Pisco Med Publishing

Original Research Article

Application of Standardized Patients in Clinical Practice Teaching of Thyroid and Breast Surgery

Xulong Zhu[1, 2], Binliang Huo[1], Qingxia Zhao[1], Lingguo Wang[1], Jia Ma[1]

1. Shaanxi Provincial People`s Hospital, Xi an 710068, China

2. School of Life Science and Technology, Xi'an Jiaotong University, Xi'an, 710049, China,

Abstract: Objective: To study and analyze the application effect and practical value of the standardized patient teaching method in clinical practice teaching of thyroid and breast surgery. Methods: According to the exclusion and inclusion requirements, 30 students from Xi'an Medical College and Medical School of Yan'an University who practiced in the Department of Thyroid and Breast Surgery during January 2020 to December 2021 were selected as the research objects, together with 100 standardized patients. Two groups were formed according to the blind method, with 15 and 50 objects in the control group who were taught by traditional practice teaching methods, while 15 and 50 objects in the experiment group and taught by the standardized scenario simulation teaching method. After standardized teaching, the clinical thinking ability, mastery of treatment knowledge and teaching satisfaction of the two groups of students were compared, and the treatment efficiency of patients was compared. Results: After the implementation of different teaching methods, the clinical thinking ability, theoretical and practical knowledge of the experimental group were significantly improved, with higher teaching satisfaction and higher effective rate of treatment. The difference of relevant indicators was statistically significant ($P < 0.05$). Conclusion: In the practice teaching of therapeutic skills, adopting the standardized scenario simulation teaching method is effective and valuable in practical application.

Keywords: Standardized Patient Teaching Method; Clinical Practice Teaching; Satisfaction; Clinical Thinking Ability; Mastery of Treatment Knowledge

Fund projects: Xi`an City Innovation Ability Enhancement Basic Plan, Medical Research Project,(21YXYJ0092); Clinical Research Fund of Wu Jieping Medical Foundation,(320.6750.2021-10-39); Clinical Research Center for Breast Diseases of Shaanxi Province, (S2021-0-ZC-LCZX-0002).

Thyroid and breast surgical diseases are diversified and complicated. In clinical treatment, efficient treatment is of great significance to improve the prognosis of these diseases. Clinical interns are an important reserve of talents; hence it is necessary to improve students' theoretical and practical knowledge reserve by effective teaching methods. The standardized patient teaching method has been a widely concerned teaching method in recent years, which combines standardized patients, scenario learning and simulation teaching. It can effectively help students develop good treatment behaviors, correct wrong treatment behaviors in time, constantly strengthen clinical treatment logic, master clinical treatment knowledge and theory, and ensure that students possess strong treatment ability and the ability to deal with various situations when participating in actual treatment work[1]. This article focuses on the effect and practical application value of the standardized patient teaching method on clinical teachers' teaching ability and the satisfaction degree in clinical practice teaching. The research details are as follows.

1. Material and methods

1.1 General information

According to exclusion and inclusion requirements, 30 students from Xi'an Medical College and Medical School of Yan'an University who practiced in the Department of Thyroid and Breast Surgery, Shaanxi Provincial People's Hospital during January 2020 to December 2021 were selected as the research objects, together with 100 standardized patients. They were divided into two groups according to the double-blind method, and the general data had no statistical significance ($P > 0.05$). The data were compared as follows. (1) In terms of students, the ratio of male to female students in the experiment group is 4/11, with an average age of (23.7 ± 0.8) years; that in the control group is 4/11 and (23.9 ± 0.9) years, respectively. (2) As for patients, all patients are female; the average age of the experimental group is (40.1 ± 5.5) years, and that of the control group is (40.3 ± 5.7) years. All students were informed of and agreed to this experimental study, and signed the informed consent form.

1.2 Methods

1.2.1 Control group

The students of the control group were taught by traditional teaching methods according to the requirements of the teaching

doi: 10.18282/l-e.v10i8.3064

syllabus, that is, they received classroom teaching in class, then practiced in groups, and teachers guided and explained, with models or group members as simulation objects. After analyzing the simulation process, teachers concluded the key points and gave supplements.

1.2.2 Experimental group

The students in the experimental group were taught by the standardized patient teaching method, with the following contents.

(1) Setting teaching objectives. Teachers analyzed the teaching requirements, and set teaching objectives. Standardized patient scenario simulation teaching objectives include: 1) students can correctly understand and master the theoretical knowledge involved in simulation teaching cases, as well as relevant treatment measures and skills. 2) Students can correctly evaluate and deal with patients' condition. 3) Students can effectively sort out related information and materials, and realize the combination of knowledge and treatment practice. 4) Students have a strong consciousness of patient-friendly and dedication, and professional qualities. 5) Students have strong ability to deal with clinical matters of sudden urgency.

(2) Setting scenarios. Case scenarios were selected according to the teaching syllabus and objectives. Simulated cases such as diagnosis and treatment of benign breast tumors, thyroid cancer surgery, and breast cancer chemotherapy were selected. The cases selected should be general, representative, and standardized. According to the requirements of experimental class, department directors, therapeutic teaching experts, and related research groups cooperated to set up simulated scenarios for students.

(3) Preparation of the simulated laboratory and standardized patients. The simulated hospital was taken as the experimental site, and teachers acted as standardized patients according to the standardized patient training program. The training and simulated education were carried out. After passing the training, they participated in scenario simulation.

(4) Practice teaching. Before the teaching started, students were given the outline of cases and scenario scripts, so that they could make adequate preparation in advance accordingly in groups, including stimulating hospital and classroom conditions, and learning relevant knowledge from CNKI. Then, they made presentations in groups. After mastering the basic information, they simulated real-life treatment. The complete process of scenario simulation consisted of scenario reproduction, practice, and guidance by teachers and standardized patients.

(5) Feedback and comments. Patients' comfort degree, students' communication ability, and the use of consultation skills were taken as judgment standards of standardized patients, and practical operations including treatment operation, treatment steps, and implementation of emergency treatment were taken as judgment standards of teachers.

1.3 Observation indicators

(1) Clinical thinking ability. According to the evaluation index system of clinical thinking, the students' critical thinking, evidence-based thinking and systematic thinking were observed and analyzed, with a total score of 15–150. The higher the score, the stronger the students' clinical thinking ability, and vice versa.

(2) Mastery of treatment knowledge. According to the objective structured clinical examination, the students' mastery of theoretical and practical knowledge was analyzed, with a perfect score of 50 for each aspect and a total score of 100. The higher the score, the better the students' mastery of treatment knowledge, and vice versa.

(3) Teaching satisfaction. Based on the satisfaction questionnaire complied according to the Bloom's Taxonomy, students' teaching satisfaction degree on knowledge, skills and emotions was analyzed, which was rated as satisfactory, fairness and unsatisfactory. Teaching satisfaction = satisfaction rate + fairness rate.

(4) Effective rate of treatment. Teachers evaluated the treatment strategy and observed the effective rate.

1.4 Statistical methods

The data were analyzed by the SPSS23.0 software. T-test was adopted for the comparison of measurement data and it was expressed by (). The rate counting data were tested by χ^2 test and expressed by rate (%). $P < 0.05$ refers to significant difference.

2. Results

2.1 Clinical thinking ability

The clinical thinking ability of the two groups of students was analyzed. The score of the experimental group was significantly higher than that of the control group, and the difference was statistically significant ($P < 0.05$). The data were as follows: the total clinical thinking ability score of the experimental group was (94.7 ± 2.2) and that of the control group was (86.1 ± 4.8), ($t = 6.308$, $P = 0.006$).

2.2 Mastery of treatment knowledge

The theoretical knowledge and practical knowledge of the two groups of students were evaluated by standardized examination. The score of the experimental group was significantly higher, and the difference was statistically significant ($P < 0.05$). The data were as follows: the theoretical knowledge score of the experimental group was (47.4 ± 2.6) and that of the control group was (45.2 ± 1.3), ($t = 2.931$, $P = 0.014$); the practical knowledge score of the experimental group was (48.8 ± 1.2) and that of the control group was (45.1 ± 2.6), ($t = 5.004$, $P = 0.006$).

2.3 Students' teaching satisfaction

Teaching satisfaction degree in the experimental group was significantly higher, and the difference was statistically significant ($P < 0.05$). The data were as follows: there were 15 cases (100.0%) of satisfactory in the experimental group, while 11 cases (73.3%) in the control group, ($\chi^2 = 4.615$, $P = 0.032$).

2.4 Effective rate of treatment

Effective rate of treatment in the experimental group was significantly higher, with statistically significant difference. The data were as follows: the effective rate in the experimental group was 50 cases (100.0%), and that in the control group was 42 cases (84.0%), ($\chi^2 = 8.696$, $P = 0.003$).

3. Discussion

China's public health system has developed rapidly in recent years, with increasing demand for clinical medical talents, and constantly improving requirements. Especially in the post-epidemic era, China has put forward higher teaching requirements for clinical medical treatment. It is an important reform aspect to cultivate high-quality applied health professionals in current clinical practice teaching, and a new teaching method is imperative. The knowledge of thyroid and breast surgery is numerous and complicated, and it is difficult for students to master the concepts through traditional teaching, resulting a lack of motivation to learn. Moreover, there are many kinds of diseases in clinical practice, with high paroxysms. The traditional practice time is too short for students to practice, which may lead to the discrepancy of theory and practice.

The standardized patient teaching method has obvious advantages in clinical practice teaching. First of all, this method can help students improve various thinking abilities, including critical thinking ability, systematic thinking ability and evidence-based thinking ability. The enhancement of these abilities can improve their comprehensive clinical ability and they can have a clear thinking system in dealing with complex scenarios[2]. Secondly, this teaching method displays the case scenarios vividly, in which students can purposefully inquire and master knowledge, and turn passive learning into active exploration. It can effectively deepen students' application depth of knowledge and broaden their cognitive level. Standardized patient teaching is a dynamic teaching mode, based on students' theoretical knowledge and skills, and oriented by focusing on cultivating students' combination of theory and practice. It ensures that students can cultivate basic skills, humanistic quality, and thinking ability during the operation[3]. According to this research, taught by different teaching methods, the clinical thinking ability of the experimental group has been significantly improved, and mastery of theoretical and practical knowledge has been significantly improved, with higher teaching satisfaction degree, and higher effective rate of treatment. The difference of related indicators is statistically significant ($P < 0.05$).

To sum up, adopting the standardized patient scenario simulation teaching method in clinical practice teaching can effectively create a simulated environment for students, thus effectively improving their clinical thinking ability, improve the theorical and practical treatment knowledge, and significantly improve the teaching satisfaction. The overall satisfaction degree of the teaching method is high, and the effect is positive. Therefore, it has practical value.

References:

[1] Zhang Q, Li R, Li Y, et al. Application of CBL combined with standardized patients in breast surgery probation teaching. Science & Technology Information 2020; 18(33): 179–182.

[2] Xiang H, Wang Y, Wang H. The teaching effect of standardized patient situational simulation teaching in practical teaching. Education and Teaching Forum 2020; (21): 228–229.

[3] Wang Z, Bao X, Zhao W, et al. Application and significance of standardized patients in clinical practice teaching of obstetrics and gynecology (in Chinese). Invention and Innovation (Vocational Education) 2021; 4(4): 122, 124.