



**IMPACT OF STRUCTURED TEACHING ON KNOWLEDGE OF
LABOUR ROOM QUALITY STANDARDS AMONG B.Sc.
NURSING STUDENTS**

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Abstract

Background: The Labour Room Quality Improvement Initiative (LAQSHYA), introduced by the Government of India, aims to reduce maternal and neonatal morbidity and mortality by improving the quality of intrapartum and immediate postpartum care. Nursing students, as future frontline maternity care providers, must be well informed about labour room protocols to ensure safe and respectful maternity care.

Aim: To evaluate the effectiveness of a structured teaching programme on improving knowledge regarding labour room quality standards (LAQSHYA) among 4th-year B.Sc Nursing students.

Methods: A quasi-experimental one-group pre-test post-test design was used among 60 final-year B.Sc Nursing students selected through multistage sampling from nursing colleges in Gandhinagar district. A structured knowledge questionnaire (30 items) assessed pre- and post-intervention knowledge. After the pre-test, a structured teaching programme on LAQSHYA was administered, and a post-test was conducted after one week. Data were analysed using descriptive and inferential statistics, including paired t-test.

Results: The mean pre-test knowledge score was 12.10, which increased to 25.63 in the post-test. The mean difference of 13.53 was statistically significant ($t = 3.28, p < 0.05$). The highest knowledge gain was observed in the area of *target and objectives of LAQSHYA* (60% improvement). All students had poor baseline knowledge, with 100% reporting no prior exposure to LAQSHYA-related seminars or guidelines.

Conclusion: The structured teaching programme was highly effective in improving knowledge regarding LAQSHYA among nursing students. Integrating labour room quality standards into the nursing curriculum and conducting regular training sessions can strengthen competencies for safe and respectful maternity care.

Keywords: LAQSHYA, labour room quality standards, structured teaching programme, maternal health, nursing students, knowledge assessment.

Introduction

Maternal and neonatal health remains a global priority, particularly in low- and middle-income countries where complications during labour and childbirth continue to contribute significantly to mortality. Despite increased institutional deliveries in India following the launch of the National Health Mission (NHM), improvements in maternal and neonatal outcomes have not kept pace. Nearly 46% of maternal deaths and a large proportion of stillbirths and newborn deaths occur during labour or within the first 24 hours postpartum. These preventable outcomes highlight gaps in labour room preparedness, clinical protocols, respectful maternity care, and health system responsiveness.

To address these challenges, the Government of India introduced LAQSHYA – Labour Room Quality Improvement Initiative in 2017. LAQSHYA aims to enhance the quality of intrapartum care, standardize labour room infrastructure, ensure availability of trained staff, implement respectful maternity care guidelines, and promote evidence-based clinical practices. Given the critical role of nurses in providing labour room services, strengthening their knowledge and skills is essential for successful implementation of LAQSHYA standards.

Nursing students, especially final-year B.Sc Nursing students, represent the future workforce in maternity units. However, evidence suggests that student nurses often lack adequate exposure to standard protocols, quality improvement practices, and national initiatives such as LAQSHYA. Structured teaching programmes (STP) have been shown to effectively improve knowledge and competencies in several clinical domains, including maternal and newborn care.

This study aims to assess the impact of a structured teaching programme on improving knowledge regarding labour room quality standards among final-year B.Sc Nursing students in Gandhinagar district.

Materials and Methods

Research Design

A quasi-experimental one-group pre-test post-test design was adopted for the study. This design was chosen because it allows the researcher to evaluate the effectiveness of an intervention when randomization is not feasible. In this framework, a pre-test (O1) was administered to assess baseline knowledge, followed by the structured teaching programme (X), and then a post-test (O2) to measure the change in knowledge after the intervention. The sequence is represented as: O1 → X → O2.

Study Setting

The study was conducted in selected B.Sc Nursing colleges located in the Gandhinagar district of Gujarat. The colleges were chosen based on geographical accessibility, administrative approval, and the availability of 4th-year B.Sc Nursing students who met the study criteria. This ensured feasibility and adequate representation of the target population.

Population and Sample

The target population for the study comprised all 4th-year B.Sc Nursing students enrolled in nursing colleges across Gandhinagar district. A total sample of 60 students was selected using a multistage probability sampling technique. Initially, Gandhinagar district was divided into four geographical zones, after which nine B.Sc Nursing colleges were listed. From these, four colleges were randomly selected. Subsequently, fifteen students from each selected college were chosen through systematic random sampling to form the final sample.

Inclusion Criteria

The study included students who were enrolled in the 4th year of the B.Sc Nursing programme, were willing to participate, and were present during both the pre-test and post-test phases of data collection.

Exclusion Criteria

Students who were absent during either the pre-test or post-test were excluded from the study. Additionally, those who had previously attended any training, seminar, or programme related to LAQSHYA were not included to avoid bias in baseline knowledge.

Tool for Data Collection

Data were collected using a structured knowledge questionnaire consisting of 30 multiple-choice questions designed to assess different aspects of labour room quality standards under the LAQSHYA programme. The tool underwent content validation by six experts in obstetrics and gynaecology to ensure relevance and adequacy. Reliability was established using the split-half method and Cronbach's alpha, yielding a reliability coefficient of 0.68, indicating acceptable internal consistency. Each correct response was awarded one point, and incorrect responses received zero, with a maximum possible score of 30. Knowledge scores were categorized as poor (0–10), average (11–20), and good (21–30).

Intervention: Structured Teaching Programme (STP)

The structured teaching programme was developed to provide comprehensive knowledge regarding labour room quality standards. The content included the introduction and need for LAQSHYA, objectives and goals, institutional arrangements, components of respectful

maternity care, labour room protocols, quality improvement cycle, staffing and equipment requirements, LDR (Labour Delivery Room) facility standards, and guidelines related to certification, incentives, and branding. Teaching was delivered using a lecture-cum-discussion method supplemented with audiovisual aids to enhance understanding and retention.

Data Collection Procedure

Data collection was carried out in a systematic manner. Permission was first obtained from the concerned institutional authorities. On Day 1, the pre-test questionnaire was administered to assess the baseline knowledge of the students. Immediately afterward, the structured teaching programme was delivered. After a period of one week, the post-test was conducted using the same questionnaire to evaluate the effectiveness of the intervention. All participants completed both tests, and no dropout was reported.

Statistical Analysis

Data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the demographic variables and knowledge scores. Paired t-test was employed to compare the pre-test and post-test knowledge scores and to determine the statistical significance of the observed differences. A confidence level of 95% was maintained, and a p-value of less than 0.05 was considered statistically significant.

Results

The results of the study demonstrated a significant improvement in the knowledge of B.Sc Nursing students following the structured teaching programme on labour room quality standards. Prior to the intervention, the majority of students exhibited inadequate baseline knowledge, with a mean pre-test score of 12.10 out of 30. After the structured teaching programme, the mean post-test score increased substantially to 25.63, indicating a marked enhancement in understanding. Area-wise analysis revealed notable gains across all domains of LAQSHYA, with the highest improvement observed in knowledge related to target standards (60% gain), LDR facility requirements, institutional arrangement, and phases of the quality improvement cycle. The paired t-test further confirmed that this improvement was statistically significant ($t = 3.28, p < 0.05$). These findings clearly establish that the structured teaching programme was effective in elevating the knowledge levels of nursing students regarding labour room quality standards.

Socio-Demographic Characteristics

Table 1: Demographic Profile of Participants (N = 60)

Variable	Category	Frequency	Percentage
Age	20–22 years	54	90%
	22–24 years	6	10%
Gender	Male	12	20%
	Female	48	80%

Residence	Urban	44	73%
	Rural	16	27%
Prior knowledge on LAQSHYA	Yes	0	0%
	No	60	100%
Attended any programme on LAQSHYA	Yes	0	0%
	No	60	100%

Most participants were 20–22 years old, female, and from urban backgrounds. None had prior exposure to LAQSHYA guidelines.

Area-wise Knowledge Scores

Table 2: Comparison of Area-Wise Pre-test and Post-test Knowledge Scores

Area	Max Score	Pre-test Mean (%)	Post-test Mean (%)	Mean Difference
Introduction	4	1.8 (45%)	3.73 (93%)	1.93
Objectives	1	0.67 (67%)	0.88 (88%)	0.21
Goal	1	0.7 (70%)	0.98 (98%)	0.28
Institutional arrangement	6	2.47 (41%)	4.77 (80%)	2.3
Target	2	0.58 (29%)	1.78 (89%)	1.20
Intervention	1	0.68 (68%)	0.85 (85%)	0.17
Cycle	2	0.65 (33%)	1.57 (79%)	0.92
Phase	4	1.3 (33%)	3.13 (78%)	1.83
Certification & Branding	3	0.98 (33%)	2.70 (90%)	1.72
Cognitive Development	1	0.52 (51%)	0.92 (92%)	0.4
LDR Facility	5	1.75 (35%)	4.32 (86%)	2.57

Highest improvement (60%) was in target and LDR facility areas, demonstrating substantial effectiveness of the teaching programme.

Comparison of Overall Knowledge Scores

Table 3: Pre-test and Post-test Comparison

Test	Mean	SD	Mean Difference	DF	t-value
Pre-test	12.10	8.88	13.53	59	3.28
Post-test	25.63	5.31			

The post-test mean score was significantly higher than the pre-test score. The paired t-test confirmed the effectiveness of the structured teaching programme.

Discussion

The study revealed that the structured teaching programme significantly enhanced nursing students' knowledge regarding labour room quality standards under LAQSHYA. The pre-test findings indicated inadequate baseline knowledge, which aligns with previous studies showing limited awareness of labour quality initiatives among student nurses and frontline workers.

The significant improvement in post-test scores supports earlier research demonstrating the effectiveness of structured or planned teaching programmes in improving knowledge in areas such as partograph plotting, antenatal care, non-pharmacological labour pain management, and sexual abuse awareness.

LAQSHYA requires health professionals to follow strict protocols for infrastructure, respectful maternity care, emergency preparedness, and documentation. Structured teaching equips students to understand and apply these standards in clinical settings, thus improving the quality of maternity care and reducing preventable morbidity.

The findings of this study highlight the urgent need to integrate LAQSHYA guidelines into nursing curricula. As future labour room staff, students must be competent in quality improvement processes, safe childbirth practices, and patient rights.

Conclusion

The structured teaching programme was highly effective in enhancing knowledge about labour room quality standards (LAQSHYA) among B.Sc Nursing students. The significant improvement in post-test scores demonstrates that targeted educational interventions can bridge existing knowledge gaps and prepare student nurses for quality maternity care roles.

Conflict of Interest

The authors declare that there is **no conflict of interest** regarding the publication of this manuscript.

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