

A Study on the Work Process-Based Practical Training Model for Basic Nursing Skills in Vocational Colleges

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Abstract: *Objective:* To explore and analyze the work process-based practical training teaching model for basic nursing skills in vocational colleges and its implementation effects. *Methods:* A total of 82 nursing students from our school were selected for the study, which was conducted from April 2023 to April 2024. Using a random number table method, the students were divided into an observation group and a control group, each with 41 students. The control group received conventional practical training teaching, while the observation group followed the work process-based practical training model for basic nursing skills. The assessment scores and teaching satisfaction of the two groups were compared. *Results:* The comparison of assessment scores showed that the observation group performed significantly better than the control group ($P < 0.05$). The comparison of teaching satisfaction also indicated that the observation group had significantly higher satisfaction than the control group ($P < 0.05$). *Conclusion:* The work process-based practical training teaching model for basic nursing skills in vocational colleges can improve students' assessment scores and enhance teaching satisfaction, demonstrating its value for wider application.

Keywords: Work processes; Vocational colleges; Basic nursing skills; Practical training teaching model

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1. Introduction

In the work process-based practical training teaching model for basic nursing skills in vocational colleges, teachers place students at the core of teaching. They design various practical training projects based on the actual requirements of nursing work in medical institutions, improve teaching methods and processes, and closely integrate the teaching process with the production process. This approach enhances students' practical skills and creates favorable conditions for their future clinical nursing careers^[1,2]. This study selects 82 nursing students from our institution as samples to explore and analyze the work process-based practical training teaching model for basic nursing skills and its application effects.

2. Materials and methods

2.1. General information

A total of 82 nursing students from our institution were included in the study, which was conducted from April 2023 to April 2024. Using a random number table method, the students were divided into an observation group and a control group, each with 41 students. All participants were female. The age range of students in the observation group was 19–22 years, with a mean age of 20.58 ± 0.42 years. The age range of students in the control group was 20–22 years, with a mean age of 20.63 ± 0.45 years. There was no statistically significant difference in the general data between the two groups ($P > 0.05$).

Inclusion criteria: Nursing students from our institution who were aware of the research content and signed an informed consent form.

Exclusion criteria: Students who could not cooperate with the study due to other factors.

2.2. Methods

Students in the control group received conventional practical training teaching. Teachers set reasonable teaching objectives based on the content of the course, provided teaching cases to students before class, and required them to review relevant content. During the classroom sessions, teachers explained the case content, demonstrated various nursing procedures such as nursing interviews, physical examinations, and nursing diagnoses, and guided students in developing nursing intervention measures and patient health education. After the demonstration, students were divided into several small groups, where they practiced the procedures by imitating the teacher's actions repeatedly.

Students in the observation group followed the work process-based practical training teaching model for basic nursing skills. The specific plan was as follows:

- (1) Determining practical training projects for basic nursing skills: Teachers identified practical training projects based on the actual requirements of clinical nursing work. They consulted with medical experts and nursing staff from healthcare institutions to select projects such as health education and psychological care, medication administration, symptom management, and daily care. Teaching cases were created based on these projects, requiring students to independently complete physical examinations, nursing diagnoses, health education, and nursing interventions to enhance their practical skills.
- (2) Setting reasonable teaching objectives: Teachers established teaching objectives focusing on knowledge and skills, processes and methods, and attitudes and emotions. The goal was for students to master various nursing operations through practical training, integrating theoretical knowledge with practical skills. This approach aimed to develop students' skills in identifying and solving problems, promote active adherence to nursing professional values, enhance service awareness, and foster high ethical standards.
- (3) Organizing practical teaching: Practical training for basic nursing skills was conducted in a practical training room. Teachers selected realistic teaching cases and invited patients with normal cognitive and communication skills and convenient mobility from the hospital to participate in the training. The practical training was based on actual clinical nursing workflows, creating appropriate work scenarios. Students were divided into several groups and required to complete nursing tasks within these work scenarios.

- (4) Establishing teaching implementation plan: Using the care of an acute appendicitis patient as a teaching case, students were required to complete basic admission care, identify nursing problems, implement nursing interventions, and conduct nursing assessments. The case involved a 25-year-old male patient who experienced periumbilical pain 30 minutes after dinner. Before bedtime, the pain moved to the lower abdomen, intensifying and accompanied by vomiting. His temperature was 38.2°C, pulse was 85 beats/min, and there was significant tenderness with rebound pain in the McBurney's point area. The diagnosis at admission was acute appendicitis. The teacher guided students to analyze the patient's condition and identified nursing tasks including self-introduction, health education, filling out pathology forms, preparing the ward, introducing the patient to the physician, and nurse-patient communication. The teaching objectives were to develop students' communication skills, service awareness, and teamwork abilities. The teacher posed questions such as: What is the nursing diagnosis for this patient? What are the diagnostic criteria? What are the nursing requirements for surgical or conservative treatment? Students were asked to think about the answers and develop appropriate nursing measures. During the implementation of nursing interventions, students needed to thoroughly understand the patient's medical history, observe the patient's condition, and monitor their clinical symptoms and signs. As the patient's condition progressed rapidly with anxiety, students were required to comfort the patient and assist the physician with various nursing operations until the patient's pain gradually decreased and vital signs stabilized. In addition to the above practical training methods, the teacher employed situational teaching methods to enhance the engagement of practical training. For example, during intravenous infusion operation training, the teacher focused on issues such as nurse-patient communication and operational errors. Students performed clinical scenarios through role-playing, helping them clarify key points of intravenous infusion operation.
- (5) Conducting teaching evaluation: After completing the teaching, the teacher conducted a comprehensive evaluation of students' performance. The evaluation methods included teacher assessment, peer evaluation among students, and self-evaluation by students. The focus was on evaluating students' practical skills, problem-solving skills, independent inquiry skills, and teamwork capabilities. The teacher provided targeted guidance based on the identified areas where students needed improvement.

2.3. Evaluation criteria

The assessment scores and teaching satisfaction were compared between the two groups.

2.4. Statistical methods

Data were analyzed using SPSS23.0 software. Measurement data (mean \pm standard deviation [SD]) were analyzed using the *t*-test, and count data (percentage) were analyzed using the χ^2 test. $P < 0.05$ was considered a statistically significant difference.

3. Results

3.1. Comparison of assessment scores between the two groups

As shown in **Table 1**, the assessment scores of the observation group were significantly higher than those of the control group ($P < 0.05$).

Table 1. Comparison of assessment scores between the two groups (mean± SD)

Groups	Nursing interview	Nursing physical examination	Nursing diagnosis	Nursing measures	Nursing operations
Observation group (<i>n</i> = 41)	8.42 ± 0.79	8.36 ± 0.81	8.38 ± 0.77	8.59 ± 0.71	8.46 ± 0.82
Control group (<i>n</i> = 41)	7.38 ± 0.45	7.45 ± 0.42	7.32 ± 0.34	7.53 ± 0.48	7.61 ± 0.35
<i>t</i>	7.324	6.386	8.064	7.920	6.105
<i>P</i>	0.000	0.000	0.000	0.000	0.000

3.2. Comparison of teaching satisfaction between the two groups

As shown in **Table 2**, the teaching satisfaction in the observation group was significantly higher than that in the control group ($P < 0.05$).

Table 2. Comparison of teaching satisfaction between the two groups [*n* (%)]

Groups	Enhancing practical skills	Improving teamwork	Fostering independent learning	Deepening understanding of theory	Increasing learning enthusiasm
Observation group (<i>n</i> = 41)	39 (95.1)	39 (95.1)	40 (97.6)	39 (95.1)	40 (97.6)
Control group (<i>n</i> = 41)	32 (78.0)	31 (75.6)	33 (80.5)	33 (80.5)	33 (80.5)
χ^2	5.144	6.247	6.115	4.100	6.115
<i>P</i>	0.023	0.012	0.013	0.042	0.013

4. Discussion

In vocational nursing education, basic nursing skills are a crucial component, characterized by the integration of theory and practice, with a focus on developing students' clinical practical skills^[3]. Currently, most vocational colleges place emphasis on theoretical knowledge in teaching basic nursing skills, with inadequate practical training, outdated teaching methods, and content that often does not align with real-world practice. This results in students' practical skills not being effectively improved, indicating a need for a revised teaching model^[4,5].

The results of this study confirm that students in the observation group, who were taught using the work process-based practical training model, had higher assessment scores and greater teaching satisfaction compared to the control group. This suggests that the work process-based practical training model enhances students' assessment performance and increases their satisfaction with the teaching process.

The underlying reasons are that under the work process-based model, teachers place students at the core of the teaching process, develop training plans based on real clinical nursing procedures, incorporate realistic teaching cases, and create appropriate teaching scenarios. This approach guides students in analyzing and solving problems within these scenarios, developing appropriate nursing measures, and standardizing nursing operations, which ultimately enhances their practical skills and teaching satisfaction^[6,7].

5. Conclusion

In summary, employing the work process-based practical training teaching model in vocational nursing education can improve students' assessment scores and teaching satisfaction, demonstrating its value for wider application.

Disclosure statement

The authors declare no conflict of interest.

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