

Social Organization Reconstruction of Ancient Iranian Traditional Medical System

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Abstract

The history of ancient Iranian traditional medical system goes back several thousand years. This system is a form of integrated medicine of the kind found throughout Asia, which is based on holistic approach and not limited to the treatment of illness, but is considered a way of life. The aim of this paper is exploring and reconstructing the history of this system. Ancient Iranian Traditional medical system was rational, enlightened, and empirical and in comparison with the other contemporary medical systems this tradition possessed fewer magical and superstitions aspects, but never free in theory or practice from religious considerations. The Iranian traditional medical system was differentiated into several fields of specialization, and this system has its own laws and rules. The profession of physician possessed high social status and was only available to the upper classes of Iranian society.

A common feature of virtually every evolutionary study is the task of reconstructing past developments either in single sociocultural systems, or in clusters of systems, such as social organization, or social stratification in general. This study has employed the detection and documentation of processes as a research strategy to get the aim that is reconstruction of ancient Iranian medical system.

As article shows the scientific aspect of this tradition was dominant over other aspects. In this tradition great emphasis was placed on personal hygiene in individuals and cleanliness of one's environment.

Keywords: Ancient Iranian medical system, Holistic approach, Social organization, Reconstruction

1. Introduction

In addition to important political, cultural and social events in Iran's history, the country has benefited from a traditional medical system that goes back several thousand years. This system is a form of integrated medicine, which is based on the unity of the physical, psychological and spiritual aspects of the individual. This approach is not limited to the treatment of illness, but is considered a way of life.

In this tradition, the physician is considered a scientist who is capable of creating faith and belief in himself and as well as trust and attention in the patients toward moral principles of the medical profession.

1.1 Before and after Zoroaster

The ancient Iranian (pre-Islamic) medical system approaches the human being in a holistic manner that is apparent when illness requires treatment. The key to it is that the physical and the psychological /spiritual aspects of the patient are considered together, without separation—although one branch of this system is designed specifically for mental illness. In this way Iran's medical system conforms to the holistic approach, where the human exists in an environmental spectrum in which health and disease are considered an outcome of a lack of equilibrium (Leslie, 1998).

In its historical and cultural processes, this tradition possessed certain theories of the cause and treatment of disease that were linked to the beliefs, customs, and life style of ancient Iran. The tradition draws on two basic

resources: the belief of the people, which has its roots in ancient Iranian history and society; and the plants, animals and minerals that are used to make medical drugs.

Diagnosis is made by considering the totality of the patient's response to disease or health. The practitioner explored the relationship between cultural aspects such as nutrition, subsistence patterns, beliefs, traditions, and customs, and their role in disease and healing. The traditional medical system of Iran is therefore considered as an intrinsic part of ancient Iranian culture and civilization, and is now the subject of academic analysis and research.

Traditional Iranian medicine integrates the medical systems of various eastern civilizations. Its remedies show a combination of traditional medicines from Greece, India, Egypt and China with the experiences of Iranian physicians (Farsam, 1994). Conceptually, the system is underpinned by the teachings of Zoroaster, in particular, the collection of sacred texts known as the Avesta. The result is a synthesis of Chinese, Indian and Greek medicine blended with Babylonian, Assyrian, Egyptian and popular medicine (Kerandish, 2005).

Iranian ancient cultural study can be divided into two general periods. The first is the Aryan period before the advent of the prophet Zoroaster. In this period, Iranian religion was the worship of natural forces seen as beneficial to human life, for example clean sky, sun, fire, and air. In contrast, natural phenomena that were harmful to human life, such as disease, darkness, drought, and dryness were considered as evil spirits, and where these were present, health depended on intervention by the beneficial forces. The people acknowledged the specific roles of these harmful forces to cause disease, and they performed particular ceremonies and sacrifices to avert the evil. Worshipping good forces gave satisfaction to the gods and achieved a good health for humankind.

The second period (Middle Iran) begins with the advent of Zoroaster in 700 BC. According to the Zoroastrian world-view, the world is the domain of the struggle of good (AhuraMazda = God) against evil (Ahriman = Devil), so disease has its origin in the dominance of Ahriman over AhuraMazda (Razeei, 2002).

In the Avesta, the root of the word Bashezeh (medical) in Pahlavi, the language of this period, means 'pathology'. Bashezeh is followed by various methods and different names, such as Ashoe (cleanliness and truth) Dato (coroner), Kareto (surgery), or Mantro (sacred word therapy) and Urroro (herbal remedy), which indicate the five branches of traditional Iranian medicine (Kodabakhshi, 1997).

In its beginnings, ancient Iranian medicine was accompanied by black magic and sorcery. The evidence suggests that in the Middle Iranian period the emphasis shifted to encompass both the patient's physical and mental health at the time of illness. In Zoroastrian religious hymns there are many references to cleanliness, an important observance in daily life. Zoroastrianism maintained that a clean life requires truth, rationalism, happiness and health, and that a comfortable life needs environmental cleanliness. The four natural elements basic to this life were fire, earth, water and air (Sharveni, 2002). So personal hygiene was important, as well as cleanliness in one's surroundings. Cleanliness and truth, both spiritually and materially, were emphasized in the prevention of disease.

The first Aryan physician was Thirita, though in some references he is introduced as an Indian physician. Actually this misconception arose from the time when both Indians and Iranians were considered as Aryans and a mixture of the Indo-European race.

In the Avesta it is declared that the Thirita is a most virtuous person, able to prevent diseases and avert death, and he can remove fever from the patient's body. AhuraMazda gave Thirita a knife for surgical work. And the sacred text says further that Thirita knew about the healing properties of plants and drugs (Khodabakhshi, 1997). In the Iranian system that grew out of this the physician possessed high social status.

This article attempts to describe the ancient Iranian traditional medical system as an integral part of this civilization. The ancient Iranian system arose in a sphere in which medical affairs synthesized with religious affairs, so neither can be studied separately. The system was divided into different fields of specialization, each of which had its own laws and rules, for patients and physician alike.

Data analysis in this research is carried out within an ecological approach in order to reconstruct the system and map the sociocultural changes of ancient Iranian society. In this perspective, the main emphasis is inclined on cultural adaptation with environmental circumstances. Data of this research were gathered mainly through documentary evidence.

1.2 Pivotal Concepts

Zoroaster was the prophet of ancient Iran who, according to the tradition, flourished in the seventh and six centuries BC.

The Iranians: The Iranian nation formed part of a wider grouping, the Indo-Iranians themselves forming but one member of the huge Indo-European group. Iran is at present a multi-ethnic and multi-religious society, but the majority of Iranian population is Moslem; the Christian, Zoroastrian, and Jewish minorities comprise only 2–3 per cent of the total population.

The Medes: Both the Indian and Iranian branches of the Indo-Iranian family called themselves Aryans. The Aryans comprised two greater groups, Medes and Parses (Persians). Cyrus the Great took over the empire from the Medes and thereby founded the purely Persian dynasty of the Achaemenids.

“The Avesta: It is said to have consisted of twenty-one Nasks, or books, a summary of which is found in the Pahlavi book of Denkart, which in its form that is the forming which it survives dates from the ninth century ad. Of these twenty-one Nasks, only a fragment remains today. This fragment, however, is of considerable size. The oldest part, which is written in an earlier form of the language than the rest of the Avesta, is the Gathas, “hymns” or “songs”; and these are generally considered to be the work of Zoroaster himself. These hymns form the kernel of the main liturgy or yasna which constitutes one of the three principal divisions of the surviving Avesta. Analogous to the yasna is a shorter liturgy called the Visp-rat or Vispered which, however, contains little that is not in the yasna. In the yasna itself, and sandwiched in among the Gathas, is another ancient section called the Haptanhaiti Gathas, written in the same dialect as the genuine Gathas of Zoroaster but very different in theological content. Next in importance, and in date later than the Gathas, though probably earlier than the main portion of the liturgy, are the yashts and ancillary texts known as the khurda- Avesta or “Little Avesta”, which consists of a series of hymns addressed to a variety of deities. Last of all comes the Vendidad, or Law against the Demons, which is largely concerned with ritual purity (Zaehner, 1975).

AhuraMazda: The God of prophetic revelation, the one true God revealing himself to the prophet through the God-mind. Worshipped as creator.

Ahriman (or AngraMainyu): The leading personification of the evil or aggressive spirit. Ahriman is not only the opponent and denial of Asha or abstract truth, but works against God, government, and peaceful agriculture and pastoral order (Zaehner, 1975).

Haoma plant: The Haoma plant (probably something like rhubarb), when bruised, became the elixir of immortality. It is the food that the gods consume not only to ensure their own immortality but also to increase their strength in their struggle against their enemies and those of Aryan people.

Magi (singular: magus): The magi were in fact a sacerdotal caste whose ethnic origin is never again so much as mentioned. We hear of Magi not only in Persia, Aria, Bactria, Chorasmia and Sakas, but also in non-Iranian lands such as Arabia.

Zrvan: the god of time, finite time.

Vayu: god of air, wind and atmosphere—that is the breath of the universe, and therefore breath of life that keeps man alive. He was god of space, finite space.

2. Ancient Iranian Medical schools

After the advent of the Zoroastrian religion, some important medical schools arose in Iran which constituted the foundation of the ancient Iranian traditional medical system. One of the characteristic teachings of these schools was attention towards individual and group hygiene, together with cleanliness in one’s surroundings. All of these medical schools practiced theory of humors. The most important of these ancient medical schools are the Mazdayazna, Ekbatan, Achaemenid schools and the Gondeshapur Academy (Zaehner, 1975).

2.1 Mazdayazna Medical School

This school was established under the leadership of Zoroaster. It was basically concerned with recovery from illness and the maintenance of health. According to its philosophy AhuraMazda created goodness so that humans could prosper, while Ahriman created evil and suffering. In the teachings of this school Zoroastrians should struggle with Ahriman in order to appease AhuraMazda. Remedial methods and healing in this school was based on the Zoroastrian world-view (see above), and healers were usually magi (the equivalent of priests). Diseases and health were considered as the result of struggle between God and Devil—if God overcomes, health prevails; if the Devil overcomes, disease is dominant. In fact before this school was established, ancient Iranians traced the origin of disease to the descent of evil spirits into the human body, or else the result of the gods’ anger; the

basis of treatment was therefore appeasement of angry gods, followed by ritual sacrifice. The Mazdayazna School establishment challenged people's attitudes towards disease. As a result, superstitious beliefs about disease were partly replaced by experimental and scientific attitudes. The origin of disease was traced to bad hygiene, but belief in temptation by ill-tempered demons survived (Sharveni, 2002).

This school's method of treatment was based on herbs, the therapeutic use of sacred words and surgery, three of what became the five branches of the Iranian medical system. It was the first time a word for "cure" or healing was widely used. Some laws were enacted regulating the healer's status and fees. In the school, visits were gratis, since visiting the sick was considered as a religious duty of healers. Another point emphasized by this school was hygiene. Zoroastrian theology claimed the only condition of hygiene is cleanliness and truth. So protecting one's surroundings and keeping orderly the four basic elements of water, fire, earth, and air was considered essential.

2.2 Ekbatan Medical School

This school was established a century after Zoroaster by Sinapur-Ahumsthood in the present city of Hamadan. With a student number

According to the school's principles, healers had to complete training courses successfully before they could apply for a job certificate. To obtain this certificate, the candidate had to show certain characteristics, such as possessing a chaste and contented look, and had obligations such as chastity and philanthropy (Sharveni, 2002).

2.3 Achaemenid School

This school, established in 550 BC during the reign of King Cyrus of Iran, survived until the establishment of the Gondeshapur Academy AD 250). This school developed greatly under the impact of the Achaemenid civilization. King Cyrus himself had some medical knowledge. Darius, another Achaemenid king after Egypt possession, ordered the establishment of a medical school in Saess city in Egypt. In this school healers and botanists concerned themselves with hygienic and medical organization, so much so that this period was called the "bright stage" of science in ancient Iran.

2.4 Gondeshapur Academy

This academy was founded in 141–171AD, and based on the first shapur command in the city of Shoosh (Susa) in southern Iran. It was the most important academy of the sixth century, run by a number of Nestorian scholars and physicians such as Theodorus and the Bukhtishu family, who played an important role in the foundation of scientific medicine in the Sassanid Empire.

Gondeshapur was a synthesis of medical systems such as the indigenous Iranian one and the Chinese, Ayurvedic, Greek, and Babylonian systems. The result of this synthesis was developments in theories and methods, and new results in various branches of medicine and astronomy. In fact Gondeshapur achieved a special identity in the medical world (Najmabadi, 1974).

A combination of theories of the Greek physician Galen and practical aspects of the Gondeshapur Academy in later centuries produced great physicians such as Razi, Ibn-e- Sina (Avicenna), and Abas-al-Majusi, all of whom were Iranian. Gondeshapur's teaching staff comprised magi from India, Iran, China, and Egypt, and Nestorian Christians. The school had hundreds of students; during the reign of the Sassanid king Anoshrovan it reached its climax and become the most important medical academy in the world. Medical training was based on scientific methods. The duration of training in the various fields differed, for example herbal therapy training was the longest, then surgery, coroner physician, respectively (Sharveni, 2002). The language of instruction was Pahlavi and other Persian tongues.

After a medical candidate successfully passed tutorial courses, he had to be examined in the practical courses. He had to treat successfully three non-Iranian patients (foreigners), and then he was allowed to treat Iranian patients and become eligible for his medical license. Another important character of this academy was compulsory courses in personal hygiene and environmental sanitation to prevent the spread of disease. These courses emphasized instruction on keeping clean and orderly the four environmental elements, water, earth fire and air, at any time and place (Farrokhnia, 2004).

Medical methods and therapeutic diagnosis of disease in Gondeshapur Academy were based on the cause-and-effect relation of disease, which in turn was dependent on the lack of balance that exists between it and other elements.

Diseases were classified into communicable and non-communicable diseases, as well as physical and mental diseases. Specialization in medical fields was based on this classification. But healing and treatment laws in

relation with temperaments compiled. Fields of specialization were pain and the suffering it caused, therapeutics, pharmacology, and pharmacy. The school was equipped with a large hospital and pharmacy, and patients were treated free of charge. In general, under King Anoshvravan the ancient Iranian medical system formed a great network of cultural growth with the other great medical systems of the world such as that of China, India, and Greece—what A.L. Kroeber called the oikoumene of the world society (Leslie, 1998). The amalgamation of these traditional medical systems under the leadership of Gondeshapur Academy received more identity.

3. The theory of humors

One of the characteristics of ancient Iran medical system is the belief in the similarity of things in the macrocosm and the microcosm. As finite space, Vayu, as well as finite time, Zarvan, is embodied in the macrocosm, and man, the microcosm, is made in his image, the parts of man correspond in every respect to the parts of the universe. Thus, the seven constituents of the material world—which themselves correspond to the seven Bounteous immortals: fire, water, earth, metals, plants, animals and man—correspond to the marrow, blood, veins, sinews, bones, flesh, and hair of man. The four elements in the macrocosm correspond to the breath, blood, bile, and phlegm in man, and just as the world is controlled and kept in working order by the elements of fire and air, so is man's body controlled and directed by his Farvashi, or external soul, working in close co-operation with his vital spirit. In the world this vital spirit, which maintains the macrocosm as a living unit, is Vayu, the atmospheric wind, in exactly the same way as breath keeps the human body alive. In man it is the soul (ravan) that guides the body and gives it consciousness; so too is the world guided by the world-soul, which is nothing less than the heavenly sphere (Zaehner, 1975).

Although the entire material world derives from the heavenly sphere and constitutes its body, man alone is its image, each part of his body corresponding to an analogous part of the universe contained within the sphere. His skin corresponds to the sky, his flesh to the earth, his bones to the mountains, his veins to the rivers, his blood to water, his stomach to the sea, his hair to the plants, the subsistence of the body to the metals, his inborn reason to the human race itself because it alone gives rationality to the universe, and his acquired reason to cattle.

In the more normative religious account, the macrocosm (endless form) and microcosm are brought intimately together in that the one dwells within the other. But whereas the macrocosm was created without thought or movement, but was intangible and only developed these qualities later, Gayomart, the microcosm and first man, from the beginning thinks upon perfect Righteousness. This why mankind in the macrocosm is compared to innate reason in the microcosm.

This tradition is formulated from generic physiological and cosmological concepts, which is based on humoral theories. The four humors in ancient Iran were breath, blood, bile and phlegm. These humors were alignments of opposing qualities: hot–cold, wet–dry, heavy–light, male–female, dark–bright, strong–weak, and so on. The equilibrium of these qualities maintained health, and their disequilibrium caused illness, whatever the number of humors. Equilibrium was regulated by an individual's age, sex, and temperament in dynamic relationship to climate, season, food consumption, and other activities (Boyce, 1995).

In fact, traditional treatment rested on the similarity between macrocosmic and microcosmic philosophy, from which the theory of the four humors developed. According to this theory, various human temperaments show similarities to the four natural elements water, fire, earth, and air. Some researchers claim that human physiological behavior shows a similarity to these four elements and their properties. This is a basic principle of ancient Iranian medicine, which goes back to pre-Zoroastrian religion.

The humors theory that constituted the basis of later Hippocratic medicine in Greece was based on this ancient Iranian world-view that all things originate from these four elements. Since the human body is a mirror of nature, it also is made from four essential elements: bile, breath, phlegm, and blood. The relationship of these elements within the human body is similar to that of four elements of nature. Each of the humors, exactly like the four natural elements, possesses two natures. So blood is considered as warm and wet, phlegm is cold and wet, breath is warm and dry, and bile is cold and dry. The relationship between four bodily humor and four natural elements are shown in the table 1.

Since the four elements are compound in nature, and govern the survival and endurance of the human body, therefore equilibrium is also suitable compound of parts which ensures good health. This health status is lost when some disorder occurs in the humors. This systematic arrangement of the body is similar to that of nature, and is governed by the same law and is capable of vitalizing its lost system. But sometimes the body may lose its capacity to restore equilibrium, and ill health results. In such a situation nature can help the body to regain health; this is followed by the intervention of the physician and the prescribing of drugs. The goal is to establish the necessary equilibrium between the humors and their properties. In this way the theory of humors, which

manifests in several later cultures, has its roots in ancient Iranian medical thought; Greeks scientists explained this theory in a more complete manner (Elgood, 1997).

4. Specialized branches of medicine in ancient Iran

three Therapeutic methods in ancient Iran rested on the comparison of the different parts of the body with the natural elements and the humors. There were various theoretical viewpoints and various methods of therapy. These were systematized as five fields of specialization. These fields are differentiated according to the task and quality of work done by physicians. The most important branches are: 1. Urroro-Bushe (herbal therapy), 2. Kareto-Bushe (surgery therapy), 3. Mantro-Bushe (sacred word therapy), 4. Ashoe-Bushe (hygienic and truth therapy), and 5. Dato-Bushe (coroner therapy). The first of these are described below:

4.1 Urroro-Bushe

Herbal medicine has a long history in Iranian society and is still in use. The ecology of Iran has allowed a great diversity of plants and trees, and this made suitable conditions for the growth of herbal medicine. According to ancient Iranian philosophy, the plant keeper angel is called Emertat (Everlasting) and the plant physician is Urroro-Bushe. The philosophy of herbal therapy claims that AhuraMazda created many plants to cure various diseases and keep people healthy.

Polyneus, a Greek historian who lived in first century BC, pointed out that herbalist was popular among ancient Iranians. Polyneus wrote that the magi were familiar with many plants, and also animal, remedies. In the Avesta, the Haoma plant is described as a drug that is used for the treatment of many diseases. It was regarded as sacred and was used as an immortality drug. Plants such as rue, spearmint, frankincense, and pussy willow had medical uses (Najmabadi, 1974).

Herbal healers in ancient Iran are classified in two groups: exorcists and conjurers, and physical healers. The latter was divided further: Dorostpads were preventive healers whose business was to remove the causes of disease. This group demanded a fee from patients; the amount depended on the patient's ability to pay. Another group was healers who treated the patients after the onset of disease; locally there were called Bashazak

Herbal remedies were prepared in three ways: as edible preparations, as ointments, and as a fumigation agent where the plant's essence was extracted by boiling. The essence type was prescribed according to the kind of disease. The ancient Iranians believed that thirty days of each month belonged to thirty angels, and in response each angel possessed a curative plant, for example the violet was attributed to arrow (tear) angel, who was in charge of bronchial diseases (Khodabakhshi, 1997).

When plants were used as ointments, the patient's body was washed with a preparation containing the essence of a plant; this was called Vetespobesh (complete therapy). In the fumigation method plants and gums such as frankincense were used as an antiseptic to clear breathing tubes and impart a healing fragrance to the surroundings. The stem of Haoma was used for fumigation. A mixture of Haoma essence and gold metal water was used as an external elixir, which is why this plant was considered sacred and worshipped as a goddess by Indo-Iranian people (Razeei, 2002).

4.2 Kareto-Bushe (surgery or knife therapy)

In the Avesta it is recommended that when a disease is not cured by herbal remedies, kareto therapy is suggested by the physician. To practice this method the kareto physician, as mentioned above, needed the experience of treating three non-Iranian (non-Ahuraian) patients on his records, then he was allowed to treat Ahuraian patients. According to some documents Thirita was the first physician to get permission to do such surgical work. Diseases subjected to surgery were broken bones. Surgical instruments were metals, knives, stones, and pieces of tree root. Moreover it is claimed the first caesarian section, which is the oldest surgery in human life, took place in Iran. Rust am, a mythical hero of Iran, was born by caesarian. Later on caesarian section found its way to Greece, and beyond; Julius Caesar was also born by this method, hence the name (Elgood, 1997).

4.3 Mantro-Bushe (sacred word therapy)

This remedy is used to treat patients suffering from mental illness. The physician cured his patient by uttering sacred mantras and the names of the saints. This therapy was applied to induce calmness in patients, which was seen as a predisposition for healing. The singing of prescribed religious hymns was also found to be useful in treating mental disease. Mantro therapy had a positive effect on the patient's suppressed negative feelings, which in fact were often the cause of the disease. The calmness, or "spiritual sedation," this treatment induced in the patients was reinforced by consoling words and sympathetic actions. By applying positive suggestions

physicians attempted to remove any negative energy that might be afflicting the patient. These attempts used to return patients to health.

It was said that the uttering of sacred words attracts the attention of the God, which makes patients able to overcome their pain and suffering. The belief was that AhuraMazda removed the damaged organs (pathology), which locally were called baeshuzeh and pashenta (body-keeper). Sick people therefore sought the help of AhuraMazda to bring them back to health.

The processes of healing for this treatment are that patients first took a bath to gain the necessary personal cleanliness. Then the Mantro physician put plants such as frankincense and aloe wood into the fire, at the same time uttering sacred words; music was also played to preacher patients (Khodabakhshi, 1997).

5. The five kinds of physician

5.1 Urraro-baexa (herbal physician)

This type of physician was familiar with the healing properties of plants and the making of herbal preparations. In the Avesta it is said that for each disease AhuraMazda created a plant to cure it. He created thousands plant for treating all of the diseases.

5.2 Karato-baexaza (surgeon physician)

Here the physician cured his patients with the help of surgical instruments such as knives. The Karato physician was allowed cutting, damaging organs and performing orthopaedic business. Surgery was restricted to external parts of the body.

5.3 Mantro-baexaza (sacred words physician)

Here the physician healed by uttering sacred words and singing hymns. Usually mental conditions such as nervous diseases and epilepsy were treated with this remedy. This field of specialization was practiced only by the magus class, who were also called Aso-baexaza (life healer). The familiarity of this type of healer with religious advises and spiritual words gave them higher status than other physicians. The sacred words uttered were the name of gods and saints, and Zoroastrian doctrine that is good words, good thought, and good deed for diseases treatment (Boyce, 1980).

5.4 Aso-baexaza (sanitation physician)

This physician treated patients by applying the sanitary laws prescribed in Zoroastrianism. These covered bodily hygiene and cleanliness in the physical, psychological, and spiritual environment. The healer's task was to help the patients observe cleanliness in these spheres. The four sanitary elements were: water, earth, fire and air (wind). During the course of treatment patients were isolated from the rest of the community. The patients who did not observe hygienic and religious rules punished with a whip by physicians.

5.5 Dato-baexaza (Coroner physician)

In this field the physician diagnosed the cause of death and issued permission grace for burial (Boyce, 1995).

6. The causes of disease

Medical knowledge, like all other disciplines, was in the beginning a part of philosophy and was based on the apparent problems in the world. Although in those days the physical causes of disease were not known, the close attention paid to material, spiritual, and environmental factors did have a positive impact on human health.

In the medical system of pre-Sassanid Iran, the specific causes of disease were seen as certain notions and superstitions. Diseases such as cholera and plague, for instance, were attributed to the anger of the gods. To appease these gods the people resorted to sacrifice. They believed that physical diseases are sky disasters that descend to humans. But mental diseases were attributed to spirits, the various forms of devil, and ghost penetration into the body of patients through black magic and the evil eye. There were diseases whose origins were attributed to sins committed or to the patient insulting the sun. The ancient Iranian religion also emphasized blood impurity as a cause of disease, so physicians practiced blood-letting to purify the blood. In a different kind of causation, putrefied types of food was considered to be the origin of eye disease (Khodabakhshi 1997). These pre-scientific ideas about disease causation survived until the Sassanid regime came to power.

In the Avesta the number of diseases mentioned is 99,999, but some other sources counted diseases in the tens of thousands. Gondeshapur Academy declared the number to be 4,333(Christiansen, 2008). In the Sassanid period diseases were divided into physical and mental diseases, with further classification into various divisions. For example, physical diseases were classed as either common or deadly. People believed that good diseases are those that have apparent signs, while bad diseases are internal diseases that do not have such signs. Diseases like

epilepsy and leprosy carried social stigma. Leprosy in particular was considered to be an ill-fated disease, and vitiligo (leukoderma) was attributed to bile overcoming the blood. Patients with these conditions were isolated from the rest of community during the course of their illness (Behzadi, 2003).

7. Traditional medical laws

Every medical system possesses its own laws and regulations. This is the case for the medical system of ancient Iran. Medical nomenclature indicated much about society. Persons who were concerned with health and hygiene were called Drostbod (honest), and those who engaged in disease history and statistics were called Atrvan (keepers of medical records). Hygienic observance of fire, earth, and agricultural products was the duty of the rulers. Medical professions in ancient Iran were restricted to the higher social classes such as the magi and the aristocrats—social classes in ancient Iran ranged from aristocrats and magi to soldiers, peasants, and craftsman. Other conditions required for medical practice were the candidate's interest, good memory, good moral character, and faithfulness.

Physicians were subject to rules about wearing clean clothes, possessing a swift horse to travel to nearby villages, providing drugs and medical equipment, and owning enough wealth. Medical law expected physicians not to work for money alone, but they were to perform their duty and remove pain and suffering from patients. The physician's fee depended on the intensity of the disease, his reputation, and the social status, wealth, and property of the patients. Fees could be paid by a gift of animals such as cows, horses and cocks. But the Mantro physician's fee was his patients praying for him. Another remarkable point was that the fee and treatment of women was less than that for men. According to medical law no physician was allowed to practice in his native place and the place he did his medical training, but instead he was suppose to be a peddler and move from one place to another. The equipment peddler physicians had to carry were the Haoma plant, a bow, drugs and a whip for the punishment of patients who did not observe hygienic and religious rules (Behzadi, 2003).

The law placed special emphasis on Taking care and treatment of sick dogs is advised in the Avesta because the dog was considered a sacred animal. This duty assigned to dog owners (Elgood, 1997).

8. Preventive medicine

In ancient Iran at times of epidemics of diseases like plague, cholera, and smallpox, suffering patients were kept in isolation from the community for nine days and nights. This isolation process was called Bershnoom, during which time patients wore white garments and ate a diet supervised by the physician. The patients deprived from group eating (commensally) and were abandonment and at the same time fragrant plants like wild rue were burned to fumigate the surroundings and prevent the spread of the disease; certain rituals were also performed. During the Bershnoom the patient had to bathe three times each day and pray; observing this procedure led to the patient's purification and was followed under the direction of the magus.

Another way of preventing the spread of disease was elimination of harmful insects and keeping in order the four natural elements, as mentioned earlier. This preventive process, locally called Ugdasergr, was advised by AhuraMazda in the Avesta. This behavior resulted in environmental cleanliness and contained the spread of disease. Beside such physical preventive methods, purification of the soul also helped to contain disease (Behzadi, 2003).

The role of sunlight in the cleansing of materials and environment in ancient Iranian philosophy is of the utmost importance. In Yashat (little Avesta), the holy book of ancient Iran, it is mentioned that the sun shines over the Iranian people, so their surroundings are clean. Ancient Iranian religion advises people not to carry dead bodies to the Tower of Silence (a circular building where Zoroastrians laid the body of their dead) at night because the lack of sun would help to spread the disease.

Another preventive custom was that people did not burn rubbish and waste material because they did not wish to pollute the environment. They would instead collect waste materials and dump them in a pit, with a small hole that gave access to the outside air to allow gases and smells to escape. One of the hygienic customs of ancient Iran, still practiced today, is Khanehtakani (housecleaning), at the end of each year (Nowrooz). In this custom a house and its all materials were washed and made clean. This was also considered a preventive to the spread of disease. The result of these attempts was preventive enterprises of diseases expansions.

9. Conclusion

The traditional medical systems of ancient Iran developed in a society where medical matters were seen as existing in the same sphere as religion, so that these two cannot be studied separately. The original Iranian (Aryan) religion was nature-worship, but later on Zoroastrianism had a vast impact on the philosophical and medical system that had prevailed hitherto.

According to the Zoroastrian world-view, the universe is the scene of a struggle between AhuraMazda (God) and Ahriman (Devil), and disease is the result of efforts of Angeraminoo (the aggressive spirit) to overcome AhuraMazda.

The ancient Iranian medical system possessed fewer magical and superstitions aspects. Of course, magical and superstitions elements of diseases in the causation and methods of treatments are observed, for example the attribution of some diseases to the evil eye or individual sin. But as this article shows, the scientific aspect of this tradition was dominant over other aspects.

Great emphasis was placed on personal hygiene in individuals and cleanliness of one's environment. Keeping clean and 'orderly' the natural elements fire, air, water and earth in one's immediate environment was regarded as a way of preventing the spread of disease. The observance of religious rites and attitudes contributed to this. By cultivating the appropriate personal characteristics, by doing and observing the laws and rites of purification, each person helped in the battle between good and evil.

So each Zoroastrian observed three principles in his life: good words, good thoughts, and good deeds.

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Table 1. Relationship between the four bodily humors and the four natural elements

Element	Humor	Characteristics	
Fire	Breath	Warm and dry	Warmness
Weather	Blood	Warm and wet	Warmness
Water	Phlegm	Cold and wet	Coldness
Earth	Bile	Cold and dry	Coldness