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Impact of Simulation Training on Self-Efficacy in Essential Newborn Care among Nursing Students

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ABSTRACT

Self-efficacy has a pretty big impact in nursing education, it kind of shapes how students feel about themselves how they come up with clinical decisions, and how well they carry out patient care steps, especially when it really counts. When we talk about essential newborn care (ENC), nursing students really have to build competence and that inner confidence so they can manage everyday newborn routines, as well as those urgent, surprise moments. Simulation training is getting more like an innovative teaching tactic, it allows learners to gather experience through realistic clinical situations, you know, the kind that feel close to actual practice. This paper looks at what simulation training does to self-efficacy in essential newborn care among nursing students. A quantitative pre-test and post-test design is planned, to see how students' self-efficacy levels shift after simulation based learning. Results from earlier work suggest that simulation training boosts confidence in a noticeable way, plus psychomotor abilities, clinical reasoning and overall readiness for neonatal care. Over all, the paper points out the learning worth of simulation, like it helps nursing students do safer, more effective newborn care. The conclusions also encourage putting simulation based activities into nursing curricula, so learning outcomes improve and neonatal healthcare quality gets better as well.

***Keywords**: Self-Efficacy, Simulation Training, Essential Newborn Care, Nursing Students, Clinical Competence.*

Introduction

The neonatal period, defined as the first 28 days of life, is a critical stage for a newborn's survival, growth, and development. During this period, newborns require appropriate care and support to prevent complications such as hypothermia, infections, feeding difficulties, and birth-related emergencies. Essential Newborn Care (ENC) encompasses a range of evidence-based interventions, including thermal protection, breastfeeding support, umbilical cord care, infection prevention, and neonatal resuscitation.

The effective delivery of these services largely depends on the competence, knowledge, and self-confidence of healthcare professionals, particularly nurses, who play a pivotal role in providing newborn care. As frontline caregivers, nurses are responsible for implementing essential newborn care practices, identifying potential complications, and ensuring timely interventions. Therefore, enhancing their knowledge and confidence through appropriate training and educational programs is essential for improving the quality of neonatal care and reducing neonatal morbidity and mortality.

Self-efficacy is, kind of a key idea in nursing education and it basically means a persons belief that they can pull off particular tasks successfully. I t's tied to Banduras Social Cognitive Theory, and from there you can see self-efficacy impacts learning, motivation, and performance as well. When nursing students have strong self-efficacy, they often show more certainty, and they also tend to make more sound clinical judgments, which then supports better patient care practices. On the other hand, low self-efficacy can spiral into anxiety, a reduced trust in your own abilities, and weaker clinical performance.

Traditional nursing education is mostly built from classroom teaching and clinical rotations. But students still get few true opportunities to rehearse newborn care procedures in real clinical settings, partly because people worry about patient safety and partly due to not enough exposure to neonatal emergencies. And so, as a result many nursing students might feel not fully prepared when they are expected to do essential newborn care on their own, even if they already had some prior teaching. Simulation based training has shown up as a pretty effective teaching approach for dealing with these challenges, you know. It presents realistic clinical situations using mannequins and various simulation tools, so students can rehearse clinical skills in a secure controlled space. Repeated attempts, specific feedback and debriefing sessions after are seen to help learners improve both clinical competence and confidence through simulation. Therefore, it is important to study the effect of simulation training on self-efficacy in essential newborn care among nursing students not only from an educational point of view but also to produce ready future healthcare professionals.

Objectives of the Study

- To assess the state of self-efficacy in essential newborn care among nursing students, prior to simulation training.
- To see how well simulation training actually works, in boosting self-efficacy.
- To look at what changes happen to clinical competence after education based on simulation.
- To examine how self-efficacy lines up with clinical performance, and whether there is a connection.
- To find out the learning value, of simulation training specifically for newborn care.

Hypothesis

- We expect there will be a significant increase in the self efficacy scores, of nursing students after they go through simulation training focused on essential newborn care, and not just a small change here.
- Also the simulation training should give a positive effect on the self efficacy level of nursing students related to essential newborn care.
- Further, it is anticipated that there will be a significant difference, between the pre test and post test self efficacy scores, after the simulation training period.
- And then, there should be a significant association between the post test self-efficacy scores and selected demographic variables of nursing students.

Limitations of the Study

- This work is pretty much restricted to a set number of nursing institutions, so it might limit how much we can generalize what we see to a broader group of nursing students in general.
- The group size might not fully capture or represent nursing students from other educational models, plus from different geographical regions too.
- The people taking part can come in with different background levels, like prior clinical time and experience in newborn care, which could end up shaping their perceived confidence and actual performance in the moment.
- Also the investigation mostly looks at what happens right after the simulation training, and it doesn't really check how well self-efficacy and clinical abilities stick over time, or what remains later.
- On top of that, the simulation labs themselves could be a bit different across institutions, in terms of facilities equipment, and learning resources, and that may change how consistent the intervention feels.
- Finally, if some places have more trained faculty for simulation based teaching, while others have fewer, that variation can impact the outcomes they end up reporting.

Review of Literature

Bandura (1997) defined self-efficacy as a key psychological factor, that kind of shapes how well someone performs, how driven they feel, and also what they realistically manage to learn. He basically argued that people with higher self-efficacy tend to feel more certain about their capabilities. They usually show more persistence, and they stick with it for longer when tasks become difficult, or when things feel

challenging in a more unexpected way. So in other words they are more likely to do better because they believe they can succeed, even if the situation is complex, or maybe just a little unfamiliar. This concept feels especially relevant in nursing education, because confidence and decision making are kind a like the everyday must haves for solid clinical performance

Aebersold and Tschannen (2013) reported that simulation based education boosts nursing students' confidence, and it also supports active participation in learning during clinical sessions. They further explained that simulation gives a safe and tightly controlled learning environment, where students can rehearse clinical skills over and over again without endangering patient safety. As a result, learners often experience less fear, and less anxiety too. They also feel more ready, for the real clinical world that comes afterward.

Cant and Cooper (2017), in their systematic review concluded that simulation based learning brings out meaningful improvements in nursing students' knowledge confidence, and clinical competence. They also stressed that simulation somehow helps bridge theoretical understanding and real clinical practice, which is kind of the whole point. In other words students can practice what they learned inside realistic scenarios, not just keep it as abstract theory.

Liaw et al. (2014) mentioned that simulation training improves clinical decision-making abilities, and it also seems to increase students' self assurance when they are dealing with patient care situations. In their work, participants appeared more prepared, and more able to manage clinical responsibilities after the simulation sessions finished.

Cook et al. (2013) reported that technology enhanced simulation shows a beneficial effect on knowledge acquisition, practical hands on skills, and professional conduct among healthcare learners. Their findings pretty much support simulation as a strong teaching approach, not only for a clearer cognitive grasp, but also for improved clinical performance overall.

Roh et al. (2013) noticed some major gains in nursing students' self confidence and clinical competence after simulation based training, kind of like a noticeable boost really. And, in a similar vein, Lee and Oh (2015) found that simulation backs self efficacy, psychomotor abilities, and learner satisfaction, so it turns into a useful tool for nursing education.

Mileder et al. (2014) pointed out that neonatal simulation programs help healthcare providers feel more prepared and confident, especially when newborn emergencies show up. In line with that, Murray et al. (2018) also reported that simulation based education improves neonatal nursing competence along with confidence, particularly during critical care situations

Alinier et al. (2006) showed that students who had simulation based training scored significantly higher on clinical assessments than those who only got traditional teaching methods. Taken together the literature keeps hinting at the same idea, like simulation-based learning is very effective for boosting self-efficacy confidence, and clinical competence in nursing students, especially where neonatal care is concerned

Research Methodology

- **Research Design**

This present study uses a quantitative, quasi experimental pre test and post test kind of layout, to figure out the effect of simulation training on self efficacy related to essential newborn care among nursing students. With this design, it becomes possible to contrast how confident and how clinically capable the participants are before and after the simulation based session, if that makes sense, basically.

- **Population and Sample**

The study population includes undergraduate nursing students who are currently enrolled in selected nursing institutions. In this work, a sample of 100 nursing students could be chosen through purposive sampling. The people included are those who are ready to take part, and who have already finished the theoretical part on newborn care, no skipping that part.

- **Data Collection Tools**

The instruments for gathering data may include the following, in a sort of bundle:

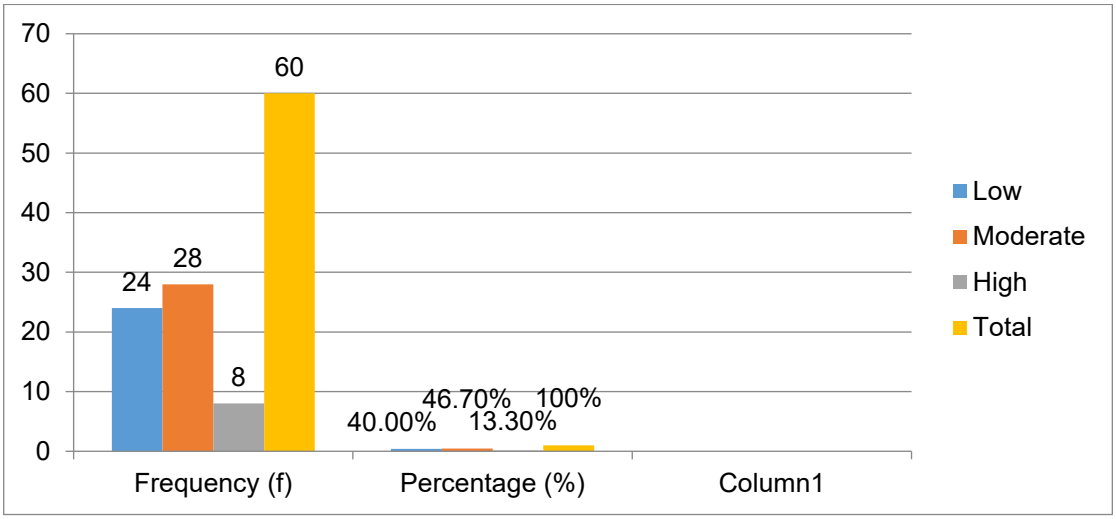
  - **Demographic Information Form:** Used to capture baseline details like age, gender, academic year and any earlier clinical exposure.
  - **Self Efficacy Rating Scale:** Used for measuring students confidence when doing essential newborn care procedures.

- **Essential Newborn Care Knowledge Questionnaire:** Used to check participants understanding about newborn care practices.
- **Clinical Competence Assessment Checklist:** Used to appraise practical skills and competence levels.
- **Simulation Performance Evaluation Tool:** Used to judge how students perform during the simulation sessions, and it helps track the results fairly.

Data Analysis

Table 1: Pre-test Self-Efficacy Level

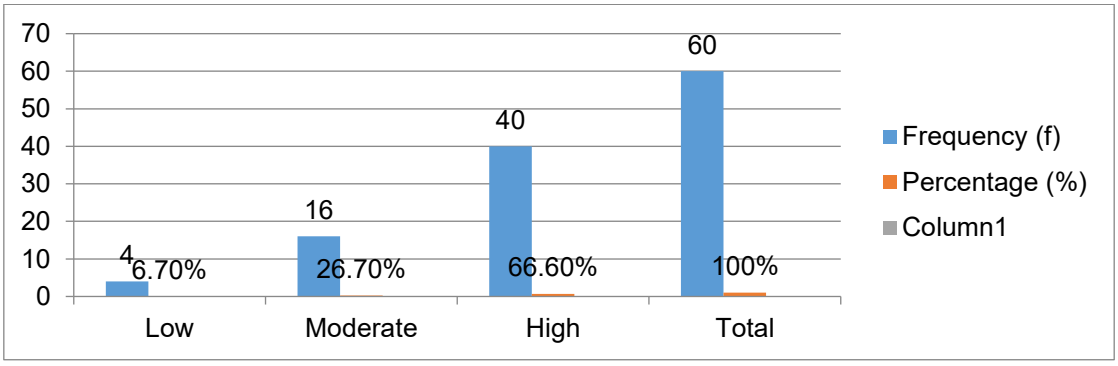
Self-Efficacy Level	Frequency (f)	Percentage (%)
Low	24	40.0%
Moderate	28	46.7%
High	8	13.3%
Total	60	100%



Before they did the simulation training, most nursing students, around 46.7% showed a moderate sense of self-efficacy. Another 40.0% had a low level, while just 13.3% reached the high self-efficacy level, specifically for essential newborn care

Table 2: Post test self-efficacy level

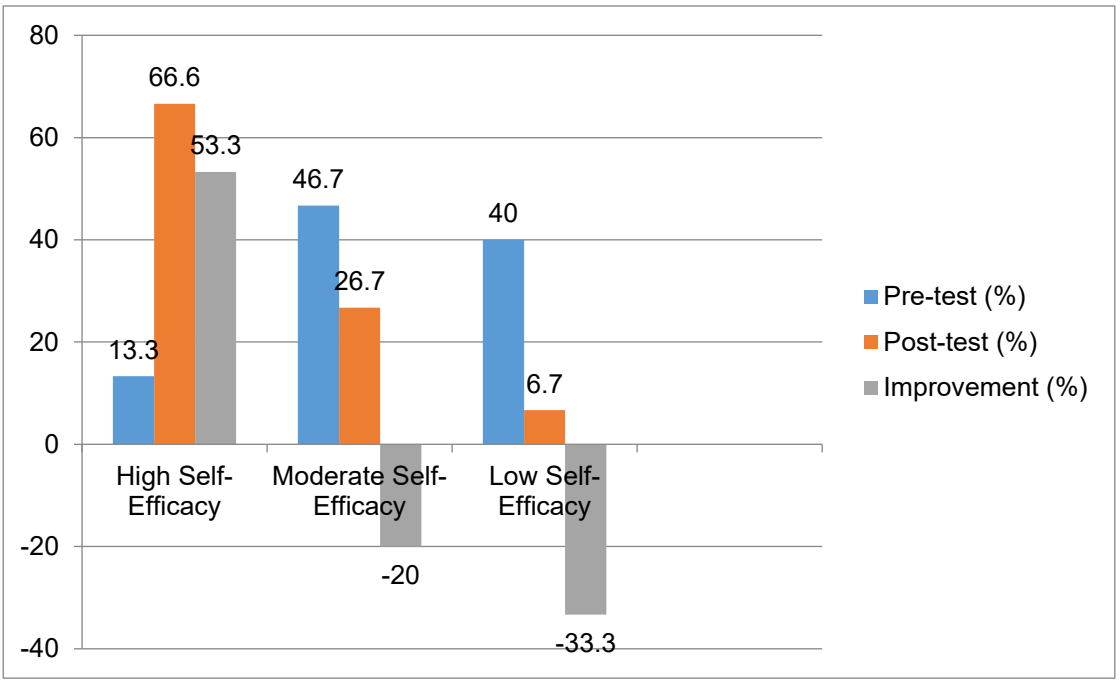
Self-Efficacy Level	Frequency (f)	Percentage (%)
Low	4	6.7%
Moderate	16	26.7%
High	40	66.6%
Total	60	100%



After simulation training, 66.6% of nursing students reached high self-efficacy, while 26.7% showed moderate self-efficacy, and just 6.7% ended up in the low self-efficacy group. This suggests a fairly big leap after the simulation experience.

Overall Percentage Improvement

Category	Pre-test (%)	Post-test (%)	Improvement (%)
High Self-Efficacy	13.3	66.6	+53.3
Moderate Self-Efficacy	46.7	26.7	-20.0
Low Self-Efficacy	40.0	6.7	-33.3



After the simulation training, the percentage of students showing high self-efficacy went up from 13.3% to 66.6%, and it really shows that simulation based education works at boosting nursing students confidence when it comes to essential newborn care. At the same time the group with low self-efficacy dropped from 40.0% to 6.7%, so the intervention effectiveness is confirmed even more.

Discussion

This current study was done to look at how simulation training affects self-efficacy in essential newborn care for nursing students. Overall, the results showed a pretty clear boost in students' self-efficacy after the simulation-based educational part. Before the training, many of the participants had low to moderate self-efficacy, meaning they were not that confident when it came to carrying out essential newborn care steps. After the simulation sessions, the share of students who scored high for self-efficacy went up a lot, while the percentage stuck at low self-efficacy dropped in a noticeable way.

Taken together, these outcomes hint that simulation training works as a good teaching approach for improving students' inner confidence and readiness when dealing with newborn care procedures. In general, simulation gives a lifelike yet risk-free learning space, where learners can rehearse clinical skills, deal with decisions, and get immediate feedback, all while not putting patient safety in jeopardy. The self-efficacy gains seen here might come from the active involvement, practical exposure and repeating the same procedures during the simulation sessions.

The findings kind a line up with earlier studies that described positive outcomes from simulation based learning for nursing students confidence, competence, and actual clinical performance. So, by adding simulation training into nursing education, it might help close that awkward gap between what students learn in theory and what they can actually apply in practice. In the end this could support higher quality newborn care and lead to better patient outcomes too.

Suggestions

From the study findings, a few recommendations are being proposed, kind of as a roadmap. It seems Simulation based training ought to be included as a usual part of nursing education programs, so students can build up their self-efficacy and get better clinical competence for the essential newborn care tasks. Nursing schools should make sure there are enough simulation laboratories, the right equipment is available, and faculty who are trained, not just present, to make the simulation learning run well in practice.

For later work, future studies could be done with larger sample sizes and involving multiple nursing institutions, this would help the results feel more widely applicable. Investigators might also add a control group and use experimental study designs, since that tends to make the results more solid and credible. Long term studies are also recommended, to check whether self-efficacy, knowledge, and clinical skills learned via simulation training actually last over time. More research could look into how simulation training affects other learning outcomes, like clinical skillfulness, sharper critical thought, decision making capacity, and patient safeguarding. Side by side comparisons, where simulation based education is pitted against traditional teaching, might also bring useful perspectives on how well different teaching approaches actually work. On top of that, it seems smart to run simulation sessions from time to time, plus refresher programs, so students keep their confidence up and feel ready for giving safe, effective core newborn care once they are in the clinical environment.

Conclusion

The study concluded that simulation training showed a positive and significant effect on the self-efficacy of nursing students, concerning essential newborn care. When we looked at the pre-test versus post-test findings, there was a noticeable jump in the number of students who ended up demonstrating high self-efficacy after taking part in simulation-based learning. On the other hand the share of students with low self-efficacy went down rather a lot, which suggests the intervention actually worked.

Simulation-based education gives nursing students a chance to build clinical assurance, and also practice decision-making skills in a controlled but still encouraging setting. By using lifelike clinical scenarios alongside hands-on skill demonstrations students could improve their grasp and their actual performance when it comes to essential newborn care procedures. Overall, the results point to the value of simulation training as a kind of fresh, yet proven educational method within nursing education.

The findings point to a big deal about slipping simulation experiences into undergraduate nursing curricula, so students feel more certain and ready for clinical practice. When their self- efficacy gets better, it may also help them perform more effectively in clinical environments, and support safer patient care once they are in real healthcare settings. All in all simulation training works as a useful instrument for grooming capable nursing professionals who can deliver high-quality essential newborn care, and handle newborn health needs in a responsive way.

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