

Navigating Clinical Shock: Facilitating Nursing Students' Smooth Transition to the Workplace

Mei-Shu Huang¹, Yun-Chun Lin¹, Wan-Ling Yang¹, Ying-Ya Chien¹, Mei-Ling Lin¹, Shin-Jean Lin¹, Yu-Chen Ku¹, Meng-Chin Peng¹, I-Chun Chen¹, Hsiao-Hui Chiu^{1,2}, Li-Hwa Lin^{1,3} & Feng-Yuan Yang⁴

¹ Department of Nursing, Taipei Veterans General Hospital, Taiwan

² School of Nursing, National Defense Medical Center, Taipei, Taiwan

³ Institute of Community Health Care, College of Nursing, National Yang Ming Chiao Tung University, Taipei, Taiwan

⁴ Medical Technologist, Taipei Veterans General Hospital, Taiwan

Correspondence: Hsiao-Hui Chiu, No.201, Sec. 2, Shipai Rd., Beitou District, Taipei City, Taiwan 11217, Taiwan, R.O.C. E-mail: shchiu2@vghtpe.gov.tw; Li-Hwa Lin, No.201, Sec. 2, Shipai Rd., Beitou District, Taipei City, Taiwan 11217, Taiwan, R.O.C. E-mail: lhlin@vghtpe.gov.tw

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Abstract

Background: The COVID-19 pandemic disrupted clinical training for nursing students, leading to "reality shock" as they entered the workforce without sufficient hands-on experience.

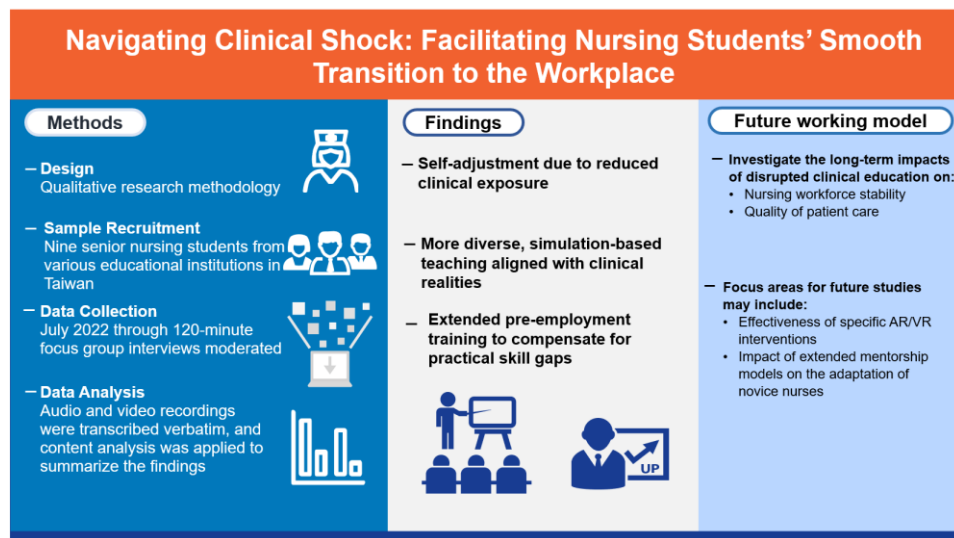
Design: This qualitative study employed a 120-minute focus group interview conducted in July 2022.

Results: Nine senior nursing students from various educational institutions in Taiwan participated in the focus group interview. Most were female (88.9%) with an average age of 22. Thematic analysis revealed three major needs: (1) self-adjustment due to reduced clinical exposure, (2) more diverse, simulation-based teaching aligned with clinical realities, and (3) extended pre-employment training to compensate for practical skill gaps.

Conclusion: The suspension of clinical placements during the pandemic left nursing students underprepared for professional practice. To support a smoother transition, nursing schools should adopt innovative, technology-enhanced teaching strategies, while hospitals must strengthen onboarding programs and mentorship. Addressing these gaps is essential to improving the readiness and retention of new nurses in the post-pandemic era. This study contributes insights into how educational and institutional support can be restructured to better equip students for professional nursing roles in crisis settings.

Keywords: COVID-19, nursing students, transition, simulation, clinical education, pre-employment training

Graphical abstract



1. Introduction

Since the outbreak of COVID-19 in late 2019, the global pandemic escalated in early 2020. In response, the Ministry of Education in Taiwan suspended all hospital-based clinical training for nursing students from May to July 2020. To mitigate this disruption, educational institutions adopted alternative methods, including digital learning, technical skill practice, and scenario-based simulations (Kodama & Fukahori, 2017). However, these strategies could not fully replicate real patient care experiences. As a result, students struggled to adapt to the new learning formats and encountered "reality shock" upon entering clinical settings. Addressing this gap has become a critical issue.

Newly graduated nurses often experience a disconnect between their expectations and the realities of clinical practice—a phenomenon referred to as "reality shock" (Kodama & Fukahori, 2017). With limited hands-on experience, these new nurses must quickly adapt to the demands of the work environment while acquiring practical skills and knowledge on the job. This abrupt transition can lead to self-doubt and may result in early resignation (Labrague et al., 2020).

A 2017 hospital survey reported first three-month turnover rates among new nurses ranging from 30.2% to 66.7%, with maladjustment accounting for up to 24% of resignations (Chang, Hsieh & Huang, 2019; Chiu et al., 2017). Chang and Lin (2021) found that workload was the most cited reason for resignation (16.3%), closely linked to perceived competency ($p = 0.45$). There were studies found that the sources of stress for students include: inability to answer questions, lack of professional judgment, fear of being distrusted, challenges in role adjustment, and the gap between expectations and actual performance (Al-Dossary, et al., 2023; Gómez-García & Torres-Cruz 2023; Pérez-Fuentes & Gázquez, 2024; Samaras, Demertzis, & Kontogiannis, 2025). These findings suggest that novice nurses are at a high risk of burnout and attrition due to insufficient knowledge, unfamiliarity with clinical workflows, and low resilience. To support their transition, both academic and clinical settings must provide targeted assistance. Hospitals can play a key role by establishing standardized clinical guidelines, enhancing mentorship, and strengthening skill development programs to reduce early attrition and improve new nurses' clinical competence (Chang & Lin, 2021; Takase et al., 2017).

2. Theoretical Framework

Transition theory explains the process of transit, development, and growth of an individual during life, which meets the process of nursing students who enter clinical work. This includes the following phases and features:

Beginning Phase: Faces a new environment, role, and challenges, needs to adjust to meet the clinical practice requirements.

Developing Phase: Needs to face the pressure and uncertainty, but adjust to the process of clinical practice gradually.

Stabilizing Phase: Needs to keep learning and updating knowledge to respond to ever-changing clinical settings.

Concluding Phase: Needs to deal with the possible choice of role change and career development.

The importance of applying transition theory to the clinical work of nursing students:

- (1) Provide guidance: Transition theory can serve as a framework to guide students to enter clinical settings, helping them understand their feelings and reactions during the process.
- (2) Anticipating challenges: Being able to predict the challenges students may face at different stages, and can better provide corresponding support and resources to assist them to transit smoothly.
- (3) Strengthen self-awareness: Students can better understand their place in clinical practice through transition theory, which helps them build self-confidence and professional identity.
- (4) Foster growth: Transition theory helps students see the process as an opportunity for development and growth rather than just a series of challenges.

3. Methods and Participants

To explore nursing students' transitional needs from school to clinical practice, this study employed qualitative research using focus group interviews. Ethical approval was granted by the Institutional Review Board (IRB No: 202205012ACF).

3.1 Sample Recruitment

Purposive sampling was used to recruit nine final-year nursing students from different educational institutions across Taiwan, each of whom had completed their practicum at a teaching hospital. One student was selected from each school. All participants provided informed consent and joined a 120-minute focus group interview.

3.2 Data Collection

The interviews were conducted in July 2022. A qualified associate professor with a psychiatric nursing background and extensive interviewing experience served as the moderator. A pre-interview consensus meeting was held with the research team to align objectives and procedures. The interviews were held in a quiet, private conference room arranged in a face-to-face format to encourage open discussion and interaction.

Interview questions included:

How was your learning experience affected by the COVID-19 pandemic?

What specific learning experiences (e.g., technical or communication skills) do you feel you missed?

How did your study methods change during the pandemic?

What improvements would you suggest for future pandemic-related educational adjustments?

What support do you think hospitals can offer to enhance your learning?

From your perspective, what were your needs and coping strategies during the pandemic?

Do you have any additional thoughts or suggestions?

3.3 Data Analysis

All interviews were audio- and video-recorded. Verbatim transcription was performed by the research team. Two researchers independently reviewed the transcripts, coded key statements, and organized the data into thematic categories based on interview topics. A content analysis approach was applied to identify recurring themes and summarize core concepts that emerged from the discussions.

4. Results

A total of nine nursing students from different institutions in Taiwan participated in a 120-minute in-depth focus group interview. Eight were female (88.9%), with an age range of 21–24 years (mean = 22). Five students were from private universities (55.5%) and four from public institutions (44.5%). Most (88.9%) were enrolled in a four-year degree program, and the majority (66.7%) attended general universities.

Due to the COVID-19 pandemic, students' physical clinical training ranged from four days to eight weeks, with affected departments including internal medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, operating rooms, Intensive Care Unit, and comprehensive internships. Two main reasons led to the suspension of clinical practice: (1) government-mandated suspension of nursing student practicums, and (2) positive COVID-19 diagnoses among students or their peers.

Initially, schools responded by shifting practice schedules—either postponing or changing departments—before fully transitioning to online formats. These included case studies, video demonstrations, literature reviews,

problem-based learning, and debates. Despite these efforts, students reported feeling inadequately prepared, citing limited technical exposure, lack of presence, minimal interaction, insufficient case diversity, career uncertainty, and overall confusion. However, students also recognized benefits from these changes, such as:

- Increased opportunities for discussion
- Flexibility in time and learning methods
- Peer mentoring and extended dialogue with senior students
- Improved information-searching abilities
- Enhanced communication and coordination skills
- Exposure to new educational technologies (e.g., Augmented Reality (AR) / Virtual Reality(VR))
- Mental adaptability and openness to diverse teaching models

4.1 Need for Self-Adjustment Due to Limited Clinical Practice

Some students felt the lack of experience had less impact in certain specialties (e.g., pediatrics, obstetrician-gynecologist), while others compensated by sharing experiences with peers and maintaining a positive mindset. They emphasized self-motivation, ongoing technical practice, encouragement from patients' families, and communication with clinical seniors to align expectations. Student reflections include:

"I lacked practice in the baby room, but it's a minor rotation, so I can let it go." (S9)

"By discussing with classmates, I learned from their experiences." (S8)

"I reminded myself to work harder and adjust my mindset." (S4)

"When family members thank me sincerely, it boosts my confidence." (S7)

"To reach consensus with my senior, I first need to master the skills." (S3)

4.2 Need for More Diverse and Practice-Oriented Teaching Models

Students expressed the desire for educational strategies that simulate real clinical conditions. They suggested scenario-based training, Objective Structured Clinical Examination, and expanding practice sites to include community settings. Examples from students:

"Scenario-based teaching should simulate time pressure and clinical priorities." (S8)

"Our teacher arranged community-based screening tasks, which helped us learn planning and teamwork." (S4)

4.3 Need for Extended Pre-Employment Training From Hospitals

Students recommended extending pre-employment training to bridge the clinical gap. Suggestions included learning ward routines, receiving technical and infection control training, hearing from experienced nurses, and informing staff about the students' limited hands-on background to foster tolerance and support. Key student comments:

"Hospitals should extend training so we feel more prepared." (S4)

"Let us know in advance which department we'll join and how to prepare." (S1)

"We need more technical training, like on Port-A—50 minutes isn't enough." (S5)

"I hope senior nurses will be patient and guide us step by step." (S6)

"If we're on the front line, we must have proper protective training." (S8)

"Hospitals should let clinical seniors know we're entering with limited experience." (S9)

Table 1 summarizes the major themes derived from the focus group interviews, along with representative quotes from nursing students. These themes reflect their emotional responses, learning challenges, and expectations during the transition to clinical practice during the COVID-19 pandemic.

Table 1. Key themes and illustrative student quotes from focus group discussions

Theme	Representative Quote
Self-adjustment and Motivation	<i>"I remind myself to study harder and adjust my mindset."</i> (S4)
Online Learning – Limits and Gains	<i>"I lacked a sense of presence in online internships."</i> (S6) <i>"Group discussions improved my communication skills."</i> (S5)
Anxiety Due to Lack of Practice	<i>"I worry I can't perform the necessary techniques."</i> (S1)
Suggestions for Schools	<i>"Scenario-based training helps us reflect on priorities."</i> (S8)
Expectations from Hospitals	<i>"Hospitals should extend pre-employment training and be more tolerant."</i> (S4, S6, S9)

5. Discussion

5.1 Impact and Response to Clinical Transition Among Nursing Students in the Post-COVID-19 Era

Some studies had found that students' stressors are due to lack of professional judgment and fear of not being trusted (Pérez-Fuentes & Gázquez, 2024; Samaras & Demerzannis, 2025). Consistent with these findings, this study also showed that students struggled with the lack of real clinical experience during the pandemic. Consistent with those findings, this study revealed that students struggled with the lack of authentic clinical experience during the pandemic. As participants shared, the absence of in-person internships led to a diminished sense of clinical presence: *"No internship, lack of sense of presence"* (S6); *"We evaluated based on our teacher or peers, but the pain and hardship experienced by real patients is different"* (S3); and *"We can't simulate emergencies or prioritize tasks realistically through online learning"* (S9). Technical unfamiliarity was also emphasized. For example: *"There's no way to practice techniques in online internships"* (S1), and *"Without real clinical practice, we couldn't master the techniques"* (S4).

Yeh (2021) advocated for the use of virtual technologies, such as virtual patients and immersive environments, to compensate for the lack of physical internships. Many institutions responded by introducing online courses, multimedia content, case-based discussions, technical drills, and scenario-based simulations. This study found similar adaptations, including the integration of AR and VR tools to enhance clinical realism.

Students generally acknowledged the effectiveness of these methods. One student noted: *"I selected a critical illness module that used simulated patients with complex conditions. It helped me apply theory and think critically"* (S8). Others highlighted immersive technologies: *"We practiced with VR tools in school"* (S1); *"We've started using AR/VR simulations—wearing goggles and performing tasks as if in the ward"* (S3); and *"Technology like AR/VR can assess whether we've completed the required training"* (S3).

Despite recognizing the limitations in their clinical experience, students expressed a positive and proactive mindset. As one shared: *"Just keep practicing—come early, leave late, and you'll get better"* (S7). Others emphasized resilience: *"Don't fear the future. When it comes, just do your best"* (S4); *"At first, it's just work—face the challenge head-on"* (S7); and *"I know I'm less skilled, so I study harder and try to make progress"* (S4).

Liu et al. (2020) also found that positive clinical experiences promote stronger professional identity and emotional well-being among nursing students. This was echoed in our findings. Gratitude from patients and meaningful clinical interactions contributed to students' motivation and sense of professional fulfillment. As one participant shared: *"When family members express sincere gratitude, it feels worthwhile and boosts my confidence"* (S7), while another added: *"I truly value this internship—I enjoy interacting with people"* (S6).

5.2 Suggestions for Schools on Supporting Clinical Transition Post-COVID-19

In response to the disruptions caused by COVID-19, nursing schools must reframe their teaching approaches to better prepare students for clinical practice. Liu et al. (2020) suggested incorporating digital learning tools, case analysis, and simulation exercises to compensate for lost clinical experience. Ou and Ni (2021) applied Bandura's self-efficacy theory to enhance students' knowledge, critical thinking, and communication through blended strategies including team-based learning, role modeling, and structured evaluations.

Morin (2020) emphasized the need for simulation, telemedicine exposure, and online competency-based curricula to foster engagement and improve readiness. However, studies by Hernández-Martínez et al. (2021) and this research found that students lacked adequate training in infection control, such as donning PPE or managing respiratory care, contributing to anxiety when entering clinical settings. Students expressed the need for stronger protective training and clearer preparation before internships.

Haddeland et al. (2021) highlighted the importance of safe simulation environments, while Ulenaers et al. (2021) noted that emotional support from educators significantly reduces students' stress. The nursing faculty also emphasized maintaining long-term communication with graduates, offering follow-up support, and understanding students' clinical challenges.

Moving forward, nursing education must go beyond technical skills to instill the core values of the profession. Teachers play a vital role in inspiring students to find meaning and identity in nursing. As echoed in the International Council of Nurses (ICN) slogan "Our Nurses. Our Future," nurturing the professional and humanistic values of nursing is essential for sustaining the workforce in the post-pandemic era.

5.3 Recommendations for Hospitals Supporting Nursing Students' Clinical Transition Post-COVID-19

Hospitals play a critical role in easing nursing students' transition to clinical practice following the pandemic. Hayter and Jackson (2020) emphasized the importance of ensuring adequate protective equipment and assessing clinical safety. This study supports that finding, as students expressed concerns about insufficient infection control resources.

Koldestam et al. (2024) found that most students (over 80%) believed that "a positive, open, and demand-oriented supervision approach" was extremely important, and pointed out that students need to learn effectively through questioning and interaction. Similarly, participants in this study hoped for better communication and guidance from senior nurses. They valued mutual understanding, step-by-step instruction, and encouragement, especially when facing skill gaps.

Effective transition also depends on institutional support. However, as Yeh (2021) noted, while many clinical nurses acknowledge the importance of mentoring, limited time and staffing often hinder their ability to teach effectively.

Hojo (2021) found in a nationwide survey in Japan that the higher the teacher-student ratio, the longer the teachers' working hours and the greater the work stress. Our research also found that it is necessary to increase the number of teachers and establish a structured mentoring program. In line with Swift et al. (2020), students in this study also recommended extending orientation or internship periods to help them adjust more confidently and reduce early-career turnover.

6. Conclusion

The suspension of clinical internships during the COVID-19 pandemic compelled nursing schools to adopt alternative teaching methods, including online simulations, virtual discussions, and written assignments. Although these strategies offered partial substitutes for clinical learning, students reported significant gaps in hands-on experience, communication skills, and technical proficiency. This study underscores the critical need for enhanced support during the transition from academia to clinical practice. Healthcare institutions must recognize the limitations in students' clinical exposure and implement extended orientation and structured pre-employment training programs. Concurrently, nursing educators should revise pedagogical approaches by incorporating immersive technologies and promoting self-directed learning.

Looking ahead, stronger collaboration between academic and clinical institutions is essential to bridge the educational gap left by the pandemic. Emphasis should be placed on competency-based training, mentorship, and the cultivation of emotional resilience to facilitate a smoother transition and improve the retention of novice nurses. Future research should investigate the long-term impacts of disrupted clinical education on nursing workforce stability and patient care outcomes. Future studies could explore the effectiveness of specific AR/VR interventions or extended mentorship models in improving novice nurses' transition outcomes.

7. Limitations of the Study

The case study is the experience and data of intern students in a teaching hospital. The sample size is small, and the generality of the results may be affected. The study only covered a specific period of time after the COVID-19 outbreak and was unable to provide long-term observations.

8. Recommendation

Based on the findings, the following recommendations are proposed:

(1) For nursing education institutions

- a. Incorporate immersive technologies such as AR/VR and scenario-based simulations to compensate for limited clinical exposure.
- b. Broaden clinical learning environments to include community-based and public health settings.
- c. Strengthen students' critical thinking, communication, and teamwork skills through case-based learning and group discussions.
- d. Provide post-graduation follow-up and psychological support to ease the transition into clinical practice.
- e. Develop competency-based curricula that integrate digital tools and emphasize adaptability in real-world scenarios.

(2) For healthcare institutions

- a. Extend pre-employment training programs to bridge clinical skill gaps and improve confidence.
- b. Offer comprehensive infection control and protective equipment training.
- c. Assign experienced mentors to guide novice nurses with patience and structured support.
- d. Provide department-specific information in advance to help new staff prepare.
- e. Promote understanding and tolerance among senior staff toward inexperienced newcomers.

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