

An Exploration and Practice on Stage Teaching Method in Pediatrics

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Abstract: With the gradual deepening of national health care reform, the need for pediatrician keeps increasing. However, there are many problems in pediatrics teaching in medical college, such as mainly using spoon-feeding teaching method which provides few opportunities for actual clinical practice with children and makes against motivating students to learn actively. This teaching model is not conducive to the student's ability of clinical thinking and clinical practice. Comparing with it, stage teaching model in pediatrics teaching which initiates to learn in stages and in steps, gives full play to student's learning initiative. Students can strengthen the knowledge in different stages.

1. Introduction

The aim of China Higher Medical Education is to cultivate certain medical talents who have abilities of knowledge and high quality. Clinical clerkship is the bridge over medical theory and clinical practice, which plays a key point in clinical education. In order to motivate students to learn pediatrics and effectively train high quality talents, we carry out the teaching reform by combining the recent teaching practice of pediatrics department. In this reform, we select the 5-year clinical students of grade 2013 and get a better teaching effect by using stage teaching method. The process of reform is introduced below.

2. Subjects and Methods

2.1 Subjects

44 students of 5-year clinical students in Grade 2013 who practice in pediatrics department of affiliated hospital of BeiHua University from March 2016 to May 2017 become the subjects. According to the internship program, students are divided into experimental group and control group randomly, 22 students for each group. The two groups have the same timetable during internship. The experimental group was taught by stage teaching method only. There is no statistic significance in gender and age in two groups.

2.2 Methods

The control group was taught by traditional method and the internship program of the experimental group was divided into three stages.

2.2.1 Stage 1

During this stage, some teaching methods such as PBL method and CBL method are adopted and the cases are chosen carefully, combining teachers' demonstration and instructing. Putting stress on pediatrics common and frequently-occurring disease, teachers made demonstration and physical examination. Meanwhile students can go through the positive sign. Then teachers inspired students to ponder, based on patient's clinical features, disease evolution and laboratory examination and teacher' explanation of difficult problems such as diagnosis, differential diagnosis, assessment and plan. During this period, teachers set an example of how to take cases analysis and summarize, meanwhile, interrupted with questions which are easy to be overlooked, such as how the parathyroid glands plays the different role on the pathogenesis of vitamin D deficiency rachitis and tetany, why the children of PDA occur differential cyanosis, if it is possible to use potassium-sparing diuretic to acute nephritis in oliguric stage, what are the different clinical features between neonates pneumonia and infant pneumonia and etc. Guiding by these questions, on the one side students can

review and enhance the learned theoretical knowledge, on the other side arouse their learning curiosity and motivation.

2.2.2 Stage 2

It is the stage focusing on clinical thinking training, which can be realized by the way of student subject and teacher-led. Two students selected by take turns in each group are responsible for pediatric patient's history taking and physical examination with common pediatric symptoms and disease. During this process, other students are responsible for supplying and the teacher aims at inspiring, evaluating and correcting. Then every student involved speaks out the clinical case, whose study enthusiasm is aroused. Eventually, students' abilities of summary are enhanced by summarizing the disease features and suggesting the diagnosis as well as the differential diagnosis, and then the further test of laboratory needed. At the same time, the teacher leads the students to further thinking by asking questions ,then replenishes and summarizes. In this way, students can understand deeply. For example, when students practice in pediatric neurology, the history of typical bacteria meningitis or viral encephalitis is inquired first and physical examination. Then, students discuss diagnosis by analyzing the case and the result of laboratory test, at the same time,the differential diagnosis of eclampsia and common brain disease join the discussion. Finally, a diagnosis is clear-out and the principle of treatment is put forward. The teacher plays the role of a guider to give a clear direction and his own opinions on divergent views. As well, the teacher discusses with students in order to learn from each other , promote each other and improve together.

2.2.3 Stage 3

The third stage is after-department examination. There are three parts: basic knowledge, case analysis, clinical basic skills.100 A-type multiple choice questions which formed 50 basic-knowledge questions,30 professional questions and 20 case-analysis. All theses questions contain most common diseases. After the examination, case analysis will be emphasized by focused analysis and explanation. Due to the time, clinical skill test is adjusted to stage 2 by instant guidance.

3. Results

At the end of study,44 students were surveyed.the results show that stage teaching method won widespread approval(see table 1) .

Table 1 students general evaluations of the effect of stage teaching method in pediatrics.

| items | options | percentage(%) | options | percentage(%) | options | percentage(%) |
|--|-------------|---------------|------------|---------------|-------------|---------------|
| Necessity of stage teaching method | necessary | 96.1 | don't care | 3.9 | unnecessary | 0.0 |
| Be good for arousing study interesting | significant | 89.4 | partly | 10.6 | no effect | 0.0 |
| To cultivate clinical thinking | significant | 88.3 | partly | 10.6 | no effect | 1.1 |
| To promote clinical knowledge grasping | significant | 80.9 | partly | 17.8 | no effect | 1.3 |
| To master the basic clinical skills | significant | 70.9 | partly | 27.4 | no effect | 1.7 |
| Guide on after-department test | significant | 39.1 | partly | 58.7 | no effect | 2.2 |
| Be good for active learn | significant | 90.3 | partly | 8.6 | no effect | 1.1 |
| popularization value | worthy | 84.9 | try out | 15.1 | against | 0.0 |

4. Discussion

4.1 Reinforcing the pediatrics theory knowledge and training basic pediatrics skills are the fundament of improving practical teaching quality.

Before, students who first entered clinical phases had more interest, but had no way to start. The reasons are that most students don't have deep impression on theory knowledge and not familiar with basic pediatrics practice skills such as history-taking and physical examination, in addition, be lack of systematic clinical thinking. For these reasons, when students come to pediatrics, teacher's explanation play a main role, the purpose of which is to rouse the memory of theory knowledge learning and transfer the abstract knowledge into perceptual knowledge. This can help students to lay solid foundation of clinical practice later. In stage 1, the teaching methods change from traditional style to heuristic teaching and problem-based teaching etc. The teaching content is taught in the form of asking questions based on the knowledge point that previous students are easily neglected and difficult to understand. In a word, adopting various teaching methods make students to study and review actively, which highly improves learning efficiency. The survey findings show that, 100% students consider it is helpful to inspire learning interest by various teaching methods. In the way of teachers' explanation, demonstration and guidance, students strengthen the book knowledge and initially realize the normalized way of interrogation and physical examination, experiences some positive sign as well. Furthermore, the abilities of formal diagnosis and treatment thinking are trained which lay a solid theoretical and practice foundation of stage 2. According to the survey, 96.1% students consider that it is significantly necessary to set up Stage 1 that is the transition from theory to practice. Stage 1 also provides a process of buffer, acquaintance and adaption to students.

4.2 It is the key to solve the clinical problems by enhancing the training of clinical thinking

After Stage 1, students are familiar with the theoretical knowledge of common and frequently-occurring disease in pediatrics, but not with the basic clinical skills and independent case analysis. They analyze incompletely and systematically, even make mistakes. All these show students' limitation of clinical observation and inexact information-gaining, as a result of which students unreasonably analyse and conclude based on clinical data and can not grasp the key point.

In short, students have low ability of clinical thinking, analysis and problem-solving in such stage. Clinical thinking is the ability of applying the theoretical knowledge to clinical practice and analyzing the specific clinical phenomenon systematically, eventually giving the suitable judgement according to the actuals. Such ability reflects the doctor's level of disease identifying and treating. Proper clinical thinking which is the aim of medical education plays an important role on doctor's growth and success. Therefore, the development of the ability of clinical ability is stressed in stage 2. Guided by main body of students and leading role of the teacher, students inquiry and take the physical examination by themselves. Students supplement and discuss each other, and then conclude the possible diagnosis, differential diagnosis and further laboratory test needed. The way of case analyzing and diagnosing by discussion and inspiration, not only consolidates the theoretical knowledge of body system, especially the disease in pediatrics, but also expands the thought of clinical style. The student's ability of analysis by grasping the main contradiction and retaining the truth is build up, which makes them accept well, understand the scientific thinking better and raise the strain capacity. Meanwhile, they complete the transition from theory to practice which help students to practice flexibly. The survey shows 98.9% students consider that it is very helpful to train the clinical ability by discussion and inspiration. In stage 2, students consolidate the knowledge learned in stage 1 and develop the skills practiced in stage 1. Based on it, students fully prepare to join the productive practice. According to the survey 98.3% students. It is helpful to learn the basic clinical skills by teacher's demonstration in stage 1 and practice by themselves in stage 2.

4.3 The key of after-department test is to urge to learn, find problems and have a clear goal.

In order to draw attention of the importance of practice in pediatrics and improving the quality of practice teaching, students are informed about the after-department test before starting the practice.

The advantages of doing this is put some pressure on students, which makes them finish the practice seriously. The test is mainly about checking students' basic knowledge, basic skill grasping and analysis ability. There will be a process of explaining after the test, the aim of which is to enhance the ability of case analysis by finding the weakness. Based on this process, students make a clear goal and keep improving themselves. The survey indicates 97.8% students believe that after-department test has great guiding significance.

5. Conclusion

Stage teaching method is the teaching procedure and method which is summarized on clinic practice teaching and students' learning reality. This method arouses student's learning interest in pediatrics and help them transit from theory to practice with the help of interest. Thereby, it plays an important role on improving student's practical skills ,which can train the qualified doctor and medical talents in its true sense.

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