

The Application of BOPPPS Effective Teaching Structure in the Teaching Practice of General Surgery

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Abstract: Objective: To study the application effect of BOPPPS effective teaching structure in general surgery teaching. **Methods:** 63 practical students received in our hospital were divided into two groups - experimental group (n=32) and control group (n=31), which were treated with BOPPPS effective teaching structure and traditional teaching mode respectively, and then the teaching effects of the two groups will be compared. **Results:** The results of case analysis and clinical operation in the experimental group were higher than those in the control group, and the preparation time before class was longer than that in the control group, and the number of active speech was more than that in the control group, and the teaching effect was higher than that in the control group. The difference was statistically significant ($P < 0.05$). **Conclusion:** The effective teaching structure of BOPPPS in general surgery teaching can obtain remarkable effect and high teaching satisfaction.

1. Introduction

With the support of scientific educational theory and clear teaching steps, BOPPPS teaching mode is considered to be an effective teaching method to maximize the realization of "student-centered, teacher-centered" education concept. Carrying out the BOPPPS teaching mode in the course of cross-cultural communication makes a beneficial attempt on the cultivation of cross-cultural communicative competence. This paper mainly studies the application of BOPPPS teaching model in general surgery.

2. Data and Methods

Clinical data. From December 2016 to December 2017, 63 intern students received in our hospital from were selected as the research objects, and were grouped according to the random digital grouping method. There were 32 cases in the experimental group, 17 males and 15 females, aged 22 to 27 years, with an average age of (23.16 ± 2.15) years. The control group consisted of 31 patients, 16 males and 15 females, with an average age of (23.41 ± 2.24) years. There was no significant difference between the two groups ($P > 0.05$).

2.1 Method.

In the control group, 31 cases were treated with traditional teaching-centered teaching method. The specific measures were as follows: after the intern students came to the hospital, the clinical teaching teachers led them to familiarize themselves with the environment of the ward, and then the department education was carried out. Introduce the relevant regulations and requirements for students, including clinical teaching regulations, teaching objectives, teaching plans, etc., and carry

out targeted guidance. In the practice process, a "one-to-one" model is adopted. Each student is responsible for 2 patients. In teaching rounds, the teaching is fully combined with specific cases. BOPPPS teaching mode was used in 32 patients in the experimental group. First, set up problems and guide students to think. On the basis of completing the traditional teaching, we set up general surgical problems with strong pertinence and high specialty for the students, such as "what are the indications of laparoscopic intestinal adhesion release", so as to guide the students to think, sometimes we also can set up multiple questions each week for students to think about. Second, use the case to train the student's thought. In the course of teaching rounds, we can sort out some typical cases of general surgery in advance, referring to the actual situation of practice students and the latest research trends of clinical medicine. Setting up the template which not only accords with the actual situation of the practice students but also has the divergent function to guide the student to take the case as the core, unify the question to look for the best answer. When the students have enough understanding on the case and grasp the relevant problems, they can guide the students to carry out practical exercises, refer to the information collected and the knowledge they have learned. In this process, the teachers should guide the students to carry out all aspects. Through the teacher's guidance and full discussion, the intern students solved various difficult problems. Teachers should sum up the students' performance objectively and put forward valuable suggestions.

2.2 Statistical methods.

Using SPSS19.0 software for statistical processing, including case analysis scores, clinical performance, pre-class preparation time, active speaking times expressed by (mean±standard deviation), t test was used, teaching satisfaction was expressed by (n, %), χ^2 test was used, $P<0.05$, the difference is statistically significant.

3. Results

3.1 Comparison of teaching results.

In the experimental group, the score of case analysis was (94.42±2.65), the score of clinical operation was (92.26±2.57), the time of preparation before class was (114.31 ±30.15) min, active speaking times was (31.3±4.12); In the control group, the score of case analysis was (84.11±2.13), the score of clinical operation was (82.14±2.06), the time of preparation before class was (68.15±15.38) min, active speaking times was (13.67±3.65). The scores of case analysis and clinical operation in the experimental group were higher than those in the control group, the preparation time before class was longer than that in the control group, the number of active speech was more than that in the control group, and the teaching effect was higher than that in the control group. The difference between the two groups was statistically significant ($P<0.05$).

3.2 Comparison of teaching satisfaction.

In the experimental group, 24 cases were satisfied, 7 cases were basically satisfied, 1 case was unsatisfactory, and the teaching satisfaction was 96.88%. In the control group, 13 cases were satisfied, 10 cases were basically satisfied, 8 cases were not satisfied, and the teaching satisfaction was 74.19%. The teaching satisfaction of the experimental group was significantly higher than that of the control group, and the difference between the two groups was statistically significant ($P<0.05$).

4. Discusses

Effective teaching design has troubled educational experts and practitioners for a long time. Traditionally, it is regarded as an effective teaching design for teachers to complete teaching tasks within a specified time. However, the teacher-centered teaching process often ignores another teaching subject - acceptance effect of students. With the instillation of "student-centered, teacher-centered" educational concept, the core evaluation elements of effective teaching design focus on the learner's learning effect, and also cover the learner's cognition, skills and emotion. The

cultivation of modern college students with an international perspective has become the primary teaching goal. In order to achieve the three comprehensive goals of emotion, action and cognition, which originated in Canada and developed in Canada and the United States, the BOPPPS teaching model is about the effectiveness of 45 minutes of each class. Combined with the comprehensive application of the attention degree and effective teaching method of both teachers and students, it is proposed for the first time that the teaching goal should be taken as the center, the classroom time should be reasonably planned, the students' participation should be strengthened, and the classroom teaching effect should be improved. The BOPPPS teaching model is mainly composed of six steps, such as Bridge-in, Objective, Pre-assessment, Participatory-learning, Post-assessment, Summary. The practice shows that the effective teaching model of BOPPPS can achieve the "student-centered" teaching goal.

Any form of classroom teaching can not be separated from the participation of teachers and students, the support of teaching content and teaching resources, and the organizational form of teaching activities. According to American educator Edgar Dale's memory pyramid theory, different classroom organization methods make students achieve different learning effects. The learning effect of passive learning process in traditional classroom is the worst, and the students' memory level is below 30%, while group learning, active learning and participatory learning have better learning effect, and students' learning and memory degree is more than 50%. Therefore, in the process of implementing BOPPPS, participatory learning is one of the keys to effective classroom teaching. From the point of view of the material elements to realize the teaching activities of BOPPPS model, the physical carrier of realizing the information interaction between teachers and students in BOPPPS classroom is the teaching design scheme of teachers about the classroom. The outstanding feature is the introduction of a series of closed-loop feedback evaluation links.

Effective BOPPPS teaching is a student-centered teaching model based on constructivism and communicative approach. It is a teaching method adopted by many famous Canadian universities in recent years. At present, BOPPPS teaching method is mostly used in teachers' teaching skills training, but the research of applying this method to practical teaching is relatively few. There are two core points: one is to emphasize students' all-around participatory learning instead of just listening to lectures, and the other is to get students' feedback information in time to adjust the follow-up teaching activities.

General surgery is a large clinical department, which involves the treatment of multiple systemic diseases, so students need to master more knowledge points and a wide range of knowledge. In addition, the complexity of knowledge content is also an important feature of the subject, and these have a greater impact on the students' enthusiasm for learning, which can lead to a sense of slackness in the study of students. Therefore, the choice of teaching mode of general surgical knowledge should be more careful, and students' interest in learning should be promoted in an all-round way to achieve the goal of improving the final teaching effect. The targeted teaching mode is based on the differences between different students' learning. According to the learning characteristics and needs of each student, it combines the individualized treatment with the whole examination to deal with the teaching mode and process, so as to achieve a better effect of knowledge imparting. In general surgery teaching in hospital, the traditional teaching method is LBL teaching. This teaching method is centered on teaching, and it is easy to ignore the students' ability of case analysis and problem-solving, and fails to combine medical basic knowledge with clinical skills organically. Therefore, the teaching effect is not obvious enough, and there are some limitations in the teaching of general surgery.

5. Summary

The purpose of this study is to analyze the application effect of BOPPPS effective teaching structure in general surgery teaching. According to the results of the study, the results of case analysis in the experimental group were higher than those in the control group, the preparation time before class was longer than that in the control group, the number of active speeches was more than that in the control group, and the teaching effect was higher than that in the control group. Therefore,

the difference is statistically significant ($P<0.05$). The teaching satisfaction of the experimental group was 96.88, which was higher than that of the control group (74.19). Therefore, the difference between the two groups is statistically significant ($P<0.05$). It shows that the effective teaching structure of BOPPPS applied to the teaching of general surgery can achieve remarkable results, and the teaching satisfaction is higher, which is worth popularizing and applying in the teaching of general surgery.

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