

The development and effect evaluation of on-line probation in obstetrics and gynecology nursing in the context of Covid-19

Lifang He^{1,a}, Bingqing Yi^{1,b}, Chi Tuo^{1,c}, Jun Liu^{1,d}, Yongmei He^{1,e}, Pan Li^{1,f,*}

¹School of Nursing, Xiangnan University, Chenzhou, China

^a937994755@qq.com, ^b1469093631@qq.com, ^c2316671617@qq.com, ^d2075395769@qq.com,
^e478194091@qq.com, ^f278369323@qq.com

*Corresponding author

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Abstract: To explore the effect of network-based on-line probation in obstetrics and gynecology during the special period of Covid-19, the convenience sampling method selected 71 three-year sophomore nursing students as the research object, carried out online probation on TengXun conference platform, and used self-designed teaching effect evaluation questionnaire to evaluate the teaching effect./After probation, students' satisfaction on probation time arrangement, content arrangement, teaching preparation, teaching methods adopted, college teachers and clinical teachers were 90.14%, 92.96%, 98.59%, 97.18%, 94.37%, 94.37%, respectively. The overall evaluation of the completion of learning objectives and online probation reached 92.96% and 94.37%, respectively. Nursing students have a high degree of satisfaction with the teaching effect of online probation in obstetrics and gynecology nursing.

1. Introduction

Clinical nursing probation is an important part of nursing teaching, which is the transition stage of nursing students from classroom theoretical learning to clinical practice. By realizing students' early contact with clinical practice, it plays an important role in cultivating nursing students' clinical thinking ability, improving their self-learning ability and enhancing their professional identity. Affected by the COVID-19 pandemic in 2019, universities have responded to the call of the Ministry of Education to suspend face-to-face teaching and carry out a variety of online teaching [1]. In September 2020, the China education experts' forum proposed that that "experience of large-scale online teaching in all kinds of schools should be summarized since the COVID-19 pandemic, and information technology should be used to update educational concepts and change educational models" [2]. At present, the construction of online courses in China mainly focuses on theoretical courses, and there are few related research reports on probation and practical courses. Therefore, this study discusses the implementation and effect of online probation teaching of obstetrics and gynecology nursing, aiming at providing reference for online teaching of practical courses in the

future.

2. Materials and methods

2.1. Participants

The convenience sampling method was adopted to study 71 three-year sophomore nursing students in our school. All of the students had online probation of obstetrics and gynecology nursing in May 2020. Inclusion criteria: ①Voluntary participation in the study; ②Complete the course of obstetrics and gynecology nursing theory.

2.2. Develop an online probation program

Table 1: Online probation teaching arrangement of obstetrics and Gynecology nursing.

Teaching arrangements	The first class	The second class	The third class	The fourth class	The fifth class
Teaching objectives	Understand the content, format and schedule of the online probation.	Master the assessment and nursing of early, middle and late pregnancy; Master care during delivery.	Master postpartum care and newborn care; Master postpartum bleeding care.	Master common gynecological diseases (reproductive system inflammation, tumor) care.	Summarize the probation harvest and teaching feedback.
Teaching content	The specific arrangement of online probation, probation matters needing attention	Pregnancy diagnosis, prenatal examination, pregnancy management, delivery care	Postpartum care, neonatal care, postpartum hemorrhage patients evaluation, rescue and nursing	Common gynecological diseases and perioperative nursing	probation harvest sharing, teaching effect feedback
Teaching method	Online video explanation, distribution of teaching materials	Online video teaching, live operation video, online question-and-answer	Online video lecture, live operation video, case analysis, group discussion and report, online question-and-answer	Online video lecture, cloud consultation, case analysis, group discussion and report, online question-and-answer	Share and answer questions online
Responsible department	College Teaching and Research Office	Antenatal ward	Postpartum ward	Gynecological Ward	College Teaching and Research Office
Credit hours (h)	2	4	4	8	2

The clinical apprenticeship of the Obstetrics and Gynecology Nursing course covers the apprenticeship of obstetrics and gynecology, with a total of 20 credit hours. The teaching design and organization are completed jointly by the faculty and clinical teachers. Probation content (Table 1) : The obstetric part includes management of women during pregnancy and childbirth and nursing of women and newborns during puerperal period; the gynecological part includes nursing of common gynecological diseases (inflammation of reproductive system and tumor).probation teaching method (Table 1) : The whole probation course is carried out on Tencent conference platform, in which the live broadcast of operation video includes the live broadcast of ward environment, nursing daily work content, common drugs, introduction of specialized equipment and specialized operation video; Online question-answering refers to answering students' questions online after the completion of each probation content; Cloud consultation refers to taking medical

history by communicating with patients via video; Group discussion and report included emergency treatment of postpartum hemorrhage in obstetrics and nursing of gynecological patients with uterine fibroids. The online sharing before the end of the probation mainly shares students' learning gains and shortcomings during the probation, including knowledge and skills and nursing professional value. Probation process management: In the first probation period, the college teacher will explain the form, specific content and time arrangement of online probation, emphasize the notes in the probation process, and distribute the electronic teaching materials to be used in the probation process. The probation in the ward concerned was conducted by a clinical teacher with the full assistance of a faculty member. The main tasks of college teachers include recording students' attendance, maintaining classroom discipline, mobilizing students' enthusiasm, assisting clinical teachers in making teaching arrangements, organizing and listening to student case reports and giving comments. Before the end of the probation, the online sharing and Q&A were organized by the college teachers, and the clinical teachers participated together, and the students made anonymous evaluation on the teaching effect.

2.3. Evaluation of teaching effect

On the basis of reference [3-4], we designed the teaching effect evaluation questionnaire by ourselves. The content includes the overall satisfaction of the online probation, the degree of completion of the learning objectives, the satisfaction of the probation time arrangement, the satisfaction of the probation content arrangement, the satisfaction of the teaching preparation before the probation, the satisfaction of the teaching method adopted in the process of the probation, the evaluation of teachers, suggestions and suggestions for improvement. The evaluation of the teaching effect was carried out in the last class by anonymous e-questionnaire.

2.4. Statistical analysis

SPSS18.0 statistical software was used to conduct descriptive statistics on the data. The count data were expressed in frequency and percentage, and the measurement data were expressed in mean \pm standard deviation.

3. Results

3.1. General characteristics of the participant of study

71 students participated in the online probation of obstetrics and gynecology, ranging from 19 to 21 years old, with an average age of (19.62 \pm 0.64) years old; There were 68 females (95.77%) and 3 males (4.23%).

3.2. Student evaluations of online apprenticeships

The students evaluated the teaching effect of online probation of obstetrics and gynecology nursing well, and the satisfaction of probation time arrangement, content arrangement, teaching preparation, teaching method adopted, college teachers and clinical teachers were 90.14%, 92.96%, 98.59%, 97.18%, 94.37%, 94.37%, respectively. The degree of completion of learning objectives and the overall evaluation of online probation reach 92.96% and 94.37% respectively, as shown in Table 2. Students believe that the achievement of learning objectives is mainly reflected in: The authenticity of the clinical environment was restored (71/71, 100%), the theoretical knowledge in the classroom was consolidated (69/71, 97.18%), the ability of clinical thinking was cultivated

(60/71, 84.51%), the nursing skills in obstetrics and gynecology were familiar (58/71, 81.69%), and the ability to analyze and solve problems was enhanced (50/71), 70.42%). In addition, students also gave some feedback in the survey, mainly focusing on the tight schedule of the course content, which affected the cooperation and participation of online group members compared with offline probation.

Table 2: Students' evaluation of online probation teaching effect. [n=71, n (%)]

Project	Satisfied	Relatively satisfied	Not satisfied
Satisfaction with the probation schedule	64(90.14)	3(4.23)	4(5.63)
Satisfaction with the arrangement of probation content	66(92.96)	2(2.82)	3(4.23)
Satisfaction with pre-apprenticeship teaching preparation	70(98.59)	0	1(1.41)
Satisfaction with the teaching methods adopted in the probation process	69(97.18)	0	2(2.82)
Overall evaluation of the faculty of the college	67(94.37)	3(4.23)	1(1.41)
Overall evaluation of clinical teachers	67(94.37)	3(4.23)	1(1.41)
Evaluation of completion of learning objectives	66(92.96)	4(5.63)	1(1.41)
Overall satisfaction	67(94.37)	2(2.82)	2(2.82)

4. Discussion

4.1. Students have higher satisfaction with online probation

The results of this study showed that students had high satisfaction with the teaching arrangement, teaching methods, teachers' teaching work, goal achievement degree and overall evaluation of online practice of obstetrics and gynecology nursing. It can be seen that this online probation explores the effective application of cloud probation mode relying on network tools in clinical probation of obstetrics and gynecology nursing in the special period of the COVID-19 pandemic, breaks the restrictions of time and space on teaching, and gives full play to the advantages of the concept of "student-centered" "Internet + education". In the process of probation, teaching methods such as teaching, case analysis, discussion and report, question-answering and sharing are integrated, which can not only strengthen the interaction between teachers and students and enlivens the classroom atmosphere, but also enhance students' interest in active learning and independent learning ability, and also contribute to the cultivation of students' relevant abilities. Relevant studies [5] also show that good interaction between teachers and students has a direct positive impact on students' satisfaction and can improve students' online experience.

4.2. Experience can be learned from the development of online probation

The successful implementation of this online probation is due to the close cooperation between the school and the hospital. The hospital cooperating with this online probation is directly affiliated to our school. The clinical teachers are all head nurses with rich experience in nursing work and clinical teaching or the backbone of nursing education. At the same time, the hospital attaches great importance to the quality of nursing practice teaching, and conducts regular teaching and research activities with the school of nursing to improve the teaching ability of clinical teachers. The school also provides opportunities for clinical teachers to learn and participate in teaching competitions. Therefore, clinical teachers and college teachers are familiar with each other, have the same understanding of teaching methods and teaching concepts, and have the ability to complete online probation teaching together. Secondly, college teachers play an important role in teaching management and classroom atmosphere in the process of probation. Online teaching largely

depends on students' consciousness. Relevant surveys show that only 32% of students in online teaching listen to lectures carefully, about 63% of students are absented occasionally, and even mobile phones are online or people are not online, and only 10% of students participate in discussion and communication, making it difficult to control the teaching situation of online classroom^[6]. Therefore, due to the lack of face-to-face supervision and interaction in the web-based classroom, teachers need to give better consideration to each student and ensure that students can participate in the classroom^[7], which may be difficult for teachers to fully take into account by themselves. It is a good choice for a college teacher who is familiar with the students to pay attention to the status of the students in class in real time, give timely reminders and encourage the students to participate in the communication and discussion. In addition, online probation also needs to pay attention to the protection of patients' privacy, especially the particularity of obstetrics and gynecology nursing work itself, the protection of patients' privacy is more sensitive. Therefore, before the probation, I explained to the patients in the ward for understanding, selected typical patients who were willing to cooperate to participate, screened the relevant shooting and video, and informed the students not to spread the information, photos and video clips of the patients online.

4.3. The problems that need to be solved further in the development of online probation

In this probation also found some problems. First of all, the probation time is relatively insufficient, as students' feedback mentioned that the time arrangement is relatively tight. In fact, in order to ensure the quality of probation, the time arrangement of this probation has exceeded the 10 class hours set in the syllabus. Part of the time crunch is because of the online apprenticeship and all the students taking classes together, student discussion report, cloud consultation, online question and answer time allocated to each student is very little; On the other hand, it takes more time for teachers to explain the ward environment, nursing daily work content and specialist operation through live broadcast than it does for students watching the live broadcast. Therefore, the reasonable arrangement of online practice teaching time should be considered in the formulation of the syllabus in the future. Secondly, compared with offline probation, the cooperation and participation among online group members are affected. The advantage of group discussion teaching lies in the cultivation of students' ability of independent learning and team assistance through free communication and collision of thinking^[8]. Therefore, it is necessary to explore ways suitable for carrying out complete online discussion activities to ensure the interaction among group members. In addition, although the network teaching can demonstrate the complete operation and teach the key points of the operation, it cannot replace the clinical practice operation, which can be made up by the virtual simulation training system.

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