

Effectiveness Of Structured Teaching Program On Knowledge Regarding International Patient Safety Goals (Ipsg) Among Staff Nurses Working In Selected Hospitals: A Quasi Experimental Study

Ms. Mohini M. Marode^{1*}, Mrs. Lata Sukare², Dr. Pascaline David³, Ms. Stuti Sunar⁴

¹Department of Medical Surgical Nursing VSPM MDINE, Nagpur

²Professor VSPM MDINE, Nagpur

³Professor VSPM MDINE, Nagpur

⁴Associate Professor VSPM MDINE, Nagpur

*Corresponding Author - Ms. Mohini M. Marode

E-mail- mohinimarode18012000@gmail.com

ABSTRACT

Introduction: Patient safety focuses on preventing avoidable harm through structured systems, standardized practices, and patient involvement. It promotes transparency and error reduction to ensure safe, effective care. Global bodies like WHO advocate for stronger safety measures, especially in high-risk settings.

Methodology: A quasi-experimental one group pretest post test design was used. A total of 75 staff nurses were selected through non probability convenient sampling technique from the selected hospitals. Data were collected using semi-structured questionnaire and self-administered questionnaire to assess knowledge. The structured teaching program on International Patient Safety Goals (IPSG) was conducted followed by post-test after seven days.

Results: Mean knowledge score in pretest was 7.46 ± 3.11 and mean percentage of knowledge score in pretest was 24.88 ± 10.38 . After the structure teaching program, mean knowledge score in post-test was 21.92 ± 3.49 and mean percentage of knowledge score in post test was 73.06 ± 11.63 and the mean difference was 14.45 ± 3.27 . The tabulated value was 1.98. The calculated 't' value i.e. 38.24 which is much higher than the tabulated value.

Conclusion: The study concluded that the post test knowledge score was improved after implementation of structured teaching program. Structured teaching program plays important role in improving the knowledge.

Keywords: International Patient Safety Goals (IPSG), structured teaching program, knowledge, staff nurses.

INTRODUCTION

Patient safety is a critical aspect of healthcare that focuses on preventing avoidable harm through structured systems, evidence-based practices, and fostering a culture of transparency. Worldwide data reveals alarmingly high rates of medical errors and healthcare-associated infections, particularly in developing countries, leading to significant human suffering and financial burdens. These harms often stem from medication errors, surgical complications, diagnostic failures, patient misidentification, and unsafe clinical practices. To address these issues, the Joint Commission International (JCI) has established the International Patient Safety Goals (IPSG), which target key risk areas and promote safer healthcare delivery. By implementing these goals, healthcare organizations can enhance the quality of care.¹

Goal 1- Identify patients correctly²

Goal 2 - Improve effective communication²

Goal 3- Improve the safety of high-alert medications²

Goal 4- Ensure correct site, correct procedure and correct patient surgery (Safe surgery)²

Goal 5- Reduce the danger of HAI [Healthcare Associated Infections]²

Goal 6- Reduce the risk of patient harm resulting from falls²

Background of the study:

Globally, 1 in 10 patients suffers harm during healthcare, with higher risks in low- and middle-income countries where up to 4 in 100 may die due to unsafe care. Common causes include medication errors, surgical mistakes, and healthcare-associated infections. A study across 26 hospitals revealed an 8% adverse event rate, 83% of which were preventable and 30% linked to death. Patient harm also impacts global economic growth, reducing it by an estimated 0.7% annually. Investing in safety strategies improves outcomes and reduces costs. In India, medical errors cause 5.2 million injuries and 3 million preventable deaths each year. With 12.7 adverse events per 100 hospitalizations, around 42.7 million patients are affected annually. Most safety reports (96.8%) come from hospitals, while only 3.1% are from acute care facilities. These figures highlight the urgent need for robust safety protocols. Systemic improvements are vital to minimizing harm and enhancing healthcare quality.³

Need of the study:

Patient safety is a global priority, especially in high-risk healthcare settings. India has advanced its commitment by adopting International Safety Goals and signing the Global Patient Safety Action Plan 2021–2030. Reducing harm requires coordinated efforts from government and healthcare providers.⁴

Studies indicate that 3.7% of hospital admissions involve adverse events, with 1% due to negligence, underscoring the need for systemic reforms. Common causes include medication errors, surgical complications, and diagnostic failures. Despite positive attitudes, many nurses lack sufficient knowledge about patient safety, highlighting the need for better education and training. Patient safety aims to prevent harm and improve care quality by addressing risks like infections, falls, and misidentification. The International Patient Safety Goals (IPSG) promote safe practices through accurate identification, effective communication, and infection control. Implementing IPSG enhances patient outcomes and fosters a culture of accountability. Prioritizing harm-free care builds trust and strengthens healthcare systems.^{5,6}

Interventional research on International Patient Safety Goals (IPSG) is crucial to address existing knowledge gaps identified in previous studies among staff nurses. Despite global frameworks, implementation deficiencies and inconsistent adherence to International Patient Safety Goals (IPSG) which highlights the need for interventions. Structured teaching program on International Patient Safety Goals (IPSG) will enhance healthcare quality and reduce preventable harm worldwide.

ETHICAL ASPECT

The title was approved by institutional ethical committee. Permission was obtained by the concerned authorities before conducting the study. Consent letter was obtained by individual samples after explaining them the research process in their own language. Confidentiality was maintained by using code numbers by the investigator.

CONCEPTUAL FRAMEWORK

The conceptual framework selected for the study was based on Ernestine Wiedenbach's "Prescriptive Theory" (Helping art of clinical nursing).

REVIEW OF LITERATURE

In the present study the literature review is classified into the following sections.

- I.Literature related to patient safety.
- II.Literature related to knowledge, attitude and practice of healthcare workers related to patient safety.
- III.Literature related to International Patient Safety Goals (IPSG).
- IV.Literature related to knowledge of staff nurses related to International Patient Safety Goals (IPSG).
- V.Literature related to effectiveness of structured teaching program

METHODOLOGY:

OBJECTIVES OF THE STUDY:

Primary Objectives:

1. To assess the effectiveness of structured teaching program on knowledge regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals.

Secondary Objectives:

1. To assess pretest knowledge regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals.
2. To assess post-test knowledge regarding International Patient Safety Goals (IPSG) among staff nurses.
3. To evaluate the effectiveness of a structured teaching program on knowledge regarding International Patient Safety Goals (IPSG) among staff nurses.
4. To associate the post test knowledge score regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals with their demographic variables.

HYPOTHESIS:

Will be tested at 0.05 level of significance.

H0- There is no significant difference between pretest and post-test knowledge score regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals.

H1- There is significant difference between pretest and post-test knowledge score regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals.

H01- There is no significant association between post-test knowledge score regarding International Patient Safety Goals (IPSG) among staff nurses with selected demographic variables.

H2- There is significant association between post-test knowledge score regarding International Patient Safety Goals (IPSG) among staff nurses with selected demographic variables.

RESEARCH APPROACH

In this study quantitative approach is used.

RESEARCH DESIGN

The research design selected for the present study was Quasi-experimental One group pre-test post-test design.

SETTING OF THE STUDY

The present study was conducted in selected hospitals where International Patient Safety Goals (IPSG) goals are not practised after obtaining permission from concerned authority.

VARIABLES

Independent variables

The independent variable in this study is structured teaching program.

Dependent variables

The dependent variable in this study is knowledge regarding International Patient Safety Goals (IPSG).

POPULATION

Target population

In this study the target population include staff nurses working in hospitals.

Accessible population:

In this study, the accessible population include staff nurses working in selected hospitals and are available during data collection who were fulfilling the inclusion criteria.

SAMPLING TECHNIQUE

In the present study non probability convenient sampling technique was used.

SAMPLE SIZE

In this study, sample size consist of 75 staff nurses working in selected hospitals.

VALIDITY AND RELIABILITY

The tool was validated by 24 experts, includes 21 medical surgical nursing experts, 1 physician and 2 statistician. The correlation coefficient 'r' of the tool was 0.885, which was more than 0.87 and hence the tool was found to be reliable.

PILOT STUDY

A sample of 10% staff nurses was selected from selected hospitals. The pilot study was feasible in terms of man money and resources.

DESCRIPTION OF TOOL

Section A-Questionnaire on demographic Variable.

It includes total 8 demographic variables like Age, Gender, Religion, Area of residence, educational qualification, Monthly family income, total clinical experience, present area of working.

Section B- Self- administered Questionnaires

The self- administered questionnaire consisted of 30 questions on knowledge about International Patient Safety Goals (IPSG). Total score was 30. Each correct answer carries 1 mark and a zero for the wrong answer.

RESULTS:

Table no. 1: Table showing the frequency and percentage wise distribution of Staff Nurses according to demographic characteristics. n=75

Demographic Variables	No. of Staff Nurses (f)	Percentage (%)
Age(in yrs)		
21-30	38	50.7
31-40	26	34.7
41-50	9	12.0
51 and above	2	2.6
Gender		
Male	10	13.3
Female	65	86.7
Religion		
Hindu	55	73.3
Muslim	0	0
Christian	3	4.0
Buddhist	17	22.7
Others	0	0
Family Income per month (in Rs)		
Less than 10000	17	22.7
10001-15000	34	45.3
15001-20000	17	22.7
More than 20000	7	9.3
Residence		
Rural	25	33.3

Urban	42	56.0
Semi Urban	8	10.7
Educational Qualification		
GNM/RGNM	56	74.7
PBBSc/PCBSc Nursing	8	10.7
BBSsc/BSc Nursing	11	14.6
Present area of working		
General Wards	30	40.0
Critical Care Unit	24	32.0
Operation Theatre	18	24.0
Other	3	4.0
Total Clinical Experience		
Less than 1 yr	17	22.7
1-5 years	25	33.3
6-10 years	21	28.0
11-15 years	8	10.7
More than 15 yrs	4	5.3

Table no. 2: Table showing the pretest and post test knowledge score among staff nurses working in selected hospitals. n=75

Level of knowledge	Score Range	Pretest		Post test	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	0-20%(0-6)	27	36	0	0
Average	21-40%(7-12)	44	58.67	2	2.67
Good	41-60%(13-18)	4	5.33	11	14.67
Very Good	61-80%(19-24)	0	0	45	60
Excellent	81-100%(25-30)	0	0	17	22.67
Minimum score		1		12	
Maximum score		15		29	
Mean knowledge score		7.46±3.11		21.92±3.49	
Mean % Knowledge Score		24.88±10.38		73.06±11.63	

Table no. 3: Table showing the effectiveness of structured teaching program on knowledge regarding International Patient Safety Goals (IPSG) among staff nurses working in selected hospitals. n=75

Test	Mean	SD	Mean Difference	Calculated t-value	df	Table value	p-value
Pre Test	7.46	3.11	14.45±3.27	38.24	74	1.98	0.001 S,p<0.05
Post Test	21.92	3.49					
*significant (P<0.05 level)							

The pretest mean is 7.46 and standard deviation is 3.11 and post-test mean is 21.92 and standard deviation is 3.49. The mean difference was 14.45±3.27. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=75-1 i.e. 74 degrees of freedom was 1.98. The calculated 't' value i.e. 38.24 which is much higher than the tabulated value at 5% level of significance for overall knowledge score of Staff Nurses which is statistically acceptable level of significance.

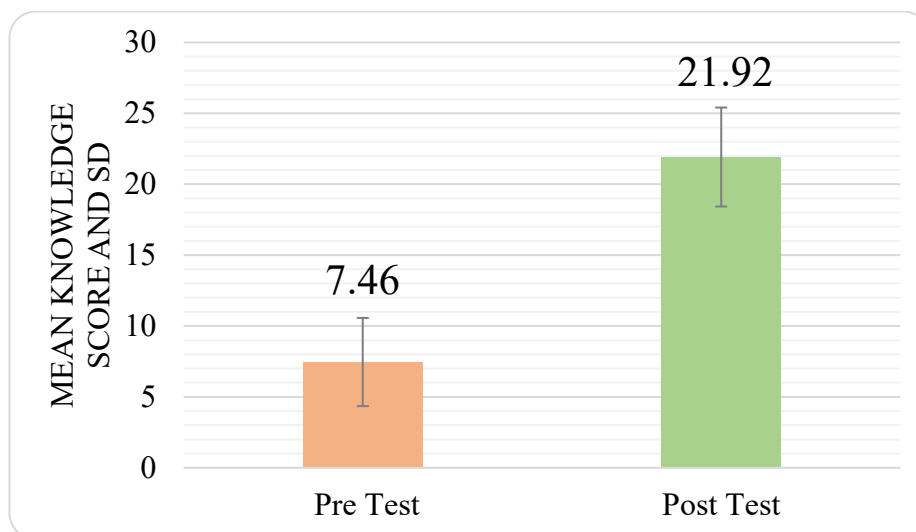


Figure no. 1: Bar Diagram showing mean score of pretest and post test knowledge score of Staff Nurses regarding International Patient Safety Goals (IPSG)

Table no. 4: Showing association of post test knowledge score in relation to selected demographic variables regarding International Patient Safety Goals (IPSG) among staff nurses n=75

Demographic Variable	Calculated value			df	Table value	Level of significance P≤0.05	Significance
	t-value	F-value	p-value				
Age in years	-	4.10	0.010	3,71	2.68	≤0.05	S
Gender	0.69	-	0.48	73	1.98	≥0.05	NS
Religion	-	0.32	0.72	2,72	3.07	≥0.05	NS
Monthly Family Income(Rs)	-	0.89	0.44	3,71	2.68	≥0.05	NS
Area of residence	-	4.23	0.018	2,72	3.07	≤0.05	S
Educational Status	-	1.64	0.20	2,72	3.07	≥0.05	NS
Area of working	-	8.18	0.0001	3,71	2.68	≤0.05	S
Total clinical experience(yrs)	-	0.19	0.94	4,70	2.45	≥0.05	NS

S - Significance

NS - Not Significant

DISCUSSION

Study was conducted to assess the effectiveness of structured teaching program on knowledge regarding patient safety measures among III semester BSc nursing students. A quasi-experimental research design was used for this study, the sampling technique used in the study was convenient sampling technique. A sample size of 54 samples selected on the basis of inclusion criteria using non-probability convenient sampling technique. Assessment of knowledge regarding patient safety measures among students using structured knowledge questionnaire revealed that 22% of participants has excellent knowledge, 72% participants have good knowledge and 5% participants has average knowledge regarding patient safety measures in the pretest. After the structured teaching program, 98% of participants have excellent knowledge and 2% of participants have good knowledge regarding patient safety measures. Thus the structured teaching program is effective in improving knowledge of students about patient safety practices. Above study shows that nursing students had improved the level of knowledge in post-test as compared to pre-test after administering structured teaching program.⁷

In present study is conducted on “Effectiveness Of Structured Teaching Program On Knowledge Regarding International Patient Safety Goals (IPSG) Among Staff Nurses Working In Selected Hospitals.” A quasi-

experimental research design was used for this study, the sampling technique used in the study was convenient sampling technique. Total 75 samples selected on the basis of inclusion criteria using non-probability convenient sampling technique. Pretest result revealed that 58.67% of staff nurses had average level of knowledge score, 36% of staff nurses had poor level of knowledge score and 5.33% of staff nurses had good level of knowledge score regarding International Patient Safety Goals (IPSG). The post test findings after providing the structured teaching program regarding International Patient Safety Goals (IPSG) are 60% of staff nurses had very good level of knowledge score, 22.67% of staff nurses had excellent level of knowledge score, 14.67% of staff nurses had good level of knowledge score, 2.67% of staff nurses had average level of knowledge score regarding International Patient Safety Goals (IPSG). In present study the pretest mean is 7.46 and standard deviation is 3.11 and post-test mean is 21.92 and standard deviation is 3.49, the mean difference was 14.45 ± 3.27 . Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value was 1.98. The calculated 't' value i.e. 38.24 which is much higher than the tabulated value. Thus it is interpreted that structured teaching program regarding International Patient Safety Goals (IPSG) was effective.

Another study was conducted on "Assessing Nurses' Knowledge and Practice Regarding the Patients' Safety Goals in Intensive Care Units" aimed to evaluate ICU nurses' knowledge and practice in relation to patient safety goals. Results showed a highly significant positive correlation between nurses' knowledge and their total practice towards patient safety goals ($P < 0.05$). There was also a statistically significant correlation between total practice and nurses' qualifications, training attendance ($P < 0.01$), age, and years of experience ($P < 0.05$).⁸ Present study also shows association of post test knowledge regarding International Patient Safety Goals (IPSG) with age which is supported by previous study. In present study association was also found with area of residence and present working area. No supportive study was found on association of post test knowledge score with other demographic variables.

CONCLUSION

This study concludes that the pre-test level of knowledge regarding International Patient Safety Goals (IPSG) among staff nurses was average level of knowledge score which simultaneously gets improved to very good level of knowledge score in post-test. This proved that the structured teaching program regarding International Patient Safety Goals (IPSG) among staff nurses was effective.

IMPLICATION OF THE STUDY

NURSING PRACTICE

International Patient Safety Goals (IPSG) guide nurses in delivering safer, error-free care through standardized protocols. They emphasize accurate patient identification, effective communication, and safe medication practices. Nurses are trained to prevent infections and falls, reducing healthcare-associated risks. IPSG fosters a culture of accountability, encouraging nurses to report incidents without fear. Overall, it strengthens nursing competence and enhances patient trust in healthcare systems.

NURSING EDUCATION

Integrating International Patient Safety Goals (IPSG) into nursing education—through updated curricula, interdisciplinary collaboration, skilled faculty, and structured assessments—empowers students with the knowledge, skills, and mindset needed to prevent harm, promote safety, and uphold high standards of patient care from the very start of their professional journey.

NURSING ADMINISTRATION

Nursing administrators play a pivotal role in implementing International Patient Safety Goals (IPSG) by developing policies, organizing ongoing education—including in-service and e-learning programs—and ensuring adequate resources and a supportive culture that promotes safety, open communication, and non-punitive error reporting across healthcare settings.

NURSING RESEARCH

Research on International Patient Safety Goals (IPSG) enriches the existing knowledge base, highlights critical areas like medication errors and infections, and supports the development of evidence-based interventions, educational programs, and innovative tools—empowering healthcare professionals and researchers to advance patient safety through informed practice and continuous learning.

RECOMMENDATIONS

- Similar studies can be replicated on a larger population for generalization of findings.
- Comparative studies can be carried out to assess the effectiveness of planned teaching program verses self-instructional module among staff Nurses on knowledge regarding International Patient Safety Goals (IPSG)
- Similar study can be conducted to evaluate knowledge and practice regarding International Patient Safety Goals (IPSG)
- Similar study can be conducted to assess the knowledge regarding International Patient Safety Goals (IPSG) among all healthcare workers

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