

Application of TBL teaching method in perioperative teaching under the concept of multidisciplinary joint diagnosis and treatment

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Abstract: Whether a clinician is excellent or not depends not only on his professional level, but also on his teamwork ability. This poses a greater challenge to clinical teaching. This paper aims to explore the teaching methods of perioperative teaching under the concept of multidisciplinary joint diagnosis and treatment. By combining the network teaching platforms such as rain classroom and bisection, TBL teaching method is applied to classroom teaching, which has good teaching effect and can better cultivate students' active inquiry ability and knowledge application ability. Fully implementing the concept of multidisciplinary joint diagnosis and treatment has important reference value for the development of teaching reform in related disciplines.

Keywords: TBL teaching method; Multidisciplinary joint diagnosis and treatment; reform in education; Perioperative period

1. Introduction

How to train a comprehensive clinician puts forward further requirements for the residential training of clinical departments. Whether a clinician is excellent or not depends not only on his professional level, but also on his teamwork ability. The close cooperation of the whole operation team can reduce the patient's pain and medical loss, and make the patient spend the whole perioperative period more comfortably; Clinicians leading the whole perioperative period should pay more attention to the whole perioperative team cooperation, and pay attention to the progress and outcome of disease treatment of patients in the whole perioperative period. The success of an operation requires the complete cooperation of multiple roles such as clinical departments, clinicians, nurses, anesthesiologists, testers and even nursing workers. Such a clinical work mode poses a greater challenge to clinical teaching. Traditional clinical teaching can only be completed by teachers of various disciplines independently. This inconsistency between the clinical working mode and teaching mode will limit the development of students' clinical thinking. The research shows that the improvement of clinical thinking ability can play a role of theory guiding practice for the improvement of clinical professional ability in the future; The application degree and efficiency of clinical thinking can directly reflect the ability of clinicians to recognize and deal with diseases. How to consider the outcome process of the patient's disease as a whole and make the patient's state reach the process from the cure of local disease to the recovery of systemic function [1]. Therefore, it is urgent to carry out perioperative teaching reform to adapt to the rapid technological innovation of clinical departments.

2. Overview of TBL teaching method and existing problems

TBL teaching method (team based learning, referred to as TBL) is team based learning, which regards class students as a large team and then decomposes them into small teams with different tasks. Therefore, it is also called team oriented learning. It is an innovative teaching strategy and mode that emphasizes learning initiative. It can not only effectively improve students' academic performance, but also cultivate students' active inquiry ability, language expression ability and logical thinking ability. [2] With the goal of improving students' comprehensive qualities such as independent inquiry, cooperative learning,

language expression and communication ability, study by means of self-study, discussion, thinking and expression, and try to solve a specific problem. Give back the learning leadership to students fully, and teachers are the guides and promoters of learning.

However, in the application of TBL teaching method, although some problems of learning initiative and team cooperation have been solved, there are still some areas to be improved [3]. First of all, students' knowledge after class is relatively loose, and they are not able to do systematic sorting under the multi-disciplinary background. The mastery of students' self-study knowledge belongs to one of the blind spots in teaching, which can only rely on students' consciousness or teachers' random inspection. Secondly, task allocation and teaching discussion need to consume more teaching resources and time. At the same time, most students cannot participate in the classroom. Finally, the results discussed in class cannot be presented repeatedly. Since 2016, this study has tried to explore the use of rain classroom and bisection to carry out TBL teaching reform. For the immediate effect of classroom, TBL teaching method based on modern teaching technology can significantly improve the classroom atmosphere, good interaction between teachers and students, high enthusiasm of students' participation, save a lot of classroom time and maximize the efficiency of classroom. At the same time, it can better solve the above three problems, which fully shows that this method has significant advantages in improving learning efficiency and improving students' comprehensive quality.

3. Implementation steps of teaching reform

3.1. Design the teaching situation and determine the teaching points and contents

The perioperative teaching involves several different links such as "before operation", "during operation" and "after operation". Each link has its own teaching characteristics. Generally speaking, TBL teaching method can be used for other contents except the "general introduction"

The presentation of real cases is undoubtedly the most convenient and effective situational design. In the implementation process, first introduce a real case, a patient who needs surgical intervention. In the case, give the patient's imaging examination and laboratory examination results, and design different perioperative scenes according to teaching situations. The connection between outpatient and resident doctors, preoperative medical history evaluation, nursing evaluation and nutritional evaluation, surgical posture, anesthesia cooperation, intraoperative cooperation and surgical records; For postoperative anesthesia recovery, drainage tube management, observation of surgical complications, discharge guidance, etc., all the contents involved in the project will be included in the E-Book Package for students to consult.

3.2. Establish a TBL team and assign problems and tasks to the team

Students will be grouped according to the learning situation of students' early courses, and group cooperative learning will be carried out in groups, so as to realize the team to solve problems together. So how to group is very important. Generally speaking, there are two methods of TBL grouping, one is homogeneous grouping. That is, students with similar information processing ability and knowledge mastery level are divided into the same group, which is convenient for teaching in groups with different ability levels. At the same time, the learning ability of members in groups is similar, which is easier to improve learning efficiency. This grouping method is characterized by small differences within groups and large differences between groups. The second is heterogeneous grouping, that is, students with different information processing ability and knowledge mastery level are divided into the same group, which is convenient for cooperative learning between groups, and can lead the weak with the strong, but also conducive to learning and complementarity within the group. This grouping method is characterized by great differences within groups and small differences between groups. For TBL teaching, the two grouping methods have their own advantages and disadvantages, and there are many projects that need dialectical thinking for this content, and each project content has a certain difficulty coefficient [4]. Therefore, this class takes heterogeneous grouping as the grouping principle, and teachers grasp the overall situation and distribution of grouping. There are 6-8 people in each group, and a team leader is elected in each group to organize inter group discussion and intra group coordination.

3.3. Pre class preview and personal test

Before class, the teaching materials related to perioperative period will be provided to students

through rain class and bisection platform for Download Preview, and students will be informed that individual test and group test will be conducted in class. The teacher classifies the relevant knowledge involved in the case. According to the difficulty of the problem, each group can be divided into 1 to 2 different tasks. In the preview, the non assigned content adopts the form of extensive reading, and the assigned content adopts the form of intensive reading. The 1-2 tasks of intensive reading need to be mastered and flexibly used by the members of the group. The night before class, the classroom test was conducted in the rain class, and the questions that the platform didn't understand were submitted.

3.4. Class discussion and group test

In class, ask each group member to put forward questions in combination with their preview content, discuss in the group and try to answer.

After the members of the group basically solve the problems of the knowledge points in the group, conduct the classroom group test. The teacher presents everyone's answers in class and focuses on common problems.

3.5. Practical exercises (Social Learning)

Teachers began to organize teaching with the clue of the actual clinical path. According to the case, the preparation before operation, cooperation during operation, observation after operation and nursing were carried out step by step. The questions designed in each step are assigned to relevant groups by knowledge, discussed by members in the group and cooperated by members in the group. Finally, a complete teaching plan for the case is formed in groups.

4. Advantages of TBL teaching method based on modern teaching technology such as rain classroom

4.1. Improve students' learning initiative

Combined with modern teaching technologies such as rain classroom and easy to split, it can increase the interest of learning. It can not only help students learn specific knowledge, but also better stimulate students' thirst for knowledge and cultivate students' enthusiasm for self-study, so as to realize the transformation of students from passive learning to active learning.

4.2. Cultivate students from all aspects and angles

From data access, individual test to group test, case analysis, group expression, from individual thinking to team discussion, students can be trained from various angles to cultivate their autonomous learning ability, scientific research ability and expression ability. At the same time, students can also cultivate the good quality of independent cooperation, positive innovation and brave exploration. Under the construction of various evaluation systems, each student's participation enthusiasm can be fully mobilized, carry out knowledge evaluation of individual test and group test, and finally complete a complete health management report through intra group and inter group cooperation, which can take into account the needs of quality education and exam oriented education.

4.3. Cultivate students' team consciousness and team cooperation ability

The cooperative relationship between individuals and collectives in a socialized environment is reflected in the search of data in different ways, the cooperative analysis of the same case, the cooperative formulation of nutrition programs, the transition of students from the original one or several people to the joint cooperation of 6 to 8 people or even dozens of people in a large class, and the rational arrangement of tasks, the cooperative sharing of data, and the cooperative completion of the final task.

4.4. Avoid the situation that teachers speak in one voice

Be able to grasp students' knowledge in real time and teach students according to their aptitude. The combination of heterogeneous grouping and teacher explanation can also benefit students of different degrees. When students consult a large number of materials and study a certain field, they also put forward relatively high requirements for teachers' knowledge reserve and guidance ability, which forces

teachers' growth to a certain extent.

5. Conclusion

Combining modern teaching methods with TBL teaching method, in the process of implementation, the role of teachers is no longer the repository of knowledge or the transmitter of knowledge, but a coach and a guide. Help students move forward on the road of knowledge accumulation and knowledge exploration, not only give students the answers to their problems, but also teach students the ways and methods to solve problems, and teach students the ability to find and solve problems. Students become the real subjects of learning. Under the effective guidance of teachers, they can explore knowledge purposefully and methodically, which can not only explore the road, but also avoid detours. In the perioperative teaching of clinical medicine^[5], TBL teaching method has its unique application value and advantages, which is worthy of further research and promotion.

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