RESEARCH PAPER

A Study To Assess The Effectiveness Of Structured Teaching Programme On Medication Safety Among Nursing Students At Vinayaka Mission's College Of Nursing, Puducherry

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ABSTRACT

Background: Medication safety is a critical component of patient care and an essential responsibility of nursing professionals. Nursing students, as future healthcare providers, must possess adequate knowledge and skills to prevent medication errors and ensure safe drug administration. However, gaps in knowledge and practice may lead to serious consequences, highlighting the need for effective educational interventions such as structured teaching programmes.

Materials and Methods: A pre-experimental one- group pre-test and post-test research design was adopted for the study. A total of 135 nursing students were selected using a convenient sampling technique. Both verbal and written informed consent were obtained after providing a participant information sheet. The study consisted of two sections: Section A included demographic variables, and Section B assessed knowledge regarding medication safety using a structured questionnaire. A pre- test was conducted to assess baseline knowledge. This was followed by a structured teaching programme (STP) using lecture, discussion, and audiovisual aids, covering topics such as the five rights of medication administration, prevention of medication errors, and safe handling of drugs. After 7 days, a post- test was conducted using the same questionnaire. The collected data were analysed using SPSS version 25. Descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (paired t- test and chi- square test) were used.

Results: The findings revealed that in the pre- test, the majority of students had inadequate knowledge 107(79.3%), while 28(20.7%) had moderately adequate knowledge and none had adequate knowledge 0(0.0%). After the intervention, there was a significant improvement, with most students having moderately adequate knowledge 115(85.2%) and adequate knowledge 20(14.8%), and none had inadequate knowledge. The mean pre- test knowledge score was 7.03 (SD=1.574), which increased to 14.30(SD=0.713) in the post- test. The mean difference was 7.27, and the calculated t- value of 76.694 was statistically highly significant at $p<0.001$, indicating the effectiveness of the structured teaching programme.

Conclusion: The study concludes that the structured teaching programme was highly effective in improving the knowledge of nursing students regarding medication safety. Regular implementation of such educational interventions is

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INTRODUCTION

Nursing students are the future healthcare professionals who play a crucial role in delivering safe and effective patient care. During their academic and clinical training, they acquire essential knowledge, skills, and attitudes required for professional nursing practice. Clinical exposure allows students to apply theoretical concepts in real-life healthcare settings under supervision. However, they may face challenges such as lack of experience, anxiety, and limited clinical competence. These factors can influence their performance and decision making abilities. Therefore, proper guidance, supervision, and training are essential to enhance their clinical skills. Strengthening the educational foundation of nursing students ensures better patient outcomes and quality healthcare delivery. Medication safety among nursing students is a crucial component of nursing education and clinical training. Nursing students are involved in medication administration under supervision during their clinical postings. Due to limited knowledge and lack of experience, they are at a

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higher risk of committing medication errors. These errors may occur during preparation, calculation, or administration of drugs. Therefore, it is essential to improve their competency through structured education. Clinical supervision plays an important role in guiding students toward safe practices. Strengthening medication safety knowledge helps ensure quality patient care and reduces risks. Implementing structured teaching programmes also supports development of reflective practice among nursing students. By comparing pre-test and post-test results, educators can identify areas where learners need additional guidance. This continuous feedback helps tailor future teaching to meet students learning needs. Incorporating structured programmes into nursing education encourages students to take responsibility for updates in medication safety guidelines and best practices. Moreover, it fosters a culture of safety where students are more willing to report and learn from near- misses and errors, improving overall patient safety outcomes. Structured programmes therefore play a dual role in education and quality improvement.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme on medication safety among nursing students at Vinayaka mission's college of nursing, Puducherry.

OBJECTIVES

1. To assess the level of knowledge regarding medication safety among nursing students.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding medication safety among nursing students.
3. To find out the association between pre-test level of knowledge with selected demographic variables among nursing students.

HYPOTHESIS

H1: There will be a significant difference between the pre and post test level of knowledge regarding medication safety among nursing students.

H2: There will be a significant association between pre-test level of knowledge with selected demographic variables among nursing students.

METHODOLOGY

Research Approach: Quantitative research approach.

Research Design: Pre-experimental -one group Pre and Post- test research design.

Setting: Vinayaka Mission's College of Nursing, Puducherry.

Population: All the nursing students.

Sample Size: 135 Nursing students.

Sampling Technique: Non probability convenient sampling technique.

TOOL

Section A: Demographic variables

Section B: Structured questionnaire (20 MCQs)

Reliability: r=0.85(highly reliable).

Data collection procedure:

- Pre-test conducted
- Structured teaching programme
- Post- test after 7 days

DATA ANALYSIS

Descriptive: Frequency, percentage, mean, SD.

Inferential: Paired t test, Chi square test

Section A: Description of the Demographic variables among nursing students.

Table 4.1: Frequency and Percentage Distribution of Demographic variables among (N=135)

Variables	Category	Frequency(n)	Percentage(%)
Age	17 years	62	45.9%
	18 years	48	35.6%
	19 years	17	12.6%
	20 years	8	5.9%
Gender	Male	17	12.6%
	Female	118	87.4%
Religion	Hindu	117	86.4%
	Muslim	11	8.1%
	Christan	7	5.2%
Educational status	Bsc nursing	98	72.6%
	DGNM	37	27.4%
Year of study	1st year	135	100%
Previous knowledge	Yes	15	11.1%
	No	120	88.9%

Section B: Assessment of the Pre- test and Post- test level of knowledge regarding medication safety among nursing students.

Table 4.2: Frequency and Percentage Distribution of Pre-test and Post-test level of knowledge regarding medication safety among nursing students (N=135)

Knowledge level	Pre-test Frequency (n)	Pre-test Percentage (%)	Post-test Frequency (n)	Post-test Percentage (%)
Inadequate	107	79.3%	0	0.0%
Moderately adequate	28	20.7%	115	85.2%
Adequate knowledge	0	0.0%	20	14.8%
Total	135	100%	135	100%

Table 4.3: Mean and Standard Deviation of Pre-test and Post-test level of knowledge regarding medication safety among nursing students (N = 135)

Knowledge Score	Mean	Standard Deviation
Pre-test Knowledge Score	7.03	1.574
Post-test Knowledge Score	14.30	0.713

The table 4.3 shows the mean and standard deviation of pre-test and post-test knowledge scores regarding medication safety among nursing students. The mean pre-test knowledge score was 7.03 with a standard deviation of 1.574, indicating a lower level of knowledge with moderate variation among students.

After the intervention, the mean post-test knowledge score increased to 14.30 with a standard deviation of 0.713, indicating a significant improvement in knowledge and reduced variation among students. **Section C: Evaluate the effectiveness of structured teaching program on knowledge regarding medication safety among nursing students.**

Table 4.4: Effectiveness of structured teaching program on knowledge regarding medication safety among nursing students (N = 135)

Knowledge Score	Mean	Standard Deviation	Mean Difference	t-value	df	p-value
Pre-test	7.03	1.574	**7.27**	76.694	134	<0.001**
Post-test	14.30	0.713				

-p < 0.001 highly significant

The table 4.4 shows the effectiveness of the structured teaching program on knowledge regarding medication safety among nursing students. The mean pre-test knowledge score was 7.03 with a standard deviation of 1.574, whereas the mean post-test knowledge score increased to 14.30 with a standard deviation of 0.713.

The mean difference between pre-test and post-test scores was 7.27, indicating a substantial improvement in knowledge after the intervention. The calculated t-value was 76.694 found to be statistically highly significant at $p < 0.001$.

This result clearly indicates that the structured teaching program was highly effective in improving the knowledge of nursing students regarding medication safety.

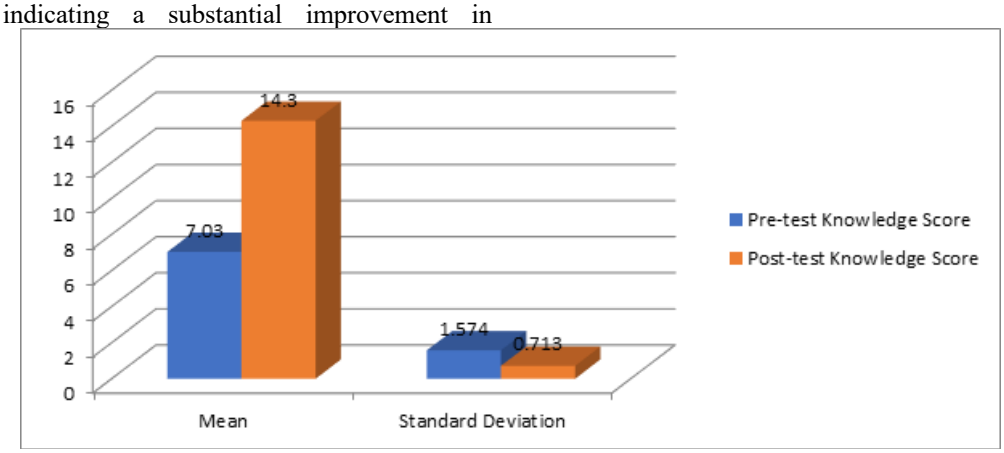


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CONCLUSION

The structured teaching programme was highly effective in enhancing the knowledge of nursing students regarding

medication safety. Hence, such educational interventions should be regularly implemented to improve patient safety and quality of care in clinical practice.

NURSING IMPLICATIONS

The findings of study have scope in following area nursing education, nursing practice, nursing administration and nursing research.

RECOMMENDATIONS

Regular structured teaching programmes on medication safety should be conducted for nursing students.

In- service education and workshops should be organized to reinforce safe medication practices.

Similar studies can be conducted with a larger sample size and in different settings for better generalization.

Comparative studies can be carried out between different groups of nursing students or healthcare professionals.

Further interventional studies are recommended to evaluate the effectiveness of various teaching strategies on medication safety.

LIMITATIONS

The study is limited to VMCON, AVMC&H Puducherry.

The study is limited to a sample size of 135 Nursing students, VMCON, AVMC&H Puducherry.

The duration of the study is limited to 7 days.

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