

Nutrition in Different Seasons, From the Viewpoint of Islamic Physicians

Mohammad Bagher Minaei^{1,*}; Esmaeel Nazem¹; Hossein Moradi¹; Ali Akbar Mirsalehian²; Alireza Nikbakht Nasrabadi³

¹Department of Traditional Medicine, School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, IR Iran

²School of Dentistry, Shahed University, Tehran, IR Iran

³Department of Surgery, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, IR Iran

*Corresponding author: Mohammad Bagher Minaei, Department of Traditional Medicine, School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, IR Iran. Tel: +98-2188953008, E-mail: minaezb@sina.tums.ac.ir

Received: December 21, 2012; **Revised:** January 17, 2013; **Accepted:** April 17, 2013

Context: Nutrition is the process of food procurement and supply. The current study aimed to evaluate the viewpoints of Iranian Islamic traditional physicians about nutrition in different seasons, to obtain healthy and native nutritional methods. Iranian traditional medicine, relying on thousands of years of scientific and practical experiences, has specific nutritional viewpoints which are not useless to create a healthy society.

Evidence Acquisitions: The current study was a library research which was conducted by evaluation of the traditional medicine books, such as Canon in medicine, Al-havy, Exir Al-azam, Kholasat Al-hikmat, Alwah Al-seha by kharazmshahi, Jame Al-sharhain, Tohfah Al-sadiyah, and Mofarrah Al-ghloub.

Results: Style of nutrition is determined according to seasonal temperature, humidity, and dryness, temper of foods, and also digestive power and temperament of individuals; through these factors health is provided and the role of food basket in providing health is determined.

Conclusions: By evaluation, analysis and comparison the viewpoints of Iranian traditional medicine physicians, principles and regulations can be codified, and contemporary nutritional methods will be achievable. It is also possible to make nutritional knowledge of Iranian traditional medicine more comprehensive and applicable.

Keywords: Medicine, Traditional; Nutrition; Seasons

1. Context

It is man's natural habit to consume foodstuffs every day in a new form. Nutrition is "The process of using food by body". Nutrition is a process which provides and supplies food; food enters the body, body separates nutritional substances from food and absorbs them. Then, uses nutritional substances and excretes wastes. Today, nutritional model significantly affects health and longevity. Also, proper nutrition prevents chronic and dangerous diseases (1). In ancient medical references, considering nutrition was on the top of educations, and related rules and types of foods played an important role in the formation of medical sciences (2). In this regard, Hippocrates said: "Activities and eating, sleeping and being awake, all should be done by the book, according to natural order". Galen also has stated that: "Knowing the benefits of foodstuffs is the most beneficial medical knowledge. Because, need to foods is an eternal and permanent need, in health or in illness, and only by eating food life can be continued" (3). According to the teachings of Iranian traditional medicine, quality and quantity of foodstuff depends on

the different physical and gastrointestinal conditions, age, weather, and season; if these factors are considered, food causes health and survival, and if not, food causes illness and cannot feed body, appropriately (4-7).

2. Evidence Acquisitions

The current study was a qualitative research, and its under study population was about 20 books on Iranian traditional medicine. Environment of qualitative researches is completely different from those of the quantitative ones. In the present study, data gathering environment was libraries equipped with internet and manuscripts and printed copies of traditional medicine reference books. In the first phase, all contents about nutritional principles were identified, gathered, and noted. In qualitative researches, data analysis is along with data gathering. Hence, while taking notes, disagreements between former scientists are also revealed. Gradually and along with note taking procedure, notes were recorded and stored in computer. Then, each class of notes was separately evaluated. In the first phase, principles of

Implication for health policy/practice/research/medical education:

This manuscript helps to identify the Indigenous and healthy nutrition, and helps to access them easily.

Copyright © 2014, Quran & Etrat Center, The Ministry of Health and Medical Education. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

nutrition and its relevant issues were presented generally. This phase was in fact only the introduction part of research, which merely aimed to gather and categorize issues based on the selected books. In the second phase, following the evaluation of notes, nutritional principles were extracted. In other words, similar properties and characteristics of notes were extracted, and after analysis, recorded as nutritional principles. In the third phase, data analysis was in the form of content analysis in a way that, theme of each class was extracted. These themes were gathered and formed a new note. Then, conclusion of these themes results in the extraction of appropriate and multipurpose nutritional principles.

1. Codification of nutritional principles for prevention and health maintenance.
2. Codification and explanation of seasonal nutrition principles.
3. Tabulation of seasonal recommended foods, according to the available data.

3. Results

3.1. Food Policy in Spring

Avicenna believed that: "Spring food should be eaten light with a given time interval; cooling drinks and soups should be used, and warm and humid meats and drinks should be avoided. Do not overeat and avoid hot, bitter, spicy and salty foods" (8). Hakim Arzani and Aghili Khorasani believed that: "In spring, warm and humid foods should be avoided; because nature of spring is also warm and humid, and undoubtedly any warm food is also stimulating, and any humid food is also booster. During this season, both of these tempers are unsuitable, and using light meals is the most beneficial policy". It is worth mentioning that according to the viewpoint of traditional physicians, there are three ways to mitigate foods:

1. Using foodstuffs which dilute blood. This type is not consistent with the intended purpose, because blood that is diluted through consumption of light foods is almost warm, and warm foods are not suitable for this season. Cold and heavy foodstuffs are the most suitable ones for this season; because cold foods relieve movement of sputum, and heavy foods also adjust concentration of sputum.
2. Reducing the amount of food. This type is not consistent with the discussed purpose either, since during spring body temper is naturally warm, and digestive power is strong, increasing the amount of food seems to be necessary. In this season, by strong digestive power, reducing the amount of food is harmful; and hunger makes tempers warmer and more excited. In this regard, Hippocrates said: "During winter and spring body temper is warmer than usual, and sleeping is also longer". Hence, one should eat more than regular during these seasons. Instinctive heat is also strong in these seasons, so more food is required.

3. The food is large, but its nutritional value is low. In fact, it is the purpose of light meal in spring; and undoubtedly, since body tempers in spring are in maximum, entering decomposable ingredients to the body should be higher than their excretion. Hence, low nutrition value foods are enough. Since in spring natural body temperature increases and digestive power strengthens, it is recommended to eat more foods to engage stomach. This type of nutrition causes that along with consuming high amounts of food, no much sputum accumulates in the body. For instance, non-tropical legumes are the suitable examples of this type of foods (5, 9). Hakim Jorjani said: "In spring, body should be purified from sputum which has been accumulated during winter, before spring moves it and warmth of summer porous and smelts it and fills all veins and organs with it. Food should be decreased, from two angles; one is to eat less, softer and lighter foods, and prevent filling stomach even from soft food. Every morning, exercise shortly before breakfast and avoid warm and humid foods such as spaghetti, meat, wine, and also bitter and salty foods. Totally, warm foodstuffs should be avoided, and cold drinks such as verjuice, pomegranate juice and sekanjabin syrup should be taken" (Table 1) (10, 11).

3.2. Food Policy in Summer

Avicenna said: "In summer, consumption of foods and drinks should be decreased, and consuming cooling foods is recommended" (8). Hakim Arzani also has stated that: "In summer, consumption of foods and drinks should be decreased. It is obvious that in this warm season digestion is weakened, temper is heated, and therefore less food is needed. This is because of excitation and decrease of sputum; therefore lowering the amount of food, and drinks is necessary. Staying in the shadows, and drinking cooling syrups such as acidosis and tamarind syrups, which are cooling drinks, also relieves excitation. In this season, bile is in maximum rate and these syrups excrete bile.

Table 1. Explanations for Summer (Warm and Humid)

	Food
Child [0-10], y	Every morning, exercise shortly before breakfast. Warm foodstuffs have to be avoided, and cold drinks such as pomegranate juice and sekanjabin syrup should be used
Young [15-35], y	Avoid cooling drinks, and meats which are warm and humid. Do not overeat, and it is necessary to avoid bitter, warm, spicy and salty foods
Middle age [35-60], y	Use warming drinks and meats, which are warm and humid
Old [over than 60], y	Drink warming drinks, and meats which are warm and laxative

Humid fruits such as plum, watermelon, and cucumber are suitable to quench heat; and cold sweet water is the most cooling drink” (9). Nafis-Ibn-Awaz believed that: “It is better to eat cold foodstuffs in this season, since they relieve excitation of sputum and excrete bile; for example, pomegranate is a suitable foodstuff for summer, as in this season bile is a dominant temper. It is better to eat light meals, and avoid heavy foods, because these foods are slow digestion, and digestion in summer is weak. Any heating and drying foodstuffs should be avoided, and because of weak digestion, eating food has to be decreased. Also, in summer the need for food is decreased, since because of excitation, sputum is increased. In this season body is emaciated and therefore, taking fruits such as plum, watermelon, and cucumber is recommended to decrease temperature” (12). Avicenna says: “Eat completely cold or low heated foods, in summers. Of course, its coldness should not be unbearable, and the best time for taking meal is when the weather is cool” (8). To explain this statement, late Qutbeddin Shirazi said: “Heat breaks fatigue, resolves instinctive heat, and weakens digestion; it also warms body and cools the nature. It is recommended to take cold or low heated foods, to prevent dominance of quality of foods and quality of season on emaciation of natural heat, and also avoid heat increase, thirst, and anguish resulted from eating warm foods in summer”. Why does Avicenna recommend eating foods that are a little warm in summer? Heat is more compatible with the resourceful nature. Hence, it is not necessary to overuse cold natured foods when needed; digestion is weak in summer, therefore, if cold natured foods are eaten during summer, weakness of digestion will increase, but if the consumed foodstuffs tend to natural heat, digestion and digestive power will also be strengthened (13). The best time for eating meal is when the weather is cooler, and the reason is that the internal heat is higher, and digestion is better. Therefore, if the man with true appetite postpones eating until the weather goes warmer, the food will not be digested properly (14, 15). Hippocrates said: “The most tolerant season for any food is winter, and the most rebellious in digestion is summer. So, summer foods should be light and easy for digestion, such as goat, see-see partridge, small fish, and chicken marinated in vinegar, pomegranate, verijuce, and sour apple juice. Consuming lotus, squash, fava beans, leaving heavy sports, and using cooling foodstuffs are among the requirements of summer” (16). Hakim Gilani has stated that: “It is clear that summer is warm and dry, so people tend to use humid and cold foodstuffs. It is recommended to eat foods that are light, little, and easy for digestion; since, natural heat usually tends to excrete, therefore, avoid eating heavy foods, and also it is necessary to reduce habitual foods because pores are opened through loss of heat and humidity. In this phlegmatic season, it is recommended to eat digestive strengtheners such as rose jam, and temperate refreshing foods (Table 2) (17).

Table 2. Descriptions for Summer (Warm and Dry)

	Food
Child [0-10], y	Meat of one-year lamb, barley soup, dairies, sekanjabin, pussy willow syrup, sour lemon syrup, and seasonal fruit
Young [15-35], y	Meat of one-year lamb, barley soup, dairies, mint sekanjabin, pussy willow syrup, sour lemon syrup, and seasonal fruits such as watermelon, cucumber, and sekanjabin-cucumber for food
Middle age [35-60], y	Haleem, lamb meat, vegetable soup, Tabriz cheese and walnut, sekanjabin, quince, pomegranate juice, and seasonal fruits such as pomegranate and melon
Old [over than 60], y	Use digestion strengtheners such as rose jam, temperate refreshing foods, Haleem, lamb meat, vegetable soup, Tabriz cheese and walnut, sekanjabin, quince, pomegranate juice, and seasonal fruits such as pomegranate and melon, and also pomegranate paste in this phlegmatic season

3.3. Nutritional Policies in Autumn

Avicenna said: “In autumn when the weather is usually unstable, the best policies should be applied, and all drying foodstuffs and cold water should be avoided. Avoid getting full and overeating seasonal fruits” (8). Hakim Arzani and AghiliKhorasani said: “It has been recommended to avoid eating drying foodstuffs because the nature of this season is dry, and eating drying foods increases dryness; since in autumn thorax and throat is weakened through unstable weather, it is recommended to avoid drinking cold water. Very cold water is also harmful for weak thorax and throat. Although sleeping with full stomach should be always avoided, in this season is more prohibited; because it causes headache, in partnership with stomach h steams. Autumnal fruits are the fruits which are ripe in autumn. Eating too much of these fruits should be avoided because they are humid, and undoubtedly overeating these fruits cause fever, as they excite tempers. Because of unstable weather and inability to digest, these problems are common during this season. Fruits of other seasons have no harmful humidity, since their harmful humidity is dried and cannot excite tempers, therefore cause equilibrium in temperament”. Recommendation to consume humid foodstuffs in this season is to equilibrate dryness of this season, but these humid foods have to tend toward dryness to be compatible with man’s temperament, and do not make heat. Humidity of foodstuffs should not cause infection and excitation in tempers. Autumn is usually rainy which breaks dryness of weather and regulates temperaments (5, 9).

Jorjani has stated that: "Warm and humid foods should be used; dried meat, hunted animals, salt, salty and sour foods and overeating fruits should also be avoided; also, pomegranate and pennyroyal syrups and temperate refreshing foods should be used" (11). Hakim Mohammad Kazim Gilani believed that: "Temper of this season is cold and dry, such as melancholy temperament, which is compatible with temper, and incompatible with the spirit of human, animals and plants. Therefore, fruits, leaves and trees get yellow and corrupt in this season. But in territories with rainy and humid autumns, the weather is not so much dry and is consistent with the people with warm and dry temperament. On the other hand, the weather of these territories hurts the elders, and people with cold and dry temperament. Under these conditions, because of unstable weather, coldness of nights and warmth of middays, the early summers which emaciate and hurt tempers, and lots of fruits cause increase in diseases. It is recommended to eat warm and spicy foods, lamb meat, twaddle, fat chickens, and confectionaries with sugar and almond, and pistachio such as jouzeghand (a kind of traditional sweet), and also summer fruits such as melon, quince, apple and pear" (4). Hakim Gilani has stated that: "In this season the following nutritional policies should be applied: use rather warm and humid chyme such as sheep and goat meat, medium size fish, and pottages with sugar, pistachio, almond, or other types of pottages. Since natural heat in this season is low, avoid drinking cold water; also, avoid overeating as it may lead to suffocation. Consuming fruits such as sweet grapes, apples, figs, and raisins are recommended" (Table 3) (17).

3.4. Nutritional Policies in Winter

Avicenna believed that: "In winter, physical activities should be increased and more food be taken; and if it were southern winter, more exercise and less food should be considered. Wheat which is used to make bread in

winter should be of higher quality than the wheat used for summer breads. Meats and fried foods should also be used as mentioned. Among vegetables, cabbages should be included, and celery, roman spinach, purslane, fava beans, and chicory be avoided" (8). Hakim Arzani and Aghili Khorasani have stated that: "Eating lot of foods in winter is suitable because coldness of winter pollutes the tempers and it leads to deficiency in the volume of tempers; since emptying vessels from accustomed tempers cause stress and anxiety, more food is needed to release from what has caused this deficiency and pollution. In winter, along with eating more food, more activities and exercises are also required to move and soften accumulated sputum. Of course, the order to increase food would be true if the winter wind does not blow from south. Because if the wind blows from south, food should be decreased, but physical activity and exercises should be increased. The reason is that southern wind is not a strong pollutant; thereby eating more food is not required. Hence, it is necessary to decrease food, because southern wind is humid, to emaciate this humidity more activities are needed. Also, since southern wind is spoiling and humid, tempers are ready to be infected. Therefore, to prevent infection, decreasing food is essential. Also, to revive natural heat and emaciate accumulated sputum, moderate exercise can prevent infection; and if his temper is compatible with winter, eating heavy food is necessary. Accordingly, bread wheat which is used in winter should be harder than the wheat used in summer. Also, heavy meats and fried foods are more suitable, because digestion is stronger in winter and more food is required. Suitable legume such as beet and celery are recommended, because cabbages and beets are warm and heavy, and celery is refreshing and sputum softener; it is better to use legumes in appropriate amount, otherwise it is preferred to avoid using them and confine to eating essential foods (5, 9). Avicenna believed that: "It is recommended to eat actually spicy foods, not too hot, in winter" (8).

Table 3. Descriptions for Autumn (Cold and Dry)

	Food
Child [0-10], y	Most of the temperate foods such as camel and lamb meat along with vegetables and refreshing drinks such as brown sugar, pussy willow, saffron, and mint.
Young [15-35], y	Most of the temperate foods such as camel and lamb meat along with vegetables and refreshing drinks such as brown sugar, pussy willow, saffron, and mint. Using watermelon, melon, cantaloupe, and pear is also useful.
Middle age [35-60], y	Warm and spicy foods, lamb meat, fat chickens; and from confectionaries, what is made from sugar, pistachio, and almond such as jouzeghand, and Louz; and fruits such as melon, quench, apple, pear, sweet grape, fig, and raisin are useful. It is also recommended to drink pomegranate juice, and citrus, saffron, and mint syrups
Old [over than 60], y	Warm and very spicy foods; lamb meat and fat hens; and from confectionaries, what is made from sugar, pistachio, and almond such as jouzeghand, and Louz; and fruits such as melon, quench, apple, pear, sweat grape, figs, and raisins; drinks such as pomegranate juice, and orange blossom, saffron, and mint syrups; and laxative foods such as soup with cinnamon and ginger

Late Qutbeddin has stated that: "In winter, to prevent accumulation of food quality and season quality, in order to preserve natural heat, use spicy foods. Of course, quality of food, verbally and potentially, should be compatible with what has been mentioned". Avicenna confined to using "actual" because actual subject works faster, and activates faster in the body. Actual spicy foods are preferred to actual cold foods for three reasons:

1. Actually spicy foods tolerate cold weather.
2. Moves winter frozen blood, outward the body.
3. Actually spicy foods are suitable for body condition, in winter (13)

Jorjani believed that: "During winter, doing more exercises and eating more food are essential. If winter was not in winter mood, eat appropriate amount of food and do enough exercise. Fried meat and white pottages; grilled, fired, and boiled meats should be consumed, and it is better to add cinnamon and cumin; also, avoid eating humid foods" (11). IbnNafis has stated that: "Consuming cress and spices is essential in winter. Since, heavy foods make heavy blood and cold weather increases this heaviness; to prevent obstruction, use refreshing foods" (12). Hakim Mohammad kazim Gilani believed that: "To maintain healthy body in winter, semi heavy foods should be eaten, such as haleem, kalleh-pacheh (boiled head and feet of the sheep), boiled meat of young sheep and its soup, salted meat, meat of hunted animals marinated in tropical spices; fried, and grilled meat of partridge, sparrow, pigeon, see-see partridge, quail, and etc.; because natural heat is strong and digestion is potent, in this season" (4). He also added that: "Be aware that, since humidity and coldness are dominant tempers of winter, it is suitable to use warm and dry foods to make balance in your body. In winter, it is better to use dry and warm foods such as cooked meat of adult sheep, and beef with salt and pepper. Boiled and grilled meats are also suitable". In this regard Hippocrates has said: "During winter, rooms are dry. It is necessary to eat nutritional and delicious foods; since soft foods usually have low nutritional value and

are easily digested. But, humid cold foods which cause sputum should be avoided, such as goat meat, milk, fish, and celery, cabbages, garlic and chard (Table 4) (17).

4. Conclusions

Important factors affecting nutritional policies of different seasons are quality of weather, in the terms of coldness and warmth, or humidity and dryness; personal temperament and digestive power, and temper of foodstuffs. Generally, cold weather is a main factor in strengthening the digestive power, warm weather causes weakness of digestive power; if humidity and dryness are in moderate level, digestive power will be strengthened. In this regard, Hippocrates has stated that: "During summer and autumn, bearing foods is difficult for body, but it is easy in spring, and more than ever in winter. According to the Iranian traditional references, any season is compatible with some tempers and is in opposition to some other tempers. For example, according to Hippocrates, summer is in compatible with cold and humid tempers and in opposition to warm and dry tempers, and in winter it is reverse (16). Autumn is consistent with warm and humid tempers, and is in opposition to cold and dry tempers. Hence, during different seasons, it is recommended to consider applied policies to the tempers which suffer more. Therefore, in autumn, it is better to apply humid nutritional policies to the people with cold and dry tempers who are more susceptible to dryness. Also, it is recommended to avoid dry foodstuffs; for example, foodstuffs which increase body dryness should be avoided, whether warm and dry, or cold and humid. These points should also be considered during summer, for warm and dry tempered people, especially young individuals whose warm and dry tempers are in the maximum. Regarding general administrations of traditional physicians, different personal temperament conditions should be considered. For example, Hakim Arzani regarding summer nutritional policies believed that: "The most suitable cooling drink for this season is sweet cold

Table 4. Descriptions for Winter (Cold and Wet)

	Food
Child [0-10], y	Mutton broth, Haleem cooked with beef bones, domestic chicken cooked with rice from north of Iran, and stews; moderate drinks composed of saffron, sugar, sour lemon, pussy willow or fumitory. Pomegranate, orange, sour orange, sea-buckthorn; and refreshments
Young [15-35], y	Mutton broth, Haleem cooked with beef bones, domestic chicken cooked with rice from north of Iran, and stews; moderate drinks composed of saffron, sugar, sour lemon, pussy willow or fumitory. Pomegranate, orange, sour orange, sea-buckthorn; and refreshments
Middle age [35-60], y	Legumes with warm meats, Haleem with red meat of Turkey, rooster and domestic rice from south of Iran; drinks composed of honey, saffron, brown sugar, pomegranate; quince, rose, and citron jam; using spices and animal oils are also recommended
Old [over than 60], y	Legumes with warm meats, Haleem with red meat of Turkey, rooster and domestic rice from south of Iran with pomegranate paste; drinks composed of honey, saffron, citrus, brown sugar, pomegranate; quince, rose, and citron jam; using spices, animal oils and almond are also recommended

water". Although this is a general true, it cannot be applied to cold stomachs or the stomachs that should be kept warm. Another important point which should be considered nowadays, and late Qutbeddin has also mentioned is that overeating actual cooling foodstuffs should be avoided, because during summer digestive power is weak and by using actual cooling foodstuffs, especially cold drinks which are capable to make the stomach weaker, it gets weaker. On the other hand, nowadays because of warm weather and high heat dissipation, cold drinks and actual cold foods are more desired which this nutritional policy can be considered as a recent reason for the weakness of stomach and Gastrointestinal system. While appropriate nutritional policy for this season is to use light and easy for digestion foods with low dryness, which are easily digested and can improve digestive power, and prevent more weakness of gastrointestinal tract. Results of the current study may be considered as a starting point for providing a new nutritional model.

References

1. Sholden G, Cohen MD. Avicenna on food Aversions and Dietary prescriptions. *Allergy Proc.* 1992;13(4):199–203.
2. Hankey GJ. Nutrition and the risk of stroke. *Lancet Neurol.* 2012;11(1):66–81.
3. Rahavi I. *Adabal-tabib translated by Pouti M.* Tehran, IR Iran: Iranian Traditional Medicine Pub; 2010.
4. Gilani MK. *Hefzul-sehat al-naseri.* Choopani R editor. : Almai Pub.; 1999.
5. Aghili Avali MMHK. *Khlasat al-hikmat.* Nazem E editor. Qom: Es-mailian Pub.; 2006.
6. Ghorshi-Ibn-Khrram . *Mojez fi teb.* Egypt: Ehyay al-asarat al-islami; 2004.
7. Zakariya Razi . *Manafeul-adviahvamarroha.* Tehran, IR Iran: Taban Pub.; 1964.
8. Avicenna . *Canon fi medicine, Volume 1.* Lebanon: Scientific institute Pub.; 2005.
9. Arzani A. *Mofarrahul-ghloub.* Lahore: Islamic Pub..
10. Jorjani SE. *Zakhira al-khrazmshahi.* Tehran, IR Iran: Iranian culture foundation pub.
11. Jorjani SE. *Eghrazul-tabia, Volume 1.* Tehran: University of Tehran Pub.; 2005.
12. kermani Nafis-Ibn-Awaz . *Sharh al-moujez.* India: Lucknow.
13. Shirazi Qutbeddin . *Tohfah al-sadiyah, Volume 2.*: Astan Quds Razawi pub..
14. Amoli Mohannad-Ibn-Mahmoud . *Sharhe Amoli, Volume 2.*: Sangi Pub..
15. Jilani A. *Sharhe Jilani, Volume 2.*: Sangi Pub.
16. Galen . *Terms of wisdom, translated by Kontouri G.* Tehran: Almai Pub.; 2010.
17. Hakim Gilani . *Alwahalseha.* Tehran, IR Iran: Institute of history of Islamic and complementary medicine, Tehran University of Medical Sciences.