Application Research of Situational Teaching Method in Nursing Education in Higher Education Institutions

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Abstract: Currently, the primary developmental direction of modern medicine is the biopsychosocial medical model, whereas the traditional biomedical model primarily analyzes physiological responses and biochemical parameters to treat diseases. In addition to this, biopsychosocial medicine places greater emphasis on considering the patient's perspective, focusing on their psychological state after illness onset, and selecting the most suitable and easily acceptable treatment regimen. Against this backdrop, the demands on clinical nursing have become more stringent. Correspondingly, nursing education in higher institutions must actively undergo reforms to cultivate more nursing professionals capable of adapting to the biopsychosocial medical model. In current nursing education at universities, the persistent disconnect between theory and practice, coupled with the prolonged clinical adaptation period for nursing students, has hindered the enhancement of their nursing competencies. This paper proposes the application of scenario-based teaching methodology to create highly realistic clinical work scenarios, transforming the classroom into a practice ground for students and overcoming current teaching challenges. This article analyzes the limitations of traditional nursing education in terms of skill internalization and humanistic integration, systematically outlines the design principles of situational teaching in nursing classrooms, and proposes a comprehensive application strategy spanning pre-class scenario construction, in-class interactive simulation, and post-class reflective review. The aim is to effectively enhance nursing students' clinical critical thinking, emergency response capabilities, and humanistic care competencies.

***Keywords*:** nursing in higher education institutions, situational teaching method, clinical thinking, humanistic concern, immersive experience

1. Introduction

Under the biopsychosocial medical model, clinical nursing practice has undergone significant transformations. Clinical nurses now require a broader range of competencies, including precise and error-free nursing skills, acute disease observation and critical thinking abilities, as well as emergency response capabilities for sudden critical conditions.[1] Universities serve as primary institutions for talent cultivation and social development, necessitating enhanced quality in nursing education. Scenario-based teaching methodology involves educators purposefully introducing or creating emotionally charged, vivid, and concrete scenarios centered on imagery. Characterized by strong immersion and experiential engagement, this approach enables students to comprehend academic content and acquire practical skills within simulated environments. Implementing this method in university nursing education can significantly improve teaching effectiveness.

2. Challenges in Traditional Nursing Education at Universities and the Necessity of Scenario-Based Teaching Applications

2.1 Challenges in Traditional Nursing Education at Universities

2.1.1 Laboratory training leads to a separation between operational skills and clinical thinking

Nursing education is highly practical in nature. However, traditional teaching methods involve students practicing in laboratories with simulated mannequins. Moreover, every nursing skill is ultimately broken down into discrete movements for students to practice — such as mechanically repeating catheter insertion steps in urinary catheterization or performing air evacuation and puncture techniques in intravenous infusion. While students may appear to master numerous skills, this merely constitutes muscle memory. The fundamental neglect of the fact that nursing procedures are never performed in isolation leads to students mechanically applying templates during real-world operations, completely lacking the ability to adapt and apply knowledge flexibly.“Dynamic clinical evaluative thinking training on "why certain procedures are performed, what changes occur in patients during the procedure, and how to manage any abnormalities that arise"[2].

2.1.2 The silent operational approach masks deficiencies in humanistic care and communication

The essence of nursing lies in patient care, requiring nursing staff to maintain continuous communication with patients, thus necessitating strong communication skills and a sense of humanistic concern. However, in traditional teaching methods, instructors assess students through silent operational demonstrations. Students interact solely with mannequins, performing procedures without dialogue, typically memorizing routine communication phrases mechanically, such as: "XX, I am about to administer an injection; please cooperate." In clinical practice, students encounter patients who exhibit emotional states and cognitive processes. The rigid language and evasive gaze characteristic of students may lead to confusion when facing patients' anxiety or inquiries from family members, and even result in nurse-patient conflicts due to poor communication.

2.2 The Necessity of Applying Situational Teaching

Given the aforementioned challenges, it is evident that reforming nursing education in higher education institutions is imperative, with a focus on enabling students to hone their practical skills. Scenario-based teaching effectively meets this requirement by creating a transitional space that bridges theoretical classroom instruction on campus and real-world clinical practice in hospitals, serving as a buffer between these two environments. In controlled scenarios, the environment and participants closely resemble real hospital settings while maintaining safety and controllability. Even if students misjudge or mishandle situations like "sudden heart failure" or "nurse-patient conflicts," their actions won't compromise actual patient safety [3]. This risk-free trial-and-error environment instills immense confidence, enabling students to perform procedures with full assurance. Through these simulations, learners experience the entire process — from encountering challenges and experiencing anxiety to applying acquired knowledge to resolve issues. The fragmented theoretical knowledge they acquire is systematically integrated, ultimately developing into comprehensive clinical response capabilities.

3. Principles for Creating Nursing Scenarios Based on Real Clinical Logic

The key to situational teaching methodology lies in scenario construction. Providing students with fabricated or unrealistic scenarios will inevitably fail to achieve educational objectives. Scenario creation must adhere to the following principles.

3.1 Derived from real medical records

The uniqueness of nursing education lies in its necessity to be grounded in clinical practice. The creation of nursing scenarios must prioritize authenticity, avoiding fabricated cases. Typical, high-frequency, and representative real-world cases can be introduced from various hospital departments to establish simulation scenarios. Within these scenarios, students must genuinely analyze patients' chief complaints, medical history, and vital signs at admission. The physiological indicators and pathological logic inherent in these medical records are strictly rigorous, enabling students to develop correct clinical thinking through practical exercises.

3.2 Focus on Core Competencies

The creation of teaching scenarios should not be arbitrary; it must be guided by clear instructional objectives. From the outset, it is essential to identify the core problem that this lesson aims to address.[4] Nursing encompasses a broad scope of disciplines. For example, in internal medicine nursing, scenario design should primarily focus on dynamic observation of patient conditions, evaluation of post-medication responses, and health education. Emergency nursing, on the other hand, should emphasize coordination within emergency protocols, proficient use of medical equipment, and teamwork under high-pressure situations. Scenario designs must address the core objectives directly, avoiding excessive elements unrelated to the development of essential nursing competencies — such as overemphasizing family ethical conflicts — which could overshadow the main focus and deviate from the core principles of nursing education.

3.3 Implantation of dynamic variables

Real-world clinical practice is characterized by constant change; patients 'conditions evolve continuously, and the importance of nursing care must correspondingly be adjusted. Therefore, scenarios should incorporate unexpected events — for example, incorporating a "sudden patient syncope" incident during routine preoperative education, or a "family member's emotional outburst due to prolonged waiting time" during nebulized inhalation therapy for an asthma patient. Such design aligns with the realities of clinical nursing practice, breaking students' rigid, step-by-step thinking patterns and compelling them to prioritize tasks and respond adaptively amidst complex, concurrent interventions.

4. Application Strategies of Situational Teaching Method Throughout the Nursing Classroom Process

The application of situational teaching methodology in university nursing education should permeate the entire instructional process. The following discussion focuses on three key phases: pre-class, in-class, and post-class.

4.1 Pre-class construction: Designing situational scripts

Pre-class preparation primarily involves foundational work. In situational teaching, the most critical element is the scenario itself; therefore, scenario materials must be carefully selected beforehand. Following the principles of situational teaching, instructors should collect authentic clinical cases — often through collaboration with hospitals — to transform them into instructional scenario scripts. These scripts should clearly document the patient's medical history and disease progression, with nursing intervention tasks designed around key milestones in the condition's evolution. For example, if the patient experiences rapid breathing at minute 5 and a drop in blood pressure at minute 10, the script should specify the anticipated nursing interventions for each phase.

After designing a realistic script, students are divided into groups to assume different roles, ensuring that every student participates in the scenario performance. Specific roles include: head nurse, assistant nurse, doctor, patient, family member, and observer; each group draws lots to determine their assigned role. Following the drawing, the instructor provides psychological preparation for students playing non-nursing roles to enhance their immersion during subsequent performances. For example, in a scenario involving "emergency admission of an acute myocardial infarction patient," the instructor first trains students playing the "patient" to demonstrate rapid breathing, painful moaning, and agitated body language during rehearsals. Students playing "family members" should portray excessive anxiety and a lack of medical knowledge; this deep understanding of non-medical roles facilitates smoother subsequent performances.

4.2 In-class enactment to facilitate student interaction and dynamically advance scenarios

The classroom session constitutes the most critical phase of instructional delivery. During this stage, situational enactment should be conducted, with teachers employing methods such as atmosphere creation to facilitate full student participation. Concurrently, new questions should be introduced at appropriate intervals to dynamically advance the entire scenario.

In this phase, it is essential to first conduct physical and physiological simulations as the foundational step. The instructor provides students with simulated mannequins, connecting them to real medical equipment such as ECG monitors and defibrillators, while incorporating sounds from various instruments to create a realistic environment that encourages students to focus and perform authentic nursing procedures — including establishing dual intravenous access, drawing blood for laboratory tests, and administering oxygen — to the mannequins. Additionally, a critical aspect of nursing practice is socio-psychological interaction. At this stage, the students portraying "patients" must communicate with nursing staff according to their assigned roles, actively expressing emotions and posing questions.

Using the "Myocardial Infarction Emergency Response" scenario as an example, each student group participated in role-based simulations according to their assigned roles and completed their tasks. At the tenth minute of the drill, the instructor could modify the physiological parameters of the mannequin in the background. The student portraying the "patient" would then synchronize their physiological state changes, triggering an alarm from the monitor, which increased the complexity of the scenario. Students playing the "family member" role would urgently shout to exert pressure on nursing staff, while those acting as "nurses" needed to rapidly assess the patient's condition under these challenging circumstances. The critical tasks included immediately performing cardiopulmonary resuscitation (CPR) and preparing for defibrillation. However, during the tense resuscitation intervals, students should also allocate time to reassure family members using firm yet concise language. This scenario accurately replicates the high-pressure, high-intensity environment of an emergency room, requiring students to demonstrate both psychological resilience and communication skills for effective patient support, thereby providing comprehensive training.

4.3 Post-class review: Conduct role-free reflection

Classroom demonstration serves as the primary phase for students to practice their skills and acquire knowledge. However, post-training review is essential; otherwise, situational teaching degenerates into mere situational drama performance. Through this review process, students can distill rational professional knowledge and facilitate its internalization.

After the performance concluded, the teacher guided all students to step out of the acting state and engage in a reflective review. First, students conducted self-evaluations, each sharing their psychological processes during the scenario simulation — particularly the nursing students who detailed their diagnostic reasoning for the patient's condition and identified any regrets in their handling. This was followed by peer evaluation, where members within and across groups assessed each other's

performance, highlighting any oversights in their actions. Finally, the teacher provided an overall assessment, acknowledging students' strengths while offering constructive feedback on areas for improvement.

For example, during the case review of "First Aid for Myocardial Infarction," a student playing the role of a family member remarked that the "nurse" did not glance at them throughout the entire procedure, despite the family member's profound distress — they felt the nurse was merely carrying out their professional duties. The instructor can leverage this moment to guide students toward understanding that the psychological trauma experienced by family members is equally significant and warrants serious attention. While performing high-intensity technical procedures, nurses must never neglect humanistic care; even a resolute expression or a brief word of reassurance reflects the essence of nursing practice. Through such reflective reviews, various nursing techniques and principles of humanistic care can be internalized as students' spontaneous professional behaviors.

5. Peroration

In conclusion, the situational teaching method provides an effective solution to the disconnect between theory and practice in university nursing education. By examining the limitations of traditional training models, this paper proposes principles for creating scenarios grounded in authentic clinical logic and analyzes specific application strategies for situational teaching across three critical phases: pre-class, in-class, and post-class. Implementing this approach in classroom instruction enhances students' nursing skill proficiency, clinical critical thinking, and humanistic communication abilities. Given its numerous advantages, universities should further investigate this methodology, promote standardized development of situational teaching frameworks, optimize resource allocation (both software and hardware), and cultivate more high-quality, application-oriented nursing professionals who meet contemporary clinical demands.

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