

Barriers Perceived By Nursing Students In Performing Neonatal Resuscitation: A Qualitative Study

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Abstract

Background: Neonatal resuscitation requires rapid decision-making and technical precision. Although nursing students are taught the principles, many struggle when applying them in practice. **Aim:** To explore the barriers perceived by nursing students in performing neonatal resuscitation. **Methods:** A qualitative descriptive approach was adopted. Fifteen nursing students participated in semi-structured interviews conducted online. Data were transcribed and analyzed using thematic analysis. **Results:** Four key themes were identified: (1) fear and lack of confidence, (2) insufficient practical exposure, (3) difficulty recalling procedural steps under stress, and (4) limited real-life clinical experience. **Conclusion:** Both emotional and educational barriers affect students' performance. Strengthening simulation-based learning and providing supportive clinical exposure may improve competence.

Keywords: Newborn, Resuscitation, Nursing, Students, Qualitative Research

1. Introduction

The transition from intrauterine to extrauterine life is a critical period for newborns, and some require immediate assistance to establish effective breathing. Neonatal resuscitation is therefore an essential competency for healthcare providers. Timely intervention during the first minute after birth is known to significantly influence neonatal outcomes (World Health Organization, 2023; American Academy of Pediatrics, 2021).

Despite structured teaching in nursing programs, students often encounter difficulties when attempting to apply neonatal resuscitation skills in practice. Acquiring theoretical knowledge alone does not guarantee clinical competence, particularly in high-pressure situations where rapid and accurate actions are required. Previous studies have highlighted that students may experience a gap between what they learn in classrooms and what they are expected to perform in clinical environments (Liaqat et al., 2021).

In addition to technical challenges, psychological factors such as anxiety, fear of making errors, and low self-confidence may influence performance. Educational strategies that include simulation, repetition, and visual learning have been suggested to enhance both confidence and skill retention (Zhang et al., 2021; Sharma et al., 2022).

Exploring students' perceptions of these barriers can provide valuable insights for improving educational approaches. Therefore, this study aims to understand the challenges faced by nursing students in performing neonatal resuscitation.

2. Methods

A qualitative descriptive design was used to explore students' experiences in depth. The study followed COREQ guidelines for qualitative reporting.

15 undergraduate nursing students were selected using purposive sampling. Participants had prior exposure to neonatal resuscitation training. Data were collected through semi-structured interviews conducted via an online platform. Each interview lasted approximately 20–30 minutes and was audio-recorded with consent. Informed consent was obtained from all participants prior data collection. This study was got ethical approval from the Institution Ethics Committee.

The recordings were transcribed verbatim and analysed using thematic analysis. Initial codes were generated from the data, which were then grouped into categories and broader themes.

To ensure rigor, credibility was established through participant validation, while dependability and confirmability were maintained through consistent coding and peer discussion.

3. Results

Demographic profile

Table 1: Demographic Characteristics of Participants n = 15

Variable	Category	Frequency (n)	Percentage (%)
Age	20–21 years	6	40%
	22–23 years	7	46.7%
	≥24 years	2	13.3%
Year of Study	3rd Year	8	53.3%
	4th Year	7	46.7%
NRP Training	Yes	15	100%
Clinical Exposure	Observed only	10	66.7%
	Performed under supervision	5	33.3%

As shown in Table 1, the study included 15 nursing students with comparable representation across academic years. While all participants had undergone neonatal resuscitation training, the extent of clinical exposure varied, with the majority reporting observational rather than hands-on experience. This variation provides important context for understanding the perceived barriers identified in the study.

Codebook formation

To enhance transparency and consistency of the analysis and results, a structured codebook was developed. The codebook includes codes, categories, themes and representative meanings.

Table 2: Structured Codebook

Code	Category	Theme	Definition	Example Quote
Fear of harming	Emotional barrier	Lack of confidence	Concern about causing injury to the newborn	"I am afraid I might harm the baby."
Anxiety	Emotional barrier	Lack of confidence	Feeling nervous during resuscitation situations	"I feel nervous thinking about emergencies."
Low confidence	Emotional barrier	Lack of confidence	Lack of belief in own ability	"I don't feel confident doing it alone."
Limited practice	Skill-related barrier	Inadequate hands-on practice	Insufficient opportunities for skill practice	"We had very few practice sessions."

Code	Category	Theme	Definition	Example Quote
Lack of repetition	Skill-related barrier	Inadequate hands-on practice	Skills not practiced regularly	"We practiced only once."
No simulation exposure	Skill-related barrier	Inadequate hands-on practice	Lack of simulation-based training	"We didn't use mannequins much."
Forgetting steps	Cognitive barrier	Difficulty in recall	Inability to remember sequence	"I forget the steps during exams."
Stress overload	Cognitive barrier	Difficulty in recall	Stress affecting thinking ability	"I panic and forget everything."
Confusion in sequence	Cognitive barrier	Difficulty in recall	Difficulty recalling correct order	"I mix up the steps."
Lack of clinical exposure	Experiential barrier	Limited clinical exposure	No real-life practice	"I never saw real resuscitation."
Observation only	Experiential barrier	Limited clinical exposure	Passive learning without participation	"We only observed."
Limited opportunity	Experiential barrier	Limited clinical exposure	Restricted access to perform skills	"We are not allowed to perform."

The coding framework developed during data analysis is presented in Table 2. The codebook outlines the key codes, their corresponding categories and themes, along with brief definitions and illustrative meanings. This structured representation supports the transparency and consistency of the analytical process and demonstrates how raw data were systematically organized into meaningful themes.

Coding matrix

A coding matrix was developed to demonstrate the linkage between participant responses, codes, categories, and themes.

Table 3: Coding Matrix

Participant	Key Statement	Code	Category	Theme
P1	"I feel scared I might harm the baby"	Fear of harming	Emotional	Lack of confidence
P2	"I get very nervous during emergencies"	Anxiety	Emotional	Lack of confidence

Participant	Key Statement	Code	Category	Theme
P3	"I don't feel confident doing it alone"	Low confidence	Emotional	Lack of confidence
P4	"We had very few practice sessions"	Limited practice	Skill-related	Inadequate hands-on practice
P5	"We practiced only once"	Lack of repetition	Skill-related	Inadequate hands-on practice
P6	"We didn't use mannequins much"	No simulation exposure	Skill-related	Inadequate hands-on practice
P7	"I forget the steps during exams"	Forgetting steps	Cognitive	Difficulty in recall
P8	"I panic and forget everything"	Stress overload	Cognitive	Difficulty in recall
P9	"I mix up the sequence"	Confusion in steps	Cognitive	Difficulty in recall
P10	"I have never seen real resuscitation"	Lack of clinical exposure	Experiential	Limited clinical exposure
P11	"We only observe in hospital"	Observation only	Experiential	Limited clinical exposure
P12	"We are not allowed to perform"	Limited opportunity	Experiential	Limited clinical exposure
P13	"Theory is not enough to perform skills"	Theory-practice gap	Educational	Educational gap
P14	"Teaching methods are not practical"	Poor teaching methods	Educational	Educational gap
P15	"More simulation training is needed"	Need for simulation	Educational	Educational gap

As shown in Table 3, the coding matrix highlights how individual participant statements were systematically coded and organized into categories and themes. This structured representation strengthens the credibility of the findings by demonstrating the consistency and logical flow of the analysis.

Thematic analysis

Analysis of the interview data led to the identification of four major themes representing barriers perceived by nursing students.

Theme 1: Fear and Lack of Confidence

Many participants expressed hesitation in performing neonatal resuscitation due to fear of making mistakes.

“Even if I know the steps, I feel scared to perform them on a real baby.”

Students reported anxiety, especially when imagining emergency situations.

Theme 2: Insufficient Practical Exposure

Participants frequently mentioned that limited opportunities for hands-on practice affected their preparedness.

“We learned the theory well, but we didn’t practice enough.”

A lack of repeated skill practice was highlighted as a major concern.

Theme 3: Difficulty in Recall During Stress

Students described challenges in remembering the sequence of steps when under pressure.

“During exams or emergencies, I tend to forget the correct order.”

Stress and cognitive overload were common contributing factors.

Theme 4: Limited Clinical Experience

Many participants reported minimal exposure to real-life neonatal resuscitation cases.

“We mostly observe, but rarely get the chance to perform.”

This lack of active involvement reduced their confidence in real settings.

Figure 1: Illustrating the Relationship Between Themes and Subthemes of Perceived Barriers in Neonatal Resuscitation

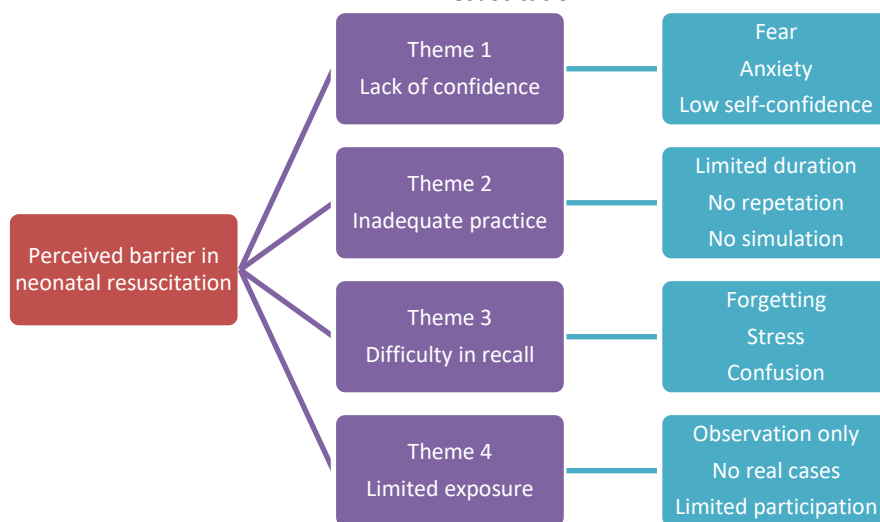


Figure 1 presents a conceptual overview of the relationships between the major themes and their corresponding subthemes identified in this study. The diagram illustrates how different dimensions of perceived barriers—namely lack of confidence, inadequate practice, difficulty in recall, and limited clinical exposure—are interconnected through specific underlying factors. Each theme is supported by multiple subthemes, reflecting the multifaceted nature of challenges experienced by nursing students in performing neonatal resuscitation.

4. Discussion

The findings highlight both psychological and educational barriers affecting students’ ability to perform neonatal resuscitation. Fear and lack of confidence were prominent, consistent with earlier studies indicating that anxiety can impact clinical performance (Sharma et al., 2022).

Limited practical exposure remains a key concern. Simulation-based training has been shown to improve competence and confidence among nursing students (Zhang et al., 2021). Additionally, difficulties in recalling procedural steps under pressure suggest the need for repeated reinforcement and structured learning approaches. These findings emphasize the importance of integrating practical training with supportive supervision to enhance preparedness.

Implications

Nursing Practice:

The study highlights the need for improved hands-on training, simulation-based learning, and supportive clinical supervision to enhance students' confidence and performance in neonatal resuscitation.

Nursing Knowledge Development:

Incorporating group-based and innovative learning strategies such as microlearning and peer learning can improve knowledge retention, critical thinking, and application of neonatal resuscitation skills.

LIMITATIONS

- Small sample size
- Single setting

5. Conclusion

Nursing students encounter multiple barriers when performing neonatal resuscitation, including emotional, cognitive, and experiential challenges. Addressing these barriers through structured training, simulation-based practice, and supportive learning environments may enhance both confidence and competence.

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