

FEATURE ARTICLE

A Survey of Complementary and Alternative Medicine in Iran

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ABSTRACT Objective: To survey the use, capability and satisfaction of complementary and alternative medicine (CAM) in comparison with conventional medicine in Iran. **Methods:** In this national survey, a cross-sectional study was designed, 5,000 people were surveyed to identify predictors of Iranian traditional medicine (ITM) use compared with conventional medicine. Data were collected through a questionnaire that covered three different predictor categories: demographic information, patient's viewpoint, and patients' experiences. **Results:** Most of the participants preferred government owned hospitals rather than other places. Praying for one's own health was the most frequent and favorable ITM domain ($P=0.017$) based on patients' interests, both in low- ($P=0.08$) and high-level ($P=0.011$) educated subjects. Among the participants, 97.8% had previous conventional medicine history due to their chronic diseases **Conclusions:** Iranian

patients resort to ITM as a choice at the late stage of the disease. Current deficiency in integration of CAM and conventional medicine is in contrast to the increasing demand on patients' side. Health care organizers should be facilitating the CAM services by tuition of CAM practitioners and supporting eligible CAM centers for diagnosis and treatment of patients.

KEYWORDS effectiveness, complementary and alternative medicine, conventional medicine

Complementary and alternative medicine (CAM) is a heterogeneous health system based on human body temperament.⁽¹⁾ This health system takes a comprehensive approach to etiology of diseases including physical, mental, social, and psychological dimensions rather than focusing on single or particular factors. CAM is difficult to describe with conventional medicine terminology or concept neither routinely taught, nor provided in medical courses during undergraduate syllabus programmed by government.⁽²⁻⁵⁾ CAM, similar to other health systems, encompasses resources in prevention, diagnosis, and curative prescription. These diverse interventions include numerous modalities used together or in place with conventional medicine.^(1,6,7) The CAM's modalities are recommended in both ill and healthy people for improving physical status to maximum healing. The knowledge of CAM is mostly inherited from experiences over decades and self-practiced by their holders rather than in a written resource.⁽⁸⁾

Public interest to CAM had a significant increase amongst physicians and patients in the last 20 years because of two reasons.^(5,9-14) First, the advantages of CAM, such as available resource, integration

with conventional medicine, lower costs, have fulfilled patients' desire to be actively involved in their treatment procedure. The other advantages of CAM are fewer side effects, cultural and autochthon accommodation, and recommendation of easy methods for patients.^(15,16) Second, dissatisfaction with conventional medicine especially in the treatment of chronic and complex disorders.⁽¹⁶⁻¹⁸⁾ According to this information, medical organizations should pay much attention to comprehensive programs in CAM modalities.

Whole medical system is one of the major categories in CAM which describes complete independent medical disciplines in different regions or countries and encompasses several categories

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of therapy or distinct types of treatment.⁽⁴⁾ Iranian traditional medicine (ITM)⁽¹⁶⁾ is well-known in the Middle-East region and practiced in ancient Persia, which conforms to CAM whole medical systems. ITM involves different practices that are used in parallel with conventional medicine in Iran. ITM explains the quad-based of tempers, which construct human body, and nominates it as "MAZAJ" (Dam is hot and wet; Safra is hot and dry; Suda is cold and dry; Balgham is cold and wet). These tempers can be affected by age, family characteristic, physical activity, occupation, environment or geographical situations as well as diet regimen and season change. According to the above-mentioned data, ITM physicians take patient history critically in order to find factors misbalancing body tempers. For the purpose of returning patients to a balanced temper, ITM therapeutic modalities prescribe antagonistic powers through food regimens, fasting, mineral and vitamin supplements, energy and praying therapy, phlebotomy and venesection, spew and enema, vapor, bath and washing, tonsorial manipulation, modifying sleep style and relaxations, herbal drugs, and special surgical operations (bonesetting and cauterizing).⁽¹⁹⁻³⁷⁾

This study was conducted for the purpose of finding socio-demographic predictors of CAM use and assessing knowledge of CAM users about ITM. Moreover, capability and satisfaction of CAM modalities were surveyed in our study in comparison with conventional medicine.

METHODS

According to the protocol for collecting ITM customers attitudes,^(38,39) we designed a cross-sectional study to be conducted on 5,000 adult patients (those of 16 years-old or older) who consumed any CAM domains in ITM during 2008–2009. Data were collected through a questionnaire that covered three different predictor categories: demographic information, patient's viewpoint on ITM issues, and patients' experiences in ITM and conventional medicine were compared. The questionnaire contained 40 items by using a five-point Likert rating scale ranging from 1 to 5. The questionnaire was pilot tested with a group of randomly selected patients prior to rolling out to the rest of the subjects for adjusting its reliability and validity.

Demographic Information

In the first category, questions on personal

information, such as age, gender, education, occupation, marital status, and socioeconomic status were asked. According to text recourses on ITM, patients were classified into basic age-humors of mankind that change during lifespan. When someone is born, s/he has warm-wet temper (Dam temper) up to the age of 35 years. During ages 35–45, the basic temper becomes warm-dry (Safra temper). With increasing chilling in later ages, human body experiences cold-dry temper (Suda temper) during 45–60 years. At last people over 60 years have cold-wet temper (Balgham temper).

Patients' Viewpoint on ITM Issues

In the second category, we merged variables, such as basic knowledge and patients' attitude regarding ITM. Knowledge on ITM's modalities was assessed based on the awareness of the existence of trustworthy scientific evidence, malpractice suits concerning use of ITM, and satisfaction for integrating ITM with conventional medicine.

Two validation studies for measuring CAM attitude were reported recently. The first one was the validation of the Integrative Medicine Attitude Questionnaire (IMAQ).⁽⁶⁾ The second was the validation of the 10-item CAM Health Belief Questionnaire (CHBQ),⁽⁴⁰⁾ which was validated by including the IMAQ.⁽⁴⁰⁾ CHBQ total scale scores were computed by summing the scores across the 10 rating items. Three CHBQ items were worded negatively to minimize acquiescence response set. The maximum possible score was 70 with a hypothetical midpoint of 35 (denoting neutral attitude). Our questionnaire was constructed by adapting items⁽⁴¹⁾ from two existing instruments^(6,42) and by adding items especially from related ITM issues. The patients were also asked to answer to the following questions: Factors influencing patients' willingness to integrate ITM modalities, methods for being informed about ITM, preventive ability of ITM, logics of diagnosis in ITM, satisfaction factor of ITM, effect of therapeutic methods, and governmental support on ITM.

Comparison of Patients' Experiences in ITM and Conventional Medicine

For collecting the third category, we searched both ITM and conventional medical documents of patients about adverse reaction, number of visits, therapeutic methods, and number of physicians.

Statistical Analysis

To present demographic parameters of the whole cases, descriptive statistics are used. Bivariate analyses using Chi square tests and *t*-tests were used for categorical and continued data, respectively. The linear regression analysis was used also for comparison of two continues parameters. We used nonparametric statistics to compare results of calculated average scores (means and medians). We performed data analysis using SPSS 17.0 software (SPSS Inc., Chicago, USA). *P*-values < 0.05 were considered statistically significant.

RESULTS

This cross-sectional study provides data on 5,000 subjects between 19 and 70 (mean age: 45.3 ± 10.2) years old who consumed any CAM domain in ITM during a period of 12 months.

Demographic and Characteristics of the Studied Participants

The survey subjects were mostly married middle aged housewives (mean age: 54.7 ± 13.6 years) and single young businessmen (mean age: 22.4 ± 9.0

years). We classified them according to principles and standards of ITM in age classification. Nationalities of almost all subjects were Iranian, in which the most prevalent ethnicity was Turks (63.4%). Nearly half (47.4%) of the subjects had academic degrees of Bachelor of Sciences (BS) or higher. Majority of the subjects (70.4%) lived in suburban areas (Table 1).

Patients' Viewpoint on ITM Issues

Of the participating patients, 67.3% visited ITM centers at the recommendations from those previously treated by ITM services. Whereas only 0.95% were recommended by conventional medicine physicians (*P*=0.034). Moreover, 73.8% of cases highlighted government incapacity in advertising for CAM and ITM. Furthermore, a significant number of selected patients (61.7%) would like to use ITM services in hospitals rather than other places (*P*=0.021). Unfortunately, based on our findings, public knowledge about ITM is limited and 68.4% of participants did not have any information in this regard at all (*P*=0.028). Most of the remaining survey participating patients who were familiar with ITM had gained their knowledge from old experts. There was a significant proportion of ITM

Table 1. Demographic and Span Characteristics of the Study Participants [Case (%)]

Characteristic	Total (5,000 cases)	Male (938 cases)	Female (4,062 cases)	<i>P</i>
Age (Year, $\bar{x} \pm s$)	45.3 \pm 10.2	51.7 \pm 13.0	37.2 \pm 17.7	0.07
Temper category*				
Dam	670 (13.4)	546 (58.5)	124 (3.0)	<0.001
Safra	488 (9.7)	191 (20.2)	297 (7.3)	<0.001
Suda	3182 (63.6)	130 (13.8)	3052 (75.1)	<0.001
Balgham	660 (13.2)	71 (7.4)	589 (14.5)	0.052
Marriage	4110 (82.2)	331 (35.2)	3779 (93.0)	<0.001
Educational degree more than bachelor of science	2367 (47.3)	541 (57.8)	1826 (44.9)	0.012
Race				
Turk	3172 (63.4)	388 (41.3)	2784 (68.5)	<0.001
Kurd	620 (12.4)	138 (14.7)	482 (11.8)	0.33
Persian	591 (11.8)	172 (18.3)	419 (10.3)	0.02
Arab	470 (9.4)	203 (21.6)	267 (6.5)	<0.001
Balouch	109 (2.2)	31 (3.3)	78 (1.9)	0.28
Others	38 (0.8)	6 (0.6)	32 (0.7)	0.41
Life location				
Urban	1151 (23)	287 (30.5)	864 (21.2)	0.06
Suburban	3520 (70.4)	585 (62.3)	2935 (72.2)	0.04
Rural	286 (5.8)	57 (6.0)	229 (5.5)	0.61
Foreign countries	43 (0.8)	9 (0.9)	34 (0.8)	0.56

Notes: *Dam <35 years, Safra 36–45 years, Suda 46–59 years, and Balgham >60 years

patients (82.5%) who found ITM modalities effective for their current diseases ($P=0.046$). About 8% of our samples indicated that ITM therapeutic methods were easy to do, and 40% of cases mentioned that CAM was the most effective remedy (Table 2).

Fifty-two percents of our case series believed that ITM had made them optimistic during their medications. It was reported that the experience of ITM physician was important among patients with low level of education ($P=0.036$), but highly educated people trusted academically educated and religious physicians ($P=0.004$). In addition, we have found that among women, experience was the most important characteristic of ITM physicians, whereas for men, academic education was on focus. The most effective ITM domain by patients' interests was praying (kind of mind-body CAM medicine) for treating purposes (44.3%, $P=0.017$), followed by fasting (28.7%). Praying for health reasons was the major mode of therapies in both relatively poorly ($P=0.08$) and highly ($P=0.011$) educated patients. There appeared to be

a positive relationship between age and manipulative body based therapies ($r=0.41$, $P=0.01$). Overall, the mean CHBQ scores was more than hypothetical scale midpoint of 35 ($P=0.004$), which represents significant positive responses to ITM practice and use. Mean scores were meaningfully higher in males and highly educated people ($P<0.002$ and $P<0.0005$, respectively).

Comparison of Patients' Experiences in ITM and Conventional Medicine

In our sample (5,000 individuals), 97.8% of the participants have had an average of 5.2 ± 1.34 (0.5–31) years of previous experiences with conventional medicine. They were seen by 9.5 physicians on the average (range 1–18). The patients' medical documents in conventional medicine showed that 26.4% of this group had not a definitive diagnosis and 43.4% of our cases suffered from severe adverse reaction of conventional medicine. Psychological and musculoskeletal disorders were the reasons of the visit in 41.3% and 18.8% of participants, respectively. The

Table 2. ITM Examination from Patients' Points of View

Parameter	Percentage (%)	Parameters	Percentage (%)
Governmental advertisement for ITM		Information level about ITM	
Perfect	0	Perfect	0
Good	3.2	Good	12.4
Tolerable	2.8	Tolerable	13.9
Weak	20.2	Weak	5.3
Nothing	73.8	Nothing	68.4
Familiar to do ITM recommendation		Capability of ITM and effectiveness	
Perfect	68.3	Perfect	82.5
Good	21.7	Good	3.4
Tolerable	7.6	Tolerable	7.8
Weak	1.2	Weak	2.6
Nothing	1.2	Nothing	3.7
Referring source to ITM		Suitable place for ITM	
Previous patients	67.3	Governmental hospitals	50.4
Physicians on CAM	0.95	Private hospitals	11.3
Propagandas	19.3	Private clinics	19.2
Family member recommendation	12.4	Other places	10.1
Source of information about ITM		Most ITM modalities attitude	
Elders	63.2	Energy therapy and praying	44.3
Popular books	8.3	Food regime and fasting	28.7
Journals	12	Herbal medicine	11.6
Internet	16.3	Bath and hydrotherapy	4.3
Medical texts	0.3	Other manipulations (spew and enema, sleep therapy and relaxation, operations)	11.1

median number of visits in ITM center was six (range 1–53) per 12 months. Subjects who have used ITM more frequently were more likely to combine their ITM modality with conventional medicine ($r=0.78$, $P=0.002$). About 50% of the participating patients recommended ITM to others, and the percentage increased to 65.9% during follow-ups, indicating their satisfaction from ITM modalities. Only 11.7% of patients' statements expressed that ITM procedures may be harmful (Table 3).

DISCUSSION

CAM is a health-related system, which is neither routinely trained nor provided to medical faculties in their educational syllabuses and domain institution. Training of CAM practitioners, however, is very important in this field both theoretically and practically.⁽⁴³⁻⁴⁵⁾ The results of this study showed that a large part of ITM users were married women living in suburban areas. Data collected in this study confirmed the previous research works showed that there was a big gap in medical organizations for programming their disciplines in teaching conventional medicine and addressing CAM request by patients.^(44,46) Although CAM therapies possess a developed knowledge, physicians are not too concerned about these particular treatments.^(2,15,47) However, many developed countries have publications on CAM application. The highest lifetime prevalence of CAM use was reported in Japan (76% of the population),⁽⁴⁸⁾ which is followed by Australia (69% of the population),⁽⁴⁹⁾ holding the second rank, and Germany (62% of the population),⁽⁵⁰⁾ US (40% of the population),⁽⁵¹⁾ and UK (28.3% of the population).⁽⁵²⁾

Our survey showed that people need suitable places for medical services. Further, we found out that most patients prefer governmental hospitals since academic places supervise the work. The other qualities of government owned hospitals are their level of knowledge, the lower cost, and public health insurance services.^(12,53) However, the most important reason that justifies this patient behavior

pattern is their fear of non-approved procedures and those who cheat and misuse CAM modalities for moneymaking.

CAM practitioners perform modalities without formal training and proper background, their knowledge is based on traditional observations and the logic of their decisions is under question; however, most of them follow some further instructions in methodological procedures. Moreover, these practitioners have passed their own separately held training courses.^(44,54-56)

Having little knowledge about CAM is the major reason for negative attitudes taken by conventional medicine toward CAM. However, CAM trainings changed opinions in this regard, resulting in today integration of CAM with conventional medicine. Public and doctors believed that CAM incorporation into curriculum taught at medical faculties is a must. In the United States, most of medical centers work on CAM, and their number has increased significantly from 10%–20% in 1995 to 50%–60% in 1997, which was within only two years.⁽⁵⁷⁾ Some important studies in CAM are performed, yet fewer comprehensive research works are being conducted in this field compared with conventional medicine.^(10,58)

Some factors that limit research in CAM are lack of funding, absence of research skills, defect in academic organizations, difficulty in interpretation of poor quality studies, and inappropriate methodological issues. These problems must be solved by governmental supports and increasing physicians' approaches to randomized clinical trials on CAM modalities.

In other non-published data in our country, records of growing rate of herbal drug customers were documented, which shows popular reputation of CAM in concordance with data of health survey in England. Prevalence of individual CAM uses in England showed that herbal medicine had a prevalence of

Table 3. Comparison of Patient Experience between ITM and Conventional Medicine [Case (%)]

Group	Case	Duration of therapy		Adverse reactions		Recommendation to other patients	
		Years (SD)	Number of physicians (SD)	Severe	None	During treatment	After treatment
ITM	4890	2.5 (1.7)	1.0 (0.2)	59 (1.2)	4318 (88.3)	2440 (49.9)	3222 (65.9)
Conventional medicine	4890	13.8 (2.3)	8.4 (3.9)	2123 (43.4)	465 (9.5)	–	229 (4.7)

200 uses annually (4th place after massage therapy, aromatherapy, and relaxation).⁽⁵²⁾

However, 67% of patients in this study believed that government efforts and medical education organizations are extremely inadequate with their needs. Moreover, our patients indicated that the state of referring to ITM in our country is not well-proportioned at all. Whereas 25.8% of CAM's customers had been referred to CAM by physicians of conventional medicine in United States.⁽⁴⁾

Pattern of patients' distribution area in our cases is related to location of our referral center that supports patients living in urban areas. In addition, Iranian rural inhabitant patients favor performing their special cultural treatments and modalities in the nearest place to their homes, and in this manner, they are not willing to attend in urban ITM hospitals. Arcury, et al⁽¹⁾ expressed that different ethnicities favored different CAM modalities; difference in socioeconomic and health status factors were predictors of CAM use. Furthermore, previous CAM databases reported the effect of culture on selection of CAM modalities.⁽⁵⁹⁻⁶¹⁾ In UK, massage, aromatherapy, and acupuncture have as many advocates as homeopathy does,^(62,63) though in US chiropractic, pray, and herbal methods are the most common alternative therapies.⁽⁵⁾ In contrast, in our study praying for therapeutic reason and fasting are the most important modalities.

Based on patients' comments, it can be concluded that patients found ITM diagnosis and its modalities completely logical. According to our data, patients with chronic illness and longtime treatment period are disappointed in conventional medicine and tend to follow ITM modalities more significantly compared with other patients.

Sixteen percent of Americans visit CAM because of cold and other simple diseases.⁽⁵⁾ This means that Americans put CAM in first choice of medication, but in our series, Iranians put ITM as their last resort, which make their condition more complicated. There were some limitations in this study; for example, we conducted the study only at one institution at which accumulation of positive patients' opinions about ITM may be a probable selection bias; therefore this setting led us to suggestion of attitude calculation in other centers to be taken into account in our future

studies.

CAM practitioners are trying to have multidimensional view on human illnesses and attention on the self-repairing capacity of the body. In fact, CAM modalities may provide opportunities for positive changes on human temper to achieve a new balance. Therefore, the current lack of a shared global view between CAM and conventional medicine should be changed to a status of effective cooperation.

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