A qualitative study on two PhD curricula

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

**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 PhD curriculum for the Traditional and Complementary Medicine in comparison with the Chinese one, aiming at improving weaknesses of the PhD curriculum for Traditional Iranian Medicine, Curriculum; Higher education technology were studied, and qualitatively compared and contrasted with that from the Educational Development Centre, Mashhad University of Medical Sciences, Mashhad, Iran.

**Conclusions:** To sum up, we pinpointed the strengths and weaknesses of the PhD curriculum for the Traditional and Complementary Medicine, Curriculum; Higher education technology were studied, and qualitatively compared and contrasted with that from the Educational Development Centre, Mashhad University of Medical Sciences, Mashhad, Iran. Keeping pace with the on-going trend, the Iranian academia have 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.
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.
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

### DISCUSSION

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

**Strengths of traditional Iranian medicine:**

- 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.

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

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

REFERENCES