

Challenges of Teaching Clinical Skills in Pediatrics Ward to Nursing Students: A review study

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Abstract

Background and Objective: Teaching clinical skills to nursing students in pediatrics faces numerous challenges due to the specific characteristics of patients, complexities of care, and communication sensitivities. The aim of this review study is to investigate and analyze the most important barriers and challenges in clinical education in pediatrics for undergraduate nursing students.

Methods: This study was conducted using a narrative review method and a structured search in the PubMed, Scopus, Web of Science, SID, Magiran, and Google Scholar databases. Articles published between 2017 and 2024 that examined the challenges of clinical education in pediatric nursing at the undergraduate level were selected and analyzed. A total of 35 articles were reviewed based on the inclusion and exclusion criteria.

Results: The results showed that the challenges of clinical education in pediatrics include students' anxiety and fear, difficulty in communicating with children and families, lack of experienced instructors, limited clinical learning opportunities, weaknesses in curriculum design, emotional pressures, and lack of educational infrastructure. These barriers are effective at individual (lack of self-confidence and anxiety, poor communication skills, lack of motivation and sufficient commitment), environmental (lack of practical opportunities, inappropriate clinical environment, hectic schedule, and high work pressure), organizational (lack of specialized and experienced instructors, lack of proper planning of clinical training), and cultural (cultural attitudes towards children and their care, cultural differences between the student and the child's family) levels.

Conclusion: Improving the quality of clinical education in pediatrics requires reviewing educational programs, improving the capabilities of educators, using modern teaching-learning methods, and creating safe and collaborative clinical environments. The findings of this study can be a guide for educational planners and policymakers in the field of nursing education.

Key Words: Clinical Competence, Educational Measurement, Nursing Student, Pediatrics Nursing.

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1- INTRODUCTION

Clinical training is a critical component of nursing education, essential for the development of professional skills, enhancement of abilities, and the promotion of critical thinking in students (1). The effectiveness of clinical training is crucial for preparing students to provide competent patient care, which in turn influences the future standards of healthcare services (2). Pediatric clinical education is particularly complex and sensitive due to the unique psychological, physical, and social needs of children, setting it apart from other nursing disciplines (3).

Effective pediatric care demands a thorough understanding of child development, meticulous technical competencies, and proficient communication skills with children and their families (4). Nursing students encounter numerous obstacles in pediatric wards. These include anxiety and stress over the potential of causing harm, feelings of helplessness in sensitive situations, challenges in communicating with young patients and their relatives, a lack of experienced clinical instructors, inadequate training environments, and insufficient structured educational opportunities (5). Such challenges can hinder the educational process, diminish students' confidence, and eventually degrade the quality of care they are able to provide (6).

Despite its significance, there is a noticeable lack of comprehensive and systematic exploration of these educational challenges within the pediatric field, particularly within general nursing education. A thorough understanding of these obstacles could lead to significant improvements in educational strategies, structural support for students, the adoption of modern teaching techniques, and overall clinical training efficacy (7). Thus, this study aims to conduct an

exhaustive review and analysis of the challenges associated with teaching clinical skills in pediatrics to undergraduate nursing students. This will serve as a foundation for reevaluating educational policies and creating evidence-based interventions to enhance clinical education in nursing.

2- METHODS

The present study is a narrative review that aims to identify and analyze the challenges of teaching clinical skills in pediatrics to undergraduate nursing students. The review was designed and implemented based on Arksey and O'Malley's five-step framework for review studies, which includes defining the research question, identifying relevant studies, selecting studies based on inclusion and exclusion criteria, extracting and analyzing data, and summarizing and reporting the results.

1- Research Question: The main question of this study was: What are the most important challenges and obstacles to teaching clinical skills in pediatrics to undergraduate nursing students?

2- Search for Resources: A systematic search for scientific resources was conducted in international and Persian databases including PubMed, Scopus, ScienceDirect, Google Scholar, SID, and Magiran. To increase the comprehensiveness of the search, articles published from January 2019 to December 2024 were reviewed. The keywords used in the search were:

“Nursing Clinical Education,” “Pediatrics ward,” “Nursing Students,” “Education Challenges.”

Logical operators AND and OR were used to combine keywords. Manual searches were also used in the reference lists of the original articles to identify gray articles and unofficial sources.

3. Inclusion and Exclusion Criteria

Inclusion Criteria: Articles published in peer-reviewed journals, qualitative, quantitative, or review studies related to clinical education in pediatrics focus on undergraduate nursing students Persian or English language, published between 2017 and 2024 **Exclusion Criteria:** Studies that only addressed education in graduate schools or other medical disciplines, articles without access to full text, short reports, letters to the editor, or non-standard reviews

4. Study Selection: After eliminating duplicates, titles and abstracts were independently reviewed by two researchers. In cases of disagreement, a third reviewer was used. Finally, from the initial 85 articles, 27 articles that were most consistent with the study objectives were selected for the final analysis.

5. Data Extraction and Analysis: Data were extracted from articles using an information extraction form, including general information, study objective, participants, data collection method, and the most important findings. Data analysis was performed as a qualitative content analysis, and challenges were categorized into main themes and subthemes.

6. Study Validation: To increase the validity and reliability of the review, the following methods were used: Independent review of articles by two people, transparency of the article selection process, use of standard data extraction tools, full reporting of the search and analysis stages

3- RESULTS

Summary of articles on the Challenges of Teaching Clinical Skills in Pediatrics Ward to Nursing Students (Table 1).

Pediatric clinical training encounters numerous complex challenges that impact both the educational experience of students

and the standard of care provided to children. These challenges can be grouped into several key areas:

3-1. Student Anxiety and Fear

A prevalent issue among nursing students in pediatrics is heightened anxiety, particularly during initial interactions with pediatric patients. The fear of causing harm, coupled with difficulties in executing delicate clinical tasks such as administering injections or monitoring vital signs in young patients, often results in decreased confidence and a sense of incompetence. This anxiety may become so overwhelming that it hinders active participation in both learning and caregiving (16).

3-2. Communication Barriers with Children and Families

Effective communication with children presents a significant hurdle for students due to age differences, varying levels of comprehension, and language barriers. The challenge intensifies with family involvement, where expectations about student conduct can vary. Occasionally, parents may resist the involvement of students in the care process due to concerns over potential errors, thereby diminishing real learning opportunities (17).

3-3. Shortage of Experienced Pediatric Educators

There is an evident scarcity of faculty members or clinical educators with expertise in pediatric nursing education. Often, students are mentored by educators who either lack adequate pediatric experience or do not possess robust clinical teaching skills, leading to an incomplete or superficial learning process (18).

Table-1: Summary of articles.

Row	Year	First Author	Study Type	Sample size	Type of challenge	Conclusion
1	2017	Gamble (8)	Mixed methods	28	Psychomotor skills	Demonstrated positive effects on critical nursing concepts and psychomotor skills for nursing students in the pediatrics ward
2	2020	Liang (9)	Phenomenological	20	Pediatric Clinical Practice	Ensuring children successfully complete challenging yet achievable learning courses, including innovative communication, technical skills, and role transitions
3	2021	Berhe (10)	Qualitative	9	clinical learning environment	Proper preparation of students, good selection of ideal clinical environment whose goal was to cultivate professional nurses
4	2022	Salifu (3)	Qualitative	55	Clinical competence	Reviewing the nursing curriculum, instilling evidence-based simulation methods, and investing adequately to ensure effective nursing education
5	2019	Woo Oh (11)	Research article	50	Clinical problem-solving skills	Training and learning to improve relevant nursing skills, such as problem-solving skills, self-directed learning capabilities, and communication self-efficacy
6	2020	Christiansen (4)	Qualitative	19	Clinical performance assessment	A worrying finding was that differing views on students' competence sometimes occurred in these situations, thus challenging the validity of clinical assessment.
7	2021	Bøe (12)	Qualitative	8	Clinical placements	Provide full written feedback to nursing students and provide sufficient time for student supervision when organizing clinical placements as high-density units.
8	2019	Atakro (13)	Qualitative	35	Clinical skills	Nursing students require varying levels of support, supervisory commitments, and logistical arrangements to learn skills such as physical examination and the nursing process during their internship.
9	2024	Rafie (14)	Quasi-experimental	43	Ask-based learning	Despite the significant effectiveness of both methods in improving student learning, ask-based learning was more effective.
10	2020	Ding (15)	Quasi-experimental	250	Empathy clinical education	Knowledge, Simulation, and Sharing can enhance empathy, communication skills, and professional identity in pediatric nursing students.

3-4. Limited Clinical Learning Opportunities

Constraints such as high patient volumes, insufficient space, and legal issues regarding student involvement in clinical settings are common in children's hospitals and medical centers. These factors restrict direct patient interaction, and an overreliance on observational learning diminishes the educational effectiveness (19).

3-5. Inadequacies in Curriculum Design and Clinical Evaluation

Many nursing programs lack a well-defined and targeted curriculum for pediatric training. Issues such as unclear evaluation methods, inadequate integration of theoretical knowledge with clinical practice, and non-specific educational strategies compromise the quality of education (20).

3-6. Emotional Stress from Exposure to Childhood Illness and Death

Encountering childhood illness and death can be profoundly distressing for students, often resulting in feelings of inadequacy and despair, or even leading to withdrawal from the clinical setting. This emotional burden adversely affects both learning outcomes and the student's active engagement in clinical activities (21).

3-7. Absence of Modern Educational Technologies

The underutilization of contemporary educational tools such as clinical simulations, virtual reality, or scenario-based learning in many institutions hampers the development of practical skills in a safe, controlled setting, particularly in pediatric care education (22).

3-8. Cultural and Ethical Considerations

In certain cultures, student involvement in child care may be viewed

as inappropriate, or there may be ethical and religious reservations about students' clinical training. These cultural obstacles restrict students' access to meaningful clinical experiences. Addressing these challenges requires a multifaceted approach aimed at enhancing both the educational framework and the practical experiences offered to nursing students in pediatric settings (23).

4- DISCUSSION

Educating nursing students in pediatric clinical skills is a complex and vital component of nursing education. This training involves not just imparting knowledge and technical abilities but also cultivating competencies in communication, psychology, and ethics, particularly important when dealing with children, a sensitive and vulnerable demographic (25). Various challenges at both individual and institutional levels affect the efficacy of clinical training in pediatrics. A primary challenge is the limited opportunities for hands-on learning, stemming from ethical and legal issues associated with treating pediatric patients (26). Often, parents are reluctant to let their children be treated by students, particularly if the child is seriously ill. This limits the availability of clinical cases for students to observe, practice on, and thereby improve their practical skills (27). Moreover, the inherent complexities of treating children, such as their varied physiological responses to illness and treatment, and their unique ways of manifesting symptoms, further complicate the learning process for students (28).

Psychologically, nursing students may face significant anxiety about causing harm to young patients or may struggle with effective communication with both the children and their families in a clinical setting. These issues can erode students' confidence and subsequently degrade the quality of their clinical education (29).

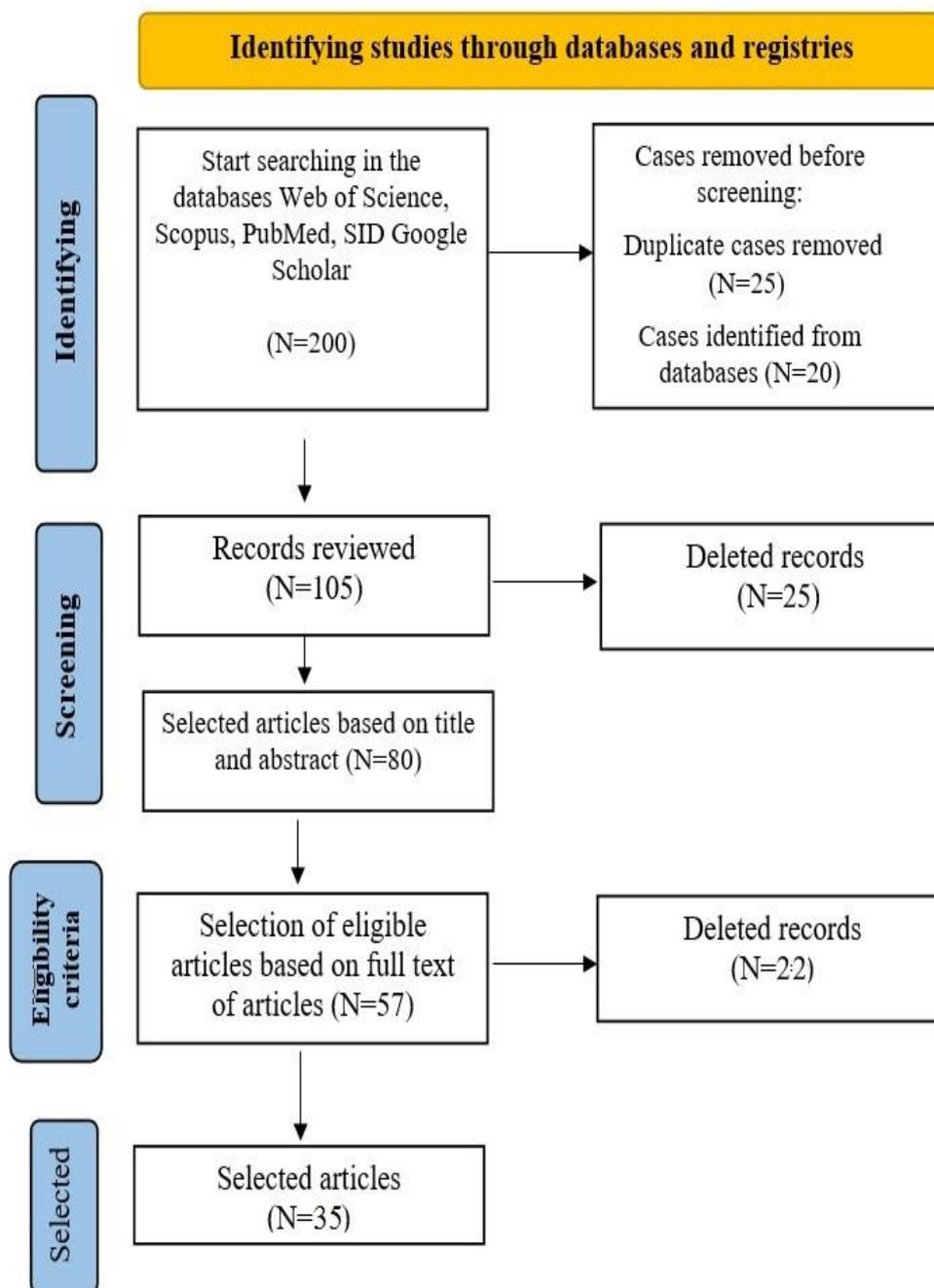


Figure-1. Flowchart of article search (24).

Research by HY Koong Kuo and Lee (2022) highlights that many nursing students feel inadequate and unprepared when it comes to handling pediatric cases, which adversely affects their clinical training experience. From an educational structure perspective, a notable shortfall is the lack of specialized clinical instructors

in pediatric nursing (30). The availability of qualified instructors with robust teaching capabilities is essential for enhancing student learning and performance. In many educational institutions, there is either a shortage of instructors with deep expertise in pediatric nursing or instructors are too overburdened

with high workloads to provide adequate direct teaching (31). Furthermore, there often exists a disconnect between the curriculum goals and the actual practical learning opportunities available in clinical settings, leading to a significant disparity between theoretical knowledge and practical application (32).

The research conducted by Akselbo et al. (2020) found that undergraduate nursing students view simulation as a realistic and effective tool for learning essential pediatric healthcare skills for both children and their parents. These simulations encouraged students to recognize the critical responsibilities of nurses during emergencies. Furthermore, incorporating simulations into pediatric training can improve students' ability to respond promptly and effectively in urgent nursing situations involving children. On the other hand, the limited use of advanced educational techniques like clinical simulations, scenario creation, and team-based learning poses challenges to achieving effective educational outcomes (33). TJ Tseng et al demonstrated that a multifaceted teaching approach outperformed traditional educational methods in increasing students' self-confidence and enhancing their reflective and critical thinking skills. The study strongly supported the effectiveness of the 5E learning model (Explain, Explore, Engage, Elaborate, Evaluate), which is based on the self-efficacy framework for educators. A learner-centered environment combined with a diverse teaching strategy significantly improved student learning outcomes. Nursing educators are encouraged to incorporate such dynamic teaching strategies across various nursing programs to boost motivation, learning attitudes, and critical thinking abilities among students. Structured simulations have been shown to reduce student anxiety and better prepare them for real-world pediatric clinical settings (34). However,

many educational institutions lack the necessary equipment, resources, and policy support to implement these innovative teaching methods effectively. Additionally, the cultural and professional environment within pediatric wards can impact the quality of education. Negative attitudes from some clinical staff toward student presence, a poor teaching-learning culture among treatment teams, and inadequate organizational support are identified as major obstacles to high-quality clinical education (35).

5- CONCLUSION

The conclusions of this analysis indicate that imparting clinical skills in pediatrics to undergraduate nursing students is hindered by complex challenges stemming from individual, educational, environmental, and cultural dimensions. Key obstacles include student anxiety and fear, ineffective communication with children and their families, a shortage of skilled instructors, restricted chances for practical engagement, deficiencies in curriculum structure, emotional stress due to the conditions of ill children, and an inadequate support infrastructure. These barriers can interfere with the educational process and adversely affect the standard of pediatric nursing training. To overcome these issues, a thorough and layered strategy is necessary. At the educational level, it is crucial to reassess the curriculum and incorporate innovative teaching methods such as clinical simulations, structured clinical scenarios, and experiential learning. Moreover, the development of instructors who are proficient in pediatric nursing and skilled in practical teaching is vital for enhancing the quality of clinical education. On the clinical front, fostering a supportive and cooperative atmosphere among students, medical personnel, and families, along with ensuring suitable psychological and physical settings for learning, is essential

for cultivating a productive and meaningful educational experience for students. Ultimately, the effectiveness of clinical education in pediatrics hinges on the educational system's ability to meet the specific demands of this specialty and its profound comprehension of associated sensitivities. Future research aimed at designing and assessing effective educational interventions could significantly advance the teaching and learning processes in this area.

5-1. Limitations of the Study

This review focused on studies in Persian and English, so some influential and high-quality studies may have been overlooked.

6- CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

7- FUNDING

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