**Application Study of Two Strengthening in Traditional Chinese and Western Medicine Clinical Course**

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**Abstract.** Purpose: The aim of the study was to evaluate the effect of two strengthening (the strengthening of both basic theoretical knowledge and clinical skill) in traditional Chinese and western medicine clinical courses. Methods: In the experimental group, to strengthen basic theoretical knowledge, and the results were observed by the final exam and questionnaire. Results: The scores of Basic Theories of Traditional Chinese Medicine, Diagnostics of Traditional Chinese Medicine and Introduction of Integrated Traditional Chinese and Western Medicine from experimental group were better than those in control group. Classroom climate, interactive activity with teachers, participation initiative and classroom attention were also better than control group. Furthermore, understanding of knowledge and connection with subjects in experimental group were better. Increasing active learning, collaboration ability and communication ability were also better in experimental group. Conclusion: Two strengthening was conducive to classroom teaching, learning promotion and capacity improving for undergraduates in traditional Chinese and western medicine major. It could endow flexibility for students in the use of theory in clinic, ability in syndrome differentiation and treatment on diseases in TCM clinic, and preliminary ability in treating urgent, difficult and severe diseases.

**Introduction**

Two strengthening means the strengthening in both basic theoretical knowledge and clinical skill. In traditional Chinese and western medicine major course, strengthening basis is the teaching model mainly innovating the current classroom teaching, which makes students accurately understand and master basic theory, principle and laws of TCM. Furthermore, it can endow flexibility for students in the use of theory in clinic, ability in syndrome differentiation and treatment on diseases in TCM clinic[1]. In order to explore the application effect of two strengthening in traditional Chinese and western medicine major course and satisfaction degree from students, we performed this study and reported as follows.

**Subjects and Methods**

**Subjects**

Total 56 undergraduates (Grade 2014) major in traditional Chinese and western medicine, were enrolled in experimental group. Total 60 undergraduates (Grade 2013) major in traditional Chinese and western medicine were enrolled in control group.

**Methods**

**Strengthening basic teaching process.** The two groups were taught by the same group of teachers. During 2014-2015, in order to make students from experimental group accurately understand and master basic theory, principle and laws of TCM, including course content innovation, teaching method innovation and auxiliary teaching method innovation. The period was one semester, and the detail was as follows. Network was used to specifically answer the teaching...
questions. Special tutoring for the difficulty of course was conducted in form of extracurricular activity. Basic knowledge competition of TCM was conducted to increase learning interest. The students in control group received traditional teaching methods.

**Strengthening clinical skill teaching process.** Two groups were taught by the same group of teachers. During 2014-2015, the students from experimental group received strengthening skill training within 3 semesters as follows: In the first semester, mainly mastered basic theory and basic method of traditional Chinese and western medicine, and understood the practical significance of clinical guidance; In the second semester, by using case teaching method, comprehended theory, rule, prescription and drug, making theory course play the bridge role and laying the foundation for clinical course; In the third semester, seminar was used to comprehend theory. Treatment based on syndrome differentiation training simulation was developed to lay the theory and practice foundation for clinical work.

**Teaching evaluation.** *Final basic course exam.* The students from the two groups received closed-book exams from the same item bank referring to question types of Medical Licensing Examination.

*Questionnaire.* All the students from experimental and control groups received self-made evaluation questionnaire on learning interest to learn the satisfaction degree on the teaching method [2-4].

*Evaluation on students’ clinical basic skill from clinical teacher.* The evaluation referred to research results from relevant papers domestic and overseas [2-4].

**Statistical analysis**

The data was expressed as Mean±SD, and analyzed by SPSS16.0 software. Measurement data was analyzed by t test. P<0.05 was termed as statistical significance.

**Results**

**Comparison of Basic Course Test Score of Final Exam between 2 Groups**

The test scores of final basic course exam from the two groups were analyzed by t test. The score in basic theories of Chinese medicine control group was 74.6±9.6, and 79.75±8.97 in experimental group (t=-2.981, P=0.004<0.05). The score of diagnostics of traditional Chinese medicine was 74.85±9.46 in control group, and 80.11±8.79 in experimental group (t=-3.094, P=0.002<0.05). The score of Introduction of integrated traditional Chinese and Western Medicine was 74.13±9.58 in control group, and 79.45±9.41 in experimental group (t=-3.011, P=0.003<0.05) with statistical significance, indicating the scores in the 3 courses in experimental group were better than those in control group.

**Evaluation on Strengthening Basic Teaching Effect from Students**

The comparison of classroom teaching of the 2 groups were analyzed by t test. In the comparison of scores of communication with classmates, t=-1.151, P=0.252>0.05, and in the comparison of scores of time rationality, t=-1.090, P=0.278>0.05. These two teaching methods did not have significant difference. The scores of other four items in experimental group were higher than those in control group (P<0.01), suggesting classroom climate, interactive activity with teachers, participation initiative and classroom attention of strengthening basis were superior to traditional teaching method.

**Discussion**

The training objectives of traditional Chinese and western medicine major are to train undergraduates to systematically master basic theories of TCM, basic knowledge, basic skill and basic theory as well as the skill of modern medicine, to master a certain humanistic and social science, natural science and Chinese traditional culture knowledge, and to possess good medical profession morality, strong clinical ability integrally using Chinese and western medicine diagnosis.
and treatment methods [5]. Basic course teaching, clinical course teaching and clinical practice teaching are divided into 3 independent phases [6]. The ability of using theory to guide clinic could not be improved at the same time of clinical teaching. The teaching mode that teaching link cannot interlink with each other will lead to disjunction of theory with clinic, showing problems such as poor basic theories of Chinese medicine and clinical application ability [7]. Showing wisdom shine of ancient philosophy. It is a confluence of multiple cultures with noble moral sentiments. TCM education cultivating talents with high quality should obey culture characteristics of TCM [8].

Increasing preview before class, knowledge denotation, searching information, consolidation and review, understanding of knowledge and connection with subjects were better in experimental group. Increasing active learning, collaboration ability and communication ability were also better.

In order to improve clinical treatment based on syndrome differentiation, students received different trainings, according to the learning phase, knowledge structure. It was found that after strengthening clinical skill, classroom climate, interactive activity with teachers, classmate communication, participation initiative, classroom attention and time rationality were better than control group. Increasing preview before class, knowledge denotation, searching information, consolidation and review, understanding of knowledge and connection with subjects were better in experimental group. Increasing active learning, collaboration ability, independent thinking, problem solving, communication capability were better in experimental group. Diagnosis on disease and differential diagnosis, making therapeutic principle, formulas selection were also better. Furthermore, through comparison of students’ clinical basic skill, it was found that the scores of diagnosis on disease and differential diagnosis, making therapeutic principle, formulas selection in experimental group were significantly higher.

It indicated that two strengthening could make students master solid basic of TCM, accurate TCM thinking method. Furthermore, it could endow students flexibility in the use of theory in clinic, ability in syndrome differentiation and treatment on diseases in TCM clinic, and preliminary ability in treating urgent, difficult and severe diseases.

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