to policies.
- These studies demonstrate that targeted educational interventions can improve KAP, reduce inappropriate PR use, and promote safer patient care.

3. Objectives

- To assess the baseline KAP on restraint policy among nurses.
- To evaluate the effect of the Restraint Management Recall Program on KAP among nurses.
- To compare the post-test KAP scores between experimental and control groups.

3.1 Methodology

- Design: True experimental research design.
- Setting: Kauvery Hospital, Marathahalli, Bangalore.
- Population: All nurses from ER, ICU, OT, and wards (excluding OPD).
- Sampling Technique: Cluster sampling.
- Sample Size: 131 nurses (Experimental: 74; Control: 57).

- Variables:
- Independent: Structured educational program (Restraint Management Recall Program).
- Dependent: Knowledge, attitude, and practice scores.

3.2. Tool

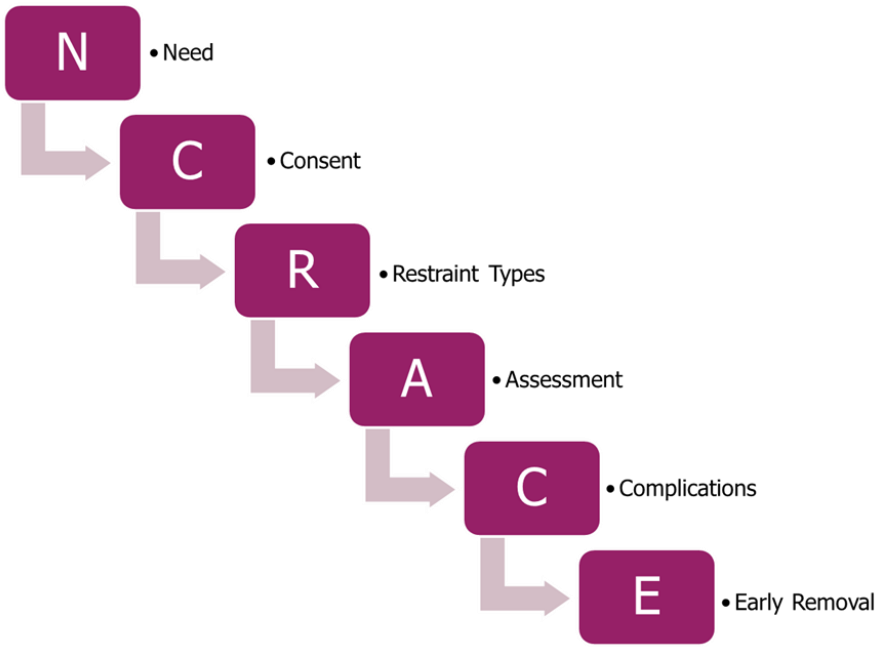
- Part A: Socio-demographic and clinical variables.
- Part B: Structured questionnaire on restraint policy knowledge.
- Part C: Attitude rating scale.
- Part D: Practice rating scale.

3.3. Intervention

Control group: Regular CNE.

Experimental group: Six-day Restraint Management Recall Program covering NCRACE aspects (policy review, ethical considerations, alternatives, safe application, monitoring, evaluation).

6 – Aspects = Ncrace



3.4 Data Collection

- Pre-test: KAP assessment for both groups.
- Post-test: KAP reassessment after intervention

3.5 Interpretation

The Score Interpretation of Knowledge was Categorized into

LEVEL OF KNOWLEDGE	SCORE
In adequate knowledge	Below 50%
Moderately adequate knowledge	50-75%
Adequate knowledge	Above 75%

Score Interpretation for Rating Scale for Assessing Attitude

LEVEL OF ATTITUDE	SCORE
Negative attitude	0 – 40
Neutral attitude	41 - 60
Positive attitude	61 - 100

Score Interpretation for Practice Scale

Level of practice	Score
Poor practice	1-50
Good practice	51-100

4. Results

Pre-test: Both groups had comparable KAP scores, with moderate knowledge and variable attitudes.

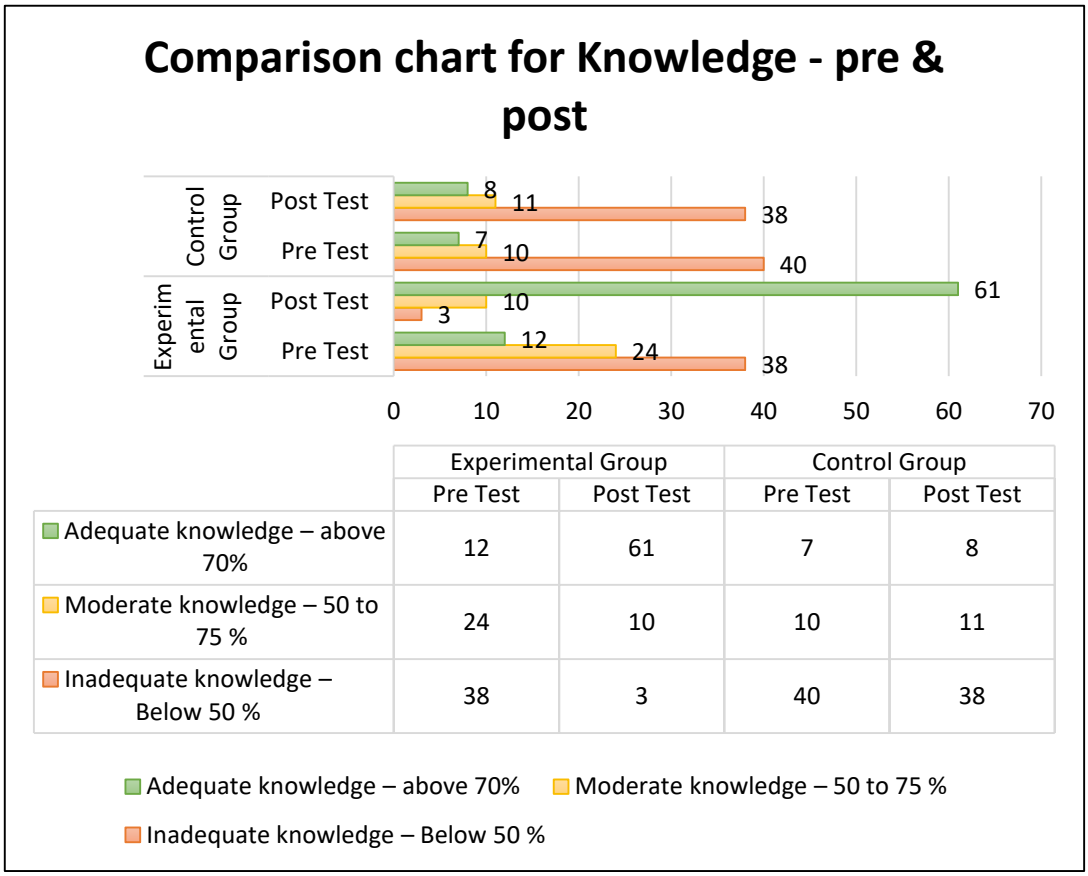
Post-test: Experimental group showed significant improvement in all three domains compared to control group ($p < 0.05$).

Knowledge Sustainability: Experimental group retained higher scores over time, while control group scores showed minimal change.

Hypothesis Testing: Null hypothesis rejected; alternative hypothesis accepted.

5.1. Comparison of pre and post – Knowledge

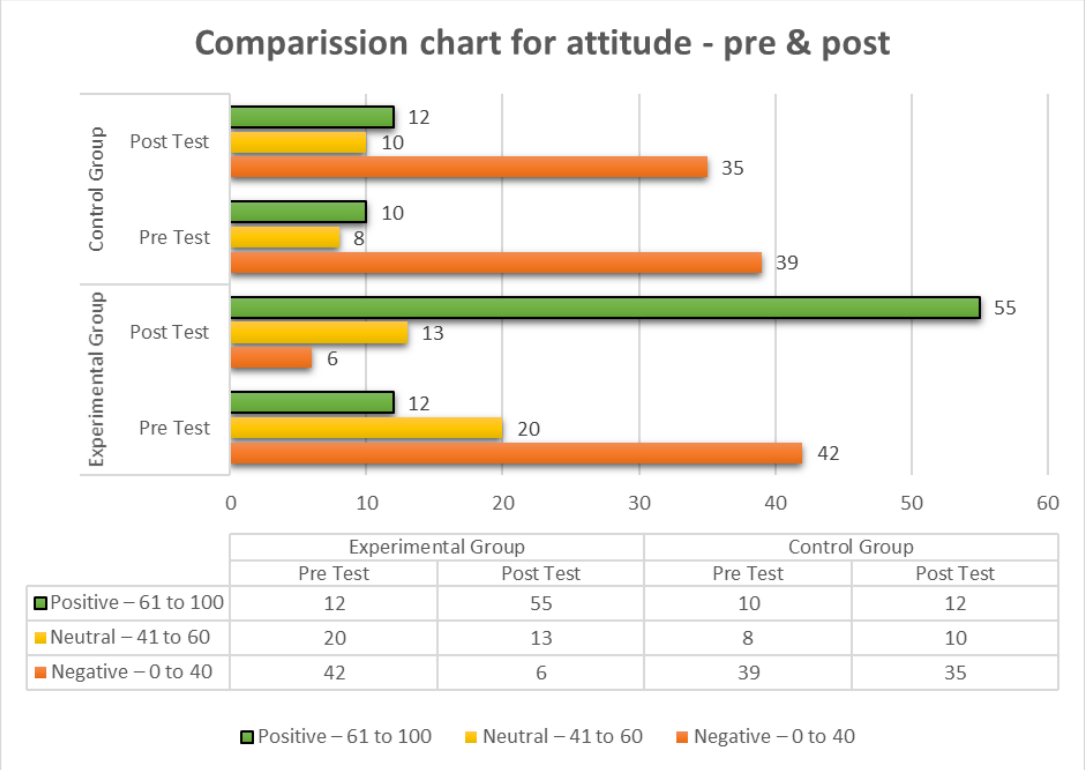
Level of knowledge	Experimental Group		Control Group	
	Pre Test	Post Test	Pre Test	Post Test
Inadequate knowledge – Below 50 %	38	03	40	38
Moderate knowledge – 50 to 75 %	24	10	10	11
Adequate knowledge – above 70%	12	61	07	08



	Experimental Group		Control Group	
	Pre Test	Post Test	Pre Test	Post Test
Adequate knowledge – above 70%	12	61	7	8
Moderate knowledge – 50 to 75 %	24	10	10	11
Inadequate knowledge – Below 50 %	38	3	40	38

5.2. Comparison of pre and post – Attitude

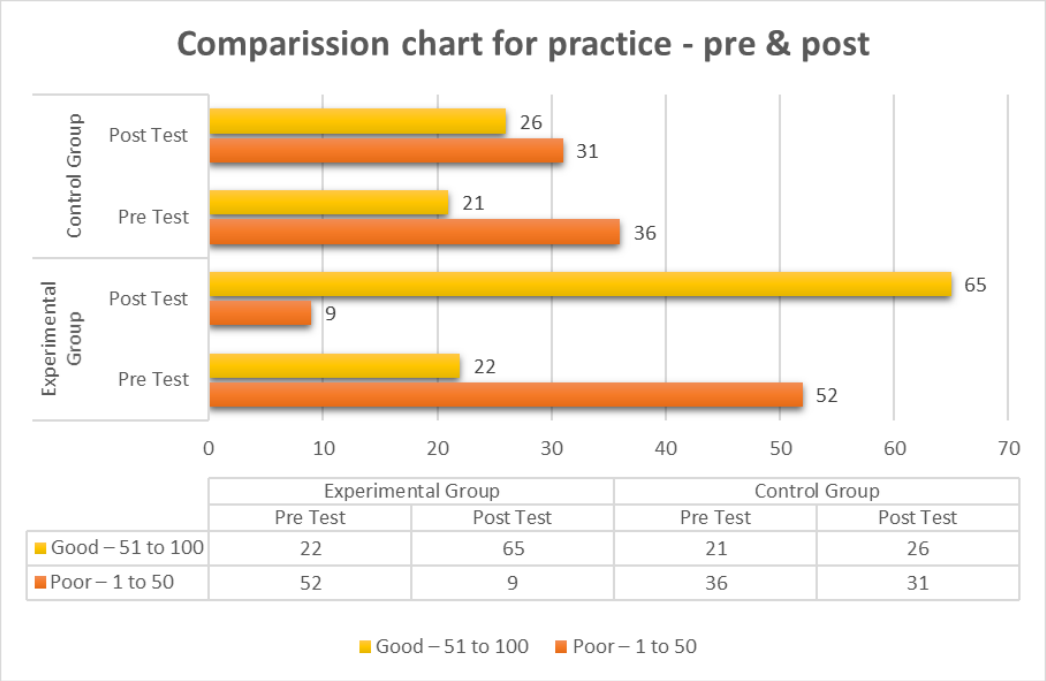
Level of Attitude	Experimental Group		Control Group	
	Pre Test	Post Test	Pre Test	Post Test
Negative – 0 to 40	42	06	39	35
Neutral – 41 to 60	20	13	08	10
Positive – 61 to 100	12	55	10	12



	Experimental Group		Control Group	
	Pre Test	Post Test	Pre Test	Post Test
Positive – 61 to 100	12	55	10	12
Neutral – 41 to 60	20	13	8	10
Negative – 0 to 40	42	6	39	35

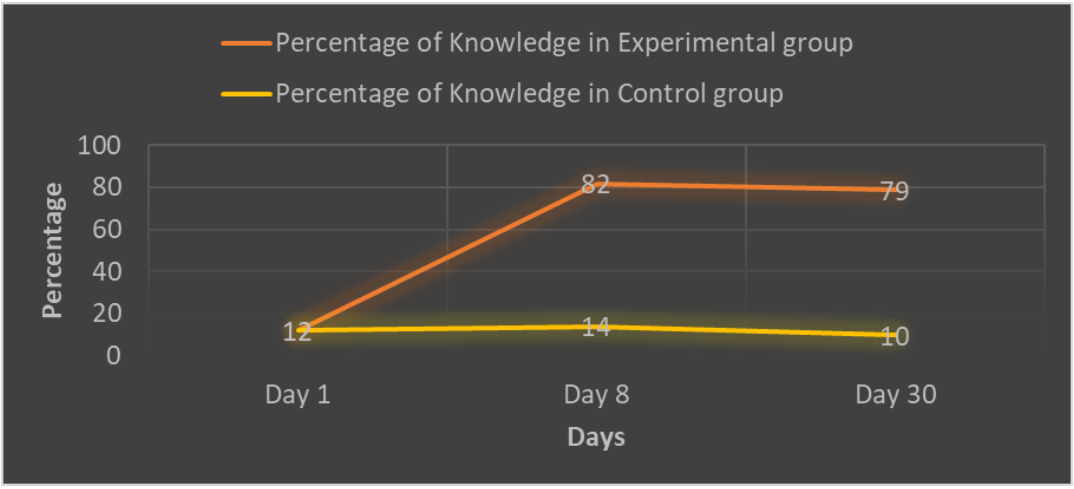
5.3. Comparison of pre and post – Practice

Level of Practice	Experimental Group		Control Group	
	Pre Test	Post Test	Pre Test	Post Test
Poor – 1 to 50	52	09	36	31
Good – 51 to 100	22	65	21	26



5.4 Knowledge Sustainability for Experimental and Control Group

Days	Percentage of Knowledge in Experimental group	Percentage of Knowledge in Control group
Day 1	12 %	12 %
Day 8	82 %	14 %
Day 30	79 %	10 %



6. Discussion

The findings align with global literature demonstrating that structured educational programs can significantly improve nurses' KAP regarding PR. The use of the NCRACE framework ensured comprehensive coverage of policy, ethics, alternatives, and safe practices. Sustainability of knowledge suggests that recall-based, multi-day training is more effective than one-time CNE sessions. The improved practice scores also reflect the importance of linking policy knowledge with hands-on demonstrations and real-world

scenarios. This study supports regular incorporation of specialized training programs into hospital policy to ensure safe, ethical, and effective PR application.

7. Conclusion

The Restraint Management Recall Program significantly improved and sustained nurses' knowledge, attitudes, and practices regarding PR policy. Adoption of such structured educational interventions can promote patient safety, reduce complications, and support zero-tolerance goals for restraint-related injuries.

Recommendations

- Regular refresher courses for all nursing staff.
- Policy updates aligned with ethical guidelines.
- Integration of restraint alternatives training in orientation programs.
- Continuous monitoring and feedback on restraint use.

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