

Research on the Evaluation System of Goal Attainment Degree of Training in Traditional Chinese Medicine Major

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Abstract: This paper uses the principles and methods of goal attainment degree of training, adopts the scientific research methods such as expert consultation method and analytic hierarchy process firstly defines the construction principle of the evaluation system of the goal attainment degree of training in traditional Chinese medicine major, and then builds the evaluation system of the goal attainment degree of training in traditional Chinese medicine major from the evaluation indicators, evaluation weight, evaluation methods and evaluation criteria, providing a new idea and path for the effective evaluation on the training quality of traditional Chinese medicine personnel.

1. Introduction

It has always been the difficulty of teaching management in colleges and universities to make an effective evaluation on the quality of personnel training and to make an effective judgement on the problems in the process of personnel training according to the evaluation results. There are many studies on the quality of personnel training in colleges and universities in China and abroad. And the common characteristic is that they are closely combined with evaluation practice. Domestic scholars' research on the evaluation methods on the quality of personnel training mainly focuses on the evaluation of mathematical statistics methods and models, as well as using expert evaluation methods and management models to evaluate according to the connotation and standards of personnel training quality in colleges and universities[1]. However, there are few studies on the methods used to evaluate the quality of personnel training using the theory of goal attainment degree of training. The evaluation on the quality of personnel training using the theory of goal attainment degree absorbs the advantages of the evaluation methods such as the mathematical statistics method and mathematical statistics model, expert evaluation method and management model. For example, the impartiality and objectivity of mathematical statistics and model in evaluating the quality of personnel training; The scientific and authenticity of the y expert evaluation method and management model in evaluating the quality of personnel training. Meanwhile, the disadvantages of using mathematical statistics and models to be subject to the acquisition of the availability of reliable data and comprehensive data, as well as the influence of unfavorable factors such as the expert subjectivity in expert evaluation method and management model[2].

The goal attainment degree of training refers to the degree to which the training objectives set by the training department are realized, and it is implemented by the personnel training objectives, professional systems and curriculum systems formulated by colleges and universities[3]. It can be seen that the evaluation on the goal attainment degree of training is to evaluate the quality of personnel training. The evaluation on the goal attainment degree of training is to trace the attainment degree of the graduation requirements of the personnel training and finally evaluates the goal attainment degree of personnel training based on the assessment results of the whole process and all links of personnel training. This paper uses the principles and methods of the goal

attainment degree, adopts the expert consultation method, the analytic hierarchy process to build the evaluation system of goal attainment degree of training for undergraduate traditional Chinese medicine major (referred to as "TCM") from the aspects of evaluation indicators, evaluation weights, evaluation methods and evaluation criteria to strengthen the management of TCM personnel training process and improve the quality of TCM personnel training.

2. Principles of establishing evaluation system for goal attainment degree of training of traditional Chinese medicine major

In addition to the three principles of comprehensiveness, objectivity and scientificity and maneuverability[4], the principles of quantitative evaluation and orientation should be followed in the construction of the evaluation system.

2.1. The quantitative evaluation principle

This principle requires that all evaluation indicators, supporting courses and related observation points should be measurable. Based on the assessment results of courses, second classes and related teaching links of graduates majoring in traditional Chinese medicine, the evaluation results of the final training goal attainment degree quantitatively reflect the quality of the training of traditional Chinese medicine personnel.

2.2. The orientation principle

This principle requires that the evaluation system constructed can reflect the problems in the personnel training of TCM in the evaluation practice, guide the direction of improving the quality of TCM personnel training and provide an effective basis for the teaching management department to strengthen education and teaching reform.

3. The construction of evaluation system for the goal attainment degree of training in traditional Chinese medicine major

The construction elements of the scientific and reasonable evaluation system include evaluation indicators, evaluation weights, evaluation methods and evaluation criteria. The evaluation indicators should be objective and scientific, the evaluation weights should be of reliability and validity and be reliable and credible, the evaluation methods should be operable, and the evaluation criteria should be in line with the reality.

3.1. Construction of evaluation indicators

According to the training objectives for the current training program of traditional Chinese medicine major in a university of traditional Chinese medicine in Jiangxi Province, this study designed an expert consultation form of "the Goal Attainment Degree of Training in TCM Major" that covers students' all around development of moral, intellectual, physical, aesthetics and labour education in accordance with the accreditation standards of TCM major and the requirements of the society for TCM personnel. After two rounds of consultation and the summarizing and analyzing of expert opinions, the training objectives for traditional Chinese medicine major are decomposed into seven first-level evaluation indicators such as being of good ideological and moral and professional qualities, mastering the basic theoretical knowledge and skills of the major, and having good ideas, etc. and 21 second-level evaluation indicators such as good ideological and moral character, social and professional ethics and the concept of practicing medicine according to law, etc. The specific content of the evaluation indicators is shown in Table 1 below. Due to the limitations of length of the article, this article does not describe the supporting courses and the main observation points under the respective secondary evaluation indicators.

3.2. Analysis on the weights of evaluation indicators

In order to make the weight coefficient of the evaluation indicators objective and scientific, this

study uses the 9-scale analytic hierarchy process[5] to analyze the first-level evaluation indicators and the second-level evaluation indicators of the goal attainment degree of training in TCM major. After consultation with 20 experts, the weights of each level of indicators are calculated and the combined weights are calculated and assigned value through the construction of the hierarchical structure model and judgment matrix of the evaluation indicators of the goal attainment degree of training in traditional Chinese medicine major. Finally, data normalization and consistency indicators (CI) test (both CI and CR values are less than 0.10) are carried out. The weight analysis results of the evaluation indicators of the goal attainment degree of training in TCM major are shown in Table 1 below.

Table 1 The weight of the evaluation indicators for the goal attainment degree of training in traditional Chinese medicine major

First-level evaluation indicators	Weights	Second-level evaluation indicator	Weights
Be of good ideological, moral and professional qualities	0.2266	Be of good ideological and moral character, social morality and professional ethics, and have the concept of practicing medicine according to law	0.0851
		Support the leadership of the Party, have a firm and correct political orientation, master the theoretical system of socialism with Chinese characteristics, be willing to serve the development and construction of the country and the people's health, and have the aspiration and sense of responsibility to strive for the prosperity of the country and the nation	0.0896
		Have good professional accomplishment	0.0519
Master the basic theoretical knowledge and skills of the major	0.2135	Master the basic knowledge and skills of basic theory of traditional Chinese medicine, TCM diagnosis, Chinese medicine, prescription and acupuncture and moxibustion	0.0832
		Master the four classical theories and have the ability to apply them initially	0.0680
		Master the necessary basic knowledge of modern medicine and related experimental skills	0.0314
		Be of strong awareness of disease prevention and public health	0.0173
		Master certain knowledge of health preservation and health care in TCM	0.0136
Master the basic clinical theoretical knowledge and skills of the major	0.1907	Master the basic knowledge and skills of clinical diagnosis and treatment on various common and frequently-occurring diseases with traditional Chinese medicine	0.0735
		Master the necessary basic knowledge and skills in modern clinical medicine	0.0350
		Be of the ability to use professional theory and skills to conduct comprehensive, systematic and correct disease diagnosis, collect medical history, write medical record and express. Be of the ability to correctly use traditional Chinese medicine prescriptions, acupuncture and other treatments for syndrome differentiation and treatment of common diseases and frequently-occurring diseases. Be of the ability to rationally select modern clinical diagnosis and treatment techniques, methods and means for initial diagnosis and treatment of common diseases and frequently-occurring diseases.	0.0822
Be of strong scientific literacy and critical thinking, Chinese medicine thinking and	0.1681	Be of certain scientific literacy and critical thinking	0.0421
		Have thinking ability of TCM such as holistic thinking ability, abstract and mathematical thinking ability, logical thinking ability and dialectical thinking ability.	0.0798

Chinese medicine inheritance ability		Have certain ability in studying classics, inheriting the academic thinking of the tutor, and inheriting clinical experience.	0.0462
Master certain knowledge and skills of sports and military theory	0.0560	Have a certain knowledge of sports, master the basic methods of scientific exercise, and develop good physical exercise habits	0.0399
		Have certain basic military knowledge	0.0161
Master a foreign language	0.0451	Have a certain ability in English listening, speaking, reading and writing	0.0167
		Have the ability to access medical literature and communicate in a foreign language	0.0284
Have good humanities, scientific qualities and innovative thinking ability	0.1000	Master certain humanities and social knowledge of medical humanities, traditional culture and art	0.0295
		Master certain natural science knowledge in computer science, biology, etc.	0.0187
		Have the creative thinking ability to creatively propose and solve problems	0.0518

3.3. Determination of evaluation methods

3.3.1. Data sources

This study takes the assessment results of supporting courses and related observation points such as the second class, the teaching internship, the graduation internship, the internship from a master to his disciples, the graduation examination and the clinical skills assessment for all the students majoring in traditional Chinese medicine from 2017 to 2019 in a university of traditional Chinese medicine in Jiangxi Province as data sources for evaluation.

3.3.2. Calculation method

In order to reflect the overall training quality of all the students majoring in traditional Chinese medicine, the average of the assessment results of the supporting courses and related observation points are taken as the basic data for the evaluation. Combining the weighting coefficients of each supporting courses and related observation points, the evaluation scores of each secondary indicator can be calculated. By analogy, the evaluation scores of each first-level evaluation indicators can be obtained. Finally, the score of the first-level evaluation indicators should be added to obtain the evaluation result of the goal attainment degree of training in traditional Chinese medicine major.

3.4. The evaluation criteria is clear

In order to better judge the training quality of traditional Chinese medical personnel, analyze the problems in the cultivation process and propose countermeasures and suggestions for further improving teaching and strengthening personnel training, this study defines the evaluation criteria for the goal attainment degree of training in TCM major into four ranks after consulting experts: The score above 85 refers to "excellent". The score greater than or equal to 70 and less than 85 is "good"; The score greater than or equal to 60 and less than 70 is "qualified"; The score less than 60 is "failed".

4. Conclusion

The evaluation system of the goal attainment degree of training in TCM major is scientifically constructed through the construction of evaluation indicators, the analysis of evaluation weights and the clarification of evaluation method and evaluation criteria. On the basis of ensuring reliable and credible data, the evaluation on the quality of TCM personnel training can be done. In order to make the evaluation more convenient, timely and accurate, the computer programming technology can be further utilized to design a network evaluation system based on the evaluation system to strengthen the integration of humanities, management disciplines and science and technology and to

serve the personnel training.

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