

The Application of Case Introduction in the Teaching of Medical Psychology

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Abstract—To explore the effectiveness of the application of case introduction in the teaching of medical psychology, 60 students in preventive medicine specialty of grade 2016 and 2017 in the Department of public health of Xi'an Medical University were selected to form a control group and an experimental group. The 2016 class students were taught by case study. Two groups of comprehensive performance, students' questionnaire results and subsequent professional teachers' scores were compared respectively, and three cases were evaluated according to the teaching effect of examples. The comprehensive scores of the students in the experimental group, the failure rate, good rate and the average score were respectively 0%, 73.29%, 78.36, 20%, which were better than the control group 26.71%, 69.14, and the differences were statistically significant ($P < 0.05$); for students in self evaluation and evaluation of teachers to the students in the experimental group, compared with the control group, the differences were statistically significant ($P < 0.05$). Based on the case introduction, the abstract theory of medical psychology can be visualized to help students understand and master the related knowledge of medical psychology better.

Keywords—*example introduction method; medical psychology; teaching method*

I. INTRODUCTION

Modern doctors should not only have the clinical diagnosis and treatment ability, but also have a deep understanding of medical psychology, and master the identification skills of common problems in medical psychology. As the competition of medical environment intensifies, the supply and demand of medical services are unbalanced, and the proportion of patients communicating with medical staff increases dramatically, almost all medical practitioners are inseparable from the knowledge of medical psychology. As a basic course of preventive medicine, medical psychology is just to lay a good foundation for the analysis of the medical process and the psychological status of medical staff, patients and their families in the future, which can be reasonably relied on in the future practice. There is an interdisciplinary subject between psychology and medical content in the practical application of medical psychology, which is characterized by abstraction and tediousness. Therefore, the author rethinks and improves teaching and experimental methods, takes improving students' interest points as factors, demonstrates practical cases and field observation as inspiration means, and reforms

the original teaching mode, which has achieved good results, so as to elaborate.

II. DATA AND METHODS

A. Research Object

The object of this experiment is 60 students of 2016 medical undergraduate course of Xi'an Medical College. The case introduction method is integrated into the teaching process of medical psychology, and the course related contents involved are carefully selected in the case; 60 students of traditional teaching in 2017's medical major were listed as reference group for comparison. All chapters in the textbook of "Medical Psychology" are taken as the teaching contents, including 46 class hours of theoretical courses and 16 class hours of experimental courses.

1) Method

The traditional teaching method is still used as the teaching method in the control group, Three parts of knowledge about the doctor-patient relationship, psychosomatic diseases, physiological disorders and common psychological problems in general hospitals involved in the course, the combination of PPT and blackboard writing, first, explain the content and principle, then mention the application of the content in practice. The experimental group adopts the method of example introduction in the teaching process, that is, to inspire students through practical observation and guide them to conduct self-study in-depth, from practice to theory, and then explain the theoretical basis in detail. Taking Chapter 10 common psychological problems in general hospitals as an example, we have arranged practical courses to complete part of the teaching in affiliated hospitals. In this part of teaching, the teacher in charge of the affiliated hospital first introduces the basic situation, distribution, precautions and safety guarantee mechanism of the inpatients in the psychiatric department of our hospital. Secondly, the group is led by different teachers; each group has 6 people, to ensure the quiet environment, stability and learning effect of the practice process. Thirdly, observe the stable behavior of the patients in the hospital, communicate with the patients in the presence of the doctors, and ask the feelings of the patients. Finally, after leaving in an orderly manner, each group makes a summary after class.

2) *Teaching effect evaluation*

The final comprehensive scores of students are composed of theoretical and experimental scores, which account for 70% and 30% respectively, forming the 100% assessment results. The test items are those with the same difficulty coefficient and the same experiment specification, so as to ensure comparability. Through the form of questionnaire survey, the following abilities, application ability, understanding ability, interest and analysis ability of students are investigated. The assessment degree can be distinguished by three grades: excellent, good and poor. "Medical Psychology" is the foundation for the completion of the follow-up courses such as "Medical Ethics" and "Children's Hygiene". The teachers of follow-up courses were used to grade the students of the two groups in terms of activity, mastery, learning efficiency and analysis ability, with each item accounting for 25% of the total.

3) *Statistical methods*

The data in this paper are analyzed and processed by spss21; independent sample t-test and rank sum test were used to process the grade data. The difference was statistically significant ($P < 0.05$).

III. RESULTS

A. *Comparison of Theoretical Class Scores Between Experimental Group and Control Group*

On the basis of the examination requirements of Xi'an Medical College, two groups of students completed the examination with three types of questions: selection, short answer and calculation. The subjective and objective question is the score of 50. The difficulty coefficients are all 0.33, and the moderate ones are significant for assessment. The final scores of the two groups of students are analyzed in detail, as shown in Table 1. After introducing the example method, the two groups of data are normal distribution. The lowest and highest scores of the experimental group were higher than those of the control group, and the performance of the experimental composition was more convergent than that of the control group, the difference was statistically significant ($P < 0.05$). "Table I" shows that students in the experimental group are better than those in the control group.

TABLE I. COMPARISON OF THEORETICAL EXAMINATION RESULTS OF TWO GROUPS (% , OR POINTS)

Group	Failure Rate	Excellent and good rate	Average	Highest Score	Minimum Score	poor
Experience Group	0.00%	73.29%	78.36	95.00	64.50	30.50
Control Group	20.00%	26.71%	69.14	85.00	52.00	33.00
t/χ^2	6.667	13.067	-4.339	-	-	-
P	<0.05	<0.05	<0.05	-	-	-

B. *Self Evaluation of Students*

The analysis of questionnaire survey results shows that the experimental group in the teaching process of case

method is relatively better than the control group in application ability, understanding ability, interest and analysis ability, the difference is statistically significant ($P < 0.05$), see "Table II".

TABLE II. PRACTICAL EXAMINATION RESULTS OF EXPERIMENTAL GROUP AND CONTROL GROUP (POINTS, $\bar{x} \pm s$)

Group	Comprehension ability	Application ability	Practical ability	Analytical ability	Interest degree
Experience Group	16.07±0.79	18.25±1.26	19.55±1.01	17.81±0.93	19.06±1.40
Control Group	15.09±1.23	15.11±0.77	15.89±1.01	15.64±0.77	16.44±2.27
t	-6.087	-9.511	-8.350	-11.747	-2.702
P	<0.05	<0.05	<0.05	<0.05	<0.05

C. *Teachers' Score of Follow-up Professional Courses*

The results showed that the experimental group was superior to the control group in all scores, with statistical significance ($P < 0.05$), as shown in "Table III".

TABLE III. SCORES OF FOLLOW-UP PROFESSIONAL TEACHERS IN EXPERIMENTAL GROUP AND CONTROL GROUP (N(%))

Group	Activity level	Mastery degree	learning efficiency	Analytical ability	After class harvest
Experience Group (n=60)					
Good	23(80.00)	24(76.67)	26(86.66)	24(83.33)	25(80.00)
Commonly	4(13.34)	5(16.67)	3(10.00)	3(10.00)	5(16.66)
Poor	2(6.67)	2(6.67)	1(3.33)	2(6.67)	1(3.33)
Control Group (n=60)					
Good	12(43.32)	13(40.00)	7(20.00)	11(36.68)	8(30.00)
Commonly	14(46.68)	12(43.33)	17(56.67)	14(43.33)	16(53.33)
Poor	3(10.00)	5(16.67)	7(23.33)	6(20.00)	5(16.67)
Z	-2.701	-2.766	-4.964	-3.488	-3.818
P	<0.05	<0.05	<0.05	<0.05	<0.05

IV. DISCUSSION

In the innovative form of education and teaching for medical students, the demand of medical institutions for comprehensive talents is expanding day by day. Training talents with clinical ability, scientific research ability and effective communication with patients has become an important part of medical education in Colleges and universities. For the medical psychology, which is indispensable in the basic course of medical students, it is of great significance for students to master the theoretical knowledge and rich practical experience for the practical effect of this course to study and work.

The content of psychology course is complicated, difficult to master and relatively abstract. In the past, it was not closely connected with professional courses and practice, which made the positioning, understanding and mastering of the course inaccurate and affected the enthusiasm of learning.

The effect of traditional teaching method is not good, the common improvement is mainly teaching content, and there is no connection and demonstration between psychology and the actual medical environment. This course adopts the method of example introduction to demonstrate, guide and inspire students' interest, bring in the course content, improve students' interest in learning, expand the thinking of practical application, and effectively improve students' thinking and innovation ability. The results showed that the experimental group was better than the control group, and the difference was statistically significant ($P < 0.05$). Through the data, it can be proved that the introduction of the strength method plays an important role in the establishment and improvement of the professional knowledge system architecture, which is conducive to the study of students in this major. In addition, in practice, the experimental group showed better proficiency in knowledge application and knowledge mastery. The students in the experimental group can make correct judgment according to the theory, and realize the teaching significance of "Medical Psychology". In the question session after class, the problems raised by the students in the experimental group are more strongly related to the actual cases, which is more meaningful than the basic knowledge of the textbooks proposed by the control group. This mode has been recognized by the following professional teachers, and the students in the experimental group can understand and learn faster in the subsequent professional courses.

The introduction of case method into the teaching of "Medical Psychology" puts forward higher requirements for the teachers who teach the course. In advance contact with the Affiliated Hospital, the actual participation in case discussion and observation learning increases the difficulty of preparing lessons and the requirements of curriculum design, but it is of great significance for the guidance and self-education of students' enthusiasm and initiative in exploration.

V. CONCLUSION

To sum up, the teaching method introduced by the example can visualize the abstract contents of medical psychology, simplify complex problems, improve self-study and practice ability, and is worth more extensive use.

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