

Application Research on Cultivating Humanistic Care in Nursing Students Oriented by Core Competencies of Nurses in the Digital Era

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Abstract: This study explores an experiential teaching model for cultivating humanistic care in higher vocational nursing education, oriented by the core competencies of nurses in the digital era. Using an experimental comparison method, the experimental group adopted the experiential teaching model, while the control group used traditional classroom lectures. After the course tasks were completed, significant changes ($P < 0.05$) were observed in the overall score and six factors of the nursing core competency assessment between the experimental and control groups. The experimental group students showed considerable improvements in critical thinking, research, leadership, interpersonal relationships, legal and ethical practice, professional development, education, and consultation compared to the control group. In summary, the experiential teaching model oriented by the core competencies of nurses in the digital era is conducive to enhancing the psychological quality and professional ability of nursing students.

Keywords: Digital Era; Nursing Core Competencies; Cultivating Humanistic Care in Nursing Students

Introduction

Core competencies are the abilities that occupy a central position in the capability system of enterprises and individuals, representing core competitiveness. Nursing core competencies (NCC) are the fundamental comprehensive abilities that nurses must possess to perform clinical nursing work and are a key focus of nursing research worldwide. In the 21st century, the application of nursing core competencies has extended to the nursing field in China. As future nurses, nursing students also need to possess these core competencies. Since the 21st century, global technological innovation has been rapidly evolving, with various technologies emerging one after another. The global pandemic has further highlighted the importance of intelligence and digitalization. In the "14th Five-Year Plan," China has explicitly proposed the goal of "accelerating digital development and building a digital China," aiming to accelerate the iteration of digital technologies and foster new technologies, new business forms, and new models.

1 Subjects and Methods

1.1 Research Subjects

The research subjects are 40 third-year nursing students from the 2022 cohort, set as the experimental group, utilizing an experiential teaching model based on a digital platform. The control group employs traditional teaching methods. All students are female, with an average age of (19.98±1.21) years.

1.2 Research Methods

The evaluation tool used is the Competency Inventory for Registered Nurses (CIRN), with Cronbach's alpha coefficients for each dimension ranging from 0.79 to 0.86, and an overall Cronbach's alpha of 0.87. The test-retest reliability is 0.83. The total score is 232, with higher scores indicating stronger competencies. An overall average score and dimension scores greater than 3 indicate high competency, 2-3 indicate medium competency, and less than 2 indicate low competency.

1.3 Experiential Teaching of "Nursing Psychology" in the Digital Era

1.3.1 Forming Teams with Clinical Nurses to Collect Typical Nursing Scenarios

To enhance the core competencies of nurses and cultivate humanistic care in nursing students, teams were formed with clinical nurses to collect typical nursing scenarios. This involved preemptively entering clinical settings to understand the real work environment of current clinical nurses. Typical nursing scenarios were collected through questionnaires and interviews to design experiential teaching projects^[1].

1.3.2 Application of Experiential Teaching in Teaching Activities in the Digital Era

Experiential teaching is characterized by creating specific scenarios in the teaching process, allowing students to relate to their life experiences and re-recognize, rediscover, and recreate knowledge through their emotions, intuition, and understanding. This method aims to combine cognitive and emotional processes and promote the mutual enhancement of passion, reasoning, and behavior guidance^[2].

In the digital era, experiential teaching based on a digital platform enhances nurses' core competencies. In collaboration with a technology company, an online platform for experiential teaching was developed, utilizing smart classrooms to record the entire process both online and offline.

The digital platform is divided into a teacher end and a student end. The teacher end includes designing scenario plays and evaluating works, with subcategories such as script design, script distribution, release design, copy design, and mobile presentation. The student end includes login, uploading scenario plays, completing tasks, and work evaluation^[3].

The scenario plays should be limited to 10 minutes, with evaluations including self-assessment, peer assessment, and teacher assessment. To facilitate filming, students form teams by dormitory to write scripts, familiarize themselves with the textbook content, especially the psychological aspects of clinical nursing, and address multiple conflicts involving different patients, nurses, and family members. Through peer learning, students consult materials and videos to write scripts that closely reflect clinical reality, emphasizing genuine emotional experience.

In class, student representatives present the scenario plays and briefly introduce the group's insights.

Teachers and students evaluate the quality and experiences of the works, and the best works are showcased on the online teaching platform to increase influence. Through personal experience, students grasp the essence of nurses' real work, internalizing and externalizing this understanding.

1.3.3 Design of Nursing Psychology Experiential Teaching Units Based on OBE Concept

Table 1: Design of Nursing Psychology Experiential Teaching Units Based on OBE Concept.

Units	Specific Content	Specific Content
Patient Psychology and Psychological Care	Psychological Care for Cancer Patients	Patient's Psychological Reactions
Patient Psychology and Psychological Care	Psychological Care for Critically Ill Patients	Stabilizing Emotions, Enhancing Protection, Providing Understanding and Support, Eliminating Dependency, Ensuring Comfort
Patient Psychology and Psychological Care	Psychological Care for Patients with Chronic Diseases	Psychological support, overcoming dependency, providing comfort
Patient Psychology and Psychological Care	Psychological Care for Surgical Patients	Social support, relaxation, overcoming negative emotions
Patient Psychology and Psychological Care	Psychological Care for Elderly Patients	Stabilizing emotions, active treatment, rational expression of emotions
Patient Psychology and Psychological Care	Psychological Care for Patients in Pain	Reducing psychological pressure, suggestion therapy, diversion, relaxation
Psychological Quality Development of Nurses	Factors Affecting Nurses' Psychological Well-being and Healthy Psychology	Social support, psychological intervention, maintaining good physical and mental states, improving coping strategies

1.4 Effect Evaluation

1.4.1 Nursing Students' Core Competence Scale

During the first week of the teaching term, nursing students are organized to fill out the core competence scale. The survey is conducted using the "Questionnaire Star" electronic questionnaire under the assistance of the course instructors. Researchers use a unified guiding language to explain the purpose and significance of the questionnaire survey, as well as the precautions to be taken while filling it out. They also provide clarification for any questions the nursing students may have about the items on the scale. After fully understanding the survey, the students fill it out anonymously, with each questionnaire being restricted to one response per individual mobile phone or computer.

1.4.2 Statistical Methods

The collected data is cross-checked by two individuals and then accurately entered into an Excel spreadsheet. Data analysis is conducted using SPSS 26.0. Measurement data is described using mean \pm standard deviation, and intergroup comparisons are performed using the t-test. The test standard is set at $\alpha=0.05$, with $P<0.05$ indicating statistical significance.

1.5 Quality Control

Both groups of students follow the same nursing talent training program, course standards, and teaching plans, with lectures given by the same instructors. The assessment methods during the term and at the end of the term are consistent for both groups. The questionnaires used in this study have been tested for reliability and validity, and all questionnaires are entered and verified by two individuals to minimize human error. 100 questionnaires are distributed, 100 are collected, and the recovery rate is 100%.^[4]

2 Results

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From the above table, it can be seen that there are differences in the total score of core competencies of nurses, critical thinking and research total score, clinical nursing total score, leadership total score, interpersonal relationships total score, legal and ethical total score, professional development total score, and educational counseling total score between the experimental group and the control group. Specifically, the table indicates that:

The clinical nursing total score does not show a significant difference between the two groups ($p>0.05$), meaning that students from different groups display consistency in their clinical nursing total score, with no significant differences observed. However, there are significant differences ($p<0.05$) in the total score, critical thinking and research total score, leadership total score, interpersonal relationships total score, legal and ethical total score, professional development total score, and educational counseling total score, indicating variability between the different groups in these areas.

In summary, the comparison reveals that the experimental group scores higher than the control group in total core competencies of nurses, critical thinking and research, leadership, interpersonal relationships, legal and ethical aspects, professional development, and educational counseling. There is no difference in clinical nursing between the two groups.

3 Discussion

3.1 Experiential Teaching in a Digital Context Can Improve Nursing Students' Critical Thinking and Research Abilities

Experiential teaching emphasizes personal experience and self-awareness, focusing on student development, allowing students to engage personally, highlighting their primary role, and enabling them to learn through participation and interaction, thus transforming the learning and teaching methods. The findings from Table 2 reveal that the core competencies of nursing students in the experimental group, who engaged in experiential teaching through digital platforms, significantly improved by the end of the term compared to the control group. The reasons for this are as follows:

Firstly, the experiential teaching (learning) process includes three stages:

Experience Stage: The individual goes through a particular event or situation.

Understanding Stage: The individual abstracts and summarizes the experience, forming concepts or viewpoints.

Reflection Stage: The individual organizes insights, reflects, and constructs new experiences and meanings.^[5]

Considering that vocational students have strong practical skills, enjoy using digital means like short videos, and are keen to express themselves, experiential teaching is mainly conducted through the shooting of psychological dramas. In these dramas, students role-play to experience clinical scenarios, enhancing their learning abilities and deepening their understanding of theoretical and practical issues in nursing psychology. Research shows that activities such as writing scripts and discussions in psychological dramas can increase students' interest in learning and cultivate innovative thinking.

Secondly, nursing students rely on digital platforms, with clear group divisions, including members and leaders who need to design scripts and simulate scenarios in advance. This process enhances their autonomous and peer learning abilities. The case studies designed by students often come from clinical practice and textbook knowledge, requiring them to think and gather evidence, thereby promoting the development of critical thinking skills. The control group in traditional teaching primarily relies on the teacher's guidance and execution, which can subtly influence students during the teaching process. However, students' autonomous learning abilities are weakened, and their critical thinking and questioning abilities decline. Traditional teaching tends to overlook continuous assessment, relying

mainly on final exams to reflect a student's performance for the entire term, which can be one-sided and not detailed enough. Especially for nursing students, who are unfamiliar with clinical nursing during their studies, relying solely on teacher-taught courses does not effectively serve clinical practice or improve communication with patients, nor does it enhance their research abilities. Critical thinking and research abilities are more dependent on daily reflection and learning. Therefore, traditional teaching is not conducive to developing nursing students' critical thinking and research abilities, whereas experiential teaching is more beneficial for their future career adaptation and personal development.^[6]

3.2 Experiential Teaching in a Digital Context Can Improve Nursing Students' Leadership Abilities

Leadership ability refers to the qualities and functions demonstrated by individuals or groups in organizing, mobilizing, and motivating members to achieve common goals. This ability enhances personal influence and competitiveness and helps nursing teams manage resources effectively and improve service quality, providing higher-level care for patients. According to the findings from Table 2, the leadership scores of students in the experimental group were higher than those in the control group. The reasons for this include the following: During the shooting of psychological dramas, disagreements among group members are inevitable. To complete the task, members need to listen, communicate, and coordinate to resolve conflicts and maintain team harmony and stability. This process builds cohesion within the group and motivates other members to learn from the outstanding students, creating a positive working atmosphere. Interviews also revealed that students enjoy this learning method. Throughout the process, their learning and leadership abilities are enhanced. During the shooting of psychological dramas, students need to assign roles in advance, understand different responsibilities and tasks, which helps them complete the task more effectively, thereby enhancing their teamwork and leadership abilities. In contrast, the traditional teaching method used in the control group, where the teacher teaches and the students learn, lacks the capacity to foster students' active learning abilities. Most of the time, students rely on the teacher's instruction, which does not effectively enhance leadership abilities.^[7]

3.3 Experiential Teaching in a Digital Context Can Improve Nursing Students' Interpersonal, Professional Development, and Educational Counseling Abilities

Interpersonal skills are the abilities displayed by individuals in interactions with others. Professional development ability refers to the capacity of individuals to continuously improve their skills, knowledge, and qualities in their professional fields to meet the evolving demands and challenges of the market. This ability is significant for personal career development and growth. Educational counseling ability is based on professional knowledge and experience, providing peers with targeted educational planning, learning strategy suggestions, progress tracking, and psychological counseling. This ability is crucial for helping students plan their learning paths better, improve learning efficiency, and achieve personal development. The application of experiential teaching in the nursing psychology course better enhances the team spirit of nursing students, promoting their interpersonal skills. Additionally, shooting psychological dramas requires students to self-study the psychological nursing section of the course in advance. Peers support each other based on their learning experiences, which inherently promotes educational counseling abilities. Finally, experiential teaching, primarily in the psychological nursing section of nursing psychology, helps students discover and solve problems,

increasing their understanding and planning for future nursing positions, thus promoting personal and professional development. In the traditional teaching model of the control group, the forty-minute classroom learning relies mainly on the teacher's instruction, resulting in low learning efficiency and a weak sense of ownership. Traditional assessment methods also emphasize grades and final exams, leading to more test-oriented education, poor classroom participation, and a lack of genuine enthusiasm for the classroom. Students' reliance on the teacher's teaching weakens their learning abilities and lacks long-term motivation for personal ability enhancement and career development. This further underscores that experiential teaching better returns the classroom to the students, emphasizing their sense of experience and future career development abilities.^[8]

Conclusion

As future nurses, nursing students are distant from clinical environments during their studies, often emphasizing theory over practice, leading to insufficient core competencies. In the digital context, the experiential teaching model for cultivating humanistic care in vocational nursing education is feasible. This teaching approach can enhance nursing students' critical thinking, research abilities, leadership skills, professional development, interpersonal skills, and educational counseling abilities. This teaching reform holds positive significance for the current and future personal and professional development of nursing students and provides valuable insights for teaching reform and talent cultivation in similar institutions.

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