

# Research on evidence-based nursing education mode and effect of five-year higher vocational nursing students based on school enterprise cooperation

Gaoxia Jiang, Jing Li, Lirong Zhou, Zihan Bu, Shaoyu Ding  
 Nanjing Vocational Health College, Nanjing, Jiangsu 210000

**Abstract:** To investigate the evidence-based ability and needs of five-year nursing interns in our school, provide a theoretical basis for the revision of the five-year higher vocational nursing talent training program and education reform, carry out evidence-based nursing education intervention based on the school enterprise joint training mode, and improve the low evidence-based ability of five-year higher vocational nursing interns. Methods: the combination of school training and clinical training was used. Results: the evidence-based nursing ability and evidence-based cognition of nursing students in the experimental group were significantly improved, which was higher than that in the control group, and the difference was statistically significant ( $p < 0.01$ ). Conclusion: the demand for evidence-based nursing training in higher vocational colleges is high, and the school enterprise combination mode to carry out evidence-based nursing education can promote the improvement of nursing students' evidence-based nursing ability, improve the core competitiveness of students, and promote the ability of teachers' team.

**Key words:** school enterprise cooperation; Evidence based nursing; Nursing education; Five year higher vocational nursing students

Evidence based nursing (EBN) has been influenced by evidence-based medicine since the 1990s. Its scientificity and practicability have been paid more and more attention and become a new trend of nursing development. The lack of evidence-based nursing knowledge and skills of clinical nurses is one of the important factors hindering the practice of evidence-based nursing. The reason is the lag of evidence-based nursing education. The development of evidence-based nursing should start with education and cultivate students' ability of evidence-based nursing. Although there have been studies on evidence-based nursing education for undergraduate and graduate nursing students, there are few studies on the cultivation of evidence-based nursing ability of higher vocational nursing students, and the students cultivated in higher vocational colleges are the main body of the nursing team, and their evidence-based nursing ability will directly affect the scientificity and standardization of evidence-based nursing practice.

The school running mode of school enterprise cooperation is the product of the development of China's vocational education to a certain extent. Since China's reform and development, the country has attached great importance to the development of vocational education. Evidence based nursing is very practical in clinical practice, while nursing students' ability in finding and proposing clinical problems and practical application of evidence is weak. Therefore, it is of practical significance to carry out evidence-based nursing education for nursing students based on school enterprise cooperation. This paper aims to explore the evidence-based nursing education mode for five-year higher vocational nursing students based on school enterprise cooperation.

## 1 object and method

### 1.1 object

Taking the fourth grade pediatric nursing students of grade 17 five-year higher vocational nursing in our school as the intervention of evidence-based nursing education

For example, the rest of the nursing students in this grade were used as control.

### 1.2 Evidence based nursing training intervention program

1.2.1 start time of control science: in this study, the intervention time of evidence-based nursing training was set as 2 weeks before the internship of nursing students.

During this period, nursing students in our school have completed all relevant theoretical knowledge learning, have certain nursing professional knowledge, statistical knowledge and medical English reserves, and are suitable for carrying out evidence-based nursing

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**Subject source:** This paper is the Anhui Sanlian University key scientific research item, "Research on the current situation and intervention countermeasures of College Students' mobile phone dependence", No. SKZD2018015.

course teaching intervention at this stage, achieving twice the result with half the effort. At the same time, it is seamless with the upcoming internship process. After students have relevant evidence-based nursing theoretical knowledge, they can carry out evidence-based practice in clinic to ensure that the teaching of evidence-based nursing can achieve the maximum effect.

#### 1.2.2 intervention cycle and content of evidence-based nursing training:

##### ① Evidence based knowledge acquisition in school system

Our school and King's College London in the United Kingdom launched a joint training "5+1" project, evidence-based nursing as one of the curriculum projects. After repeated discussions by the teachers of the evidence-based curriculum group of both sides, the evidence-based nursing teaching plan for nursing students with education background in our school was formulated, with a total of 32 class hours, which has been successfully carried out for 3 periods. Therefore, according to the previous work experience and related research, 32 class hours are determined for the teaching in the school.

The research group has constructed and improved the curriculum system of evidence-based nursing network learning platform in the early stage, which is helpful for students' self-directed learning before and after class. After 2 weeks of systematic learning, four nursing students were selected as a group to discuss and report on the following topics: the concept, connotation and significance of evidence-based nursing. Based on the designated nursing problems, the pico framework, retrieval strategy and results were constructed, and one of the literatures was selected for quality evaluation.

The teaching methods mainly include PBL teaching, traditional teaching, flipped classroom, self-directed learning and group cooperative learning.

##### ② Based on clinical practice, preliminary exploration

After the evidence-based nursing training in the school, the students entered the Nanjing Children's Hospital for clinical practice. Give full play to the role of school enterprise cooperation. Based on the initial evidence-based nursing knowledge of nursing students, with the help of clinical tutors in the research group, find clinical problems, and discuss with clinical tutors to make a feasible clinical evidence-based practice plan. At the mid-term examination stage of internship, each nursing student was required to show the process and results of their evidence-based practice, and the clinical tutor and the school teacher jointly commented on and guided.

#### 1.3 evaluation method

##### 1.3.1 awareness of evidence-based nursing and education and training needs

The questionnaire includes 5 items. Cronbach's  $\alpha$  The coefficient is 0.745.

##### 1.3.2 investigation on cognitive status of evidence-based nursing

The scale includes 23 items, including the concept, significance and methods of evidence-based nursing.

##### 1.3.3 evaluation of evidence-based nursing ability

The evidence-based nursing ability assessment scale is suitable for China's national conditions and conforms to the trend of professional development. There are 23 items in this scale. Cronbach's  $\alpha$  The coefficient is 0.95.

##### 1.3.4 Process evaluation

The members of the research group worked out a procedural evaluation framework for the performance of each learning group at each stage of the whole research process through discussion. The teachers in the school will score the performance of each learning group at the reporting stage of the school teaching group. The average score will be used to select the evaluation rank of the group and reward it. In the clinical practice stage, the teachers in the school and the teachers in the hospital jointly evaluate it.

#### 1.4 statistical analysis

According to different data types, corresponding quantitative analysis and qualitative analysis are carried out. Spss170 software integration

The results were expressed by mean  $\pm$  standard deviation ( $\bar{x} \pm s$ ), and t test was used for comparison between the two groups.

## 2 Results

### 2.1 status quo of awareness of evidence-based nursing and results of education and training needs of grade 17 nursing interns (Table 1)

**Table 1 status quo of evidence-based nursing cognition and results of education and training needs of grade 17 nursing interns**

entry	result			
Have you heard of evidence-based nursing	53.1%	Never heard of it		
Have you attended any lectures on evidence-based nursing	No participation accounted for 60%	Once 40%		
Your understanding of "evidence based nursing"	Know nothing 42.4%	Heard but didn't understand 25.9%	Learn something 28.8%	Better understanding 2.8%
Do you have any content about "evidence-based nursing" in your previous courses	No 43%			
Do you think it is necessary to carry out systematic evidence-based nursing training for nursing staff	Evidence based nursing is not in line with China's national conditions and does not need to introduce 9.5%	The time to carry out evidence-based nursing is not ripe, and 17.2% will be carried out later	41.9% needed evidence-based nursing training	Special training on evidence-based nursing is very needed 31.2%

## 2.2 survey results of evidence-based nursing cognition

T-test was used to compare the evidence-based cognition of nursing students in the experimental group and the control group before intervention. The results showed that there was no significant difference between the two groups ( $p>0.05$ ). T test was used to compare the evidence-based cognition of nursing students in the experimental group and the control group after the intervention. The results showed that the score of evidence-based nursing cognition of nursing students in the experimental group was higher than that in the control group, and the difference was statistically significant ( $p<0.01$ ). See Table 2.

**Table 2 survey results of evidence-based nursing cognition of nursing students in two groups**

dimension	Pre intervention			After intervention		
	Test group (n=20)	control group(n=450)	P value	Test group(n=20)	Control group n=450)	P value
Evidence based nursing concept	0.57± 0.12	0.56± 0.1	>0.05	0.85± 0.07	0.56± 0.1	<0.01
Cognition of evidence	0.54± 0.09	0.54± 0.13	>0.05	0.92± 0.09	0.54± 0.13	<0.01
Evidence application ability	0.55± 0.07	0.54± 0.12	>0.05	0.95± 0.11	0.54± 0.12	<0.01

## 2.3 evaluation results of evidence-based nursing ability

T test was used to compare the status of evidence-based nursing ability between the experimental group and the control group before intervention. The results showed that there was no significant difference between the two groups ( $p>0.05$ ). T test was used to compare the status of evidence-based nursing ability between the experimental group and the control group after the intervention. The results showed that the score of evidence-based nursing ability of the experimental group was higher than that of the control group after the intervention, and the difference was statistically significant ( $p<0.01$ ). See Table 3.

**Table 3 evaluation results of evidence-based nursing ability of nursing students in two groups**

dimension	Pre intervention			After intervention		
	Test group (n=20)	Control group (n=450)	P	Test group(n=20)	control group(n=450)	P value
Evidence retrieval and evaluation ability	2.1± 0.07	2.1± 0.1	>0.05	4± 0.13	2.1± 0.1	<0.01
Evidence integration capability	0.8± 0.07	0.8± 0.09	>0.05	1.6± 0.12	0.8± 0.09	<0.01
Evidence dissemination capacity	0.8± 0.05	0.8± 0.11	>0.05	1.6± 0.14	0.8± 0.11	<0.01
Situational assessment and application ability	1.1± 0.04	1.1± 0.02	>0.05	3± 0.06	1.1± 0.02	<0.01

## 3 discussion

### 3.1 higher vocational evidence-based nursing training needs

The results of this study show that 53.1% of higher vocational nursing students have not heard of evidence-based nursing, while 73.1% of higher vocational nursing students hope to carry out evidence-based nursing training. Although higher vocational nursing students' practical ability is strong, their active thinking, problem finding, problem solving and evidence-based ability are weak. Evidence based nursing ability has become an important part of nurses' professional ability. Therefore, it is particularly important to improve the evidence-based nursing ability of higher vocational nursing students. Therefore, it is of great significance to carry out evidence-based nursing education for higher vocational nursing students.

3.2 carrying out evidence-based nursing education in the mode of school enterprise combination to promote the improvement of evidence-based nursing ability of nursing students

The results of this study showed that through education intervention, the evidence-based cognition and evidence-based nursing ability of the experimental group were significantly better than those of the control group, and the difference was statistically significant, indicating that the school enterprise combination mode to carry out evidence-based nursing education can promote the improvement of nursing students' evidence-based nursing ability. The combination of evidence-based nursing and clinical practice can effectively avoid the problem of evidence-based practical application, integrate evidence-based elements into specific nursing courses and clinical practice process, consolidate basic knowledge and strengthen clinical evidence-based practice, which is more in line with the cognitive law of higher vocational nursing students.

### 3.3 Diversified evaluation methods to improve the comprehensive quality of nursing students

Process evaluation is a teaching evaluation method that focuses on all aspects of students' learning process, and is characterized by dynamic process, timely feedback, flexible mode and sustainability. In this study, process management and evaluation were integrated, and students were asked to report and analyze in groups, and actively communicate with clinical teachers. The school teachers and clinical teachers conducted corresponding assessment and evaluation on the team, and the assessment results showed that all teams were "excellent". The knowledge and skills related to evidence-based nursing can be consolidated through group cooperative learning and exploration. At the same time, students all responded that through this form, their self-expression ability and team cooperation ability were improved. Although evidence-based knowledge is abstract and logical, through the process evaluation method, it pays attention to the accumulation and evaluation at ordinary times, which has deepened my deep impression on evidence-based knowledge and is no longer a cramming learning attitude.

### 3.4 improve students' core competitiveness and promote the improvement of teachers' team ability

When nursing students have certain evidence-based nursing ability, their critical thinking ability and innovative thinking ability will be further improved. In the future clinical work, nursing students can find problems in time, dare to ask questions, and be good at solving problems, so as to improve the core competitiveness of nursing students and promote comprehensive development. At the same time, the teaching of evidence-based nursing course puts forward higher requirements for teachers' evidence-based ability, scientific research level and clinical thinking, and promotes the rapid improvement of teachers' comprehensive ability. In the school enterprise cooperation, professional teachers and clinical teachers work closely together to learn from each other and improve together. Only through close communication with clinical experts can we firmly grasp the pulse of the ability demand of clinical nursing talents and cultivate nursing talents that are really needed in clinic.

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**About the author:** jianggaoxia, female, born in October, 1987, main research direction: nursing education

This paper is a personal project of the twelfth period of Nanjing Education Science Planning (Project No.: No. 0q4228 of the 12th period of Nanjing Education Science Planning); Results of the project approved by Jiangsu Vocational and Technical Education Society (Project No.: xhyblx2021287).