

# The Effects of Persian Medicine on Knowledge, Attitude, and Practice of Medical Sciences Students

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## Abstract

**Background:** Traditional medicine refers to a set of indigenous or acquired health care practices outside the mainstream health care system in any country. A wide range of people use traditional and complementary medicine in Iran, and due to its ancient Persian origin, it is known as Persian Medicine (PM). PM is used for a wide range of people and diseases because it comprises various treatment strategies. Thus, the familiarity of healthcare providers with it seems essential for them.

**Methods:** This quasi-experimental study was conducted to investigate the effect of PM education on the knowledge, attitude, and practice of medical sciences students in Iran. In this study, an educational intervention on knowledge, attitude, and practice of Persian medicine was conducted on medical sciences students in the fifth-largest region of health education in Iran. The data were collected from 99 medical sciences students. The knowledge of these participants was evaluated and compared before and after the courses by a questionnaire scored using 5-point Likert scale.

**Results:** The mean score of selected students was 25.28 before starting the course, but after completing the course, their mean score of knowledge changed significantly and reached 31.03. Although, after the course, the use and attitude of these participants increased, these rises were statistically significant in a few items.

**Conclusion:** Overall, the findings of our study indicated that this course had a practical impact on medical science students' knowledge, practice, and attitude toward PM. Accordingly, this course will improve the insight of future healthcare providers about PM.

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## Introduction

Traditional medicine refers to indigenous or acquired healthcare practices outside the mainstream health care system in any country. In some countries, complementary and Alternative Medicine (CAM) is usually used instead of traditional medicine.<sup>1,2</sup> Traditional medicine is based on knowledge, skills, and practices based on theories,

beliefs, and indigenous experiences of different cultures, and complementary medicine (such as acupuncture, yoga, massage, chiropractic, and other treatment modalities like them) as an alternative treatment or used in conjunction with traditional medicine of any country.<sup>3</sup> These methods, which are used to prevent, treat, and promote health,<sup>1,3</sup> have a variable range in terms of application in different countries.<sup>4,5</sup>

The use of CAM has expanded in the last two decades, and the prevalence of its use in the general population worldwide varies from 9.8 to 76%.<sup>5</sup> Expecting the usefulness of CAM treatments, dissatisfaction with allopathic medicine, and perceived CAM safety are three potentially essential factors influencing the use of these treatments worldwide.<sup>6</sup>

Many people use traditional and complementary medicine in Iran, and due to its ancient Persian origin, it is known as Persian Medicine. It consists of different treatment strategies; as a result, it is used in a broad spectrum of people and diseases.<sup>7,8</sup> A study of patients with thalassemia over 12 months (2015-2016) in southern Iran found that 65.8% of patients had used one of the CAM therapies in the last six months before treatment. Almost half of the patients also used CAM methods simultaneously as starting their usual treatment.<sup>6,9</sup> A systematic review also shows that 51% of cancer patients in 2009-2018 used CAM therapies.<sup>10</sup>

A large number of physicians do not know much about this medical method or do not believe in it, and in contrast, many doctors and even non-physicians use this method in treating patients.<sup>11</sup> There have been many references to why knowledge of CAM is essential for future physicians. It is believed that knowledge about CAM therapies can increase positive attitudes about them among patients. Knowing known CAM theories and treatments can help physicians better advise their patients on healthcare options.<sup>12</sup>

To examine the physicians' attitudes and knowledge about CAM in Italy in 2020, Berretta et al. showed that 42% of physicians believed CAM therapies could play an integrated role in modern medicine.<sup>13</sup> In Iran, a study by Soleimani et al. on the attitude of medical students and specialized assistants in 2013 showed that the participants' attitudes about traditional medicine were low to moderate. These results show that it is necessary to educate it and continue medical education for this health community group to improve their knowledge about traditional medicine.<sup>14</sup>

Due to the increasing demand of patients for access to traditional medical services and the keenness of physicians to use these methods in Iran, increasing healthcare providers' knowledge and improving their attitude towards CAM seems to be a priority. Therefore, according to the directive of the Ministry of Health and Medical Education of Iran, all medical sciences students must take courses in Persian medicine. However, no interventional study has been conducted to investigate the effect of Persian medicine education on the knowledge and attitude of medical sciences students in Iran. Therefore, this study aimed to evaluate the efficacy of such education on the knowledge, attitude, and practice of medical sciences students.

## Methods

### *Study Design*

This quasi-experimental study was designed with a pretest among a group of medical sciences students who had not still undergone the educational intervention about Persian medicine; furthermore, after completing the course, a post-test was conducted. This e-learning course was entitled "the basics of Iranian and complementary medicine" and consisted of 26 hours of multimedia lessons with online instructors.

They were trained in Iranian and complementary medicine fundamentals, health care measures and the six principles of health protection, Persian medicine treatments modalities, herbal remedies, and manual procedures such as cupping. This course is mandatory for specific majors such as professional doctorates of medicine, dentistry, and pharmacy, as well as bachelors or higher degree students in midwifery, nutrition, physiotherapy, and nursing. However, other medical sciences students can also choose that course as a selective course.

In this study, an educational intervention on knowledge, attitude, and practice of Persian medicine was conducted on medical sciences students of fifth-largest region of health education in Iran. They were studying in the second semester of the academic year from 20 Jan. 2020 to 20 May 2020.

### *Sampling and Participants*

All medical sciences students who were enrolled in the Persian medicine virtual course in the four southern provinces of Iran (Fars, Hormozgan, Bushehr, Kohgiluyeh, and Boyer-Ahmad) were invited to participate in this study.

The inclusion criteria were having a doctorate degree in medicine, dentistry, and pharmacy or a bachelor's or higher degree in midwifery, nutrition, physiotherapy, and nursing and studying in one of the universities of fifth-largest region of health education in Iran. They participants were informed about the objectives of this research, and those who signed the electronically informed consent forms participated in this study. The exclusion criteria were unwillingness to continue cooperation and lack of a complete post-test questionnaire.

Medical sciences students from five major universities in southern provinces of Iran who were enrolled in this course in that semester and responded to both the pretest and post-test participated in this research. Unfortunately, only 99 students from 450 students filled out pre-test and post-test questionnaires, so the analysis was conducted on the responses of these participants.

### *Instruments*

In this study, we aimed to include questions based

on the methodology of KAP studies about Persian traditional medicine conducted in the country. Unfortunately, literature about KAP of Persian medicine among university students was scanty. Thus, a self-completed questionnaire founded on a literature review was designed to reach the study objectives. The questionnaire contains a number of questions which are divided into six domains. The first section surveyed the students' personal information about demographic variables including gender, significance of study, grade point average, duration of university studies, and place of birth and study.

The second section elicited students' knowledge about 10 methods used for health and treatment by "Persian medicine," using a 5-point Likert scale. Responses on a 5-point Likert scale range from 1=not knowledgeable to 5=very knowledgeable. These questions evaluated their knowledge about different types of Persian medicine used in the current society and include:

1. Six principles of maintaining health which Persian medicine scholars recommended
2. mizāj (temperament)
3. Principle usage of herbal medicines (medicinal plants)
4. Principle usage of a combination of herbal medicines (medicinal plant remedies)
5. ilāj bil ghizā (diet therapy/ Nutritional recommendations of Persian medicine)
6. Dalk (Massage therapy)
7. Abzan (Aquatic therapy)
8. hijāma (cupping)
9. Fasd (venesection/phlebotomy)
10. Leech therapy

On the next part of the questionnaire, students were asked about the source(s) of getting information about those 10 maintaining health and treatment methods of "Persian medicine." Media and the Internet, classic training courses, official and authoritative books, and other methods were mentioned as information references and the questions are answered by "yes" and "no".

The fourth and fifth sections explored medical sciences students' personal and professional use of Persian medicine, personal usage patterns and reasons for personal use, recommendation for patients to use it, and patterns and reasons of their suggestion for the patients' use, respectively. They were asked if they used or recommended those "Persian medicine" methods and treatments as "the main treatment method," "adjuvant treatment," or "pain relief." They could select multiple choices in these sections.

In the last part of the questionnaire, 16 questions were asked to evaluate their health belief and attitude

about "Persian medicine" using a 7-point Likert scale to indicate whether they agree or disagree with any of the following statements. These questions emphasized students' intentions to change their attitudes and beliefs about "Persian medicine." Responses on a 7-point Likert scale ranged from 1=strongly disagree to 7=strongly agree.

These statements were ordered as below:

- S1: Persian medicine treatments can be used without consulting a doctor.
- S2: Persian medicine treatment methods can be used as the main treatment of diseases.
- S3: Persian medicine treatments are helpful only as a complementary treatment.
- S4: Persian medicine treatments are used only for simple diseases.
- S5: Persian medicine treatments are used only for chronic diseases.
- S6: Persian medicine treatments are cheap.
- S7: Persian medicine treatments are available to all people.
- S8: Persian medicine treatments are helpful only for maintaining health and preventing diseases.
- S9: Persian medicine treatments are easily accepted by patients.
- S10: In the final stages of diseases when the patient does not respond to other treatments, Persian medicine treatments are worth trying.
- S11: In general, the treatments of Persian medicine do not cause any special harm to the patients if they are not beneficial.
- S12: Persian medicine has no significant side effects.
- S13: The use of Persian medicine treatments may delay the main treatments.
- S14: Faculty members need to be familiar with Persian medicine treatment methods.
- S15: If a training course is held on Persian medicine for a short time (less than a week), I will participate in these courses.
- S16: If a training course is held on Persian medicine for a long time (one month), I will participate in these courses.

The preliminary questionnaire was designed by an agreement of national researchers in medical education, informed by a literature review, and then forwarded to the panel of regional specialists in Persian medicine to be approved. It contained both open- and closed-ended inquiries that required either a brief answer or a tick. Respondents could fill in other CAMs if they were not listed.

#### *Validity and Reliability of the Instrument*

The face and content validation of the questionnaire

was approved by consultation with a Persian medicine expert committee including six faculty members of Shiraz medical school and the School of Health, and corrections were made where required. The committee of experts evaluated the validity of the questionnaire, language transparency, comfort of use, applicability to medical sciences students, and appropriateness of the therapies listed for the study. Cronbach's alpha was used to indicate the internal consistency of different sections of the questionnaire and check its reliability. The values for the 2<sup>nd</sup> to 6<sup>th</sup> parts of the questionnaire were 0.898, 0.897, 0.925, 0.941, and 0.899, respectively, indicating good internal consistency.

### Ethical Considerations

After approving the proposal and obtaining permission to complete the questionnaires from the Shiraz University of Medical Sciences ethics committee (IR.SUMS.REC.1400.511), researchers uploaded the questionnaire for medical sciences students who were enrolled in virtual courses of Persian medicine. All participants had signed an electronic informed consent form to participate in the study.

### Data Collection

The questionnaire was uploaded on the "Formal" website (an Iranian platform for online questionnaire). Then, the link was sent to all students through their cell phones, emails, and their virtual lesson website, and they were requested to fill it out. Meanwhile, the participants were assured that their information would remain confidential and their answers would not affect their course scores.

### Statistical Analyses

The collected data were entered into SPSS software version 22. However, missing data and the questions with two responses were deleted from the data analysis. Descriptive statistics for variables were used and the frequencies were shown in percentages, means, and standard deviation and summarized in tables. Data analysis was performed using inferential statistics, including Paired t-test, and Chi-square test. The Chi-square test was used to identify the relationship between the demographic characteristics and the rate of using CAM methods. The Chi-square test was also used to determine the frequency distribution of the CAM method on demographic variables. All comparisons were tested at the significance level of 0.05.

## Results

### Sample

The pre-test questionnaire was sent to 395 students of medical sciences who were enrolled in the virtual course of Persian medicine (273 women and 118 men), but only 99 of them completed the post-test questionnaire (75 women and 24 men), indicating a response rate of 25%. Only those questionnaires in which both pre-test and post-test were attached were included in the final data set.

Table 1 displays the socio-demographic characteristics of the respondents. These medical sciences students were primarily female (75.8%) and most of them were bachelor's degree students (76.8%) with less than two years of studying (an average of 3.34 semesters). Most of them (40.4%) were nursing students.

**Table 1:** Socio-demographic characteristics of the students

		Frequency	Percent	Cumulative Percent	Gender Female/Male
Major	NURSING	40	40.4	40.4	25/15
	MIDWIFERY	24	24.2	64.6	24/0
	DMD	14	14.1	78.8	10/4
	NUTRITION	12	12.1	90.9	9/3
	MD	9	9.1	100.0	7/2
	Total	99	100.0	-	75/24
Grade	BA student	75	75.8	75.8	57/18
	MD/DMD student	22	22.2	98.0	16/6
	MS student	1	1.0	99.0	1/0
	PHD student	1	1.0	100.0	1/0
	Total	99	100.0	-	75/24
Place of residence	Metropolitan areas	23	23.23	23.23	17/6
	Rural areas	70	70.70	93.93	74/16
	Missing data	6	6.06	100	4/2
Duration of studying (Semester)	1-2	40	40.40	40.40	32/8
	3-4	36	36.36	76.76	26/10
	5-6	15	15.15	91.91	12/3
	Other	3	3.03	94.94	3/0
	Missing data	5	5.05	100	2/3

**Table 2:** The mean scores of medical sciences students' knowledge perceptions, attitude, and practice of Persian medicine

Score of medical sciences students	Before		After		P value
	Mean (M)	Standard deviation (SD)	Mean (M)	Standard deviation (SD)	
Knowledge perceptions	25.28	7.57	31.03	8.64	≤0.001
Participants' own usage	49	22.47	64	17.06	≤0.001
Participants' recommendations for patients' usage	45	19.92	60	20.45	≤0.001
Attitude	69.34	8.98	70.68	9.37	≤0.001

**Table 3:** The participants' own or professional usage patterns of Persian medicine

Preferable or Professional usage	Participants' own usage			Participants' recommendations to patients		
	Before (N)	After (N)	P value	Before (N)	After (N)	P value
Six principles of hygiene in Persian medicine	63	81	0.004	58	74	0.015
mizāj (temperament)	51	72	0.002	46	70	<0.001
Medicinal plants	82	85	0.557	68	84	0.007
Compound herbal medicines	38	59	0.002	30	54	<0.001
Diet therapy	79	86	0.181	74	80	0.305
Massage therapy	58	67	0.184	52	70	0.008
Aquatic therapy	30	42	0.076	26	39	0.049
hijāma (cupping)	46	51	0.477	55	63	0.299
Fasd (venesection)	7	20	0.007	8	17	0.054
Leech therapy	26	36	0.125	27	38	0.095

*The Efficacy of Persian Medicine Educational Course on the Participants' Perceptions about Their Persian Medicine Knowledge*

In the next part of the questionnaire, the participants' perceptions about their Persian medicine knowledge of these medical sciences students were evaluated and compared before and after the courses using a 5-point Likert scale. It means the maximum score for each student was 50, and the minimum score reached 10. The mean score of selected students was 25.28 before starting the course; however, after completing the course, their mean score of perceptions about their Persian medicine knowledge reached 31.03. Therefore, these mean score changes, which occurred in their knowledge perceptions, were significant, as shown in Table 2.

Changes in the familiarity of these students with Persian medicine were influenced on the practical usage of these methods. As shown in Table 2, although 49 and 45% of them used Persian medicine methods for themselves/close relatives or recommended them to their patients, the practical use of Persian medicine methods after completing the course changed to 64 and 60 percent, respectively. These changes were statistically significant as well.

The other aspect of this course that was evaluated was related to changing attitude of those students about Persian medicine. A 16-question questionnaire with the 7-point Likert scale was used to achieve this purpose. It means the maximum score for each student was 112, and the minimum score reached 16. The mean score of those students was 69.34 before

starting the course; however, after completing the course, their attitude means scores about Persian medicine significantly changed and reached 70.68.

*Usage of Persian Medicine as a Treatment Modality*

As illustrated in Table 3, at the beginning of the course, the usage of a Persian medicine methods among the participants had a remarkable variety. At that time, many participants used "medicinal plants" and "diet therapy" for themselves or close family members (82 and 79 out of 99 participants, respectively) though Fasd (venesection) was the less favorable procedure (8 out of 99 participants).

After the course was over, the number of participants who said they would use Persian medicine treatment modalities for themselves or close relatives increased. Although the use of "diet therapy" and "medicinal plants" became more popular among those students (86 and 85 out of 99 students, respectively); significant popularity was shown for the usage of mizāj (temperament) and compound herbal medicines; 21 students reported that they favored those modalities more than the beginning of the course 72 and 59 participants preferred to use them for themselves or close relatives. Although, after the course was over, the number of participants who said they would use Persian medicine treatment modalities for themselves or close relatives increased, these increases were not statistically significant among "medicinal plants," "diet therapy," "hijāma (cupping)," "Aquatic therapy," and "Leech therapy."

In the other part of this research, the participants'

recommendations to their patients were evaluated. Before the start of the course, most of the participants said that they recommended their patients to use “medicinal plants” and “diet therapy” to. However, “diet therapy” was more common, and 74 out of the 99 participants had recommended it to their patients. At that time, only eight participants had recommended using “Fasd (venesection)” to patients.

At the end of the course, all participants tendency for professional use of all Persian Medicine methods for their patients increased. However, the recommendation for the use of “medicinal plants” increased significantly; the majority (84 out of 99 participants) had recommended it to their patients. Furthermore, like the beginning of the course, after completing it, “Fasd (venesection)” was a less favorable Persian medicine method for recommendation to other people when the course was over.

#### *Attitude of Medical Sciences Students about Persian Medicine*

In the next part of the questionnaire, the attitude of these medical sciences students was evaluated by 16 statements with a 7-point Likert scale containing seven response options. As a psychometric tool, this scale contains several statements that represent the study hypotheses. In the survey, respondents are asked to rate their level of agreement on a scale from strongly agree (By ticking number 7) to strongly disagree (By ticking number 1). In this 7-point scale, the positive responses are 5, 6 and 7, and negative responses are 1, 2 and 3.

As illustrated in appendix 2, before starting the course, the majority of the participants agreed to these statements:

1. Persian Medicine treatments can be used without consulting a doctor.
2. Persian Medicine treatments are used only for chronic diseases.
3. In general, the treatments using Persian Medicine do not have any special harm for the patient if they are not beneficial.
4. Persian Medicine has no significant side effects.
5. Medical sciences students need to be familiar with Persian Medicine treatment methods.

In addition, most participants disagreed with these statements:

1. Persian Medicine treatments are helpful only as a complementary treatment.
2. Persian Medicine treatments are used only for simple diseases.
3. Persian Medicine treatments are cheap.
4. Persian Medicine treatments are available to all people.

5. Persian Medicine treatments are helpful only for maintaining health and preventing diseases.

6. Patients easily accept Persian Medicine treatments.

7. The use of Persian Medicine treatments may delay the main treatments.

Furthermore, before the course, most of them neither agreed nor disagreed with the following statements:

1. Persian Medicine treatment methods can be used as the main treatment of diseases.

2. In the final stages of diseases whe the patient does not respond to other treatments, Persian Medicine treatments are worth trying.

3. If a training course is held on Persian Medicine for a short time (less than a week), I will participate in these courses.

4. If a training course is held on Persian Medicine for a long time (one month), I will participate in these courses.

Although the students’ attitudes did not change significantly after the “Persian Medicine” course, the attitudes of participants significantly changed in the following statements:

“Persian medicine treatments are cheap, “Persian Medicine treatments are available to all people,” and

“Patients easily accept Persian Medicine treatments.”

In fact, after finishing the course, students’ opposing views in these statements changed to “Neither Agree nor Disagree.”

#### *The Primary Source of Getting Information about Persian Medicine*

Healthcare professionals must keep their knowledge up to date and use accurate and authentic sources of information due to the growing amount of information on complementary and alternative medicine (CAM) being provided to people by newspapers, broadcast, websites, and other sources.<sup>15</sup> In a study, the primary main sources of information about complementary and alternative medicine (CAM) usage by lung cancer patients were friends (65.4%), family (30.8%), CAM practitioners (26.9%), and the media (23.1%);<sup>16</sup> another study on pharmacy and non-pharmacy students showed that the main sources of information utilized were family/friends and mass media.<sup>17</sup> According to these studies, very few patients and students learned about CAM through training/apprenticeship with healers or other reliable sources.

Therefore, the main sources of knowledge about Persian medicine were inquired in another section of our questionnaire. This section evaluated the four main sources of information. As illustrated in Appendix 3, these students used books less often than other ways to learn about Persian medicine.

The majority of the participants learned “Six Principles of Hygiene in Persian Medicine” through social media and the Internet (69.69%), while only one of them got information about Fasd (venesection) via books. Even though books and traditional training courses became more popular among students after they finished the course, social media and the Internet remained the best sources used to get information.

As demonstrated in Appendix 3, this course significantly increased the use of classic training courses as preferable sources for getting information about Persian medicine, except leech therapy. Although scientific books for information on temperament ( $P < 0.001$ ), Fasd (venesection) ( $P < 0.001$ ), and compound herbal medicines ( $P < 0.001$ ) had increased, they remained the second after the media and Internet.

## Discussion

Complementary and alternative medicine (CAM) has recently returned to the modern era from ancient civilizations. Currently, CAM is used by more than 80% of the developing world population, while only 50% of the developed world population uses CAM.<sup>18</sup> Although the nature and application of CAM may vary between regions based on local culture and environment, studies conducted among physicians and medical sciences students in numerous countries, including the United States,<sup>19</sup> Australia,<sup>20</sup> Germany,<sup>21</sup> India,<sup>22</sup> Turkey,<sup>23</sup> Palestine,<sup>24</sup> and Ireland,<sup>25</sup> revealed that those participants were frequently more interested in learning more about CAM approaches. At the same time, knowledge of them was insufficient. However, 86.6% of the participants in a study by Nejatian et al which investigated how healthcare providers personally perceive and use complementary and alternative medicine reported using at least one or more CAMs.<sup>26</sup>

Even though it appears that students’ awareness and knowledge of CAM have increased in recent years due to the rise in the use of herbal medicines, studies conducted in previous years among Ethiopian students revealed that only 26.5% of respondents appeared to have good knowledge about CAM,<sup>27</sup> the same result was reported in the United States.<sup>28</sup> However, our study found that, prior to the intervention, the participants’ knowledge of CAM was 25.28 (50.56%).

According to the findings of this study, there was a 12% increase in knowledge after an online Persian medicine training program targeted to medical sciences students and developed over 120 days using the Navid Platform, with tutoring. There were changes in the level of familiarity of these students with Persian medicine in all aspects of their education and practice at the end of the training, which were more pronounced in some respects, demonstrating the effectiveness of training courses in that area. The

outcomes of an online educational intervention are comparable to those reported in other studies.<sup>29,30</sup>

According to Harris’s research, increasing CAM knowledge and awareness significantly impacts people’s health. That study emphasizes the importance of comprehensive, moral, and practical training in traditional medical treatment methods to anticipate and minimize the risks of dangerous side effects and drug interactions while still enjoying therapeutic effects.<sup>5</sup> It implies that CAM training fosters a more positive attitude toward it. This finding can be interpreted as a sign that opportunities in the CAM curriculum may be available.<sup>23,31</sup>

Although Keene and Tangkiatkumjai demonstrated that patients used at least one CAM modality during their treatment,<sup>6,10</sup> another study showed that patients’ desire for individual, family and generalized use of CAM would be influenced by adequate knowledge of CAM.<sup>32</sup> The Persian medicine training course, as expected, had a significant impact on the use of primary and adjuvant therapies, including six principles of hygiene in Persian Medicine, temperament, compound herbal medicines, and Fasd (venesection) for participants and their families in our study. However, there was no statistically significant increase in the use of medicinal plants, nutritional recommendations, massage therapy, cupping, aquatic therapy, and leech therapy as treatment methods for themselves and their families following the training course.

However, when the results of this study participants were evaluated, it was found that the professional use of traditional medicine for their patients differed from the use of it for themselves and their families. In fact, most of the participants increased their professional use of a wide range of Persian medicine modalities for their patients. Except for diet therapy, hijma (cupping), Fasd (venesection), and leech therapy, this increase was significant.

Despite the students’ positive attitudes toward CAM, their beliefs and attitudes did not change in our study, except in three cases after completing the training. As a result, existing training courses must be reviewed to provide appropriate treatment methods in all fields and improve the performance of traditional medicine practitioners in CAM. Another study, conducted by Hsiao-Yun et al., revealed that 66.4% of nurses had a favorable attitude toward complementary and alternative medicine. However, 77.4% did not have a thorough understanding of its benefits and drawbacks. In addition, nearly half of those polled said they were uncomfortable discussing complementary and alternative medicine with their patients.<sup>33</sup>

The other outcomes of this educational course focused on the best resources for learning about Persian medicine. Prior to education, most of the participants primarily used social media and the Internet to research Persian medicine; however, after

the course, this preference decreased, except for those who used “medicinal plants” and “compound herbal medicines.” There has been a noticeable rise in the use of “Classic training courses” as a preferred Persian medicine source after education, except for “leech therapy.” The results of the current studies show that students primarily learned about PM from non-scientific sources. Another study that included both pharmacy and non-pharmacy university students came to the same conclusion.<sup>17</sup> Thus, this emphasizes the significance of updating academic curricula and health policies to standardize and regulate complementary and alternative medicine (CAM) healthcare practices to protect the public, and the student’s perception of Persian medicine can be altered.

## Conclusion

Overall, our findings showed that this course had a practical impact on medical science students’ knowledge, practice, and attitudes toward Persian medicine. Although it did not result in significant changes in some aspects of knowledge, practice, and attitude, this education did influence a group of future healthcare providers’ perceptions of Persian Medicine. This Persian Medicine course appears to be both an opportunity and a requirement for the medical sciences educational program. Despite having little practical knowledge of PM at the start of the course, which was mostly based on untrustworthy sources of information, many students agreed to include PM in the curriculum to advance their knowledge of PM and impart more scientific logic behind its use. As a result, advanced and basic PM education in medical sciences disciplines is required.

## Limitation

This study has significant limitations, including its design, so factors influencing students’ answers cannot be examined in a long period. In addition, the students’ knowledge and attitude regarding PM may change over time; therefore, a longitudinal study should be conducted to fully illustrate these behaviors. Another drawback of this study is the sample size of students who did not cooperate well throughout the course of the study. The results of this survey are limited to medicinal sciences students who attended one of the universities in the fifth-largest health education region in Iran; they cannot be extrapolated to other universities in Iran. The findings on Persian medicine are based on the students’ perspectives, whereas the perspectives of PM practitioners, university faculty members, and patients as actual consumers with potentially divergent opinions have not been described. Additionally, because the study relied on medical sciences students’ own accounts, the validity of the self-reporting may be taken into consideration when interpreting the results.

## Authors’ Contribution

All authors contributed to the study and the final manuscript.

## Ethical Consideration

Ethics approval for this study was obtained from the Ethics Committee of Shiraz University of Medical Sciences.

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