TRADITIONAL AND INTEGRATIVE MEDICINE

Trad Integr Med, Volume 2, Issue 3, Summer 2017

Review

The Concept of Temperaments in Traditional Persian Medicine

Laila Shirbeigi[1], Azadeh Zarei[1], Ayeh Naghizadeh[1], Mahdi Alizadeh Vaghasloo[1]*

[1]*Department of Traditional Persian Medicine, School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, Iran*

Received: 23 Jul 2017 **Accepted:** 6 Aug 2017

Abstract

Temperament is a key concept in comprehending the fundamentals of traditional medicine, based on which individuals are classified as healthy and ill. This principle plays an important role in determining ways to maintain good health and also in treating diseases. Recently receiving increasing attention in conventional medicine, the trend has progressed towards treating the *individual* rather than the *illness* in general. Accordingly, studies have been conducted to investigate the relationship between temperament and proteomes in the human body. This article is an attempt to review the definition and classification of temperament, its modifying factors, and categorization of dystemperaments as discussed in Traditional Persian Medicine references. Clarifying this concept has a vital role in health recognition and maintenance, treatment of diseases as well as in traditional medicine studies.

Keywords: Temperament, Traditional Persian Medicine (TPM), Avicenna, Mizaj, Blood Production and Distribution Doctrine

Citation: Shirbeigi L, Zarei A, Naghizadeh A, Alizadeh Vaghasloo M. **The Concept of Temperaments in Traditional Persian Medicine**. Trad Integr Med 2017; 2(3): 143-156.

Introduction

Complementary medicine is considered as an acceptable, efficient method to treat diseases in accompaniment with conventional medicine; the position of which has been promoted in the recent years [1]. As demonstrated in a study in the US (2002), 62% of adults use at least one alternative medicine method per year [2]. Also, a high percentage of people in Asian and African countries benefit from complementary medicine for treatment [3]. One of the important roles of the health care system is to create equality in access to treatment services for all members of the public. Moreover, an essential role of social justice is to promote health in all divisions of the society with priority of prevention over treatment or health promotion [2]. This issue is crucially important and systematic in alternative medicine, especially in Traditional Persian

*Corresponding author: Mahdi Alizadeh Vaghasloo
Department of Traditional Persian Medicine, School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, Iran
Email: m-alizadehv@sina.tums.ac.ir
Tel: 021-88990837-105

Medicine (TPM). Meanwhile, complementary medicine also plays an important role in reducing treatment costs. TPM is considered a rich and known source in the healthcare field of medical history to the point that in a period of history, it has been used as an educational reference even at universities in European countries [4]. TPM, being comprehensive in the fields of prevention, disease control and treatment has rich and efficient advice on lifestyle, providing natural, safe and low-cost treatments [5]. Despite numerous similarities in terms of disease descriptions, symptoms, and involved organs, TPM has special and fundamental concepts that are not considered in conventional medicine. Temperament is a key basic factor in traditional schools of medicine applied in conceptualizing, diagnosing and treating diseases. This concept is generally accepted in conventional medicine in the form of individual differences in various physical, mental and personality traits among individuals [6]. Although genetics and pathophysiology have suggested some hypotheses for these variances [7, 8], the reason for such differences is still unclear. In Islamic literature, biodiversity is known to be a gift dedicated by the creator that not only displays his knowledge and ability in creation but also benefits to correlate and keep creations dependent on each other through their different needs and capabilities and thus enabling the formation of ecosystems and especially human social relationships and societies [9, 10]. It seems that understanding the concept of temperament will greatly help understanding these differences [11, 12]. Dissimilarities in body reactions against a pathogen and response to treatment arise from this concept. For this purpose - since 1950 continued up to present - many studies have been conducted in order to provide new models for temperament [13-15]; and to build new approaches to conventional medicine with respect to it [16]. Despite the popularity of these studies in conventional medicine, the use of temperament has still remained limited to psychiatric and psychological scopes. Moreover, conventional medicine has also recently replaced the use of "a similar treatment for all individuals affected by a certain disease" with "personalized medicine" [17], a principle constantly practiced by TPM physicians as a treatment based on temperaments. Due to the fundamental importance of temperament in TPM, introducing and defining the concept of temperament becomes mandatory for efficient use of the knowledge and recommendations of this medical school. The aim of this study is to describe the concept of temperament and its classification from the perspective of TPM masters.

Methods

To accurately comprehend the concept of temperament and its classification, we searched the electronic version of selected main resources of TPM by the Farsi/Arabic equivalent for temperament, termed ***"Mizaj"*** مزاج . In order to recognize the classifications listed in the studied books, the searched contents were read, reviewed and classified in a table consisting of definitions, categories, temperament of age, temperament of gender, temperament of seasons, temperament of waters, temperament of winds, temperament of cities, temperament of body organs and temperament causes.

In this study, ten main books of Persian Medicine sages of 10th-19th centuries who have written their books in Arabic or Farsi were used. These ten books included "*The Canon of Medicine*" (Avicenna, 11th century), "*Hidayat al-Muta`allemin Fi al-Tibb*" (Abu Bakr Rabee Ibn Ahmad Al-Akhawyni Bokhari, 10th century), "*Mofarah Al-Gholoob*" (Muhammad Akbar ibn Mir Hajji Muhammad MuqimArzani, 18th century), "*Kāmil al-ṣinā'ah al-ṭibbīyah"* (Ali Ibn al-Abbas al-Majusi, 10th century), "*Zakhire*

Khwarazmshahi" (Ismail Gorgani, 12th century), "*KholasatAlHekma*" (Aghili, 18th century), "*Kitab al-Mansouri fi al-Tibb*" (Abu Salih al-Mansur Al-Razi, 10th century), "*Bahr Al-Jawaher"* (Heravi, 16th century), "*Exir Azam*" (Nazem Jahan, 19th century), "*Al-Shamil fi al-Tibb*" (Ala-al-din abu Al-Hassan Ali ibnAbi-Hazm al-Qarshi al-Dimashqi, 13th century).

Results

Exploring the equivalent word for temperament, which is ***"Mizaj"*** **مزاج** in the above mentioned selected Arabic and Persian TPM references, we reached the following classification of data:

Definition of Temperament

In Persian Medicine, the four classical elements of earth, water, air and fire are the constituents of creation on earth. The names are only symbols to resemble and bring to mind the physical characteristics of each by comparing it with an external examinable object. These philosophical elements being considered non-degradable into a different substance are therefore not comparable with elements of the periodic table and thus yet to be discovered.

These four elements have four natures of warmness, coldness, dryness and wetness [18]. In fact, ***"elemental fire"*** **آتش عنصری** is extremely warm and then dry, while ***"elemental air"*** **هوای عنصری** is mostly moist and then warm, ***"elemental water"*** **آب عنصری** extremely cold and then moist, and finally the ***"elemental earth"*** **خاک عنصری** is extremely dry and then cold. The contact of these elements with each other followed by interactions between their opposing qualities, ultimately results in a compound with a new homogenous quality or ***"Mizaj"*** **مزاج**, meaning temperament [19]. It is therefore notable that temperament may be considered as a coordinate in a two dimensional quality spectrum plane with two axes of hotness and wetness (Figure 1). There are an infinite number of temperaments in the universe per all living and non-living creatures, since the elements may combine together in infinitive patterns of proportion.

Causes of Temperament

According to the sages, four factors are required for the appearance of any phenomenon in the universe. These four factors or causes include:

1. Material cause
2. Agent cause
3. Formal cause
4. Final cause

To make it clear with an example we might consider **a carpenter** - the agent cause - that works on **wood** - the material cause - to build **a wooden desk** - the formal cause - for **students to study on, in the library** which is the final cause and purpose.

In summary, the material cause of human temperament is food. Human food includes animal meat and plants, which are also made up of the four "*philosophical elements*". The temperament's agent cause is the innate heat or the ***"Haar"*** [20] **حار غریزی**, and its formal cause, the nine types of temperaments. "Issuance of activities" comprises the ultimate cause of temperament, and in human beings is classified into two categories of physical and mental actions and reactions. In other words, food is changed by the ***"Haar"*** to suitable blood that nourishes the tissues and gives them their optimum quality composition or temperament. A suitable temperament provides conditions for proper physical and mental actions and reactions [21].

Classification of Temperaments

Temperament is divided into two categories by a reasonable classification [22]:

1. Moderate Temperament مزاج معتدل
2. Non-Moderate Temperament مزاج خارج از اعتدال

Moderate temperament is also classified into groups of true moderate معتدل حقیقی and medical hypothetical moderate معتدل فرضی طبی. In the true moderate temperament, the quantity of opposite qualities is considered equal. This type of moderate temperament does not exist in reality, because the qualitative potency of different elements is not the same in similar quantities and thus, equalizing the quantities imbalances the qualities and vice versa; therefore, the quality and quantity of a compound cannot be adjusted to yield a truly moderate temperament. Despite the notion that the true moderate temperament does not exist, a physician needs a milestone to estimate the amount of deviation of a temperament from desirable coordinate in the quality spectrum. Taking into account different populations, the sages have considered several hypothetical moderate temperaments, which are mainly the modal points of each population. These eight temperaments are categorized into four pairs as follows [22]:

A. Typical Moderate Temperament

Typical moderate temperament is classified as the following:

1. External typical moderate temperament (معتدل فرضی نوعی خارجی): the temperament of mankind compared to other creatures, like inanimate objects, plants and animals, which is usually defined by their effect on the human body when consumed, or applied externally (Figure 1).

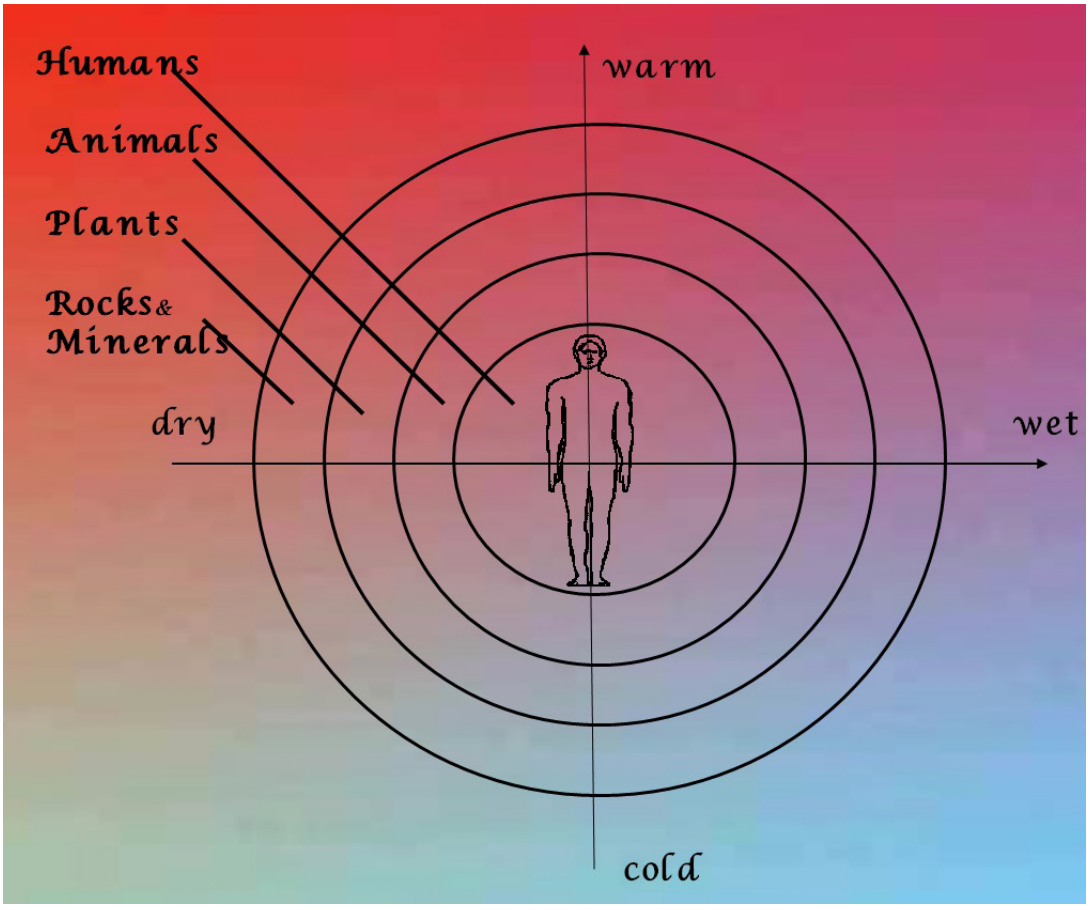

Figure 1: The schematic position of the human temperament in respect to other creation in the coordinate plane of temperaments (The external typical moderate temperament)

1. Internal typical moderate temperament *(معتدل فرضی نوعی داخلی)*: is the most moderate temperament within the human population (Figure 2, person "*e*").

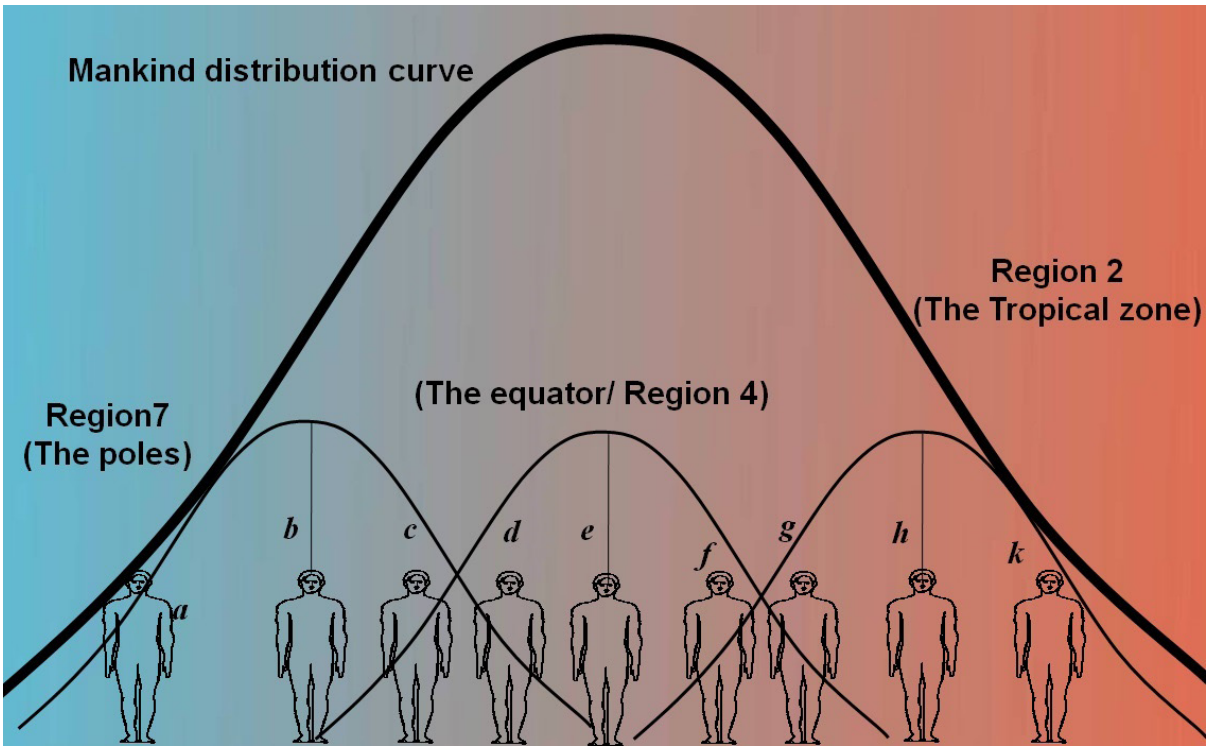

Figure 2: Subdivisions of the human temperament based on the residential population of each climate zone

B. Guild (Caste) Moderate Temperament

Guild moderate temperament consists of the following:

1. External guild moderate temperament *(معتدل فرضی صنفی خارجی)*: refers to the most moderate tempered human guild in comparison to the temperament of people outside that class; for example, it has been claimed by Avicenna - the most famous worldly wide known Muslim Iranian polymath and TPM physician - that the most moderate temperament belongs to the residents of the equator followed by residence of the moderate climate zone [22]. It is deducible that the temperament of people living in the tropical regions above and below the equatorial region is therefore warmer than those living in the equator or the moderate zone (Figure 2).

2. Internal guild moderate temperament *(معتدل فرضی صنفی داخلی)*: refers to the temperament of the most moderate person within each class (guild); therefore, every guild of people has its own moderate temperament representative, which has the modal temperament of that guild (Figure 2, person "*b*" in the seventh region, person "*e*" in the equator or the forth region and person "*h*" in the second region). However, this representative may not be the healthiest person in that climate, since in a tropical climate for instance, such a moderate person (Figure 2, person "*h*") is more susceptible to hyperthermia than a much colder tempered person from the same guild (Figure 2, person "*g*").

C. Individual Moderate Temperament

Individual moderate temperament comprises of the following:

1. External individual moderate temperament *(معتدل فرضی شخصی خارجی):* refers to the temperament of a person in a guild who is furthest from being affected by the quality surrounding the guild, which means he or she is closer to the *"Internal typical moderate temperament"*, i.e. person "*e*" in Figure 2. Such a person in a tropical climate is considered relatively cold tempered in that climate (person "*g*" in region two) and will not shift towards a hot dystemperament as easily as others of the same guild. Being closer to temperate in a warm climate makes this person healthier in such zones. By the same reasoning, person "*c*" in region seven is protected from hypothermia or other cold tempered diseases than the modal person "*b*" in the same region who had the label of *"Internal guild moderate temperament"* of that region.

2. Internal individual moderate temperament *(معتدل فرضی شخصی داخلی):* refers to the temperament of a person in his best state of temperament in comparison to other stages of his/her lifetime (persons marked with "*T*" in Figure 5).

D. Organ Moderate Temperament

Organ moderate temperament includes the following:

1. External organ moderate temperament *(معتدل فرضی عضوی خارجی):* refers to the skin especially that of the fingertips, which is assumed to have the most moderate temperament in comparison to other organs.

2. Internal organ moderate temperament *(معتدل فرضی عضوی داخلی):* refers to the normal and optimal temperament of each organ in an optimum state compared to other states of the same organ; for example, the middle set brain and heart in Figure 3. The eight other brains and hearts illustrated around but inside the circles are non-moderate but healthy organs and the eight brains and hearts drawn outside the circles are dystempered diseased organs. Each of these seventeen temperamental locations of heart, brain or any other major organ has been addressed in the literature by a short list of signs and symptoms in order to be discriminated from the rest.

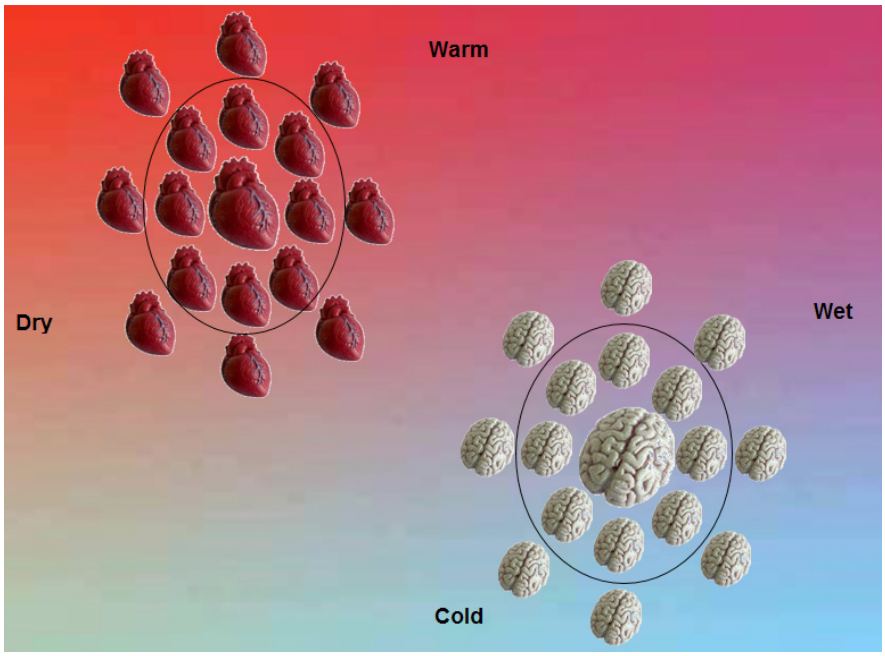

Figure 3: The comparison and distribution of temperaments of the heart and brain as an example in the coordinate plane of organ temperaments

Non-moderate temperament (Figure 4) includes eight types, consisting of four singular (warm, cold, wet, and dry) and four combined (warm-wet, warm-dry, cold-wet, cold-dry) types. A singular temperament implies that classical elements have reacted together in a manner that only one quality has overcome to reveal its feature, while a combined temperament indicates that the reactions between elements has occurred in such a way to reveal two qualities simultaneously. As demonstrated in figure 4, there may be many people, and therefore, an infinitive number of temperaments in between these representatives. However, to facilitate the diagnostic process, the two dimensional spectrum of normal temperaments is practically grouped into nine sections or groups of considerably similar clinical manifestations.

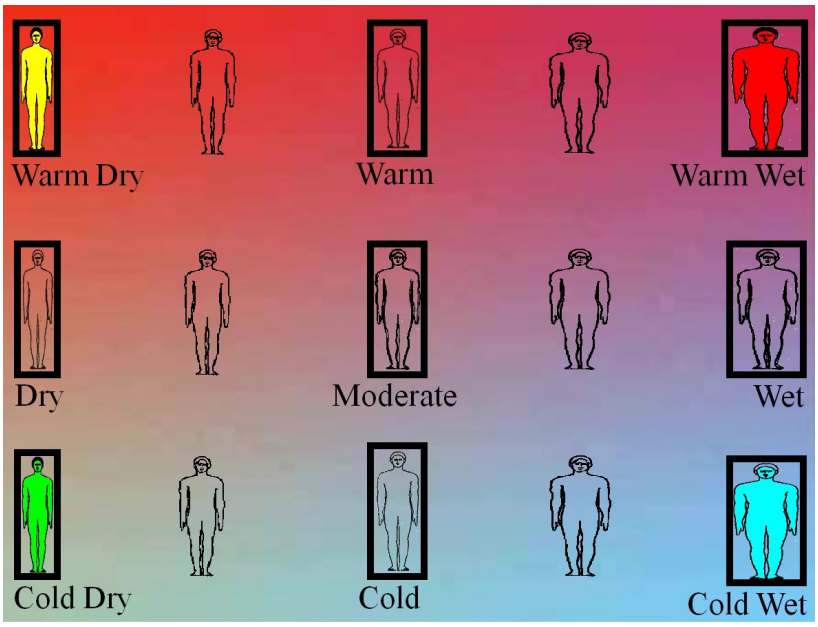

Figure 4: The eight non-moderate temperament groups and the one moderate temperament group of humans in the coordinate plane of normal human temperaments

Temperament of Age and Sex

The life years of human beings are divided into four categories of childhood and adolescence, youth, middle age and old age from the perspective of philosophers and sages. They believed that the body resembled a lantern burning with a liquid fuel, where the burning flame corresponds to the innate heat or ***"Hararat-e-Gharizi"*** ***حرارت غریزی***, and the liquid to the innate moisture or ***"Rotoobat-e-Gharizi"*** ***رطوبت غریزی***. It is noted in the literature that throughout life, the innate moisture eventually decreases by factors like consumption, consequently leading to a decline in the innate heat. This change in the amount of moisture and heat, changes the body temperament gradually during lifetime; therefore, the body will have a certain temperament in each age period. Childhood and adolescence - from birth to age thirty - have a warm and moist temperament. The innate heat in children-from birth until the end of growth- is similar to youth, while the amount of moisture is greater due to the need for growth and development [23]. This excess moisture masks the intensity of heat in contrast to the youth period, including ages 30 through 40. The most moderate temperament in contrast to other periods of life belongs to the youth [22], who have a warm and dry moderate

temperament. By the onset of middle age (40 to 60), the innate moisture and subsequently the innate heat begin to decline more evidently and this decreasing trend continues to the old age (after age 60), and the body will experience a cold and dry temperament. In this period of life, the temperament of the main organs reaches its coldest and driest state; but despite this dryness, an accumulation of harmful moistures may occur in some elders resulting in the ***"Bad-Anbasht Syndrome"*** discussed in previous articles [24] and thus, symptoms of coldness-wetness, instead of coldness-dryness develop in these individuals. In figure 5, a schematic model of the effect of age on temperaments is illustrated, with the temperaments color coded. It is shown that the closer to the center circle, the more temperate and healthy a person will be in a certain age (persons marked with "*T*").The opposite is true for the persons marked with "*D*", who are more deviated from the central circle of the spectrum making them susceptible to a dystemperament with the same quality of the direction of deviation. For example, in childhood, a warm-wet tempered baby – marked with "*D*" in the far right side of the diagram- is more susceptible to a warm and wet tempered disease like diaper rash especially at the warm-wet season of spring. This is because warmness and wetness accumulate much more than physiologically tolerated in such a situation. The uncertainty and diversity shown at the old age in the far left side is due to the various amounts of unsuitable moisture deposition in this age group leading to the cold temperament of the elderly to be accompanied by varying degrees of dryness and wetness. As stated in TPM references, there are certain laws on the temperaments of men and women. In all classes of organisms, including humans, the temperament of the male is slightly warmer and drier than that of the female, and the female's temperament is somewhat colder and wetter [21, 23].

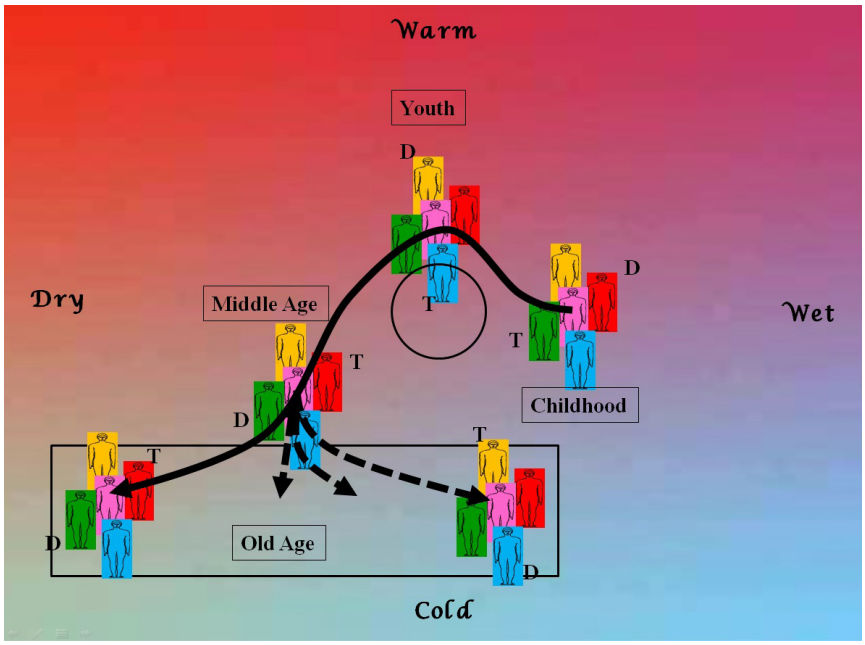

Figure 5: Schematic model of the effect of age on temperaments ("T" marks the most temperate person in each age group; "D" marks the person most vulnerable to dystemperament in each age group. Red is for warm-wet temperament, yellow is for warm-dry temp., pink is for moderate temp., green is for cold-dry temp., blue is for cold-wet temp)

Temperament of Seasons and Places

According to TPM references, each season of the year has a particular temperament. The temperament of spring, which is the most moderate season, is warm and wet, while the summer is warm-dry. The temperaments of autumn and winter are cold-dry, and cold-wet respectively [25]. Even regional winds have their own temperament according to the latitude and longitude of each location and the geographical positions of mountains and the sea. This means that their temperaments may change the temperaments of the living organisms especially humans and shift them towards their own [26]. For example, a hot weather, climate or wind may warm up the temperament of people exposed to them. These climatic effects may not be very intense due to the defensive mechanisms of intelligent and warm blooded human beings as they may change their clothes or environment intellectually or their blood circulation physiologically. As pointed out briefly before, the sages have divided the northern and southern hemispheres each to nine latitudinal regions starting from the narrow equatorial region to the hot 1st-3rd hot regions corresponding with the modern tropical zone, the forth region or the moderate zone and finally, to the5th-7th cold regions, leaving the nonresidential polar regions unnamed. In figure 6, a rough correlation has been shown between the conventional and traditional classifications [27] of the global regions.

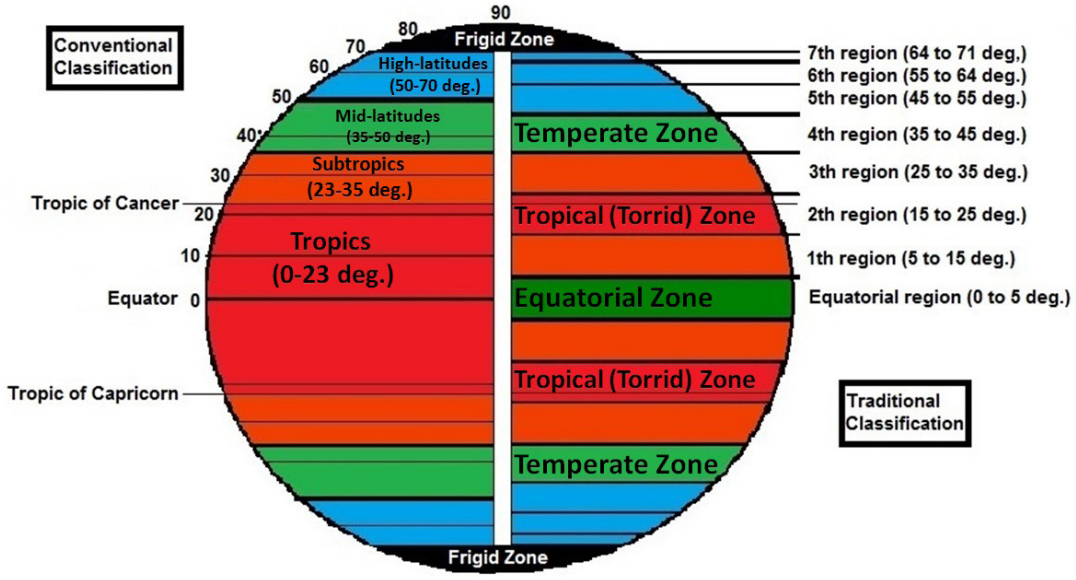

Figure 6: A comparative schematic illustration of the conventional and traditional classifications of the global regions

Although there are disagreements in different books about the most moderate geographic area and despite Avicenna's opinion on the first zone being the most moderate, some believe this to be true about the fourth zone [21], modern geographical evidence demonstrate that the narrow equatorial belt has the most suitable climate for life. Due to a moderate heat and moisture, this well-nourished area hosts an incredible plant and wildlife ecosystem in the form of the tropical rainforests all around the globe (Figure 7).

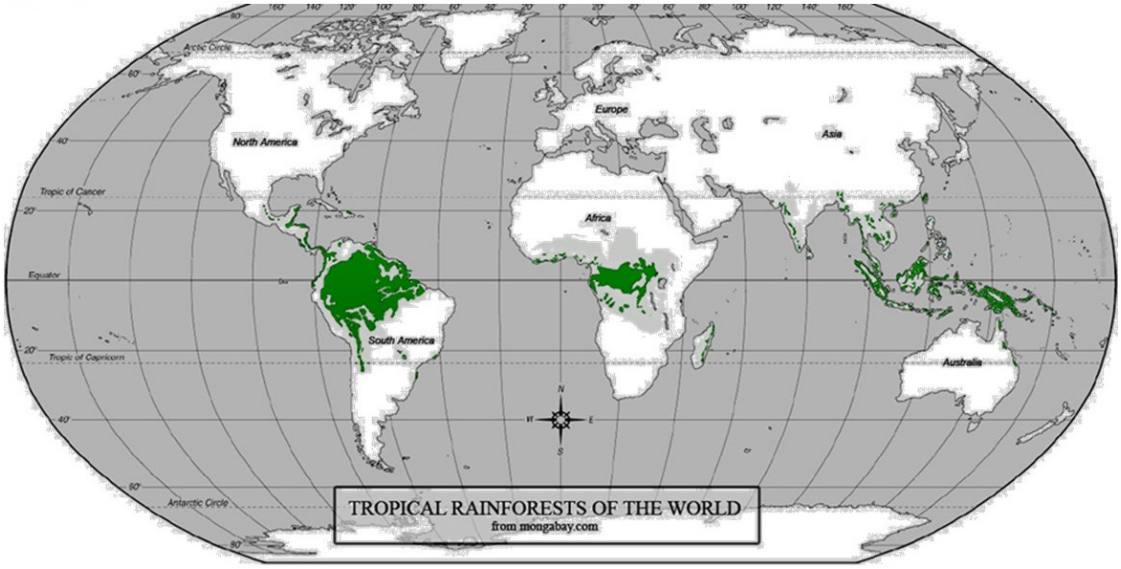

Figure 7: Tropical rainforests around the world located on the equatorial line are mostly surrounded from the north and south by tropical hot dry deserts (with permission from kids.mongabay.com)

Temperament of Colors

According to TPM sages, the four humors of blood, phlegm, yellow bile and black bile have specific temperaments. These humors each have their own specific color. The red color, as blood humor, has a warm and wet temperament, and the color yellow, as yellow bile humor, has a warm and dry temperament. White, similar to phlegm humor, has a cold and wet temperament, while black, like black bile humor, has a cold and dry temperament [21].

Temperament of Organs

As discussed previously, each body organ has a specific temperament at which it will have its best function. The sages consider man's skin as the most moderate organ, and describe the temperament of other organs compared to this organ [28]. For example, the heart and the liver have the warmest, and the bone, the coldest temperaments. Other examples are hair, being the driest and fat, being the wettest organs [26]. Indeed, body organs have a composite temperament; for instance, the bone has a cold-dry temperament, while adipose tissue has a cold-wet temperament. Avicenna notes that although the three vital organs - the brain, the heart and the liver - are warm and wet generally due to being the container and source of the spirits and the ***"Haar"***, but in comparison to each other the brain is cold-wet, the liver warm-wet, and the heart warm-dry [22]. The paradox of a cold versus warm temperament for the brain has been previously discussed by colleagues [29]. In recent studies the brain excluding the cerebellum has been shown to have approximately four times more non-neural cells [30]. It seems that the core of the functioning brain, which is practically comprised of neurons, has a hot temperament but the dominant glial cells, the myelin and the cerebrospinal fluid are cold-wet, which may have a function of cooling and feeding the hot core.

Table 1. Avicenna's quote from Galen about the temperament sequence of bodily materials, tissues and organs. (Avicenna's commentaries on some organs have been numbered in the table and discussed in the text)

Warm to moderate	Cold to moderate	Dry to moderate	Wet to moderate
Spirit and heart[1]	Phlegm	Hair	Phlegm
Blood	Hair	Bone	Blood
Liver	Bone	Cartilage	Parietal fat
Meat[2]	Cartilage	Ligament	Visceral fat
Muscle[2]	Ligament	Tendon	Brain
Spleen	Tendon	Aponeurosis	Spinal cord
Kidney[3]	Aponeurosis	Artery	Breast
Artery[4]	Nerve	Vein	Testicles
Vein[4]	Spinal cord	Motor nerve	Lung[5]
Skin	Brain	Sensory nerve	Liver
	Visceral fat	Skin	Spleen
	Parietal fat		Kidney
	Skin		Muscle
			Skin

Avicenna, quoting the above mentioned sequence of temperaments from Galen, points out several items which may decode the source of temperament formation. These issues are as follows [22]:

1. The hottest materials in the body are the "***Haar"*** or the soul, the heart and then the blood.
2. Meat is generally known to be warmer than the muscle because it is considered as coagulated blood, but in the muscle it combines with the cold tempered – hard dense - nerves and tendons so the muscle does not receive as much warmness and wetness of blood.
1. The flesh of kidneys being harder and denser than liver, meat, muscle and spleen is considered to receive less blood and thus less warmness.
2. The veins containing mostly blood and less spirit or ***"Haar"*** are also known to have a colder temperament than the arteries.
3. The primary instinctive temperament of every organ is similar to what it feeds from. Accumulation of waste products in the organ may change this temperament and result in a secondary acquired one. For instance, the lungs primarily feed on the hottest part of the blood mixed with bile but may be infiltrated with excess damp due to vapors rising from lower body parts, or discharges spilling from upper parts of the body. This may result in a very wet dystemperament, making the lungs susceptible to damp diseases such as asthma.

It is deducible from the above items that blood, the soul originating from it, the heart pumping them throughout the body, and the amount of their penetration in different tissues and organs dedicate a diverse combination of warmness and wetness and thus temperaments to tissues.

Food and Drugs Temperament

Food and drugs also have temperaments; for example, white mulberry has a warm and wet temperament, while watermelon is cold-wet. Raspberries have a cold and dry temperament and mango has a warm and dry temperament [31].

The actions of drugs or food-drugs in the human body are categorized into three levels, namely "primary", "secondary" and "tertiary" acts. "Primary" and "secondary" actions affect almost the whole body, whereas the specialized minor "tertiary" actions are related to a particular organ.

"Primary" actions are general actions attributable to the direct effect of the four qualities like heating, cooling, wetting and drying effects.

"Secondary" effects are semi-general actions deriving from indirect effects of the four qualities, like the closure of pores due to coldness, or loosening of tissues as a result of heating or wetting.

"Tertiary" actions are related to the specific structure of the drug and its affinity to a specific organ with the tendency to receive and show the effects of that drug. This action is a concept

similar to the modern molecular ligand-receptor reaction.

The first two effects may be directly or indirectly justified by the simple or compound temperament of the drug's particles. For example, chamomile is warm and dry, and therefore not only fairly heats the body by its primary effect but also opens the enclosed pores and fenestrations of the body and loosens hardened material; acting as a diuretic, antispasmodic and anticatarrh and etc. secondarily.

The potency of drugs is described in a degree scale from one to four, based on the amount of deviation they impose on the temperament of a temperate body in vivo. Each degree is subdivided to three levels adding up to overall twelve subdegrees of temperament. Thus, the more warmer or colder the drug becomes, the more it is displaced towards the third level of the forth degree - the twelfth subdegree - which makes it more effective in changing the temperate body towards hotness or coldness respectively, and also more potent to cause side effects and even lead to toxicity if consumed in high doses [22].

Discussion & Conclusion

Temperament or ***"Mizaj"*** is a key concept in TPM, evidences for which have been demonstrated in proteomics studies carried out by our colleagues [32].

It is defined as the final homogenous quality derived from the interactions of contrasting qualities - warmness, coldness, wetness and dryness - of the four philosophical elements when they combine with each other to form the compound materials of the universe.

Accordingly, everything including food and drug and even conditions like the climates and weather has its own temperament determined by the change it imposes on the temperament of human beings. Due to this effect, their temperaments can be used to maintain health or treat diseases in different individuals, particularly in relation to personalized medicine [33].

Based on the definitions, we come to the conclusion that moderate temperament is a person's temperament being in the range of health where all his body organs are in their best condition. In fact, in a moderate temperament, the accuracy and perfectness of actions issued by the organs, and generally, by the whole body remains relatively stable in different situations. In contrast, displacement of a temperament from its moderate center toward the edges of the quality spectrum make the person susceptible to a dystemperament or ***"Su-e-Mizaj"*** سوء مزاج named as the same exceeding quality. For example, the excessive use of a cold tempered drug may push a tempered individual towards the cold edge of the spectrum causing primarily a cold temperament and gradually a cold dystemperament. This deviation in temperament leads to disturbances in mental or physical actions and reactions of the body by activating some and inhibiting others [34]. As in the previous example, the mental and physical actions and reactions of the body may generally reduce in intensity, speed and frequency due to coldness.

Large groups of diseases are precipitated by dystemperaments aroused in an organ or the whole human body; therefore, preventing or treating diseases may be facilitated by recognition and treatment of the underlying dystemperament. The temperament and dystemperament of the whole body or specific organs have been allocated by the sages with scenarios of symptoms and signs accumulated during centuries of observation and clinical experience. The recognition and discrimination of the dystemperaments are thus theoretically possible from medical history taking, physical examination and summation of data. Although this method may lead to a major and rough classification of people in restricted types of dystemperaments, but it is mostly impractical, imprecise and confusing when there

are compound paradoxical dystemperaments of different organs simultaneously. It is because of these problems that we have tried to find a new - but loyal to the text - model to describe and discuss the source of different and inconsistent concurrent dystemperament formation in a single individual. Concluding from this research, it seems that the production of blood and its distribution from the heart via the vessels throughout the body can be considered as an important key factor in creating and changing the temperaments. In modern physiology, the arterial blood is known to receive its nutrients and chemical energy from the liver and the lungs and its pressure and mechanical energy from the heart and then distribute them throughout the whole body. Similarly, in TPM literature the blood is the vehicle of the ***"Haar"*** and heat. The ***"Haar"*** itself is the sum of the liver's natural spirit and the heart's vital spirit [20]. Therefore, the circulation of blood transfers and provides both the mass and the heat needed for the formation of temperaments and accomplishment of tissue functions. It has even been clearly stated that the body receives its heat from the circulating sanguine and bile that are the hot components of the blood [22].

This issue clarifies why the organs with more blood supply, such as the heart and liver, are considered organs with warm temperaments and those with lower blood supply, such as hair and bones, are seen as cold tempered ones. Through understanding these mechanisms in the human body, a more accurate recognition of temperaments and its deviations can be made. The writers of this article aim to emphasize again the ***"Doctrine of Priority of Blood Production and Distribution over the Formation of Temperaments and Dystemperaments"*** discussed in previous articles [35]. This doctrine may help solve the simultaneous paradoxical dystemperaments in a particular patient and may clarify the steps of treatment by emphasizing on the management of major shared causes of blood production and distribution instead of simultaneous diverse drug prescription for each organ dystemperament in an individual. The dimensions and clinical evidence of the above doctrine are yet to be discussed in more detail in future articles.

Conflict of Interests

None.

Acknowledgments

None.

Refrences

[1] Landis E, Davis S, Feldman S, Taylor S. Complementary and Alternative Medicine Use in Dermatology in the USA. J Complement Med 2014;20:392-398.

[2] Nahin R, McFann K, Barnes P, Powell-Griner E. Complementary and alternative medicine use among adults: United States, 2002. Seminars in Integrative Medicine 2004;2:54-71.

[3] WHO Traditional Medicine Strategy 2002-2005. Geneva 2002; pp. 1-3; pp. 43-47.

[4] Aciduman A, Er U, Belen D. Peripheral nerve disorders and treatment strategies according to Avicenna in his medical treatise, Canon of Medicine. Neurosurgery 2009;64:172-177.

[5] Rezaeizadeh H, Alizadeh M, Naseri M, Shams-Ardakani MR. The Traditional Iranian Medicine Point of View on Health and Disease. Iran J Publ Health 2009;38:169-172.

[6] Hall JE. Guyton and Hall Textbook of Medical Physiology: Enhanced E-book. Elsevier Health Sciences. United State 2010 [In English].

[7] Roses AD. Pharmacogenetics and the practice of medicine. Nature 2000;405:857-865.

[8] Naseri M, Rezaeizadeh H, Taheripanah T, Naseri V. Iranian traditional medicine theory and a variety of therapeutic response based on pharmacogenetics. IranTrad Med 2010;1:237-242.

[9] The Holy Quran, Chapter 24, Verse 45; Chapter 35, Verse 1; Chapter 49, Verse 13; Chapter 71, Verse 14.

[10] Saduq MA. Al Emali, Vol 1. Ketabchi. Tehran 1997; p 446 [in Arabic].

[11] Rothbart MK. Biological Processes in Temperament. Wi-

ley. Sussex. England 1989; p29.
[12] Keltikangas-Jarvinen L, Ravaja N, Viikari J, Identifying Cloninger's temperament profiles as relatedto the early development of the metabolic cardiovascular syndrome in young men. Arterioscler Thromb Vasc Biol 1999;19:1998-2006.
[13] Hogan R, Johnson JA, Briggs SR, Handbook of personality psychology. Academic Pr 1997; p 112 [In English].
[14] John OP, Robins RW, Pervin LA, Handbook of personality: Theory and research: The Guilford Press. 2008; p 403 [In English].
[15] Cloninger CR, A systematic method for clinical description and classification of personality variants: A proposal. Arch Gen Psychiatry 1987;44:573-588.
[16] Pulkki-Raback L, Temperament, socioeconomic status and cardiovascular risk. University of Helsinki 2004; p 92-99.
[17] Hamburg MA, Collins FS, The path to personalized medicine. N Engl J Med 2010;363:301-304.
[18] Rafati, Vahid. Lawh-i-Hikmat: The Two Agents and the Two Patients. Vol 5. Andalib. pp 29-38.
[19] Heravi M. Bahr al-Jawaher. Jalaluddin Publications. Qom 2008; p 347 [in Arabic].
[20] Alizadeh Vaghasloo M, Naghizadeh A, Babashahi N. The Concept of the Haar-re-Gharizi and Hararate Gharizi: The Innate Hot [Substance] and Heat. Trad Integr Med 2017;2:3-8.
[21] Aghili Shirazi M. Khulasah al-Hikmah. Vol 1. Esma'ilian Publications. Qom 2006; p 52; p 54; p 426 [In Persian].
[22] Avicenna. The Canon of Medicine. Vol 1.AlMayi. Tehran 2014; p5; pp 67-71; p87; pp 301-304; p326; p362 [In Arabic].
[23] Jorjani IIMa-H. Zakhirah -E- Kharazm Shahi. Bonyade frahange Iran. Tehran 1976; p 23; p 25. [In Persian].
[24] Alizadeh Vaghasloo M, Zareian MA, Soroushzadeh SMA. The Concept of Nozj. Trad Integr Med 2016;1:133-135.
[25] Ahvazi AA. Kamel al-Sana'a al-Tebbiya.Vol 3. Jalaluddin Publications. Institute of Natural Medicine Restoration. Qom 2008; p 434 [In Arabic].
[26] Razi M. Al-Mansori fi-Teb. The Uni of Med Sci. Tehran 2008; p 41; p 163 [In Persian].
[27] Safinejad J. Onsolmohaj and the Geography of the Seven Aghaleems. Gozareshe Miraas 2013; 56:30-41[In Persian].
[28] Arzani HMA. Medicine. Mofarrah al Gholob. 1st ed. Chogan. Tehran 2015; p 18 [In Persian].
[29] Attarfar M, Ashrafzadeh F. Brain temperament in Iranian medicine. J Islm Iran Trad Med 2015; 6:1-8.
[30] Jabr F. Know your Neurons: What is the ratio of glia to neurons in the brain. SciAm 2012; Available from: https://blogs.scientificamerican.com/brainwaves/know-your-neurons-what-is-the-ratio-of-glia-to-neurons-in-the-brain/
[31] Aghili Shirazi M. Makhzan Al Adviyeh. 8th ed. Sabzarang. Tehran 2014; p 173; p 225; p 278; p 472 [In Persian].
[32] Rezadoost H, Karimi M, Jafari M, Protemics of hot-wet and cold-dry temperaments proposed in Iranian traditional medicine: a network-based study. Sci Rep 2016;6:30133
[33] Parvinroo SH, Kamalinejad M, Sabetkasaei M. Pharmacological Concepts of Temperament in Iranian Traditional Medicine. Iran J Publ Health 2014;43:1463-1465.
[34] Emtiazy M, Keshavarz M, Khodadoost M, Kamalinejad M, Gooshahgir SA, Shahrad Bajestani H. Relation between Body Humors and Hypercholesterolemia: An Iranian Traditional Medicine Perspective Based on the Teaching of Avicenna. Iran Red Crescent Med J 2012;14:133-138.
[35] Alizadeh Vaghasloo M, Naghizadeh A, Keshavarz M. The Concept of Pulse. Trad Integr Med 2017;2:54-60.