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Advances in Bioresearch

## SHORT COMMINATION

# Effectiveness of an Online Workshop on NABH's International Patient Safety Goals Among Nursing Professionals and Students

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**ABSTRACT**
*Patient safety is one of the most critical components of quality healthcare delivery. The National Accreditation Board for Hospitals and Healthcare Providers (NABH) has established International Patient Safety Goals (IPSG) to minimize clinical errors, enhance communication, and promote safe practices in healthcare environments. However, there is often a lack of structured education on these guidelines among nursing professionals and students. This study aimed to evaluate the effectiveness of a two-day structured online workshop on NABH's IPSG in improving the knowledge of nursing students, educators, and professionals. A pre-experimental one-group pre-test post-test research design was adopted. The study was conducted among 1175 nursing participants who attended a two-day virtual workshop hosted by Parul University Faculty of Nursing in collaboration with the Critical Care Nurses Society (CCNS). A validated questionnaire consisting of 15 multiple-choice questions was administered before and after the workshop to assess knowledge improvement. Data was analyzed using descriptive and inferential statistics. The mean pre-test score was 10.56 ± 3.01, which increased to 13.21 ± 1.76 in the post-test, indicating a statistically significant improvement ($p < 0.001$). The score distribution shifted towards higher scores, demonstrating effective learning. Participants showed notable improvement in areas such as medication safety, communication during handovers, and fall risk assessment. The structured online workshop significantly improved knowledge levels regarding IPSG among nursing participants. Such initiatives are vital to bridge knowledge gaps and promote adherence to patient safety standards in clinical settings.*
***Keywords**: NABH, IPSG, Patient Safety, Nursing Education, Online Workshop, Quality Improvement*

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## INTRODUCTION

The delivery of safe healthcare is a fundamental human right and a core element of healthcare quality. In recent years, patient safety has emerged as a major concern globally, with adverse events and preventable errors contributing significantly to patient morbidity and mortality. The World Health Organization (WHO) emphasizes that one in 10 patients is harmed while receiving hospital care in developed countries, with higher numbers likely in developing nations due to resource limitations and workforce challenges [6].

To address these concerns, NABH introduced the International Patient Safety Goals (IPSG), which focus on six major domains: patient identification, communication, medication safety, surgical safety, infection control, and fall prevention. These goals are integral to improving clinical practices and ensuring the safety of patients across healthcare settings [4].

Despite the critical importance of these safety measures, studies have shown that nursing professionals often lack formal training and updates on IPSG implementation. This gap is particularly evident among nursing students and early-career practitioners who may not have exposure to NABH-accredited settings [1-3].

Parul University, in collaboration with the Critical Care Nurses Society, recognized the need for structured, accessible education on IPSG. An online workshop titled "Mastering NABH's IPSG: International Patient Safety Goals" was organized to address this need. The present study evaluates the effectiveness of this workshop in enhancing knowledge and awareness among participants.

**Objectives**

1. To assess the baseline knowledge of nursing professionals and students regarding NABH's IPSG.
2. To evaluate the effectiveness of an online workshop in improving IPSG-related knowledge.
3. To identify specific areas of knowledge enhancement and persistent gaps post-intervention.

**MATERIAL AND METHODS**

A pre-experimental one-group pre-test post-test design was used to evaluate the effectiveness of the online workshop. The workshop was conducted virtually via Zoom and hosted by the Faculty of Nursing at Parul University. A total of 1175 participants took part in the workshop, including nursing students (B.Sc., GNM, Post-basic B.Sc., M.Sc.), registered nurses, clinical instructors, and nursing faculty.

Participants were selected based on their willingness to participate and ability to complete both the pre-test and post-test questionnaires. The instrument used for data collection was a structured and validated questionnaire comprising 15 multiple-choice questions. The questions addressed all six IPSG goals and aimed to measure knowledge and understanding before and after the intervention.

The workshop was conducted over two days. Day 1 focused on Patient Identification, Communication during Handovers, and Medication Safety. Day 2 covered Infection Control, Surgical Safety, and Fall Prevention. Each session was led by experts in the field and included interactive discussions and Q&A sessions to promote deeper understanding.

Pre-test assessments were administered online before the start of the workshop, while post-test assessments were conducted immediately after the conclusion of Day 2. Data analysis was performed using descriptive statistics (mean, standard deviation, frequency, and percentage) and inferential statistics (paired t-test) to assess the statistical significance of the knowledge improvement.

**RESULTS**

Demographic Profile: Among the 1175 participants, 68% were students, 22% were registered nurses, and 10% were faculty members. Participants represented a broad geographic distribution across India, with a few joining from international locations. This diversity added depth and a wide range of perspectives to the workshop experience.

Pre-Test and Post-Test Score Analysis: The pre-test scores showed that the majority of participants had a basic to moderate level of understanding of IPSG concepts. The mean pre-test score was 10.56 (SD = 3.01), with scores ranging from a minimum of 1 to a maximum of 14. The distribution of scores indicated that while many participants had foundational knowledge, significant room for improvement existed.

Following the workshop, the post-test scores demonstrated a marked improvement. The mean score rose to 13.21 (SD = 1.76), with scores ranging from 8 to 15. A total of 87% of participants scored 12 or above in the post-test, compared to only 42% in the pre-test. This substantial increase indicates that the participants effectively absorbed and retained the knowledge delivered during the sessions.

Statistical analysis using a paired t-test confirmed that the improvement in scores was statistically significant ($p < 0.001$), underscoring the effectiveness of the intervention.

Areas of Notable Improvement: The most significant improvements were observed in the following IPSG areas:

- Goal 2: Communication during patient handovers
- Goal 3: Medication safety, particularly concerning high-alert medications
- Goal 6: Risk assessment and protocols for fall prevention

Participants demonstrated enhanced ability to identify safe communication practices, double-check medications, and understand the timing and procedures of fall risk assessments. This aligns with the targeted learning objectives set during the workshop.

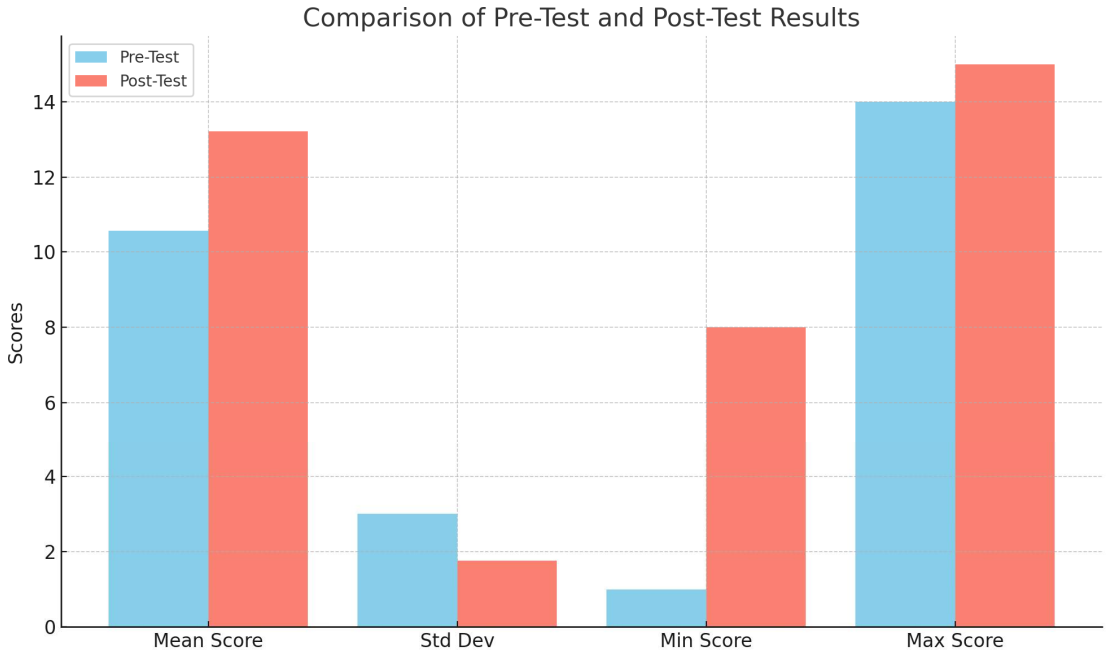


Fig 1: Comparative Score Analysis (Pre and Post Test Results)

Table 1: Comparative Score Analysis

| Metric | Pre-Test | Post-Test |
|---|---|---|
| Mean Score | 10.56 | 13.21 |
| Standard Deviation | 3.01 | 1.76 |
| Minimum Score | 1 | 8 |
| Maximum Score | 14 | 15 |
| Percentage Scoring ≥12 | 42% | 87% |
| p-value | - | < 0.001 |

## DISCUSSION

The findings from this study strongly support the conclusion that a structured, virtual workshop can significantly enhance the knowledge and awareness of nursing professionals and students about NABH's IPSG. The high participation rate and diverse demographic distribution suggest widespread interest and applicability of the content across different settings.

The substantial improvement in post-test scores indicates effective knowledge transfer. Specifically, the rise in mean score from 10.56 to 13.21, accompanied by a narrowing standard deviation, reflects not only improved learning outcomes but also greater consistency among participants.

This improvement is consistent with prior research, such as the study by Thomas & George [5], which found that targeted educational interventions significantly enhance compliance with patient safety protocols. The feedback from workshop attendees highlighted the value of expert-led sessions, real-life case scenarios, and interactive Q&A as effective educational strategies.

Moreover, the accessibility and convenience of the online format allowed for a broader audience to participate without geographical limitations. Participants were able to engage from their own institutions, making it a cost-effective and scalable model for continuous education.

However, some participants recommended integrating simulation-based modules and scenario testing in future sessions to enhance practical learning. Such enhancements could provide opportunities for skill application, critical thinking, and decision-making in real-time clinical scenarios.

In conclusion, the study demonstrates the potential of structured online workshops in improving nursing practice and promoting patient safety through education. Continued investment in such training is essential to maintain and elevate standards of care across healthcare settings.

## LIMITATIONS

1. Lack of long-term follow-up to assess retention and implementation.
2. Potential response bias in self-reported knowledge assessments.
3. Absence of a control group to compare alternative methods of training.

**RECOMMENDATIONS**

1. Integrate IPSG training into regular nursing curriculum.
2. Conduct quarterly workshops with practical simulations.
3. Develop mobile apps and digital aids for bedside use.
4. Create mentorship programs for junior nurses on IPSG application.
5. Extend such workshops to allied health professionals.

**CONCLUSION**

In conclusion, the study demonstrates the potential of structured online workshops in improving nursing practice and promoting patient safety through education. Continued investment in such training is essential to maintain and elevate standards of care across healthcare settings.

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