

## Assessing The Knowledge on Home-Based Newborn Care Among Nursing Students

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### Abstract

Home-based newborn care plays a vital role in ensuring neonatal survival and reducing morbidity and mortality rates. This study aimed to assess the knowledge of nursing students regarding home-based newborn care. A cross-sectional design and quantitative research approach were utilized. The study was conducted in a nursing college with a sample size of 46 nursing students, selected through convenient sampling.

Data collection was carried out using a structured knowledge assessment tool. The results indicated that 30.43% of the students had adequate knowledge of home-based newborn care, 45.65% demonstrated moderately adequate knowledge, and 23.91% had inadequate knowledge. These findings highlight significant gaps in the knowledge base of nursing students, with nearly one-fourth of the sample displaying inadequate understanding of essential newborn care practices.

The study underscores the need to strengthen nursing education through targeted interventions, such as integrating comprehensive modules on newborn care, conducting hands-on training, and organizing workshops. Enhancing students' knowledge and skills in home-based newborn care can empower them to provide quality care and contribute to improved neonatal outcomes.

This study provides insights into the current knowledge levels of nursing students and emphasizes the importance of continuous education to bridge the existing gaps in newborn care practices.

### INTRODUCTION

Home-based newborn care is a cornerstone in improving neonatal health outcomes and reducing preventable neonatal deaths. Proper care during the neonatal period ensures survival, growth, and development, significantly influencing a child's overall health trajectory. Nursing students, as future healthcare providers, play a pivotal role in disseminating knowledge and practicing essential newborn care.

Despite advancements in healthcare, challenges in neonatal care persist, especially in resource-limited settings. The knowledge and skills of nursing students are vital in addressing these challenges and providing evidence-based newborn care. This study was undertaken to assess the knowledge levels of nursing students on home-based newborn care, identify gaps in understanding, and suggest educational strategies to address these deficiencies.

### RESEARCH METHODOLOGY

#### Research Approach:

A quantitative research approach was adopted to systematically evaluate the knowledge levels of nursing students regarding home-based newborn care.

#### Research Design:

The study employed a cross-sectional design, enabling a snapshot analysis of the participants' knowledge at a specific point in time.

#### Setting:

The study was conducted in a nursing college, providing a conducive environment for assessing the target population.

#### Population:

The population consisted of nursing students enrolled in the selected nursing college.

#### Sample Size:

A total of 46 nursing students participated in the study.

#### Sampling Technique:

Convenient sampling was employed to select participants based on accessibility and willingness to participate.

#### Data Collection Tool:

A structured knowledge assessment questionnaire was used to gather data on various aspects of home-based newborn care.

### Data Analysis:

The data were analyzed using descriptive statistics, with the results presented in terms of frequency and percentage distributions.

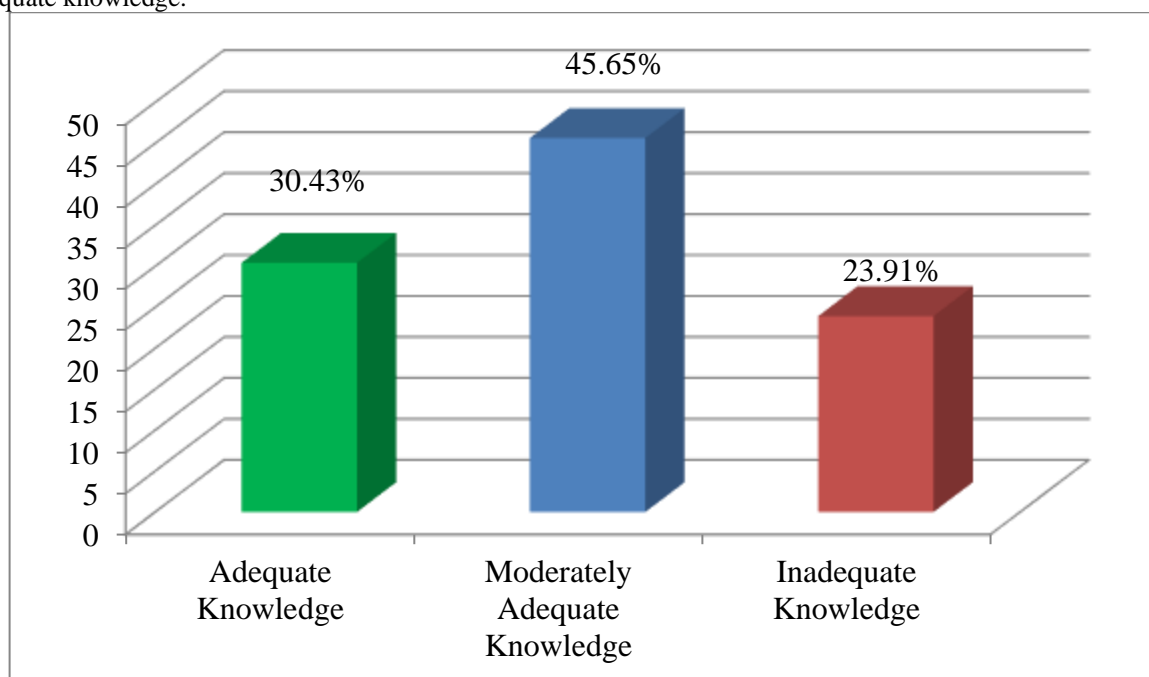
This systematic methodology ensured the reliability and validity of the findings while providing actionable insights into the knowledge levels of nursing students regarding home-based newborn care.

## RESULT

The study aimed to assess the knowledge levels of nursing students on home-based newborn care. The findings are presented and analyzed below based on the data collected.

### 1. Overall Knowledge Levels

The knowledge levels of the 46 nursing students were categorized into three groups: adequate, moderately adequate, and inadequate knowledge.



**Fig1. Distribution of Level of Knowledge on HBNC among Nursing Students**

### Interpretation:

A majority (45.65%) of the participants exhibited moderately adequate knowledge of home-based newborn care.

Only 30.43% of students had adequate knowledge, demonstrating a satisfactory understanding of the subject.

Alarmingly, 23.91% of students fell into the inadequate knowledge category, indicating significant gaps in their understanding.

### 2. Key Strengths in Knowledge Areas

Some students displayed strong understanding in certain aspects of home-based newborn care, such as:

- Basic hygiene practices for newborn care.
- Awareness of breastfeeding techniques and benefits.
- Identification of common neonatal illnesses like jaundice and methods for early detection.

This reflects that foundational knowledge has been adequately covered in their curriculum.

### 3. Identified Gaps in Knowledge

The analysis highlighted several critical areas where knowledge was lacking, particularly among those categorized as having inadequate or moderately adequate knowledge. These areas include:

- Postnatal thermal care, such as maintaining optimal body temperature through skin-to-skin contact (kangaroo care).
- Management of low birth weight or preterm infants at home.
- Guidelines for identifying and responding to danger signs in newborns, such as poor feeding, fever, or respiratory distress.
- Basic immunization schedules and their importance for newborn health.

These gaps suggest the need for further training and emphasis on these topics during the nursing program.

#### 4. Comparison Across Knowledge Categories

- **Adequate Knowledge (30.43%):** These students demonstrated comprehensive understanding across all aspects of newborn care, showcasing their ability to apply theoretical knowledge in practical scenarios.
- **Moderately Adequate Knowledge (45.65%):** These students had a fair understanding of core concepts but lacked clarity in critical areas such as thermal care and danger sign recognition.
- **Inadequate Knowledge (23.91%):** These students had limited understanding, often restricted to superficial knowledge, indicating insufficient exposure to theoretical or practical training in home-based newborn care.

#### 5. Implications of Findings

The results highlight that while a significant portion of students possess moderate to adequate knowledge, a considerable number of them are underprepared to handle critical newborn care practices effectively. This could impact their ability to deliver quality care, particularly in home-based or resource-limited settings.

#### Recommendations Based on Results

1. **Enhanced Curriculum Focus:**  
Integrate detailed modules on neonatal thermal care, breastfeeding, and danger signs into the nursing curriculum.
2. **Practical Training:**  
Organize workshops and simulation-based training sessions to reinforce practical skills in newborn care.
3. **Regular Assessments:**  
Conduct frequent knowledge assessments to identify and address gaps in learning.
4. **Interactive Learning:**  
Implement case-based learning methods to help students understand real-world applications of newborn care.

#### DISCUSSION

The findings of the study reveal that the knowledge levels of nursing students on home-based newborn care are varied, with 30.43% demonstrating adequate knowledge, 45.65% showing moderately adequate knowledge, and 23.91% having inadequate knowledge. This indicates that while a portion of students possesses satisfactory understanding, there is a pressing need to address the gaps in knowledge among the remaining students.

Home-based newborn care encompasses critical practices such as thermal regulation, exclusive breastfeeding, immunization, hygiene, and recognition of danger signs, all of which are pivotal in reducing neonatal mortality. The results align with previous studies highlighting that nursing students often lack comprehensive knowledge in key areas, particularly in danger sign recognition and the management of low birth weight infants.

The moderate knowledge levels among a significant proportion of students suggest that the current curriculum provides foundational knowledge but may lack depth in practical application. Moreover, the inadequate knowledge observed in nearly one-fourth of the participants underscores the need for targeted educational interventions. This inadequacy can adversely affect the quality of care provided to neonates, particularly in home settings where access to healthcare is limited.

#### SUMMARY

This study assessed the knowledge of nursing students regarding home-based newborn care using a cross-sectional design and a quantitative approach. Key findings include:

1. **Knowledge Levels:**  
30.43% had adequate knowledge.  
45.65% had moderately adequate knowledge.  
23.91% had inadequate knowledge.
2. **Strengths:**  
Basic understanding of breastfeeding and hygiene practices.
3. **Gaps:**  
Limited knowledge of thermal care, management of low birth weight infants, immunization schedules, and neonatal danger signs.

The results emphasize the need for curriculum enhancements, practical training, and ongoing assessments to improve students' knowledge and skills in home-based newborn care.

#### CONCLUSION

The study highlights significant variability in the knowledge of nursing students regarding home-based newborn care, with a notable proportion displaying inadequate understanding. These findings call for immediate attention to improve the theoretical and practical aspects of neonatal care education in nursing programs.

## RECOMMENDATIONS:

1. Incorporating comprehensive modules on neonatal care into the curriculum.
  2. Conducting workshops, simulation-based training, and interactive learning sessions.
  3. Regular evaluations to monitor and enhance knowledge retention and application.
- By addressing these educational gaps, nursing institutions can better prepare students to deliver effective, evidence-based care, ultimately contributing to improved neonatal health outcomes.

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