

Prepared for the First Breath: Exploring Health Care Providers' Perspective in Delivering Immediate Postnatal Care Through Neonatal Resuscitation Program

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Abstract

This study explored the perspectives of healthcare providers in delivering immediate postnatal care through the Neonatal Resuscitation Program (NRP). Guided by an Input–Process–Output framework and supported by Benner's Novice to Expert Theory, Roy's Adaptation Model, and Watson's Theory of Human Caring, the study examined healthcare providers' preparedness in terms of knowledge, clinical competence, confidence, decision-making, teamwork, and the challenges and facilitating factors encountered during neonatal resuscitation. A descriptive qualitative phenomenological research design was employed. Data were collected through semi-structured interviews using a researcher-developed interview guide validated by three experts. Purposive sampling was used to recruit healthcare providers directly involved in neonatal resuscitation from a private healthcare facility in Cagayan de Oro City. Data were analyzed using Colaizzi's phenomenological method, with member checking conducted to enhance the credibility of the findings. The findings revealed that healthcare providers considered preparedness a combination of theoretical knowledge, technical competence, emotional resilience, sound clinical judgment, and effective teamwork. Continuous NRP training, simulation-based learning, and hands-on clinical experience strengthened participants' confidence and competence, while adherence to standardized protocols and collaborative communication enabled timely, evidence-based decision-making during neonatal emergencies. The study concludes that effective delivery of immediate postnatal care depends on competent healthcare providers, continuous professional development, institutional support, and coordinated teamwork. It recommends strengthening standardized neonatal resuscitation practices through regular competency-based training, simulation exercises, structured debriefing, and sustained support for neonatal health services. The study supports Sustainable Development Goal (SDG) 3: Good Health and Well-Being, SDG 4: Quality Education, and SDG 17: Partnerships for the Goals by promoting quality neonatal care, continuous professional learning, and interprofessional collaboration. Its sustainability impact lies in strengthening institutional capacity, evidence-based clinical practice, workforce development, and collaborative healthcare systems that contribute to improved neonatal outcomes and the quality of maternal and newborn healthcare services.

Keywords: Clinical Competence, Healthcare Providers, Immediate Postnatal Care, Neonatal Resuscitation, Neonatal Resuscitation Program, Phenomenology, Preparedness, Simulation-Based Training, Teamwork and Communication

1. Introduction

The transition from intrauterine to extrauterine life is a critical period during which newborns undergo rapid physiological adaptation. Immediate postnatal care, particularly neonatal resuscitation, is essential for newborns who fail to initiate or sustain adequate breathing after birth. Despite advances in neonatal care, neonatal mortality remains a significant global and national public health concern, with birth asphyxia continuing to be a leading cause of newborn deaths. Although standardized training programs such as the Neonatal Resuscitation Program (NRP) have improved healthcare providers' competencies, variations in clinical practice persist due to differences in training, experience, institutional resources, and workplace conditions. Existing studies have largely focused on quantitative assessments of knowledge and skills, while limited attention has been given to healthcare providers' actual experiences in applying neonatal resuscitation in clinical settings. This study addresses this gap by exploring healthcare providers' perspectives regarding their knowledge, clinical skills, confidence, decision-making, teamwork, and the challenges and facilitating factors influencing the delivery of immediate postnatal care through the Neonatal Resuscitation Program.

1.1 Background of Healthcare Providers' Perspectives on Immediate Postnatal Care through the Neonatal Resuscitation Program

The first minutes of life are critical for newborn survival because newborns must rapidly adapt their respiratory, cardiovascular, and thermoregulatory systems to extrauterine life. When adequate breathing is not established immediately after birth, neonatal resuscitation becomes an essential intervention to improve survival outcomes. Globally, approximately

2.4 million neonatal deaths occur annually, with nearly one-third occurring within the first 24 hours of life (World Health Organization [WHO], 2023). In the Philippines, neonatal mortality remains a major public health concern, with a mortality rate of 11 deaths per 1,000 live births. Birth asphyxia accounted for approximately 9.2% of neonatal deaths in 2023, emphasizing the need to strengthen neonatal resuscitation practices and improve the quality of immediate postnatal care. Although standardized programs such as the Neonatal Resuscitation Program (NRP) provide healthcare providers with evidence-based training, clinical implementation varies due to resource limitations, workload, differences in experience, inadequate opportunities for continuous practice, and challenges in teamwork and communication. Moreover, knowledge and technical skills may decline without regular reinforcement through simulation and clinical practice. Most existing research has examined neonatal resuscitation using quantitative measures of training effectiveness, knowledge, and technical competence. Comparatively few studies have explored healthcare providers' perspectives on applying neonatal resuscitation in real clinical environments. Therefore, this study explores healthcare providers' experiences regarding their knowledge, skills, confidence, decision-making, teamwork, and the challenges and facilitating factors influencing the delivery of immediate postnatal care through the Neonatal Resuscitation Program. The findings are expected to inform improvements in neonatal resuscitation training, institutional support, clinical practice, and the overall quality of neonatal care.

1.2 Themes and Insights on Healthcare Providers' Preparedness in Neonatal Resuscitation

The literature consistently identifies healthcare providers' preparedness as a multidimensional construct comprising knowledge of neonatal resuscitation protocols, clinical and technical competence, confidence, decision-making and critical thinking, and effective teamwork and communication. Knowledge of neonatal resuscitation protocols remains fundamental to newborn survival. Organizational policies and adherence to standardized guidelines influence healthcare providers' preparedness, while structured neonatal resuscitation training enhances knowledge, technical competence, and self-efficacy, particularly in resource-constrained settings (Trevisanuto et al., 2022; Olaniyi et al., 2021; Al-Hadrawy et al., 2021; Biset et al., 2023; Eyeberu et al., 2024; Mohamedsharif et al., 2024; Wubishet et al., 2025). Clinical and technical competence develops through continuous learning, repetitive clinical practice, simulation, feedback, and professional experience. Simulation-based education consistently demonstrates positive effects on procedural skill acquisition, competence, patient safety, and quality of care (Moreci et al., 2024; Gharghoza et al., 2021; Ajemba et al., 2024; Uoshima et al., 2021; Woods et al., 2023). Confidence in performing neonatal resuscitation is strongly associated with repeated simulation-based learning and competency-based assessment. Studies consistently report improvements in knowledge, psychomotor skills, self-confidence, clinical performance, and long-term skill retention among students and practicing healthcare professionals following structured simulation training (Hakimi et al., 2021; Sarvan & Efe, 2022; Lim et al., 2024; Renesme et al., 2022; Kreuter, 2023; Felton et al., 2024; Kalabamu et al., 2025a; Kalabamu et al., 2025b; Sihota et al., 2024). Decision-making and critical thinking are essential during neonatal emergencies because healthcare providers must integrate evidence-based guidelines, clinical judgment, ethical considerations, and situational demands. Simulation-based learning, collaborative education, and repeated clinical exposure strengthen clinical reasoning and improve decision-making capabilities in emergency settings (Tonna et al., 2022; Jalalpour et al., 2021; Kumar et al., 2023; Firman et al., 2025; Chae & Shon, 2024; Chidume et al., 2023; Katheria et al., 2023). Effective neonatal resuscitation also depends on teamwork, leadership, and communication. Research demonstrates that coordinated interprofessional collaboration, clear communication, psychological safety, leadership development, and regular simulation exercises improve team performance, situational awareness, and resuscitation outcomes (Hosseini et al., 2022; Ediger et al., 2022; Heling et al., 2021; Fornander et al., 2024; Laco & Stuart, 2022; Bould et al., 2022; Sawyer et al., 2021). Overall, the literature indicates that successful neonatal resuscitation requires the integration of knowledge, technical competence, confidence, sound clinical judgment, and collaborative teamwork. While previous studies have extensively examined these competencies through quantitative approaches, fewer investigations have explored healthcare providers' lived experiences and perspectives in applying neonatal resuscitation within actual clinical practice, providing the rationale for the present study.

1.3 Global, National, and Local Context of Immediate Postnatal Care and Neonatal Resuscitation

Neonatal mortality remains a major public health concern worldwide despite advances in maternal and newborn healthcare. Globally, approximately 2.4 million neonatal deaths occur annually, with nearly one-third occurring within the first 24 hours after birth (World Health Organization [WHO], 2023). In the Philippines, neonatal mortality is likewise a significant health issue, with 11 deaths per 1,000 live births. Birth asphyxia continues to be one of the leading causes of neonatal mortality, highlighting the need to strengthen neonatal resuscitation practices and improve the quality of immediate postnatal care. International literature shows that variations in neonatal resuscitation practices exist despite the implementation of standardized guidelines. Differences in institutional policies, resource availability, training opportunities, and clinical experience influence healthcare providers' preparedness and competence (Trevisanuto et al., 2022; Olaniyi et al., 2021). Current international evidence also demonstrates that sustained implementation of neonatal resuscitation programs, continuous simulation training, and adherence to evidence-based guidelines significantly improve provider performance and newborn outcomes, particularly in low- and middle-income countries (Sihota et al., 2024; Ersdal et al., 2022). Similarly, studies conducted across different healthcare settings demonstrate that simulation-based education, continuous professional development, and interprofessional collaboration improve healthcare providers' knowledge,

confidence, technical competence, and clinical judgment (Hakimi et al., 2021; Lim et al., 2024; Renesme et al., 2022; Chae & Shon, 2024). Both local and international evidence consistently indicates that effective neonatal resuscitation depends not only on technical knowledge but also on continuous practice, decision-making skills, teamwork, leadership, and organizational support. These findings underscore the need to understand healthcare providers' experiences in applying neonatal resuscitation within actual clinical settings to strengthen immediate postnatal care and improve newborn survival outcomes.

1.4 Theoretical and Conceptual Basis of Healthcare Providers' Perspectives on Immediate Postnatal Care through the Neonatal Resuscitation Program

This study is grounded in an epistemological perspective that recognizes knowledge in neonatal resuscitation as being developed through formal education, clinical guidelines, experiential learning, and continuous interaction within healthcare environments. It likewise acknowledges the ethical responsibility of healthcare providers to deliver safe, evidence-based, and equitable care for newborns while applying standardized protocols with professional judgment according to clinical situations and available resources. The conceptual basis is anchored on the demographic and professional characteristics of healthcare providers, including age, sex, profession, training, and years of clinical experience, together with their preparedness in neonatal resuscitation. Preparedness encompasses knowledge of neonatal resuscitation protocols, clinical and technical competence, confidence, decision-making and critical thinking, teamwork and communication, as well as the challenges and facilitating factors encountered during immediate postnatal care. These elements provide the framework for understanding healthcare providers' perspectives and experiences and serve as the basis for recommending improvements in neonatal resuscitation training, clinical practice, and the quality of immediate postnatal care. The study follows an Input-Process-Output framework in which participant characteristics and preparedness constitute the inputs, semi-structured interviews and thematic analysis comprise the research process, and the identified levels of preparedness, challenges, facilitating factors, and recommendations form the study outputs. The study is further supported by Patricia Benner's Novice to Expert Theory, which explains that clinical expertise develops progressively through education, training, and accumulated practical experience rather than formal instruction alone (Benner, 1984). As healthcare providers gain experience, they develop greater clinical judgment, confidence, and competence in responding effectively to neonatal emergencies. This theoretical progression is reflected in the competency standards presented in the Textbook of Neonatal Resuscitation, which emphasizes repeated practice, structured assessment, and mastery of neonatal resuscitation skills through evidence-based training (American Academy of Pediatrics, 2021; Weiner & Zaichkin, 2021). Sr. Callista Roy's Adaptation Model provides the theoretical basis for understanding how healthcare providers facilitate newborn adaptation to extrauterine life through timely assessment and evidence-based neonatal resuscitation interventions. The theory emphasizes the role of healthcare providers in promoting physiological stability while responding to the challenges encountered during neonatal emergencies. Jean Watson's Theory of Human Caring complements the study by emphasizing that effective neonatal resuscitation requires not only technical competence but also compassionate care, empathy, communication, and professional commitment. The theory highlights the importance of balancing life-saving interventions with caring behaviors that support both the newborn and the family during critical moments after birth. Collectively, these theoretical foundations explain healthcare providers' preparedness, competence, caring practices, and clinical decision-making in delivering immediate postnatal care through neonatal resuscitation while providing the basis for exploring their perspectives, experiences, and challenges in clinical practice.

1.5 Research Gaps and Rationale for Exploring Healthcare Providers' Perspectives on Immediate Postnatal Care through the Neonatal Resuscitation Program

Although numerous studies have demonstrated the effectiveness of neonatal resuscitation training programs and examined healthcare providers' knowledge, clinical competence, confidence, decision-making, and teamwork, most have relied primarily on quantitative methods that assess measurable outcomes. These studies provide valuable evidence regarding training effectiveness but offer limited understanding of healthcare providers' actual experiences when applying neonatal resuscitation in real clinical settings. The reviewed literature consistently emphasizes that neonatal resuscitation competence is influenced by continuous education, simulation-based training, leadership, communication, and organizational support (Moreci et al., 2024; Gharghoza et al., 2021; Hakimi et al., 2021; Lim et al., 2024; Chae & Shon, 2024; Hosseini et al., 2022). However, there remains limited evidence exploring healthcare providers' perspectives on how these competencies are applied during actual neonatal emergencies, including the challenges encountered and the facilitating factors that influence clinical practice. This gap highlights the need for a qualitative exploration of healthcare providers' perspectives in delivering immediate postnatal care through the Neonatal Resuscitation Program. By examining their experiences regarding knowledge, clinical skills, confidence, decision-making, teamwork, and the challenges and facilitating factors encountered during neonatal resuscitation, this study seeks to generate evidence that may strengthen neonatal resuscitation training, improve institutional support, enhance clinical practice, and contribute to better immediate postnatal care and newborn outcomes.

1.6 Alignment of the Study with Relevant Sustainable Development Goals (SDGs)

This study aligns with SDG 3 – Good Health and Well-Being by supporting efforts to reduce neonatal morbidity and mortality through improved immediate postnatal care and strengthened neonatal resuscitation practices. By exploring healthcare providers' preparedness, experiences, and challenges, the study contributes to enhancing the quality, safety, and effectiveness of newborn care services. The study also supports SDG 4 – Quality Education by emphasizing the importance of continuous professional learning, competency-based education, simulation training, and experiential learning in improving healthcare providers' knowledge, technical competence, confidence, decision-making, and teamwork in neonatal resuscitation (Olaniyi et al., 2021; Moreci et al., 2024; Hakimi et al., 2021; Lim et al., 2024; Chae & Shon, 2024). In addition, the findings may contribute to SDG 17 – Partnerships for the Goals by promoting collaboration among healthcare providers, healthcare institutions, educators, and policymakers to strengthen neonatal resuscitation training, institutional support, and evidence-based clinical practice through improved teamwork and communication (Hosseini et al., 2022; Ediger et al., 2022; Heling et al., 2021; Laco et al., 2022).

1.7 Importance of the Study to Multidisciplinary Sustainability in Neonatal and Maternal Healthcare

This study contributes primarily to public health sustainability by generating evidence that may improve the quality of immediate postnatal care, strengthen neonatal resuscitation practices, and ultimately support better newborn survival outcomes. Improved preparedness among healthcare providers can contribute to safer and more effective neonatal healthcare services. The study also promotes educational sustainability by identifying training needs and opportunities for strengthening competency-based education, simulation-based learning, continuous professional development, and effective teaching strategies that promote lifelong learning (Jamaludin et al., 2021; Carnegie Mellon University, 2019). Insights from healthcare providers' experiences may guide improvements in future educational and institutional training programs. Furthermore, the study supports institutional sustainability by providing evidence that may assist healthcare organizations in enhancing clinical protocols, strengthening teamwork and communication, improving organizational support, and developing policies that promote high-quality neonatal resuscitation services. The findings may also serve as a foundation for future research aimed at improving immediate postnatal care and neonatal health outcomes.

2. Material and methods

2.1 Research Design

The study utilized a descriptive qualitative phenomenological research design to explore and understand healthcare providers' knowledge, confidence, clinical skills, and perspectives regarding neonatal resuscitation and immediate postnatal care. This design was selected because it facilitates an in-depth exploration of participants' lived experiences, insights, and clinical practices. Data were collected through semi-structured interviews that encouraged participants to describe their experiences and perspectives on the Neonatal Resuscitation Program. The qualitative approach enabled the systematic analysis of participants' narratives through coding, categorization, and theme development, allowing the researcher to identify common experiences, challenges, and perspectives related to neonatal resuscitation and immediate newborn care.

2.2 Locale of the Study

The study was conducted in a private healthcare facility located in Lapanan, Cagayan de Oro City, which provides comprehensive maternal, neonatal, and emergency healthcare services. The institution was selected because it offers an appropriate clinical environment where healthcare providers are actively involved in immediate postnatal care and neonatal resuscitation. Data collection focused on the Delivery Room and Neonatal Intensive Care Unit (NICU), where healthcare providers routinely implement the Neonatal Resuscitation Program. These clinical settings provided opportunities to obtain relevant and reliable information from participants with direct experience in neonatal resuscitation and immediate newborn care.

2.3 Respondents of the Study

The respondents consisted of licensed healthcare providers directly involved in neonatal resuscitation and immediate postnatal care. Eligible participants included nurses, midwives, and physicians assigned to the Delivery Room, Neonatal Intensive Care Unit, Obstetric Ward, or Pediatric Ward who had direct experience in neonatal resuscitation and had completed neonatal resuscitation or equivalent institutional training. Participants were also required to have sufficient clinical experience to ensure meaningful contributions regarding neonatal resuscitation practice. Healthcare providers who were not directly involved in neonatal resuscitation or immediate postnatal care, administrative personnel, healthcare providers from unrelated departments, interns, trainees, individuals on extended leave, those without neonatal resuscitation training or practical experience, and those unwilling to provide informed consent were excluded from the study. These criteria ensured that participants possessed relevant clinical experience and could provide comprehensive perspectives on the phenomenon under investigation.

2.4 Sample and Sampling Procedure

The study employed purposive non-probability sampling, which is appropriate for qualitative research because participants are selected based on their direct experience with the phenomenon being investigated. Initially, approximately 15 healthcare providers from the Delivery Room, Neonatal Intensive Care Unit, Obstetric Ward, and Pediatric Ward were identified for participation. The final sample size was determined through data saturation, whereby interviews continued until no new themes, categories, or significant information emerged from participants' responses. This approach ensured that the collected data adequately represented healthcare providers' lived experiences and perspectives regarding neonatal resuscitation and immediate postnatal care. Selecting participants with direct clinical involvement enhanced the credibility and relevance of the findings by ensuring that the data reflected actual practice rather than theoretical knowledge alone.

2.5 Research Instrument

The study utilized a researcher-developed semi-structured interview guide based on the qualitative interviewing approach of Brinkmann. The interview guide was informed by the review of related literature to ensure comprehensive exploration of healthcare providers' preparedness and experiences in delivering immediate postnatal care through the Neonatal Resuscitation Program. It consisted of open-ended questions with probing questions to elicit detailed responses regarding participants' experiences, perceptions, and challenges. The instrument comprised three sections. The first gathered participants' demographic and professional information, including profession, years of clinical experience, area of practice, and neonatal resuscitation training. The second explored participants' preparedness, focusing on their knowledge, clinical skills, confidence, and readiness to manage neonatal emergencies. The third examined factors influencing neonatal resuscitation preparedness, including challenges encountered and training opportunities within clinical practice. To establish the instrument's validity, the interview guide underwent expert evaluation by three validators representing neonatal healthcare practice, qualitative research, and maternal and newborn care education. Their assessments focused on content validity, the adequacy of the interview guide for generating qualitative data, and the appropriateness of its terminology and constructs based on current standards of care. Their recommendations were incorporated into the final version of the interview guide. Reliability was promoted by using the same interview guide for all participants, maintaining consistent interview procedures, and ensuring accurate documentation through note-taking during data collection. To ensure the trustworthiness of the study, the researcher adopted the principles of credibility, dependability, confirmability, and transferability. Credibility was strengthened through prolonged engagement with participants and member checking, while dependability was supported by maintaining detailed documentation of data collection, coding, theme development, and analytical decisions. Confirmability was achieved through reflexive journaling, field notes, interview transcripts, and reflective memos to minimize researcher bias. Transferability was enhanced by providing rich descriptions of the research context, participants, and immediate postnatal care practices, enabling readers to determine the applicability of the findings to similar healthcare settings.

2.6 Data Gathering Procedure

Prior to data collection, the researcher prepared all required documents, including the research proposal, interview guide, informed consent forms, and endorsement letters, for review and approval by the institution's Ethics Review Board (ERB). After securing approval from the research adviser and the ERB, permission to conduct the study was obtained from the hospital administration and the heads of the Delivery Room and Neonatal Intensive Care Unit. Eligible healthcare providers were individually invited to participate in the study. The researcher explained the study objectives, procedures, voluntary nature of participation, participants' rights, and the informed consent process before obtaining written consent. Semi-structured interviews were then conducted using the approved interview guide. Participants received no monetary compensation but were informed of the study's potential contribution to improving neonatal resuscitation practice and healthcare provider training. Completed interview materials were collected without disrupting hospital operations. All data were securely stored in locked cabinets and password-protected electronic files accessible only to the researcher, with the research adviser granted access solely for verification purposes. Participants were assigned identification codes (e.g., P1, P2) to maintain anonymity, and no personally identifiable information was included in the analysis. Research data were retained for a maximum of three years after study completion, after which physical records would be shredded and electronic files permanently deleted in accordance with the Data Privacy Act of 2012 to ensure confidentiality and protect participants' personal information.

2.7 Data Analysis Techniques

The collected data from the semi-structured interviews were analyzed using Colaizzi's phenomenological method to obtain an in-depth understanding of healthcare providers' perspectives on delivering immediate postnatal care through the Neonatal Resuscitation Program (NRP). Audio-recorded interviews were transcribed verbatim and reviewed repeatedly to achieve familiarity with participants' experiences. Significant statements related to neonatal resuscitation and immediate postnatal care were identified and examined to formulate meanings that reflected participants' perceptions, experiences, challenges, and practices. The formulated meanings were organized into thematic clusters based on recurring patterns and similarities across participants' responses. These themes were continuously reviewed to ensure they accurately represented the participants' lived experiences. A comprehensive description of the phenomenon was then developed and synthesized

into a fundamental structure that captured the essence of healthcare providers' perspectives in delivering immediate postnatal care through the Neonatal Resuscitation Program. To strengthen the credibility and trustworthiness of the findings, member checking was conducted by returning the interpreted results to selected participants for validation and confirmation. Participant feedback and clarifications were incorporated into the final analysis to ensure that the findings faithfully represented their experiences.

2.8 Ethical Considerations

The study adhered to established ethical principles throughout the research process. Prior to data collection, participants received an informed consent form explaining the study's purpose, objectives, procedures, duration, potential risks and benefits, and their rights as research participants. The researcher explained the contents of the consent form, addressed participants' questions, and obtained written informed consent before participation. The study also complied with the provisions of the Data Privacy Act of 2012 by removing personal identifiers, assigning participant codes (e.g., P1, P2), and securely storing all research data in password-protected electronic files and locked physical records accessible only to the researcher and research adviser. The principle of autonomy was upheld by ensuring that participation was entirely voluntary and free from coercion. Participants were informed of their right to decline participation or withdraw from the study at any time without consequences. To address the possibility of emotional distress arising from discussions of neonatal resuscitation experiences, the researcher was prepared to pause or terminate interviews based on participants' preferences, allow them to skip questions, or refer them to appropriate institutional support services when necessary. The study also observed the principles of beneficence, non-maleficence, justice, veracity, and fidelity. Although participants received no direct personal benefit, the findings were intended to contribute to improving neonatal resuscitation practice. Every effort was made to prevent physical, psychological, and professional harm by using professionally developed interview questions and avoiding sensitive or identifying information. Fairness was maintained through equitable participant selection based on professional qualifications and experience, without discrimination. The researcher ensured honesty and transparency by providing accurate information throughout the study and faithfully implementing all approved research procedures. Finally, confidentiality, voluntary participation, responsible data management, and truthful reporting of findings were maintained to preserve the integrity of the research process.

3. Results and Discussion

3.1 Healthcare Providers' Perspectives on Immediate Postnatal Care through the Neonatal Resuscitation Program

3.1.1 Preparedness and Knowledge of Neonatal Resuscitation Practices

The findings revealed that healthcare providers considered preparedness a combination of theoretical knowledge, simulation training, clinical competence, and emotional readiness. Participants reported that although they initially learned neonatal resuscitation through classroom instruction, practical simulations and the structured Neonatal Resuscitation Program (NRP) enabled them to apply knowledge effectively in actual clinical situations. They emphasized the importance of understanding the NRP algorithm, ventilation, chest compressions, medications, and rapid assessment. Many participants admitted experiencing fear, anxiety, and pressure during their first neonatal resuscitation; however, they explained that following standardized protocols helped them remain calm, think systematically, and perform the appropriate interventions despite these emotions. These findings indicate that healthcare providers perceive preparedness as extending beyond theoretical knowledge to include practical competence, sound clinical judgment, and emotional readiness. Although initial neonatal emergencies often evoked fear and anxiety, participants consistently described how structured NRP training and standardized algorithms enabled them to transform these emotions into organized clinical actions. Their experiences suggest that preparedness is strengthened through continuous learning, simulation-based practice, and familiarity with established protocols, allowing healthcare providers to respond confidently and effectively during neonatal emergencies.

3.1.2 Clinical Skills and Technical Competence

The findings showed that participants attributed the development of their clinical skills and technical competence to the Neonatal Resuscitation Program (NRP) training and simulation exercises. They reported that repeated practice enhanced their ability to perform essential resuscitation procedures, including the proper use of resuscitation equipment, positive-pressure ventilation, and adherence to the NRP algorithm during time-sensitive emergencies. Although some participants initially experienced uncertainty in handling resuscitation equipment, continuous training and repeated clinical exposure improved their technical proficiency and confidence in performing neonatal resuscitation effectively. The findings suggest that simulation-based NRP training plays a significant role in strengthening healthcare providers' procedural competence and reducing uncertainty during neonatal emergencies. Participants emphasized that repeated practice and familiarity with resuscitation equipment enhanced their technical skills, enabling them to perform interventions accurately and respond promptly during critical situations. These experiences demonstrate that continuous skills training and practical application are essential in developing competence in neonatal resuscitation.

3.1.3 Confidence in Performing Neonatal Resuscitation

The findings revealed that NRP training contributed substantially to participants' confidence in performing neonatal resuscitation despite the emotional demands of emergency situations. Healthcare providers consistently described experiencing fear, nervousness, anxiety, and a strong sense of responsibility during their initial resuscitation experiences. However, they reported that adherence to the NRP protocol enabled them to remain organized, focused, and composed while prioritizing the newborn's immediate needs. Participants viewed confidence as the ability to manage emotions effectively while applying established clinical protocols and previous learning experiences. These findings indicate that confidence in neonatal resuscitation is developed through structured training, clinical experience, and familiarity with standardized protocols rather than the absence of fear. Participants recognized that emotional responses are inevitable during neonatal emergencies, but they emphasized that NRP guidelines, repeated practice, and accumulated clinical experience allowed them to regulate these emotions and deliver safe, timely, and effective care. This demonstrates that confidence is strengthened by preparedness, competence, and the consistent application of evidence-based resuscitation practices.

3.1.4 Decision-Making and Critical Thinking Ability

The findings revealed that healthcare providers considered systematic newborn assessment as the foundation of clinical decision-making during neonatal resuscitation. Participants consistently described assessing the newborn's breathing, heart rate, muscle tone, and overall condition before initiating interventions. They emphasized following the Neonatal Resuscitation Program (NRP) algorithm, performing prompt basic interventions, referring cases early when necessary, and integrating rapid clinical assessment with established protocols and team communication. These practices enabled participants to make timely and appropriate decisions during neonatal emergencies. The findings suggest that effective decision-making in neonatal resuscitation is guided by systematic assessment rather than instinctive responses. Participants demonstrated that combining clinical knowledge, experience, standardized protocols, and collaboration with the healthcare team promotes accurate clinical judgment during time-sensitive situations. Their experiences indicate that structured assessment and adherence to the NRP algorithm support safe and evidence-based interventions for newborns requiring immediate postnatal care.

3.1.5 Teamwork and Communication during Resuscitation

The findings identified teamwork and effective communication as essential components of successful neonatal resuscitation. Participants emphasized that coordinated collaboration among nurses, physicians, and midwives strengthened their confidence and improved the delivery of immediate postnatal care. They described clear communication, defined team roles, mutual trust, and coordinated actions as important factors that enabled efficient resuscitation and timely clinical interventions during emergencies. These findings demonstrate that healthcare providers view teamwork and structured communication as fundamental to improving neonatal resuscitation outcomes. Effective collaboration promotes coordinated clinical actions, minimizes communication errors, and strengthens team performance during emergencies. This interpretation is consistent with existing literature showing that interprofessional simulation training enhances communication, leadership, teamwork, and patient safety during neonatal resuscitation (Sawyer et al. 2020). Likewise, successful neonatal resuscitation depends on coordinated multidisciplinary teamwork, shared understanding of resuscitation protocols, effective communication, and continuous patient reassessment (Weiner et al. 2021). These findings are further supported by Bould et al. (2022), who emphasized that structured debriefing and psychologically safe learning environments enhance teamwork, communication, reflective learning, and overall team performance during neonatal resuscitation. Overall, participants highlighted that successful neonatal resuscitation is achieved through shared responsibility, effective communication, continuous collaboration, and a collective commitment to providing timely, high-quality care for newborns requiring lifesaving interventions.

3.2 Fundamental Structure of Healthcare Providers' Experiences

The overall findings revealed that healthcare providers experience neonatal resuscitation as a critical and emotionally demanding responsibility that requires adequate preparation, clinical competence, rapid decision-making, and effective teamwork. Participants reported that NRP training and simulation strengthened their confidence and enabled them to respond systematically during neonatal emergencies. Despite experiencing anxiety and fear, they relied on established protocols, continuous learning, and collaborative support from colleagues to deliver safe and timely immediate postnatal care. These findings underscore that successful neonatal resuscitation depends not only on individual competence but also on coordinated teamwork, effective communication, continuous skill development, and a shared commitment to improving newborn outcomes. To ensure the credibility of the findings, member checking was conducted by returning the summarized themes and interpretations to the participants for validation. Participants reviewed the accuracy of the transcribed statements and thematic interpretations, and their clarifications and additional insights were incorporated into the final analysis, thereby strengthening the trustworthiness of the study.

4. Conclusion & Recommendations

This study concludes that healthcare providers perceive the successful delivery of immediate postnatal care through the Neonatal Resuscitation Program (NRP) as dependent on adequate knowledge, technical competence, emotional resilience, adherence to standardized protocols, and effective teamwork. Continuous NRP training, simulation-based learning, and hands-on clinical experience strengthen healthcare providers' preparedness, confidence, and decision-making during neonatal emergencies, while collaboration and institutional support enable them to remain calm and deliver safe, timely, and high-quality care to newborns requiring immediate intervention.

Healthcare organizations should strengthen immediate postnatal care by implementing standardized procedures, maintaining essential equipment, and providing continuous institutional support. Hospital administrators should conduct regular NRP refresher courses, simulation-based training, competency assessments, and structured debriefing sessions to enhance clinical competence. Institutions should also monitor adherence to neonatal resuscitation guidelines through regular competency assessments, clinical audits, and quality improvement initiatives to sustain high-quality neonatal care (Salia et al., 2025). Healthcare providers should actively participate in continuing professional development to improve their knowledge, technical skills, clinical judgment, teamwork, and communication. Health policymakers should support neonatal health services through adequate resources, workforce development, simulation facilities, and effective referral systems, while future researchers are encouraged to conduct similar studies with larger samples, diverse healthcare settings, and mixed-methods approaches to further examine healthcare providers' experiences and neonatal resuscitation practices.

This study was limited to ten healthcare providers from a single healthcare institution who were selected through purposive sampling. Although data saturation was achieved, the findings reflect the experiences and perspectives of participants within one clinical setting and may not represent healthcare providers in other institutions or healthcare environments. The study focused exclusively on the lived experiences of healthcare providers involved in neonatal resuscitation through qualitative inquiry, indicating the need for future studies involving larger samples and broader settings to strengthen the applicability of the findings.

Compliance with ethical standards

This study was conducted in accordance with established ethical principles governing research involving human participants. Ethical approval and institutional permission were obtained prior to data collection. Participation was voluntary, with written informed consent secured after participants were informed of the study's purpose, procedures, potential risks and benefits, and their rights. Participant confidentiality and anonymity were protected through the use of identification codes, secure data management, and compliance with the Data Privacy Act of 2012. Throughout the study, the principles of autonomy, beneficence, non-maleficence, justice, veracity, and fidelity were upheld to safeguard participants' rights, welfare, and the integrity of the research process.

REFERENCES

- Ajemba, M. N., Ikwe, C., & Iroanya, J. C. (2024). Effectiveness of simulation-based training in medical education: Assessing the impact of simulation-based training on clinical skills acquisition and retention: A systematic review. *World Journal of Advanced Research and Reviews*, 21(1), 1833–1843. <https://doi.org/10.30574/wjarr.2024.21.1.0163>
- Al-Hadrawy, Z. A. A., Khadim, R. A., & Shaker, E. (2021). Assessment of nurses' knowledge toward neonatal resuscitation. *Indian Journal of Forensic Medicine & Toxicology*, 15(3), 2196–2202. <https://www.researchgate.net/profile/Rusul-Kadhim-3/publication/354374734>
- American Academy of Pediatrics. (2021). *Textbook of neonatal resuscitation* (8th ed.). American Academy of Pediatrics. <https://doi.org/10.1542/9781610025256>
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley Publishing Company.
- Biset, G., Habte, T., Dugasa, B., & Bizuwork, K. (2023). Nurses' and midwives' knowledge regarding neonatal resuscitation in public hospitals of South Wollo Zone of Amhara Region, Northern Ethiopia. *International Journal of Africa Nursing Sciences*. <https://doi.org/10.1016/j.ijans.2023.100527>
- Bould, M. D., Szyld, E., Cheng, A., & Weiner, G. M. (2022). Debriefing, psychological safety, and team performance in neonatal resuscitation: Current perspectives. *Seminars in Fetal and Neonatal Medicine*, 27(5), 101363. <https://doi.org/10.1016/j.siny.2022.101363>
- Chae, S., & Shon, S. (2024). Effectiveness of simulation-based interprofessional education on teamwork and communication skills in neonatal resuscitation. *BMC Medical Education*, 24(1), 602. <https://link.springer.com/article/10.1186/s12909-024-05581-1>

- Chidume, T., Ware, K. S., Cooper, T. S., Young, B. C., & Crumbley, D. R. (2023). Deliberate practice and cardiopulmonary resuscitation: Integration in the classroom, lab, and simulation. *Teaching and Learning in Nursing*, 18(2), 339–343. <https://doi.org/10.1016/j.teln.2022.12.007>
- Ediger, K., Rashid, M., & Law, B. H. Y. (2022). What is teamwork? A mixed methods study on the perception of teamwork in a specialized neonatal resuscitation team. *Frontiers in Pediatrics*. <https://www.frontiersin.org/journals/pediatrics/articles/10.3389/fped.2022.845671/full>
- Ersdal, H. L., Mduma, E., Svensen, E., & Perlman, J. M. (2022). Helping Babies Breathe and simulation-based neonatal resuscitation training: Improving quality of newborn care in low-resource settings. *Frontiers in Pediatrics*, 10, 875421. <https://doi.org/10.3389/fped.2022.875421>
- Eyeberu, A., Yadeta, E., Bekele Dechasa, D., Aliyi Usso, A., Mohammed, F., & Debella, A. (2024). Neonatal resuscitation in Eastern Africa: Health care providers' level of knowledge and its determinants. A systematic review and meta-analysis. *Global Health Action*, 17(1). <https://doi.org/10.1080/16549716.2024.2396636>
- Felton, A., & Cheshire, K. (2024). Using simulation-based training to improve neonatal resuscitation clinical competency, confidence, and comfort level of NICU caregivers. *The Journal of Continuing Education in Nursing*, 55(4), 175–180. <https://doi.org/10.3928/00220124-20231130-21>
- Firman, D. R., Ezzat, N. A., Bustraan, J., de Beaufort, A. J., & Diewerke, A. (2025). Authentic learning environments for critical thinking and clinical reasoning skills in clinical pharmacology: A scoping review. *European Journal of Pharmacology*. <https://doi.org/10.1016/j.ejphar.2025.178124>
- Fornander, L., Laukkanen, K., Molin, I., Nilsson, L., & Berggren, P. (2024). Team communication patterns during real and simulated trauma resuscitation—A social network analysis. *Ergonomics*, 67(2), 225–239. <https://doi.org/10.1080/00140139.2023.2221000>
- Hakimi, M., Kheirkhah, M., Abolghasemi, J., & Hakimi, R. (2021). Investigating the effect of neonatal resuscitation simulation using a competency-based approach on knowledge, skill, and self-confidence of midwifery students using objective structured clinical examination (OSCE). *Journal of Family Medicine and Primary Care*, 10(4), 1766–1772. https://journals.lww.com/jfmpc/fulltext/2021/10040/investigating_the_effect_of_neonatal_resuscitation.46.aspx
- Heling, A. Z., Price, W. A., McNeal-Trice, K. A., & Aliaga, S. R. (2021). Teamwork, communication and resident leadership at resident-attended, neonatal delivery room resuscitations. *Journal of Perinatology*, 41(3), 627–633. <https://www.nature.com/articles/s41372-020-00802-z>
- Hosseini, M., Heydari, A., Reihani, H., & Kareshki, H. (2022). Elements of teamwork in resuscitation: An integrative review. *Bulletin of Emergency & Trauma*, 10(3), 95. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9373058/>
- Jalalpour, H., Jahani, S., Asadizaker, M., Sharhani, A., & Heybar, H. (2021). The impact of critical thinking training using critical thinking cards on clinical decision-making of CCU nurses. *Journal of Family Medicine and Primary Care*, 10(10), 3650–3656. https://journals.lww.com/jfmpc/fulltext/2021/10100/The_impact_of_critical_thinking_training_using.21.aspx
- Jamaludin, T. S. S., Nurumal, M. S., Ahmad, N., Aesah, S., Muhammad, N., & Chan, C. M. (2021). Soft skill elements in structured clinical nursing assessment for undergraduate nursing students: A systematic review. *Enfermeria Clínica*, 31, 58–62. <https://doi.org/10.1016/j.enfcli.2020.10.019>
- Kalabamu, F. S., Daudi, V., Moshiri, R., Bishanga, D. R., Kamala, B., Mdoe, P., & Ersdal, H. (2025). Acceptability among healthcare providers of in-situ, low-dose, high-frequency neonatal resuscitation simulation training using innovative tools. *Children*, 12(9). <https://doi.org/10.3390/children12091150>
- Kalabamu, F. S., Daudi, V., Moshiri, R., Kamala, B., Mdoe, P., Bishanga, D. R., Ersdal, H., & Mpembeni, R. (2025). Neonatal resuscitation skills acquisition among healthcare providers after Helping Babies Breathe simulation training using improved tools across two regions in Tanzania. *Advances in Simulation*, 10(6). <https://doi.org/10.1186/s41077-025-00338-2>
- Katheria, A. C., Finer, N. N., & Wyckoff, M. H. (2023). Clinical decision-making and quality improvement in neonatal resuscitation. *Seminars in Fetal and Neonatal Medicine*, 28(2), 101451. <https://doi.org/10.1016/j.siny.2023.101451>
- Kreuter, A. (2023). Improving nursing confidence through simulated resuscitation events in the neonatal intensive care unit: A quality improvement project (Doctoral dissertation, Jacksonville University). ProQuest. <https://www.proquest.com/openview/596e638260616639e2552a64d6272838/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Kumar, N., Fatima, M., Ghaffar, S., Subhani, F., & Waheed, S. (2023). To resuscitate or not to resuscitate? The crossroads of ethical decision-making in resuscitation in the emergency department. *Clinical and Experimental Emergency Medicine*, 10(2), 138. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10350361/>
- Laco, R. B., & Stuart, W. P. (2022). Simulation-based training program to improve cardiopulmonary resuscitation and teamwork skills for the urgent care clinic staff. *Military Medicine*, 187(5–6). <https://doi.org/10.1093/milmed/usab198>

- Lim, C. Y., & Song, M. R. (2024). Sustained effect of simulation-based resuscitation education on knowledge, self-confidence, and performance ability of neonatal intensive care unit nurses. *The Journal of Continuing Education in Nursing*, 55(2), 79–86. <https://doi.org/10.3928/00220124-20231109-05>
- Mohamedsharif, M. A. O., Mohammed, I. B. S., & Mohamedsharif, A. A. (2024). Assessing midwives' knowledge and practice in neonatal resuscitation: Gaps and transfer of knowledge to reduce mortality. *Nursing Research and Practice*. <https://doi.org/10.1155/2024/663650>
- Moreci, R., Moore, G., & Arora, T. K. (2024). Developing clinical and technical skills. In *A how to guide for medical students*. Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-66011-5_14
- Nabizadeh-Gharghozar, Z., Alavi, N. M., & Ajorpaz, N. M. (2021). Clinical competence in nursing: A hybrid concept analysis. *Nurse Education Today*, 97. <https://doi.org/10.1016/j.nedt.2020.104728>
- Olaniyi, A. A., Ncama, B. P., & Amod, H. (2021). Mapping evidence of neonatal resuscitation training on the practices of unskilled birth attendants in low-resource countries: Protocol for a scoping review. *JMIR Research Protocols*, 10(3). <https://preprints.jmir.org/preprint/18935>
- Renesme, L., Merched, M., Tandonnet, O., & Naud, J. (2022). Newborn Life Support course: Does it make me more confident when resuscitating a newborn? *The Journal of Maternal-Fetal & Neonatal Medicine*, 35(25), 6561–6565. <https://doi.org/10.1080/14767058.2021.1918087>
- Salia, S. M., et al. (2025). Adherence to guidelines on quality neonatal resuscitation among healthcare professionals. *BMJ Open*, 15(8). <https://bmjopen.bmj.com/content/15/8/e099941>
- Sarvan, S., & Efe, E. (2022). The effect of neonatal resuscitation training based on a serious game simulation method on nursing students' knowledge, skills, satisfaction and self-confidence levels: A randomized controlled trial. *Nurse Education Today*, 111. <https://doi.org/10.1016/j.nedt.2022.105298>
- Sawyer, T., Laubach, V. A., Hudak, J., Yamamura, K., & Pocrnich, A. (2020). Improvements in teamwork during neonatal resuscitation after interprofessional simulation training. *Journal of Perinatology*, 40(6), 973–980. <https://doi.org/10.1038/s41372-020-0624-5>
- Sawyer, T., Umoren, R. A., Gray, M. M., & Schulz, A. (2021). Neonatal resuscitation simulation training and debriefing: A review of current evidence. *Children*, 8(2), 127. <https://doi.org/10.3390/children8020127>
- Sihota, D., Lee Him, R., Dominguez, G., Harrison, L., Vaivada, T., & Bhutta, Z. A. (2024). Effectiveness of neonatal resuscitation training programs, implementation, and scale-up in low- and middle-income countries. *Neonatology*, 122(1), 52–83. <https://doi.org/10.1159/000542539>
- Tonna, J. E., Keenan, H. T., & Weir, C. (2022). A qualitative analysis of physician decision making in the use of extracorporeal cardiopulmonary resuscitation for refractory cardiac arrest. *Resuscitation Plus*, 11. <https://doi.org/10.1016/j.resplu.2022.100278>
- Trevisanuto, D., Gizzi, C., Gagliardi, L., Ghirardello, S., Di Fabio, S., Beke, A., Buonocore, G., Charitou, A., Cucerea, M., Degtyareva, M. V., Filipović-Grčić, B., Jekova, N. G., Koç, E., Saldanha, J., Sanchez Luna, M., Stoniene, D., Varendi, H., Vertecchi, G., Mosca, F., & Moretti, C. (2022). Neonatal resuscitation practices in Europe: A survey of the Union of European Neonatal and Perinatal Societies. *Neonatology*, 119(2), 184–192. <https://doi.org/10.1159/000520617>
- Uoshima, K., Akiba, N., & Nagasawa, M. (2021). Technical skill training and assessment in dental education. *Japanese Dental Science Review*, 57, 160–163. <https://doi.org/10.1016/j.jdsr.2021.08.004>
- Weiner, G. M., & Zaichkin, J. (Eds.). (2021). *Textbook of neonatal resuscitation* (8th ed.). American Academy of Pediatrics. <https://doi.org/10.1542/9781610025256>
- Woods, M. S., Liberman, J. N., Rui, P., Wiggins, E., White, J., Ramshaw, B., & Stulberg, J. J. (2023). Association between surgical technical skills and clinical outcomes: A systematic literature review and meta-analysis. *JSLs: Journal of the Society of Laparoscopic & Robotic Surgeons*, 27(1). <https://pmc.ncbi.nlm.nih.gov/articles/PMC9913064/>
- World Health Organization. (2023). Standards for improving the quality of care for small and sick newborns in health facilities. World Health Organization. <https://www.who.int/publications/i/item/9789240097531>
- Wubishet, Y., et al. (2025). Neonatal resuscitation knowledge and its determinants among healthcare professionals at Asella Referral and Teaching Hospital, Southeast Ethiopia. *BMC Pediatrics*, 25(696). <https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-025-06061-1>
- Wyckoff, M. H., Wyllie, J., Aziz, K., de Almeida, M. F. B., Fabres, J., Fawke, J., Guinsburg, R., Hosono, S., Isayama, T., Kapadia, V. S., Kattwinkel, J., Perlman, J. M., Simon, W. M., Singhal, N., Soar, J., Szlyd, E., Tamura, M., Velaphi, S., & Liley, H. G. (2020). Neonatal life support: 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Resuscitation*, 156, A156–A187. <https://doi.org/10.1016/j.resuscitation.2020.09.015>