

The Application and Evaluation of Problem-guided Teaching Method in Rehabilitation Medicine Teaching

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Abstract : To explore the application effect of problem-guided teaching method in rehabilitation medicine teaching. Methods: From February to July, 2021, 74 students majoring in rehabilitation medicine were selected as the research data, and randomly divided into two groups, with 37 cases in each group. The control group adopted traditional teaching method, and the observation group adopted problem-guided teaching method. The test scores and teaching satisfaction of the two groups were evaluated. Results: The theoretical and skill scores of the observation group were significantly higher than those of the control group, $P < 0.05$. The teaching satisfaction, such as learning initiative, subjective initiative, analysis and induction ability, creative thinking ability and teamwork ability in the observation group was 100.0%, 97.30%, 97.30%, 97.30%, 94.59%, which was higher than that of the control group 81.08%, 81.08%, 75.68%, 75.68%, 72.97%, $P < 0.05$. Conclusion: In the teaching of rehabilitation medicine, the problem-guided and learning method can stimulate students' interest in learning, active learning, stimulate creative thinking ability, and improve the test scores, with good teaching effect, which is worthy of promotion.

Keywords : Problem-guided Teaching Method; Rehabilitation Medicine; Test Scores; Teaching Satisfaction

With the rapid development of China's medical cause, more and more attention has been paid to the training of medical talents. As a new discipline, rehabilitation medicine has the characteristics of strong practice and operation. Students need to have solid knowledge, professional function, and independent ability to analyze and solve problems. Rehabilitation medicine refers to the dysfunction of the prevention, diagnosis, assessment, treatment, training and treatment of medical disciplines. The traditional teaching adopts centralism teaching, practice teaching means such as demonstration, simulation. Although it can encourage students to master certain knowledge and skills, in the teaching process, students are in a passive position and passively receive knowledge, which makes it difficult to stimulate their interest in learning and results in limited teaching effect. Problem-guided teaching method advocates setting typical questions to guide students to think independently, so that the teaching process can be creative, which can exercise students' thinking ability, embody interest and stimulate students' interest in learning. Therefore, the application effect of problem-guided teaching method in rehabilitation medicine teaching was discussed in this study as follows.

1. Data and methods

1.1 The general data

From February to July 2021, 74 students majoring in rehabilitation medicine were selected as research data and randomly divided into two groups, with 37 cases in each group. All of them knew the purpose of the study, volunteered to participate in the study and had good communication skills. There were 19 male students and 18 female students in the control group, aged from 19 to 23, with an average age of (21.12 ± 0.98) years; There were 18 male students and 19 female students in the observation group, aged from 19 to 23 years old, with an average age of (21.18 ± 0.92) years old; Exclude students who dropped out. There was no

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statistically significant differences between the two groups ($P > 0.05$).

1.2 The teaching method

The control group adopted the traditional teaching method. Teachers formulated the teaching syllabus according to the content of teaching materials and teaching plans, carried out theoretical knowledge teaching in a centralized way, made PPT, and taught on the blackboard. For example, channels were used to explain the knowledge of meridians and acupoints, and videos of meridians and collaterals were played. Practice teaching in a spacious place, teachers demonstrated the teaching of rehabilitation techniques, such as massage and acupuncture, and marked key acupoints. Then students imitated and operated in groups, and teachers corrected wrong operations after observation.

The observation group adopted problem-guided teaching method, and divided 37 students into 6 groups, with 6 students in group A, B, C, D, E, and 7 students in group F, with one leader in each group. In teaching, the teaching syllabus is made according to the content of teaching materials and teaching plans. Typical questions are selected before each class and released to the group leader in advance, who guides the group members to discuss, such as “physiological function of meridians”, “acupuncture techniques commonly used in clinical practice”, “evaluation method of motor function”, etc. The group members will preview the questions and obtain the answers by combining with the textbooks and literature independently. The group members will share and supplement each other and finally summarize the unified answers. In class, one member of each group will explain the answer to the question at random, and the teacher will comment on the answer and summarize the class content. The problem situation is set up in the practice teaching. The teacher demonstrates the operation first, and the students think about the problems after observation. The students are guided to think about the key points of learning through the questions, such as elbow extension and forearm supination in spastic rehabilitation techniques, and the teacher corrects the wrong operation after observation. Meanwhile, the teacher sets questions to guide thinking about the details, such as “Should I do spastic drafting fast or slow?” The teacher encourages students to answer.

1.3 Index observation

The test scores of the two groups were evaluated. The theoretical knowledge was answered in the paper, including multiple choice questions, concept questions, short answer questions, etc., with a full score of 100 points; Skills assessment includes freehand operation, physiotherapy equipment operation, sports equipment operation, etc., with a full score of 100 points. The teaching satisfaction of the two groups was evaluated from the aspects of learning initiative, subjective initiative, analysis and induction ability, creative thinking ability, teamwork ability and so on, with the help of self-made teaching satisfaction questionnaire. The two groups were divided into being satisfied and dissatisfied.

1.4 Statistics

SPSS22.0 analysis was performed, measurement data were expressed by $(X \pm S)$ and tested by t , count data were expressed by (%) and tested by chi-square, $P < 0.05$ was considered statistically significant difference.

2. Results

2.1 Comparison of assessment results between the two groups

According to Table 1, the theoretical and skill scores of the observation group were significantly higher than those of the control group ($P < 0.05$).

Table 1. Comparison of assessment results between the two groups (score, $X \pm S$)

group	case	theoretical score	skill score
observation	37	93.22 ± 6.04	92.26 ± 6.15
control	37	85.52 ± 7.15	84.43 ± 7.43
t	—	5.004	4.938
P	—	0.000	0.000

2.2 Comparison of teaching satisfaction between the two groups

According to the analysis of Table 2, The teaching satisfaction, such as learning initiative, subjective initiative, analysis and induction ability, creative thinking ability and teamwork ability in the observation group was 100.0%, 97.30%, 97.30%, 97.30%, 94.59%, which was significantly higher than that in the control group 81.08%, 81.08%, 75.68%, 75.68%, 72.97%, $P < 0.05$.

Table 2. Comparison of teaching satisfaction between the two groups (%)

group	case	learning initiative	subjective initiative	Analysis and induction ability	creative thinking ability	teamwork ability
observation	37	37(100.0)	36(97.30)	36(97.30)	36(97.30)	35(94.59)
control	37	30(81.08)	30(81.08)	28(75.68)	28(75.68)	27(72.97)
X ²	—	7.731	5.045	7.400	7.400	6.365
P	—	0.005	0.024	0.006	0.006	0.011

3. Discussions

China attaches great importance to medical education. Rehabilitation medicine, as a new concept emerged in the middle of the 20th century, has a short development time. How to train rehabilitation medicine talents has become the focus of medical education. Rehabilitation medicine teaching advocates training talents with comprehensive knowledge and excellent skills, while traditional teaching focuses on teaching with poor student participation and fails to cultivate subjective initiative, thus affecting the teaching effect. Problem-guided teaching method breaks the traditional teaching way which is based on classroom explanation, which guides students to think, discuss, self-study, re-discuss, re-self-study by setting the questions, guiding students to actively think. The teacher is a facilitator of students learning process, supervise the students' knowledge of rehabilitation medicine, and find out skill details and its problems. Problem-guided teaching method adopts group teaching, guiding students to discuss in groups based on problems, and at the same time, actively and independently think, training team cooperation ability and self-learning ability, and improving the teaching effect. The study results show that the theory achievement, skill examination achievement and teaching satisfaction in the observation group are significantly higher than those in the control group, confirming that the problem-guided teaching method can stimulate students' interest in learning, cultivate students' comprehensive qualities, rich theory knowledge, exercise rehabilitation skills, which is conducive to cultivating excellent comprehensive rehabilitation medicine talents, with high teaching value. The result is similar to that of Ma Wanxia that "the total assessment score of the observation group was significantly higher than that of the control group, and the teaching satisfaction of the observation group was 95%, which was significantly higher than that of the control group (77.5%)", confirming that the setting of problem-guided teaching can improve the assessment scores of students and cultivate their problem-solving ability and communication ability.

In conclusion, the application of problem-guided teaching method in rehabilitation medicine teaching has a good teaching effect, promoting the comprehensive development of rehabilitation medicine students, stimulating their interest in learning, and cultivating their thinking ability and operation ability, which is worthy of popularization and application.

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