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Effectiveness of an Educational Programme on Knowledge Regarding Advancement in Nursing Practice and Patient Safety Among Nurses in Selected Healthcare Settings: A Pre-Experimental Study

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ABSTRACT

Background - Mental health care is an essential aspect of the healthcare system, and nurses play a crucial role in providing care to patients with mental illnesses. One of the significant challenges faced by healthcare providers is managing patients who may exhibit aggressive or violent behaviour due to their mental condition. In such situations, physical or mechanical restraints are sometimes used to ensure the safety of the patient and those around them. Present study was conducted to determine the effectiveness of a self-instructional module on knowledge regarding use of restraints among staff nurses.

Methods - A quantitative research approach with a quasi-experimental one-group pre-test and Post-test design was adopted for the study. The study was conducted among 70 staff nurses in Selected hospitals. Participants were selected using a simple random sampling technique.
Data were collected using a structured demographic questionnaire and self-structured 30 questionnaire. Following the pre-test assessment, a self-instructional module was administered to assess the post test score of staff nurse. Post-test assessment was conducted after the intervention to evaluate changes in knowledge levels.

Results - The findings revealed a significant improvement in knowledge scores following the implementation of the self-instructional module. The mean pre-test knowledge score was 11.21 (SD = 1.70), whereas the mean post-test score increased to 21.17(SD = 1.58). The paired t-test value was 54.90 with a p-value < 0.05, indicating a statistically significant difference between pre-test and post-test knowledge scores. Post-test analysis showed that, no one of them had poor knowledge, 38.57% had average knowledge and 61.43% of them had good knowledge. Average knowledge score at the time of posttest was 21.17 with standard deviation of 1.58. The minimum score of knowledge was 19 with maximum score of 26.

Conclusion - The study concluded that the self-instructional module is a simple intervention which should be carried out independently in the field of nursing. The overall experience of conducting this study was enriching hence it gives an opportunity to the investigator to acquire new information as well as learning experience. The experience of the investigator during the study and the finding helped the investigator to give suggestions and the recommendations for further studies

Keywords: Advanced Nursing Practice, Patient Safety, Evidence-Based Practice, Nurses, Healthcare Quality, Nursing Education

INTRODUCTION

Patient safety remains a global healthcare priority and is recognized as a critical indicator of healthcare quality. Healthcare organizations continuously seek innovative approaches to reduce adverse events, medication errors, healthcare-associated infections, and preventable patient harm... .

Advancements in nursing practice have emerged as essential strategies for improving patient outcomes and promoting safer healthcare systems. These advancements include evidence-based nursing practice, electronic health records, clinical decision-support systems, standardized communication models such as SBAR, quality improvement initiatives, and multidisciplinary collaboration. Nurses represent the largest segment of the healthcare workforce and spend the greatest amount of time with patients, making their role central to patient safety initiatives.

Despite rapid technological and professional developments, variation exists in nurses' adoption of advanced practices. Limited knowledge, insufficient training, and organizational barriers may affect implementation. Therefore, assessing the impact of advanced nursing practice on patient safety is essential for guiding future nursing education and healthcare policies.

2. Objectives

1. Assess nurses' knowledge regarding advancement in nursing practice and patient safety.
2. Evaluate the effectiveness of an educational programme.
3. Determine associations between knowledge scores and demographic variables.

3. Hypotheses

H_1: There is a significant difference between the pretest and posttest knowledge scores regarding advancement in nursing practice and patient safety among nurses in selected healthcare settings.

H_2: There is a significant association between nurses' pretest knowledge scores regarding patient safety and selected demographic variables

H_0: There is no significant difference between the pretest and posttest knowledge scores regarding advancement in nursing practice and patient safety among nurses in selected healthcare settings.

4. Materials and Methods

4.1 Study Design

Quantitative pre-experimental one-group pretest-posttest design.

4.2 Study Setting and Population

Selected healthcare settings including hospitals and clinical centres.

4.3 Sample and Sampling Technique

40 Registered staff nurses employed in selected healthcare institutions.

4.4 Inclusion and Exclusion Criteria

Inclusion Criteria

Registered staff nurses working in selected healthcare settings

Nurses willing to participate

Nurses available during data collection

Exclusion Criteria

Nursing students and interns

Nurses on long-term leave

Nurses unwilling to participate

4.5 Data Collection Tool

Section A: Demographic variables.

Section B: Knowledge questionnaire on advanced nursing practice and patient safety.

4.6 Validity and Reliability

Content validity was established through expert review by nursing and public health professionals. The structured format ensured consistency and minimized measurement bias. The tool demonstrated acceptable internal consistency for assessing Advancement in Nursing Practice on Patient Safety.

4.7 Intervention

A structured educational programme on advancements in nursing practice and patient safety was

administered to the participants. The programme included topics such as evidence-based practice, patient safety principles, communication techniques, medication safety, and quality assurance. Interactive lectures, discussions, and audiovisual aids were used to enhance learning and understanding among nurses.

4.8 Data Collection Procedure

After obtaining formal permission and informed consent, a pretest was conducted using a structured questionnaire to assess baseline knowledge. The educational intervention was then implemented, followed by a post-test using the same tool to evaluate the effectiveness of the programme. The collected data were checked and prepared for analysis.

4.9 Ethical Considerations

Ethical approval and institutional permission were obtained before data collection. Participation was voluntary, and informed consent was secured from all participants. Confidentiality, anonymity, and the right to withdraw from the study at any time were ensured throughout the research process.

4.10 Statistical Analysis

Data were analysed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used to summarize the data. Paired t-test assessed the effectiveness of the intervention, while chi-square test determined associations between knowledge scores and demographic variables. Statistical significance was set at $p < 0.05$.

5. Results

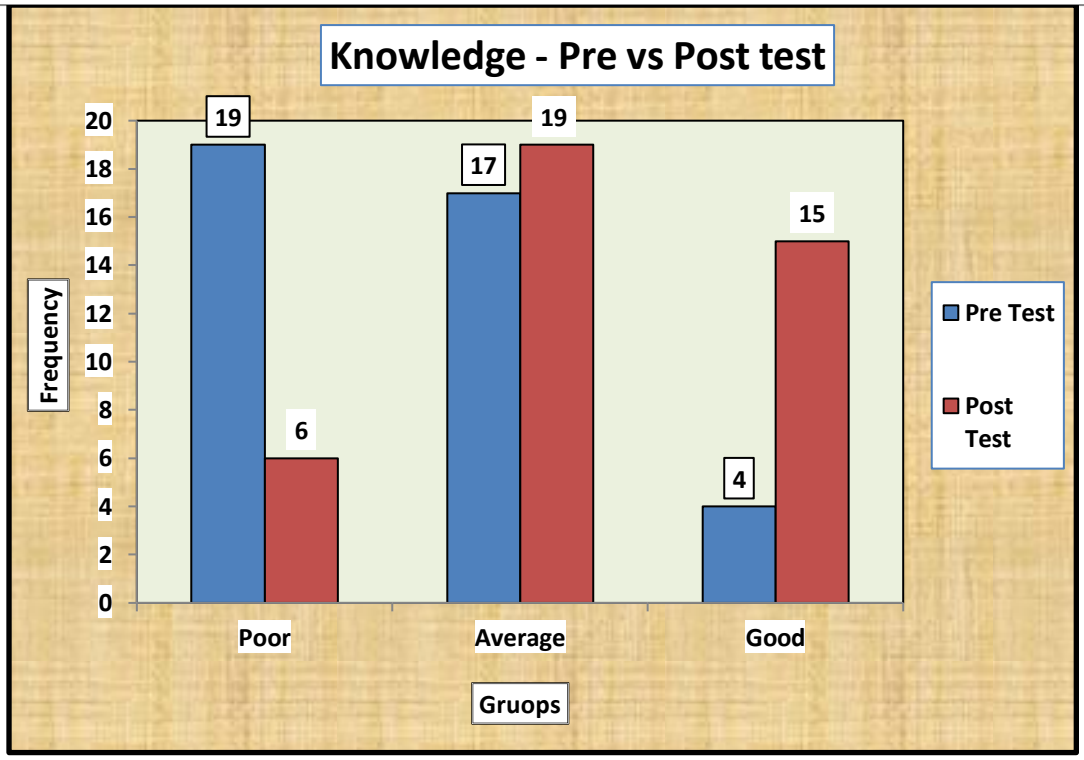
The pretest findings showed that 47.5% of nurses had poor knowledge, whereas only 10% had good knowledge regarding advanced nursing practice and patient safety.

Following the intervention, the proportion of nurses with good knowledge increased to 37.5%. The mean knowledge score improved significantly from 3.75 ± 1.69 to 5.77 ± 1.96 ($t = 6.08$, $p < 0.001$), indicating the effectiveness of the educational programme.

Significant associations were found between knowledge scores, gender, and previous training on advanced nursing practices.

General assessments of Knowledge- PRE & POST test

Variable	Groups	Score	Pre Test		Post Test	
			Frequency	Percentage	Frequency	Percentage
Knowledge	Poor	0-3	19	47.50	6	15.00
	Average	4-6.	17	42.50	19	47.50
	Good	7-10.	4	10.00	15	37.50
Knowledge	Minimum		1		2	
	Maximum		9		9	
	Average (SD)		3.75 (1.69)		5.77 (1.96)	



Comparison of the pre and posttest Knowledge (paired t test)

Group	Frequency	Mean	S.D.	t value	P value
Pre Test	40	3.75	1.69	6.08	0.000
Post Test	40	5.77	1.96		

Association of Knowledge with demographic variables

Variable	Groups	Knowledge - PRE Test		Chi Square	d.f.	p value	Significance
		below Md	above Md				
Age (in years)	21-25	12	4	1.29	3	0.73	Not Significant
	26-30	7	1				
	31-35	5	2				
	above 35	8	1				
Gender	Male	16	8	6.66	1	**0.010**	**Significant**
	Female	16	0				
Educational Qualification	GNM	13	2	1.20	3	0.75	Not Significant
	BSc. Nursing	10	3				
	Post Basic BSc nursing	5	1				
	MSc nursing	4	2				

Years of experience	6 month - 1 year	14	2	1.04	3	0.79	Not Significant
	1-3 year	6	2				
	3-5 year	5	2				
	above 5 years	7	2				
Working area	ICU	12	3	2.48	3	0.48	Not Significant
	Medical ward	5	1				
	Surgical ward	6	0				
	Emergency ward	9	4				
	Others	0	0				
Type of hospital	Government	18	7	2.66	1	0.10	Not Significant
	Private	14	1				
Have you received training on advanced nursing practices?	Yes	20	1	6.41	1	**0.011**	**Significant**
	No	12	7				

6. Discussion

The present study demonstrates that a structured educational programme on advancements in nursing practice can significantly improve nurses' knowledge regarding patient safety. The low baseline knowledge observed among participants indicates the need for continuous professional education and training in advanced nursing practices.

The substantial improvement in post-test knowledge scores suggests that educational interventions focusing on evidence-based practice, patient safety principles, and quality improvement strategies are effective in enhancing nurses' competencies. These findings are consistent with previous studies reporting positive effects of advanced nursing practice education on patient safety outcomes and quality of care.

The significant association between knowledge scores and prior training on advanced nursing practices highlights the importance of continuous professional development programmes. The absence of significant associations with most demographic variables suggests that educational interventions can be beneficial for nurses irrespective of age, qualification, experience, or work setting.

Although the study was conducted on a limited sample and lacked a control group, the statistically significant improvement in knowledge scores supports the effectiveness of the intervention. Further studies with larger samples and stronger research designs are recommended to strengthen the evidence.

7. Conclusion

The educational programme significantly improved nurses' knowledge regarding advancement in nursing practice and patient safety. Structured educational programmes can enhance awareness and promote the adoption of evidence-based and safety-oriented nursing practices. Strengthening continuous professional education may contribute to improved patient outcomes and higher standards of healthcare quality.

8. Limitations

Small sample size.

Absence of a control group.

Use of non-probability convenience sampling.

Limited generalization of findings to other healthcare settings.

9. Recommendations

Regular implementation of training programmes on advanced nursing practices and patient safety.
Continuous professional development and skill enhancement for nurses.
Integration of evidence-based practice and patient safety education into nursing curricula.
Further research using larger samples, multicentre settings, and experimental study designs.