

# Analysis of the Application Effect of Case Discussion Method in Obstetric Nursing Education

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**Abstract:** *This study aims to analyze the application effect of the case discussion method in obstetric nursing education. Thirty nursing students admitted to the obstetrics department of the First Affiliated Hospital of Zhengzhou University from June 2022 to June 2024 were selected as research subjects. A retrospective analysis was conducted, with groups divided based on teaching methods: the control group (receiving conventional teaching methods) and the observation group (receiving conventional teaching methods + case discussion method). The comprehensive abilities in obstetric nursing, learning enthusiasm, and satisfaction with teaching were analyzed between the two groups. The results showed that after teaching, the scores for nursing problem analysis, service awareness, nursing assessment, nursing operations, and emergency nursing event handling were higher in the observation group than in the control group ( $P < 0.05$ ). Additionally, the observation group demonstrated higher learning enthusiasm, subjective efficacy rate, satisfaction with teaching activities, and satisfaction with instructors compared to the control group ( $P < 0.05$ ). In conclusion, the application of the case discussion method in obstetric nursing education yielded ideal results, significantly enhancing nursing students' comprehensive nursing abilities and learning enthusiasm, as well as improving their satisfaction with teaching.*

**Keywords:** *case discussion method; obstetrics; nursing education; comprehensive nursing ability; learning enthusiasm*

## 1. Introduction

Since the 21st century, the nursing profession in China has developed rapidly, with patients demanding increasingly high standards of nursing services. Against the backdrop of diverse nursing requirements, medical institutions need to provide high-quality, comprehensive nursing services tailored to the characteristics of each specialty. Obstetrics, as one of the main departments in hospitals, serves a special patient group — mainly mothers and infants—requiring higher and more extensive clinical nursing services. Obstetrics aims to ensure the safety of both mother and child by providing nursing care for mothers and infants alike. Related data indicate that patient satisfaction with obstetric nursing in China ranges from 80% to 95%[1]. There is significant room for improvement in the quality of obstetric nursing. Nursing students, as the reserve force for obstetric nursing, play a crucial role in elevating the overall quality of nursing care. High-quality obstetric nursing education can enhance nursing students' comprehensive abilities and provide human resources to improve overall obstetric care. However, traditional obstetric nursing teaching methods are relatively limited in scope and often overlook practical nursing operations, restricting the effectiveness of nursing education. The case discussion method, based on the case study approach, introduces elements of discussion to encourage students to engage in independent discussions, expand their learning perspectives, stimulate their desire to learn, and enhance their enthusiasm for study[2]. Applying the case discussion method in obstetric nursing education may improve nursing students' comprehensive abilities and enthusiasm for learning. Given the lack of related studies, this research selected 30 nursing students admitted to the obstetrics department of the First Affiliated Hospital of Zhengzhou University from June 2022 to June 2024 as research subjects to analyze the application effect of the case discussion method. The findings are reported as follows.

## 2. General Information and Methods

### 2.1 General Information

From June 2022 to June 2024, 30 nursing students admitted to the obstetrics department of the First Affiliated Hospital of Zhengzhou University were selected as research subjects for a retrospective analysis. The students were divided into groups based on teaching methods: the control group (receiving conventional teaching methods,  $n=15$ ) and the observation group (receiving conventional teaching methods + case discussion method,  $n=15$ ). In the control group, all nursing students were female, aged 18–22 ( $20.28\pm 0.83$ ). In the observation group, all nursing students were also female, aged 18–22 ( $20.31\pm 0.86$ ). The general information of the nursing students in both groups was homogeneous ( $P>0.05$ ). All nursing students voluntarily participated in the study and provided informed consent. The study complied with ethical requirements.

### 2.2 Methods

The control group received conventional teaching methods (lasting for 1 month). The instructors determined the nursing teaching content based on the characteristics of obstetrics and the obstetrics and gynecology nursing teaching syllabus. The obstetric nursing teaching content included maternal assessment, nursing care for high-risk mothers, postpartum care, and handling adverse nursing events. According to the actual situation of the nursing students, they were divided into several small groups, with 1-2 students per group. In the study group composed of 2 nursing students, one group leader shall be set up to communicate with teachers, reflect problems encountered in study, organize members to find relevant materials according to nursing problems assigned by teachers, etc. One nursing student needs to complete the above contents alone, and can communicate with the teacher if he/she encounters any puzzles. During the teaching process, the frequency of centralized lectures was determined based on the nursing students' learning progress and clinical nursing work. Centralized lectures were held 1-3 times per week, with each session lasting approximately 45 minutes. A WeChat group was created for the nursing students, where the instructors shared teaching materials, micro-lecture videos, and teaching resources. The nursing groups were required to conduct self-study during non-lecture periods. In conjunction with theoretical teaching, instructors organized simulated nursing drills and nursing scenario training for the students.

The observation group received conventional teaching methods combined with the case discussion method (lasting for 1 month). The conventional teaching methods were the same as those used in the control group. Case Discussion Method: (1) Preparation of Typical Cases: Before the teaching process, the instructor selected typical clinical cases based on the specific situation of patients admitted to the First Affiliated Hospital of Zhengzhou University, with the patient's informed consent. The selected typical patient cases were combined with the obstetrics and gynecology nursing teaching syllabus to set up key discussion questions related to the case. The discussion questions were designed to meet the criteria of comprehensiveness, diversity, and typicality. For example, a typical case of a pregnant woman with severe preeclampsia was selected, detailing the patient's examination data and delivery-related information. Students were required to discuss key issues such as the prevention of postpartum complications in women with severe preeclampsia and the focus of postpartum care based on the provided information. After determining the specific case, the instructor set 3–4 discussion questions. (2) Familiarization with Typical Cases: After determining the typical case and discussion questions, the instructor shared the case materials with the nursing students one week in advance via WeChat, QQ group, or an online teaching platform. All nursing students were required to carefully read and analyze the patient's related information before class. (3) Discussion and Analysis: Once the typical obstetric case and discussion questions were set, the students were divided into small groups for centralized discussions. The discussion focused on the prepared questions, and each nursing student group was required to submit a report after the discussion. Additionally, the groups were encouraged to propose new nursing questions to other groups. (4) Simulated Nursing Training: After the nursing student groups submitted their report materials, they carried out simulated nursing training based on the typical case. Each group assigned one student to play the role of the patient, while the remaining nursing students and teachers played the roles of nurses. The groups took turns performing simulated nursing tasks (i.e., the group playing the patient was cared for by other groups). During the simulation, the instructor continuously observed the nursing students' actions and promptly corrected any errors in their nursing behaviors. (5) Case Discussion Summary: After the group discussions and simulated nursing training, the instructor summarized the performance of each nursing student group, highlighting common nursing issues and praising outstanding

groups. After the summary, new questions were raised around the typical case, and the nursing student groups were asked to investigate the answers outside of class. The instructor could provide assistance to the students during their inquiry if necessary.

### 2.3 Observation Indicators

The analysis focused on the obstetric nursing comprehensive ability, learning motivation, and teaching satisfaction of the nursing students in both groups. (1) Nursing Students' Comprehensive Nursing Ability: Before and after the teaching, all instructors developed a test and scored the students based on their daily performance. The assessment was conducted in five areas: nursing problem analysis, service awareness, nursing assessment, nursing operation, and handling of emergency nursing events. The scores ranged from 10 to 100, with higher scores indicating stronger comprehensive abilities. (2) Learning Motivation: After the teaching, nursing students evaluated their own learning performance during the obstetrics training, including their learning motivation and the rate of good subjective efficacy. (3) Satisfaction with Teaching: After the teaching, nursing students rated their satisfaction with the teaching activities and the instructors. The scores ranged from 20 to 100, with scores above 80 indicating satisfaction. Satisfaction rates were then calculated.

### 2.4 Statistical Methods

The research data were collected by a designated person and processed using SPSS 24.0 software. Continuous data were expressed as ( $\bar{x} \pm s$ ), and inter-group comparisons were made using the t-test. Categorical data were expressed as n (%), and inter-group comparisons were made using the  $\chi^2$  test. A p-value of less than 0.05 was considered statistically significant.

## 3. Results

### 3.1 Comprehensive Nursing Ability

Before the teaching, there were no statistically significant differences between the control group and the observation group in terms of nursing problem analysis, service awareness, nursing assessment, nursing operation, and handling of emergency nursing events ( $P > 0.05$ ). After the teaching, the scores for nursing problem analysis, service awareness, nursing assessment, nursing operation, and handling of emergency nursing events in the observation group were significantly higher than those in the control group ( $P < 0.05$ ). See Table 1.

Table 1. Comprehensive Nursing Ability ( $\bar{x} \pm s$ ; Points)

Group	n	Nursing Problem Analysis		Service Awareness		Nursing Assessment		Nursing Operation		Emergency Nursing Event Handling	
		Before Teaching	After Teaching	Before Teaching	After Teaching	Before Teaching	After Teaching	Before Teaching	After Teaching	Before Teaching	After Teaching
Control Group	15	65.32 ± 1.26	85.22 ± 1.24	65.53 ± 2.11	84.02 ± 1.36	65.53 ± 2.18	84.02 ± 6.36	65.34 ± 1.18	84.22 ± 1.03	65.32 ± 1.23	84.22 ± 1.12
Observation Group	15	65.44 ± 1.54	89.41 ± 1.42	65.55 ± 2.36	89.56 ± 2.41	65.55 ± 2.26	89.54 ± 2.41	65.44 ± 1.52	89.56 ± 1.42	65.44 ± 1.41	89.31 ± 1.43
t	—	0.234	8.608	0.024	7.754	0.025	3.143	0.201	11.790	0.248	10.853
P	—	0.817	<0.001	0.981	<0.001	0.980	0.004	0.842	<0.001	0.806	<0.001

### 3.2 Learning Motivation and Teaching Satisfaction

After the teaching, the learning motivation, subjective effectiveness, satisfaction with teaching activities, and satisfaction with the teacher were significantly higher in the observation group compared to the control group ( $P < 0.05$ ). See Table 2.

Table 2. Learning Motivation and Teaching Satisfaction [n (%)]

Group	n	Learning Motivation	Subjective Effectiveness	Satisfaction with Teaching Activities	Satisfaction with Teacher
Control Group	15	8(53.33)	9(60.00)	9(60.00)	9(60.00)
Observation Group	15	14(93.33)	15(100.00)	14(93.33)	14(93.33)
$\chi^2$	—	6.136	7.500	4.658	4.658
P	—	0.013	0.006	0.031	0.031

#### 4. Discussion

Obstetric patients often present with unique and significantly varied conditions, requiring nursing students to actively identify problems and engage in learning during nursing interventions. This approach helps them better adapt to the demands of obstetric nursing and improve the quality of care. However, due to the strong awareness of patient rights among obstetric patients, nursing students often have limited opportunities to interact directly with patients during practical teaching sessions. Consequently, students are primarily reliant on observation and listening, which can lead to passive learning, disconnect between theory and practice, and hinder the enhancement of their comprehensive nursing abilities. The case discussion teaching method provides an effective solution by leveraging typical case studies. Through this method, nursing students can gain a deeper understanding of the characteristics of obstetric nursing work, the key focus areas for different patients, and their specific needs, even with limited patient resources. This approach promotes the development of comprehensive obstetric nursing abilities among nursing students, as supported by previous research [3].

The application of the case discussion method on the foundation of the conventional teaching model enriches obstetric nursing education by introducing innovative elements that stimulate nursing students' interest in learning. Through group discussions and analyses, students' ability to analyze and solve problems is enhanced, leading to improved comprehensive nursing skills. Liu Chang, Zhou Xin, and Liu Xiaowei [4] conducted a study on nursing students specializing in obstetrics and gynecology, utilizing different teaching methods. Their findings revealed that students taught through case discussion scored higher in problem-solving using required knowledge, addressing patient issues, and medical record writing. This suggests that the case discussion method plays a positive role in fostering comprehensive nursing competencies. Instructors, by integrating the unique aspects of obstetrics, select representative cases and formulate discussion topics aligned with the teaching syllabus. This approach enables nursing students to develop a deeper understanding of obstetric nursing knowledge through subsequent discussions, while also expanding their thinking capabilities. It cultivates students' ability to analyze and address nursing problems. Furthermore, pairing case discussions with simulated nursing training centered around these cases offers students opportunities to validate theoretical knowledge and nursing methods, effectively combining theoretical teaching with practical training. This method enhances students' nursing operations and emergency nursing event handling abilities. The results of this study indicate that, after teaching, the scores for nursing problem analysis, service awareness, nursing assessment, nursing operations, and emergency nursing event handling in the observation group were significantly higher than those in the control group ( $P < 0.05$ ). During case discussion-based teaching, students' central role is fully respected, and they are encouraged to engage in independent exploration and analysis, which improves their subjective efficacy. By enriching the traditional teaching model, the case discussion method provides nursing students with novel learning stimuli, meeting their learning needs while increasing their satisfaction with teaching activities and instructors [5]. The findings of this study further demonstrate that, after teaching, learning enthusiasm, subjective efficacy, satisfaction with teaching activities, and satisfaction with instructors in the observation group were significantly higher than those in the control group ( $P < 0.05$ ).

#### 5. Conclusion

In summary, the case discussion method, when applied to the traditional obstetrics nursing teaching model, not only significantly improves nursing students' comprehensive abilities in problem analysis, service awareness, and nursing evaluation, but also enhances their learning motivation and satisfaction with the teaching. Given its positive teaching effects, the case discussion method has good potential for widespread application.

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