The Association between Dystemperament and Prevention of Diseases: A Systematic Review

RAFIEIAN KOPAEI 1, ALIREZA KHAJEGI R, SARA KIANI R

INTRODUCTION
Temperament of a person is mostly related to identifying the most proper diet and lifestyle for health promotion [1]. According to Hippocrates, “it is more important to know what sort of a person has a disease rather than to know what sort of disease a person has” [2].

There are four essence of the body. Blood which is hot and moist, phlegm which is cold and moist, bilious which is hot and dry and atrabilious which is cold and dry. Any problem within one of these essences should be treated according to the moisture and temperature characteristic of the essence [3]. Muinuddin and Chishti argues that nearly all of the eastern medicine techniques uses this idea of four essences of the body while western medicine totally disregards it [4]. On the basis of Mizaj, human beings have been categorized into four qualitative types: Sanguineous (Damvi), bilious (Safravi), phlegmatic (Balghami), melancholic (Saudawi). They were suggested to result from predominant humor in the body [5,6]. Temperament of the body is specific for each individual fluctuating between certain minimum and maximum limits. Any change in the temperament of a person brings about a change in persons’ state of health [7-9]. Thus, preservation of balanced temperament under the differing conditions of life is vital for the maintenance of health and avoidance of disease in an individual. Arabic medicine is in agreement with the Greeks and Romans on the same, that the deviation of the health spectrum from positive health to diseased condition and death largely depends on the equilibrium and ratio of four humors viz., phlegm, sanguine and melancholic humors, disturbance in original (genetic or congenital) temperament, change in bodily composition, size and putrifaction(taafun) [10]. Some factors including age, place, season, diet and occupation possess their certain temperament that are in charge of affecting the individual temperament and make them prone to a particular group of diseases. Thus, the people of specific temperament predispose to specific kind of diseases in different stages of their life and under different climatic conditions [5,7,8].

Medicine is divided into two branches viz., curative medicine and public health (preventive medicine). It was said that the essence of medicine is prevention. This is in conformity with the Arabic tradition believing that the guardian, protecting and preserving personal well-being is considered better than medical treatment [11]. According to Traditional Iranian Medicine (TIM), health preservation and disease prevention are prior to disease treatment [12]. Besides, in Unani system of medicine, it is generally said that “prevention is better than cure, so a specific prevention plan for each disease must be structured as per Greek-o-Arabic norms [5]. Nevertheless, before making the prevention plan, one must understand the Greek-o-Arabic aetiopathology of the disease [5].

Ayurveda focusses on the preventing and promoting health, resulting from a holistic approach of this system, its widespread use would boost the health status of the people around the world [13]. Ayurvedic approaches to therapy includes: 1) Diet: foods should be consumed slowly, in their natural season in tranquil surroundings; occasional fasting is thought to promote health; 2) Medicine: the primary therapeutic and preventative arsenal is based on herbal remedies, which may be supplemented by homeopathy and conventional drugs. Practical-behavioural modification, breathing exercises, mental counseling, enemas, transcendental meditation, yoga and a healthy lifestyle [14,15].

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In Unani system of medicine, prevention plan consists of limiting the toxins accumulation through proper adjustment of the person’s six governing factors [16,17]. Unani medicine is well-known for preventing diseases including gastric ulcer, hepatitis, ischemic cardiovascular disease, hypertension, diabetes mellitus, sexual debility, renal stones, vitiligo, psoriasis and paralysis via its dietotherapy [1].

Public health (preventive medicine) includes correction in ashab-e-sitlah Zarooriya (six essentials of life) and implementation of ashab-e-gheire Zarooriya. Six essentials of life includes air, water, food, rest and improvement of body; soul and mind, sleeping and awakening, retention and discharge of fluids, solids, gases and energy from the body. The above-said factors are causes that influence every human being. Depending on circumstance, the following may be added namely: geographical conditions; residential environment; occupation and related matters; habits; age; gender. Ashab-e-gheire Zarooriya includes adoption of all healthy behaviours and life style including niazat (special exercise), hammam (bath house), taleeq(leeching), venesection(phlebotomy), mahajim and so on [11]. Ashab or Cause is the first thing that make states or durability in the human body. Each of the three body states have a special cause. There are three kinds of causes: primary causes, physical causes and the former cause. Every cause is either necessary or unnecessary. Unnecessary cause is either contrary to nature (human allegiance) or it has no contradiction with it [18].

In a book entitled taqwiym alsihha (tables of health) consisting of 40 tables, Ibn buTlaan set the conditions under which health could be preserved. According to him, health depends on the proper balance between six areas: the elements and air, food and drink, movement and rest, sleep, bowel movement, emotions: joy, anger, fear and distress [19].

**MATERIALS AND METHODS**

**Search Strategy**

Investigation strategy: This systematic review has reviewed association between dystemperament and prevention of disease. The major questions of the present study were: “what are the major findings of the studies reviewed for factors involved in the association between dystemperament and prevention of disease?”

Data collection was performed by four inclusion criteria:
1) Published within the past 26 years (March 1990-March 2016);
2) Published in English and Persian languages;
3) Published in trustworthy peer-reviewed scientific journals; and
4) Occurrence of the keywords in titles or abstracts. The following words were used independently and later as combination to search for in databases and electronic journals. According to the inclusion criteria 25 articles were retrieved. First, the articles which did not comply with inclusion criteria or were duplicated were ruled out (n = 5). Secondly, some articles were ruled out on the basis of title and abstract (n = 6). In the third step the full text of the remaining 14 articles was read and 5 articles were ruled out based on the content of articles. In the final step, 9 articles in English were finalized out and their full texts were reviewed and analyzed. The process of selecting articles for review was systematically performed in three steps [Table/Fig-1]. Exclusion criteria: Relating to treatment of disease instead of prevention, just abstract was available, not in the time line of study. Those article which did not match our inclusion criteria (relating to prevention of disease, between the time line of study) were excluded from the study.

**RESULTS**

Necessary causes are six that are called ashab-e-sitlah Zarooriya that are as follows [18,20].

1) **Air**: Air the use of which is inevitable because its inhalation causes balance of soul and its exhalation causes removal of waste from the body and as long as the air is clean and moderate and is not mixed with steaming swamps, landfills, stagnant and foul-smelling water, steam of rotten vegetables and fruits, foul-smelling trees such as yew and fig, the dust and permanent smoke it produces health. Climatic change may be normal or abnormal; abnormal changes may be compatible or incompatible with the nature. Natural variation includes seasonal changes, and every season has a special cause for the spread of some diseases. Besides, in each seasons some of diseases are diminished. However, abnormal changes that are not hostile to human nature have heavenly or terrestrial cause. Cold weather strengthens the body, improves digestion of food and colour of skin, triggers special diseases including epilepsy, paralysis and cataarrh cold and trembling. Hot air causes lethargy, weakness, poor digestion of food, burning of the senses and heaviness of the brain and its specific diseases include croup, different types of fever and eye pain. But climatic changes that are incompatible with the normal process of a region cause epidemic diseases.

2) **Food and Drink**: These two affect the body either through their effects on body that in this case is called “medicine” or their impact is ones due to their substance that in this case are called “food” or due to their forms that in this case have either a positive effect in the body (antidote) or against the body (such as pesticides) or influence through their substance and quality in this case is called “medical food” or affect through their form and quality that is named “ zol-al-khase medicine ” or affect via their substance and form that called “ medical food”. Food may be either subtle, medium or thick, and each of the three cases may be saleh-al-keimos or fasd-al-keimos and each of them may be full calorie (kasir-al-taghziye) or low calorie (ghalil-al-taghziye). Water has no nutritional value because of the simplicity of its structure, it is only used to dilute foods, to cook and helps to penetrates the tight ducts of body. Savory delicious foods cause hotness of the body and cold foods can cause digestive problems and coldness of body [2,20]. Besides, to have a healthy body, one must have a diet consisting of a balanced amount of both hot and dry foods [4]. The Sufis separate foods into eight categories. Four of these categories are for hot foods while the other four is for cold foods. The four hot and the four cold categories are distinguished by their degree of hotness and coldness [4].
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as hunger. Daytime sleepiness is harmful for both skin and spleen.
gastrointestinal dyspepsia resulting from digestive power as well spiritual coldness. Too much sleep cause weakness of brain and
sudden (such as fear) and or gradual (like sadness) [20].
as happiness or pleasure), and its movement inside may also be
sudden sleep and wakefulness is detrimental [20].

3) Physical exercise and rest: Sports are different in terms of intensity and weaknesses, frequency and speed. Strong and fast and
little exercise is more warming than degenerative and low speed, weak and much exercise is reverse. Excess in exercise and rest causes body to cool. Rest helps improve digestion, while exercise help in better absorption of foods [20,21].

4) Movement and mental relaxation: The spiritual movement requires movement of the soul outside or inside. Movement of soul outside may be sudden (such as extreme anger) or gradual (such as happiness or pleasure), and its movement inside may also be sudden (such as fear) and or gradual (like sadness) [20].

5) Sleep and wakefulness: Sleep is similar to rest and waking is closer to movement. Sleep can crawl into the spirit of the body that is why the body becomes cold. That’s why more clothing is required during sleep. Excessive sleep causes body moistness and coldness. On the other hand, lack of sleep triggers spiritual coldness. Too much sleep cause weakness of brain and gastrointestinal dyspepsia resulting from digestive power as well as hunger. Daytime sleepiness is harmful for both skin and spleen.

Moreover, it causes halitosis and lethargy. However, if it is formed as an addiction, so it should be gradually allowed to quit. Although successive sleep and wakefulness is detrimental [20].

6) Evacuation and retention: Whenever it is enough, it will be helpful and protective for the health. However, excessive evacuation cause dryness and coldness of body unless the substance be cold and dry that in this case, its vomiting cause warmthness and moistness of body. Excessive retention cause incidence of serious infections, loss of appetite and heaviness of body. However, unnecessary but compatible causes, such as being buried in the sand, and rolling in it causes drying the useful moisture and is helpful in the treatment of edema and paralysis (in fact, these methods are some type of vomiting). Oil rubbing on body with oils like olive oil has the same effect. Washing your face with cold water also cause increase in the intrinsic warmthness and it’s boosting and is helpful in the treatment of condition resulting from staying too much in bath. But some causes are incompatible with the normal process of life, such as drowning, deep cuts, burns and toxic smoke [2,20].
The aforementioned four causes are related to single sue mizaj and their combination caused compound sue mizaj.

Health maintenance for four different mizaj or temperament are shown [Table/Fig-2] and different kinds of temperament and suggested regimen was offered [Table/Fig-3]. Based on the aforementioned causes, some Tadbeer were introduced as below:

**Tadbeer-i-Air:** It aims to allow timely prevention and management of complications [20].

**Tadbeer-bil-food:** Maintaining the health of each person must be done according to his mizaj and it should be prescribed the material whose quality is the same as one's own mizaj. Trying to change ones mizaj to a better mizaj is detrimental for him [12,20].

Medical foods should not be consumed unless the management of mizaj or adjustment of food of an individual is concerned. In addition, it should be avoided to consume foods without having appetite. Besides, it should not be fought with real appetites. It is necessary to eat cool foods in summer and warm foods in winter. Eating foods before previous food is digested is very disadvantageous and too much indulging is placed in the next step. Colourful foods makes the individuals mizaj mixed up.

Food of bilious individual should be cold and moist. While food of sanguineous person has to be very cool. Food of phlegmatic person should be soft and hot and melancholic person should consumed moist foods.

The combination of certain foods were forbidden by experts because the concomitant use of these leads to chronic diseases such as leprosy and polio. Although, it is difficult to prove many of them by analogy.

**Tadbeer-bil-drinks:** It was said that well water and spring water should not be consumed together unless one of them had been absorbed. The best of water is water of streams especially those running on clean and free from pollution soil and on rocks. These kinds of water are rarely infected if running from north or east and from the top down and be away from original source [20].

Spring water is free from any bad temperament and worse than that is water wells the worst is water of ponds. It is best to drink water after the beginning of food digestion. Drink waters after food consumption avoid burning of food in digestive system and drinking water during eating is even worse. But it is beneficial for those whose mizaj is hot. Some people have poor appetite and drinking water cause to offset the heat of their stomach and enhance their appetite. Drinking water is very harmful while fasting, following exercise, especially after sexual intercourse, after taking strong laxatives and after eating fruits, especially melons, after taking shower. In many cases, the thirst feeling is resulted from viscous or bitter phlegm. Thus, the more water you drink, the more thirsty you will feel. In such cases, it should be resist against thirst until the nature cooked and melted the thirst substance. In this condition, thirstiness will be removed. In many of such cases, thirstiness will be disappear by consuming hot material like honey [20].

**Tadbeer bil-exercise and physical relaxation:** As we know, the body’s survival is impossible without eating. On the other hand, the food does not absorb completely, but in every digestion, some amount of food will remain in gastrointestinal digestive system. If these material increase gradually over time, some kind of materials will be produced that are harmful in two ways [20]:

1) First, they affect the quality of foods as they increase the temperature of body without any cause or by causing infection or causing decrease in the temperature of body without any cause or by removing natural heat of body [20]; 2) Second, they affect the quantity of foods that cause obstruction and heavity of body as well as causing retention disease. So, it is clear that both remaining and vomiting these waste in body is disadvantageous. The main barrier of producing this kind of waste material is movement that cause heating body members and running the waste material in them, in this way, avoid their accumulation over time. On the other hand, exercise makes the body carefree and happy. It makes body ready for the reception of food. As well as increase in resistance and strength of joints, ligaments and nerves. Along with other therapeutic measures, exercise makes body immune against different kinds of temperamental and material diseases [20].

**Protective role of exercise against chronic diseases such as cardio- respiratory diseases, diabetes, and hyperlipidemia etc., was investigated and proved** [22,23]. The most appropriate time to exercise is deemed after food digestion and absorption [20].

**Massage is of different kinds:** Soft and hard massage. Massage with rough hands can flush skin and is refreshing, hard massage trigger to strengthen the weak limb while the soft massage will...
cause their weakness. Too much massage cause slimming and mild massage cause obesity. The important point in massaging is that it should be done by several persons simultaneously [20].

**Tadbeer-bil-sleep and wakefulness:** Deep, continuous and adequate sleep is the best type of sleep that begin to take place after digestion and the absorption of food and reduction of bloating caused by of food. A person who sleep to help digestion of food, should scratch on the right side first in order that food be placed in the bottom of the stomach then lie on ones left side for a long time because in this case, liver cover stomach and keep it warm. After the digestion of food, one should lay down again to the right side in order that food be better absorbed by the liver [20,24].

**Tadbeer bil-retention and discharge:** There are 10 indications which show when it is right to procure “evacuation” (i.e., bloodletting, wet-cupping [25], purgation, enemas, diaphoresis, use of leeches, etc.): 1) Plethora; 2) vitality; 3) temperament; 4) appropriate symptoms (thus, we need not evacuate the bowel in a case of diarrhea); 5) habit of body or physique; 6) the age of the patient; 7) the time of year; 8) the state of atmosphere; 9) the geographical situation;10) the patients mode of life regarding “evacuation”; and 11) his occupation [26]. The individual nature should be always noted in a way that the nature retention can be done by a fatty stew, white soups and soups containing lemon and Safflower. Some of the most common kinds of vomiting (retention way) in healthy person is hammam and sexual intercourse. It must be noted that entering into the warm bath and the exit from it should be done gradually. Staying too much time in the bathroom cause epileptic, boring and dry. A person with dry mizaj should use bath water more than its air and in such cases it is necessary to sprinkle the floor and walls of the bathroom, in order to evaporate the water and makes it air vapory. A person with moist mizaj should use more air than water in hammam and it is required to sweat before using the water. It is also correct about those patients with oedema. As long as skin is refresh, no excess in hammam take place. But when the skin begins to wrinkle and person’s tiredness increase, it is a sign of excessive bathing.

Sexual intercourse: The best time for that is after digestion of food and when the body is in moderation in terms of heat and cold, moisture, dryness and fullness and if it is done in inappropriate time, its harm during fullness of body is lesser than when the body is empty and cold and dry. It is recommended that sexual intercourse is done due to the increased intensity of passion and intense sexual desire and then the person become sleepy. Intercourse in moderation sparks body with instinctive warmth and prepares body to absorb food and is helpful to overcome the phlegmatic and melancholic diseases [26,27].

A brief comparison between traditional and mainstream preventive medicine. While unani medicine focus on the four essence of life and six governing factors, mainstream medicine introduce three types of prevention: primary prevention, secondary prevention and tertiary prevention. Based on the MeSH, Primary prevention is defined as specific practices for the prevention of disease or mental disorders in susceptible individuals or populations. These include health promotion, including mental health; protective procedures, such as communicable disease control; and monitoring and regulation of environmental pollutants. Secondary prevention was defined as early detection of disease process and application of interventions to prevent progression of disease or the prevention of recurrences or exacerbations of a disease or complications of its therapy. Tertiary Prevention is also defined by MESH as measures aimed at providing appropriate supportive and rehabilitative services to minimize morbidity and maximize quality of life after a long-term disease or injury is present. While factors including age, place, season, diet and occupation in traditional medicine were important, mainstream medicine put its emphasis on age, gender, sleep, BMI, (and other physiologic parameters), lifestyle habits (nutrition, physical activity, not smoking, not drinking alcohol, self and stress management) [28,29] that should be focused to prevent from diseases [30-32]. What we aimed to focus in this study is the primary prevention rather than the two other prevention and its associated measures.

**Primary preventive measures**

Primary prevention aims to prevent disease or injury before it occurs. This is done by preventing exposures to risks triggering disease or injury, changing unhealthy or unsafe behaviours that can lead to disease or injury, and increasing resistance to disease or injury. It includes:1) Training healthy and safe habits: training healthy lifestyle factor emphasized to: a) prevent from obesity, central obesity, and diabetes [33]; 2) To control blood pressure and lipid management and to use evidence-based medications [34], Healthy lifestyle factors and risk factor control are consisted of [35]: 1) Nutrition (nonhydrogenated unsaturated fats, grains consumption as the main form of carbohydrates, large portion of fruits and vegetables, calorie intake reduction, and adequate omega-3 fatty acids [36,37], using medicinal plants [38,39], regular physical activity [40,41], not smoking) [42,43], maintaining healthy weight (body mass index 18.5-29.9 kg/m²) [44], not being stressful. 2) Immunization against diseases: a)vaccination; b)drug consumption; c)dietary supplemnetations (like probiotic, folic acid supplements, vitamins, antioxidants [52-58].

**LIMITATION**

A limitation of this systematic review was the potential bias due to the research strategy. Another limitation was related to the language of most of the book in this area (Arabic texts mostly), that made it difficult, using them in this manuscript.

**CONCLUSION**

There are two difference between these two kinds of medicine: firstly, although some preventive factors are overlapped in traditional and mainstream medicines (including nutrition (both food and drink), physical activity, sleep), some of the traditional preventive factors become undefined (retention, air) and some new preventive factors get highlighted in mainstream medicine (e.g., not smoking, not having stress, etc.); secondly, rules of preventive medicine in Unani system were mentioned in detail and were different for different people with different types of temperament, while in mainstream medicine state its rules generally for different types of people.

**EDITORIAL NOTE**

The following review belongs to the field of Alternative Medicine and during the process of peer review we received conflicting opinion regarding the suitability of the article for the journal. However, the Editorial had a broader prospective and we thought of moving ahead with it, as on including this article it might broaden our reach to the readers of Alternative Medicine and also widen the concept of traditional medicine. We thought to let the readers judge the usefulness of such strategies. Best example is Yoga and meditation that have now found a place of their own in the field of Unani herbal medicine.

**REFERENCES**
