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Effectiveness of an Innovative Teaching Module on Knowledge and Confidence Regarding Skilled Birth Attendant (SBA) Among 6th Semester B.Sc. Nursing Students

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ABSTRACT

Background: Skilled Birth Attendants (SBAs) are essential for improving maternal and neonatal outcomes. Strengthening knowledge and confidence among nursing students—the future SBA workforce—is crucial for safe intrapartum and postpartum care.

Aim: To evaluate the effectiveness of an innovative structured teaching module on knowledge and confidence regarding SBA among 6th-semester B.Sc. Nursing students.

Methods: A pre-experimental one-group pre-test post-test design was used among 92 students selected through total enumeration. Tools included a structured knowledge questionnaire, confidence rating scale, and satisfaction checklist. An innovative SBA teaching module involving simulation, skill demonstration, interactive lectures, and AV aids was implemented. Data were analyzed using descriptive and inferential statistics.

Results: The mean knowledge score improved from 16 ± 2.69 to 19 ± 1.43, and confidence increased from 33.88 ± 4.84 to 38.88 ± 2.59. Paired t-test showed highly significant improvements in knowledge ($t = -10.22$, $p < 0.001$) and confidence ($t = -9.87$, $p < 0.001$). All students (100%) achieved good knowledge in the post-test. Satisfaction scores indicated high student acceptance.

Conclusion: The innovative teaching module was highly effective in enhancing knowledge and confidence regarding SBA. Competency-based, simulation-integrated teaching should be incorporated routinely into nursing education to strengthen SBA preparedness

Introduction

Skilled Birth Attendants (SBAs) are crucial for reducing preventable maternal and neonatal mortality. The WHO emphasizes that well-trained SBAs with adequate competency and confidence are essential to ensure safe childbirth practices (WHO, 2018)[1]. Despite advancements, maternal mortality remains a global challenge, with approximately 287,000 deaths reported annually (WHO, 2023)[2]. In India, SBA training continues to be a core strategy under the National Health Mission (MoHFW, 2020)[3]. Although nursing curricula cover SBA competencies, gaps remain between theoretical knowledge and clinical application. Studies reveal that many nursing students possess moderate knowledge but inadequate hands-on skills in SBA-related practices, such as AMTSL, newborn resuscitation, and complication identification (Sharma et al., 2021)[11]. Similar concerns are noted globally, where nursing and midwifery students report low confidence in intrapartum skills and emergency management.

Emerging evidence suggests that innovative teaching strategies—simulation-based learning, structured skill demonstrations, scenario-based learning, and case discussions—significantly improve skill competency and confidence (Ahn & Kim, 2015)[7]. Bandura's self-efficacy theory (1997)[10] supports this, highlighting that confidence increases when learners practice in realistic, supervised environments.

Therefore, bridging the knowledge–practice gap through competency-oriented teaching modules is essential. The present study evaluates the effectiveness of an innovative SBA teaching module in improving knowledge and confidence among B.Sc. Nursing students.

Methods

Study Design

A pre-experimental one-group pre-test post-test design was adopted.

Setting

The study was conducted at Sri Devaraj Urs College of Nursing, Kolar.

Population & Sample

- All 6th semester B.Sc. Nursing students were included.
- Sample size = 92 (total enumeration).
- Two students were excluded (one absent, one unwilling).

Inclusion Criteria

- 6th semester B.Sc. Nursing students
- Willing to participate
- Present during data collection

Exclusion Criteria

- Students with prior intensive SBA training
- Absent or unwilling students

Tools

1. Structured Knowledge Questionnaire
2. Confidence Rating Scale
3. Satisfaction Checklist
4. Demographic Profile Sheet

Intervention

The innovative SBA teaching module included:

- Interactive lecture
- Simulation-based learning
- Skill demonstrations
- Role play & case scenarios
- Audiovisual (AV) aids
- Practice on mannequins
- Feedback and reinforcement

Data Collection Procedure

1. **Pre-test:** Knowledge and confidence were assessed.
2. **Intervention:** Teaching module delivered in a 3-hour structured session.
3. **Post-test:** Conducted after intervention using the same tools.

Data Analysis

- Descriptive statistics: Mean, SD, %
- Inferential statistics: Paired t-test, Chi-square
- Significance: $p < 0.05$

Results

The findings of the study are presented according to the stated objectives. A total of 92 sixth-semester B.Sc. Nursing students participated in the study. The results demonstrate clear improvements in both knowledge and confidence regarding Skilled Birth Attendant (SBA) competencies following the implementation of the innovative teaching module. Comparative analysis between pre-test and post-test scores showed statistically significant gains, indicating the effectiveness of the intervention. The associations between selected demographic variables and post-test outcomes were also examined.

Objective 1 — Baseline knowledge and confidence

Table: Pre-test and post-test Knowledge score

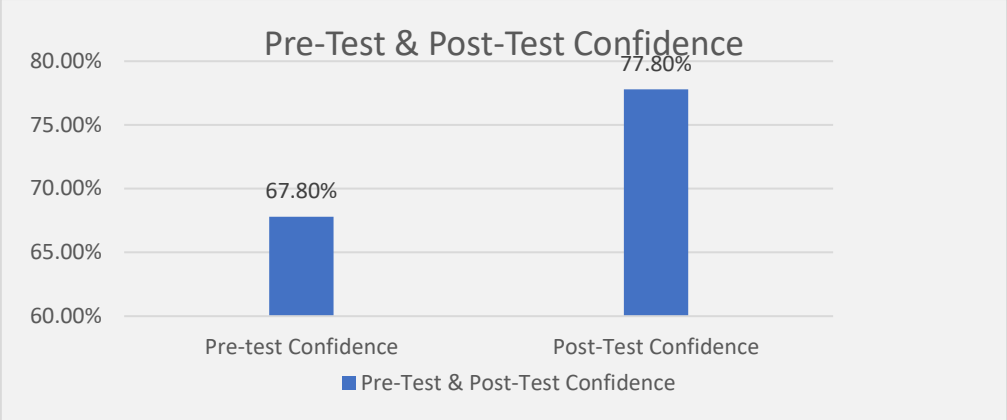
(Pre-test)			post-test		
Knowledge Level	**Frequency (f)**	**Percentage (%)**	**Knowledge Level**	**Frequency (f)**	**Percentage (%)**
Poor	2	2.2	Poor	0	0%
Average	35	38.0	Average	0	0%
Good	55	59.8	**Good**	**92**	**100%**
Total	**92**	**100**	**Total**	**92**	**100%**

Interpretation:

Before the intervention, most students (59.8%) had a good level of knowledge, 38% had average knowledge, and only 2.2% had poor knowledge regarding SBA competencies.

Table 2: Pre-test and Post-test Confidence

Confidence Level	Mean ± SD	Percentage (%)	Interpretation
Pre-Test Confidence	**33.88 ± 4.84**	**67.8%**	Moderate confidence
Post-Test Confidence	**38.88 ± 2.59**	**77.8%**	High confidence



Interpretation:

There was a clear improvement in confidence levels following the innovative teaching module. Pre-test confidence was **moderate (67.8%)**, whereas post-test confidence increased to **77.8%**, indicating a **high level of confidence** among students after the intervention.

Objective 2 — Implementation of the teaching module

An innovative structured teaching module was implemented using interactive lectures, simulation-based skill demonstrations, role play, audiovisual aids, and hands-on practice. This module was designed to strengthen SBA competencies, decision-making skills, and emergency preparedness among students.

Objective 3 — Effectiveness of the teaching module (pre-test vs. post-test scores)

Parameter	Pre-test Mean ± SD	Post-test Mean ± SD	t-value	p-value	Interpretation
Knowledge	16.00 ± 2.69	19.00 ± 1.43	–10.22	**p < 0.001**	Highly significant improvement
Confidence	33.88 ± 4.84	38.88 ± 2.59	–9.87	**p < 0.001**	Highly significant improvement

Interpretation:

There was a statistically significant improvement in both knowledge and confidence scores following the innovative teaching module, confirming its effectiveness.

Objective 4: To find the association between post-test knowledge and confidence levels with selected demographic variables of the students.

Table 4: Association between Post-Test Knowledge and Demographic Variables (n = 92)

Demographic Variables	Chi-square (χ^2)	df	p-value	Interpretation
Age	0.84	2	0.65	Not significant
Gender	1.14	1	0.28	Not significant
Previous SBA exposure	5.42	2	0.02	Significant association

Table 5: Association between Post-Test Confidence and Demographic Variables (n = 92)

Demographic Variables	Chi-square (χ^2)	df	p-value	Interpretation
Age	0.94	2	0.62	Not significant
Gender	0.68	1	0.41	Not significant
Previous SBA exposure	6.12	2	0.01	Significant association

Interpretation:

There was a significant association between previous SBA exposure and both post-test knowledge and confidence levels, indicating that prior experience supported better learning outcomes.

Summary:

The innovative teaching module significantly improved students' knowledge and confidence regarding SBA competencies, with high satisfaction levels and a positive association with previous SBA exposure.

Objective 5: To assess the level of satisfaction regarding the innovative teaching module

Table 6: Satisfaction Scores of Students (n = 92)

Parameter	Mean ± SD	Interpretation
Satisfaction Score	40.58 ± 13.72	High level of satisfaction

Interpretation:

The mean satisfaction score was **40.58 ± 13.72**, indicating that students were **highly satisfied** with the innovative teaching module. Feedback suggested that interactive strategies, simulation practice, and skill demonstrations improved clarity, engagement, and confidence in performing SBA-related procedures.

Discussion

This study demonstrated that the innovative structured teaching module significantly enhanced both knowledge and confidence regarding SBA among nursing students. Post-test scores showed a highly significant increase, consistent with earlier findings that structured modules improve SBA knowledge (Kumari & Singh, 2018)[14].

Simulation-based interventions have also been shown to strengthen critical thinking and emergency response skills (Thomas & Abraham, 2020)[16]. The improvement in confidence observed in this study aligns with literature stating that experiential learning boosts self-efficacy (Ahn & Kim, 2015)[7] and better prepares students for clinical settings (Priya et al., 2022)[15].

The significant association between prior SBA exposure and improved post-test performance reinforces the role of clinical experience in competency development (Devi et al., 2020) [13]. High satisfaction scores indicate acceptability and feasibility of implementing such innovative teaching modules in routine curricula.

Overall, the study highlights the effectiveness of competency-based, simulation-enhanced teaching strategies in strengthening SBA readiness among nursing students.

Conclusion

The innovative structured teaching module was highly effective in improving knowledge and confidence regarding SBA. Incorporating competency-based teaching, simulation, and hands-on practice should be prioritized to improve student preparedness for intrapartum and postpartum care.

Limitations

- Single-center study
- No control groups
- Short-term post-test evaluation

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee. Written informed consent was taken from all participants.

Conflict of Interest

The author declares no conflict of interest.

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