

### PhD Curriculum for the Traditional and Complementary Medicine Program: A Qualitative Comparative Study in the Chinese and Iranian Medical Universities

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**Background:** Recently, the traditional and complementary medicine has largely gained interest among scholars across the globe. Keeping pace with the on-going trend, the Iranian academia have provided the PhD course on Traditional Iranian Medicine. In this study, we attempted to perform a qualitative study, comparing the PhD curricula of the Chinese and Iranian traditional medicine in detail.

**Methods:** The PhD curricula of 11 departments of traditional medicine affiliated to the Chinese Ministry of Science and Technology were studied, and qualitatively compared and contrasted with that from the Educational Development Centre, Mashhad University of Medical Sciences (MUMS), Iran.

**Results:** The whole characteristics of the program were delineated in terms of mission, vision, values, aims, and action plan, prior to the courses offered in the program as well as the evaluation methods.

**Conclusions:** To sum up, we pinpointed the strengths and weaknesses of the PhD curriculum for the Traditional Iranian Medicine in comparison with the Chinese one, aiming at improving it nationwide.

**Keywords:** Traditional Chinese Medicine, Traditional Persian Medicine, Curriculum; Higher education

### مقایسه و نقد برنامه‌های تحصیلی درجه دکتری در رشته‌های طب سنتی و طب تکمیلی در ایران

**المقدمه:** نلاحظ نمو الطب التقليدي و البريل في العالم في الآونة الأخيرة بشكل متزايد. إن المراكز التعليمية و الجامعية في إيران تناغمت مع هذا الحدث العالمي و تم عرض دورة دكتوراه تخصصية في مجال الطب التقليدي الإيراني. نهدف في هذه الدراسة في بحث كيفية مقارنة البرنامج التعليمي لمقطع الدكتوراه للطب التقليدي في الصين و ایران.

**الأسلوب:** من خلال تجميع ١١ كورسكولوم تعليمي من كليات تدرس الطب الصيني تابعه لوزارة العلوم الصينية و تعيين النقاط المشتركة فيما و أيضا تم اخذ البرنامج التعليمي للطلاب PHD في مجال الطب التقليدي الإيراني. و تمت المقارنة.

**النتائج:** تم تعيين الشخصيات العامة للبرنامج التعليمي حسب الرسالة التعليمية، الألف، القيم، الأضداد الكلية و البرامج العملية و أيضا تم تعيين مشخصات الدروس و أساليب التقييم بشكل مختصر.

**الاستنتاج:** في النهاية تمت الإثارة الى نقاط القوة و الضعف في البرنامج التعليمي للطب التقليدي الإيراني مقارنة مع الطب التقليدي الصيني حتى تكون هناك خطوط في مجال رفع مستوى البرنامج التعليمي لدورة دكتوراه التخصصية في الطب التقليدي في بلدنا.

**كلمات المفتاح:** الطب التقليدي الصيني، البرنامج التعليمي، الدكتوراه التخصصية، الطب التقليدي الإيراني.

### مقایسه و نقد برنامه آموزشی دکتری طب سنتی در دانشکده‌های طب سنتی چین و ایران

**المقدمه:** اخیرا طب سنتی و مکمل به طور فزاینده‌ای در سرتاسر جهان رو به گسترش می‌باشد. مراکز علمی و دانشگاهی ایران همگام با این روند جهانی شده و دوره‌ی دکتری تخصصی در خصوص طب سنتی ایرانی عرضه کرده است. در این مطالعه، ما بر آن شدیم تا در یک تحقیق کیفی برنامه آموزشی مقطع دکتری طب سنتی چینی و ایرانی را مقایسه نماییم.

**روش:** از طریق جمع‌آوری کورسکولوم‌های آموزشی ١١ دانشکده طب سنتی چینی وابسته به وزارت علوم چین و در نظر گرفتن نقاط مشترک آنها و همچنین مراجعه به مرکز توسعه آموزش دانشگاه مشهد و دریافت برنامه درسی دانشجویان PhD رشته طب سنتی ایرانی جهت بررسی و مقایسه.

**یافته‌ها:** مشخصات کلی برنامه آموزشی با توجه رسالت، چشم‌انداز، ارزش‌های بنیادین، اهداف کلی و برنامه عملیاتی بیان گردیده و مشخصات دروس ارائه شده و شیوه ارزشیابی به اختصار ذکر شده است.

**نتیجه‌گیری و بحث:** در انتها نیز به نقاط قوت و ضعف برنامه آموزشی طب سنتی ایرانی در مقایسه با طب سنتی چینی اشاره شده است تا گامی در جهت ارتقای برنامه‌ی آموزشی دکتری تخصصی طب سنتی در کشورمان برداریم.

**واژه‌های کلیدی:** طب سنتی چینی، برنامه آموزشی، دکتری تخصصی، طب سنتی ایرانی.

### ایران اور چین کی یونیورسٹیوں میں ڈاکٹریٹ سطح پر قدیمی روایتی طب کی تعلیم کا تقابلی اور تنقیدی جائزہ

**ہیک گراؤنڈ:** حالیہ برسوں میں روایتی طب یعنی جزی بوٹیوں سے علاج کے طریقے کو ترقی حاصل ہو رہی ہے۔ ایران کے علمی اور یونیورسٹی مراکز نے اس عالمی تحریک کے ساتھ ساتھ روایتی طب میں ڈاکٹریٹ کا کورس اور ڈگری رکھی ہے۔ اس تحقیق میں ہم چین اور ایران کی یونیورسٹیوں میں ڈاکٹریٹ کی ڈگری کے لیول پر تعلیم کا تقابلی اور تنقیدی جائزہ لیں گے۔

**روش:** چین کی وزارت سائنس سے وابستہ روایتی طب کی گیارہ فیکلٹیز کے کورس کا روایتی طب میں ایرانی نصاب سے مقابلہ کیا گیا ہے اور ان کے مشترکہ نکات کو بھی مد نظر رکھا گیا ہے۔ اس کام کے لئے مشہد یونیورسٹی میں تعلیمی ترقیاتی مرکز نیز روایتی طب میں پی ایچ ڈی کے نصاب کو پیش نظر رکھا گیا ہے۔

**نتیجے:** روایتی قدیمی طب کے بارے میں اس تحقیق میں اس کے اہداف و مقاصد، مستقبل، بنیادی اقدار و اہداف اور عملی پروگرام بیان کئے گئے ہیں اس کے علاوہ اس نصاب کی خصوصیات اور اس کی جانچ پڑتال کے طریقے بھی بیان کئے گئے ہیں۔

**سفرارش:** اس تحقیق کے آخر میں چین کے قدیمی طب کے مقابلے میں ایران کے قدیمی روایتی طب کے مثبت اور منفی نکات کا ذکر کیا گیا ہے تاکہ ایران میں روایتی طب کے ڈاکٹریٹ لیول کے پروگرام میں بہتری لائی جاسکے۔

**کلیدی الفاظ:** چین کا روایتی قدیمی طبی طریقہ، ڈاکٹریٹ۔

## INTRODUCTION

Traditional and complementary medicine has been progressively used in many countries as a means of prevention and treatment; the declaration of the World Health Organization in 2000 (based on reports from 25 countries on the presence of national policies regarding traditional and complementary medicine) have obliged all countries to pursue its education and scientific application (1). People's Republic of China, with a great civilization and deep and longstanding practice, is one of the leading countries in spreading scientific approach to traditional and complementary medicine worldwide; activities carried out in the most prestigious research centers in the world to revive traditional Chinese medicine, wide publishing of papers, and the introduction of treatment solutions to the world's largest medical resources support this claim. Schedules with the aim of leading traditional Chinese medicine in the context of universities, led to continue training and scientific services in more than 20 faculties, among which five universities possess international value regarding PhD education of traditional Chinese medicine (2,3). Also, in Iran, efforts have been made to revive traditional medicine in recent years (4). Thus, considering the focused policies of traditional medicine faculties in China in developing the curriculum of PhD program, and given the fact that the PhD curriculum of traditional Iranian medicine is new, we decided to compare the two mentioned curricula, in order to promote the PhD curriculum of traditional medicine of Iran.

## METHODS

In this study, by correspondence with educational deputies of 11 faculties of Traditional Chinese Medicine affiliated with the Ministry of Science, China and also referring to their websites, the curricula were surveyed and common areas were included in the study. On the other hand, referring to the Educational Development Center of Mashhad University, PhD curriculum of traditional Iranian medicine approved by the Ministry was provided to the researchers.

## RESULTS

### PhD curriculum of traditional Chinese medicine

This curriculum, named as "Core curriculum" has been selected as the reference curriculum in traditional medicine faculties of China and some traditional medicine faculties of England, which are branches of the Chinese universities, and includes the following:

**Mission:** The mission of this field is to train experts, in the form of research and clinical PhD, for treatment and research measures in order to apply the concepts and principles of traditional Chinese medicine and to help promote these concepts.

**Vision:** According to the World Health Organization's vision, training these specialists in order to utilize the experience of predecessors in the treatment of diseases and helping the shortcomings of modern medicine, conducting research by a scientific approach and helping to determine the efficacy and safety of mentioned medical procedures.

**Fundamental values:** Human values and professional ethics

based on human rights with an emphasis on accountability and human levels with commitment and mutual respect must be considered during the course.

**Aims:** Providing safe, secure, easy, effective, and inexpensive health-care services, acceptable by the patients, and conducting research in accordance with the clinical principles by training experts.

**Administrative and instructional strategies:** Student-centered methods, problem analysis, critical thinking, and training experts capable of evidence-based practice.

**Practical plan:** includes issues during the course, conditions of applicants, educational materials, the evaluation period and method, and the final output; the final output, clinical PhD graduates, must:

1. Be able to take history and perform physical examination based on the concepts of traditional and modern medicine;
2. Be able to take the pulse and examine the tongue;
3. Have the ability to determine the pattern of disease, and if needed, the knowledge required to provide guidance to patients for diagnostic procedures of modern medicine.
4. Be able to provide safe and legal acupuncture and herbal medicine treatments.
5. Be able to provide the correct lifestyle, diet, and exercise.
6. Have the communication skills and follow professional principles.

In addition to the above, a research PhD must be familiar with advanced research principles.

### PhD Curriculum of Traditional Iranian Medicine

The PhD Curriculum of Traditional Iranian Medicine consists of different chapters, including the general specifications of the curriculum, characteristics of the curriculum, courses, and the curriculum assessment.

#### General specifications of the curriculum

After defining the field and level (as a branch of medical sciences) and a history, the following are mentioned. It should be noted that in this curriculum, in addition to the conditions of admission, similar fields inside the country and abroad, and the requirements to establish the field are also mentioned.

**Mission:** Training physicians educated by official general medical courses inside the country or abroad, after passing a valid PhD course, implement advanced up-to-date knowledge, use the specific information of traditional Iranian medicine for prevention, treatment and rehabilitation, with adequate research as well.

**Vision:** According to 20-year vision of the Islamic Republic of Iran, high goals of science production, and global and national expectations of applying past experience, training these physicians leads to fulfilling patients' requirements providing references and educational literature and eliminating confusion in applied research.

**Fundamental values:** Considering the divine and religious principles of Islam and the values of human existence, and necessity of considering the responsibilities of the government and society towards people in order to utilize past experience and innovative research.

**Aims:** These are similar to that of the Chinese medicine.

**Role definition:** Includes educational, research and service-providing.

**Professional tasks of the graduates:** Have been defined separately in the fields of education, research, and service-providing.

**General educational approach:** It is based on a series of student-centered methods, problem solving, participation in the system of educational texts, problem analysis by planning the issue, and completing provided solutions.

**Specifications of the courses of the curriculum:** Here we mention compulsory and obligatory courses, introducing each course along with its specific code, number and type of unit, prerequisites, references, topics, overall purpose, and evaluation method.

**Evaluation:** Includes the goal of evaluation, the method (summative or final), process of evaluation, and the proposed success indices and indicators for each index.

Table 1 summarizes the above.

**DISCUSSION**

Comparing the PhD curriculum of traditional Iranian medicine with Chinese medicine, indicates strengths and weaknesses as follows:

**Strengths of traditional Iranian medicine:**

1. All components have been mentioned; especially its functional components are described more in detail than the curriculum of traditional Chinese medicine.
2. In fundamental values of traditional Iranian medicine, the value of human existence is considered along with its cultural and religious aspects.
3. Roles of the graduates and their professional tasks have been described separately, while the curriculum of traditional Chinese medicine has not mentioned these items.
4. Conditions required to establish the course are well described.

**Weaknesses of traditional Iranian medicine:**

1. Educational method is mentioned in the course introduction in the curriculum of traditional Chinese medicine, and qualifying conditions of the professor teaching the course are specifically defined for each course.
2. Assessment of the curriculum of traditional Chinese medicine has been done with formative and summative method, while in traditional Iranian medicine, it is done every four years for each course. Given the importance of formative assessment in required modifications, considering it in the curriculum of traditional Iranian medicine seems necessary.
3. Special attention to the communication skills and professionalism as an essential principle in graduation is

**Table 1. Comparing the curricula of traditional Chinese and Iranian medicines**

University	Faculties of traditional Chinese medicine	Faculty of traditional medicine of Mashhad University of Medical Sciences
Mission	PhD training in separate research and clinical filed	PhD training with research and clinical abilities at the same time
Vision	Training to promote safety and efficacy of the predecessors' treatment methods according to the World Health Organization's vision	Training physicians to treat patients, provide educational texts, and conduct practical research according to the 20-years
Fundamental Values	Considering human values and professional ethics with an emphasis on accountability and care with commitment	Considering the divine and religious principles of Islam and the values of human existence
Aims	Providing safe, secure, easy, effective, and inexpensive health-care services, acceptable by the patients, and conducting scientific research	Conducting practical research and treatment measures
Educational approach	Problem analysis methods, critical thinking, Self-direction, Student-centered methods, and capability of evidence-based care	A series of student-centered, problem solving, participation on the texts, and problem analysis
Operational Plan		
Terms of admission	PhD of traditional medicine or general medicine doctorate accepted in the exam	General medicine doctorate accepted in the exam
Professional tasks of the graduates	Educational or research role relative to the course	Combined service-providing, educational, and research roles
Courses' introduction	References, number of units, hours, educational method, objective, and qualification conditions of the professor	References, number of units, objective, and prerequisite
Student's evaluation method	Is defined for each course specifically	Overall, by Obtaining more than 70% of the score in the final examinations
Curriculum's assessment	Formative and summative	Summative
Curriculum's success criteria	Obtaining the required scores determined by the supervisory board on tests measuring levels of knowledge, professional skills and communication	Obtaining more than 70% score of final examination Obtaining more than 80% of scores of professional abilities' test

included in the curriculum of traditional Chinese medicine, while it is generally described in the curriculum of traditional Iranian medicine.

Studies showed that there is a significant relationship between the curriculum of students and their advance in professional knowledge and skills (4-7). Also, comprehensive trainings including all theoretical, practical, professional, and communication skills and careful evaluation of all medical graduates is essential. Some studies in this regard showed that a significant number of students are not well trained regarding some essential professional skills (8,9), indicating its necessity in the curriculum. Also, prevention and avoiding any damage to the patients

must be considered in fields related to medicine, especially complementary medicine, as Hippocrates also mentions avoiding any damage as the first step: (primum non nocere; first do no harm) (10). Thus, considering proper training of scientific research to study treatment methods of Iranian and complementary medicine and providing its arrangements is essential for the students of this field.

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#### Conflict of interest

The authors declare no conflict of interest.

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