



# Association Between Personality Types and Temperament (*Mizaj*) Based on Persian Medicine

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## Abstract

**Background:** Personality and personality disorders are important in psychology. In addition, *mizaj* is a key concept of Persian medicine, according to which, it can affect the personality of the staff of an organizations.

**Objectives:** The aim of this study was to find the relationship between personality types based on NEO-FFI questionnaire, and *mizaj*, based on the knowledge of Persian medicine.

**Methods:** This is a cross-sectional descriptive analytical study. The participants were selected from 20 - 40-year-old staff of the medical school of Shiraz University of Medical Sciences through 2016. Mojahadi's questionnaire, including 10 questions based on three-point Likert scale for the assessment of the *mizaj* as well as the NEO-FFI questionnaire, which includes 60 questions based on five-point Likert scale for the assessment of personality type were used in this study. SPSS 18 was performed for analyzing the data.

**Results:** Overall, 112 staff members, including 20 men (17.9%) and 92 women (82.1%) enrolled in the study. The mean age of the participants was  $32.29 \pm 5.10$  years. In this study, neuroticism was positively related with hot temperament ( $P = 0.02$ ). However, there was no statistically significant relationship between other aspects of temperament and personality ( $P > 0.05$ ).

**Conclusions:** The correlation of hot temperament and neuroticism is in line with the concept of Persian medicine. However, more research is needed to reveal more aspects of the relationship between temperament and personality.

**Keywords:** Personality, Persian Medicine, Temperament

## 1. Background

Traditional medicine, as defined by WHO, comprises a spectrum of medical therapies and preventive measures consisting of herbal, non-herbal, and manual treatments (acupuncture, cupping, and massage), which is indigenous to an area such as Chinese medicine and Indian Ayurveda. However, traditional medicine may be considered as complementary, if it is used by people of other countries (1, 2). *Mizaj* or temperament is a notion that is considered a key concept among ancient physicians and sages of Persia and Greece and is commonly used in natural philosophy, medical treatises, and textbooks (3, 4).

According to Persian medicine (PM) sources, temperament is defined as an average quality produced by the interaction of quadruple elements (fire, air, water, and soil),

which possess their own unique dual qualities (5, 6). Interaction of fire (hot-dry), air (hot-wet), water (cold-wet), and soil (cold-dry) gives rise a dual quality, which is the average of a homogenous quality addressed as temperament (7, 8).

*Mizaj* is simple, if a simple quality is predominant such as hotness, coldness, wetness, and dryness. If the active qualities of hotness and wetness are balanced, the outcome will be a simple wet temperament or a simple dry temperament, depending on the predominance of wetness or dryness. Given the balance of passive qualities-wetness and dryness-the result will be a simple hot temperament or simple cold temperament, depending on the predominance of hotness or coldness. Compound temperaments are produced when either active or passive qualities are imbalanced, which is a combination of predominantly active and predominantly passive qualities including hot-

dry, hot-wet, cold-dry, and cold-wet (9, 10).

Average temperament is equal to health; however, the true average that is completely equal in qualities of hotness, coldness, wetness, and dryness does not really exist in the world. What is considered a healthy temperament is the assumed average quality in which the combination of the quadruple qualities in human kind regarding time, place, and age results in the best functionality, mentality, and physical attributes. Arbitrarily, from the combination of simple and compound temperaments, we have nine types of temperaments, one average and eight out of range (7, 8, 10).

Determination of the temperament plays a crucial role in the diagnosis of health and diseases in the PM school (5, 7). There is a set of 10 questions, *adjaas-e-ashareh*, to determine temperament in general including touch (perception of physician from patient's skin touch), appearance, physique, hair, sleep and wakefulness, quality of body organ functions, quality of body wastes, and body impression by quadruple qualities and mental states (10, 11). The estimate of the physician, based on these 10 variables, indicates the general temperament of the examined person. According to the PM approach, people with different temperaments possess different mental characteristics (12).

There are a variety of interpretations regarding the concept of temperament in the conventional approach comprising blood acidity, thyroid hormone levels, homeostasis, acid base equilibrium, neuroendocrine hormones, and other biomarkers (3).

Personality, etymologically, is defined as a mask that actors used in ancient Greek theater to cover their face. The main concept of personality is usually tailored according to the social-end formal image of a person in the community (13). Different definitions for personality are rooted in different views. Personality is considered as one of the contributing factors forming individual behavior and different personal characteristics. Personality, usually consolidated and unchangeable, describes behaviors that individuals show while dealing with different situations. There are various models to determine and evaluate personality. One of these models, NEO-FFI, has been used in different studies. Several studies, with five-factor models, have been done to determine the relationships between the personality of people of different communities, taking into account learning, social deprivation, and other crucial factors (13-15).

According to our literature review, there was no study evaluating the relation between temperament and personality, two important determinants of personal characteristics in traditional and conventional approach, respectively. It is also very important to adapt an employee's temperament and personality characteristics to the tasks assigned

to them in the office. For this reason, our study compares Mojahedi's temperament questionnaire (16) and NEO-FFI personality questionnaire in the population.

## 2. Methods

### 2.1. Design of the Study

It is a cross-sectional descriptive analytical research into the temperament of a normal population compared with their personality dimensions according to the five-factor model. This study was performed in the medical school of the Shiraz University of Medical Sciences. The minimum sample size was calculated considering  $\alpha = 0.05$  and  $\beta = 0.20$ , and a 0.3 correlation coefficient for the relationship between *mizaj* and the personalities of 112 individuals. However, due to the low number of staff at the medical school, it was decided that all eligible employees would be enrolled in the study.

### 2.2. Participants

Shiraz medical school staff, between the ages of 20 and 40 years, reporting generally good health status, were selected from the list of university human resources office. People with a history of chronic diseases and those uninterested in participating in the study were omitted from the list; about 112 individuals were included in the study through 2016.

### 2.3. Method of Temperament Determination

Mojahedi's questionnaire, the first valid and reliable instrument for measuring the temperament, was used to determine the temperament of the participants. The questionnaire was a three-point Likert scale, with responses ranging from 1 to 3, including the first eight questions for evaluation of the hotness-coldness range and the last two for the determination of the wetness-dryness range (16). The questionnaire was filled and a PhD in PM evaluated the temperament of the patient.

### 2.4. Personality questionnaire

The personality of the participants was evaluated by the NEO-FFI standard questionnaire consisting of 60 valid questions. The model comprises of five factors including neuroticism, extraversion, openness, agreeableness, and conscientiousness (17). The Persian version of normalization was done by Amrai et al. and Garusi Farshi (18, 19). The participants received a NEO-FFI Persian version questionnaire and, after being explained the details of the method of responding to the questions, were asked to fill the questionnaires. At the end, an expert psychologist determined the personality type of the participant according to their answers.

2.5. Ethics

Verbal informed consent was received from the participants and they were assured that all information gathered from them would be secured by researchers and would not be published.

2.6. Statistical Analysis

After collecting the information and scoring based on the questionnaire guidelines, the crude data was analyzed by a statistician with SPSS 18. The relationship between temperament and personality was evaluated with proper statistical tests. Descriptive statistics were included in mean and standard deviation for quantitative parameters and frequency count and percentage for qualitative variables. In addition, Independent t-test, ANOVA, Chi-square, and Pearson and Spearman correlation coefficient were used for an analytical explanation of the results.

3. Results

A total of 112 individuals, including 20 men (17.9%) and 92 women (82.1%), participated in the study. The mean ages of men and women were  $32.20 \pm 4.23$  and  $32.32 \pm 5.29$ , respectively, however, it was not statistically significant ( $P = 0.92$ ). Of the participants, 57.1% were married and 34.8% had master degrees or higher (Table 1). Regarding the warmness-coldness temperament, 55.4% were average, and based on dryness-wetness, about 34.4% and 39.3% were dry and average, respectively (Table 2). Most of the participants were in level-2 in all personality facets, encompassing the average range. Accordingly, no one was in the high level of personality and few people fell in the low level (Table 3). There is a relationship between different temperaments and various personality levels in a way that warm or hot-temperament is significantly related to neuroticism ( $P = 0.02$ ), however, there is no statistically significant relation among other temperaments with individuals' personalities ( $P > 0.05$ ) (Table 4). Regarding the wetness-dryness temperament, there is a statistically significant relation between wetness and extraversion ( $P = 0.009$ ) (Table 5).

4. Discussion

According to PM knowledge, hot-dry tempered people are probably more irascible and hot-blooded. They are usually impatient, acute, fast, and furious. They are active, ready-witted and rapid-analyzers. People with a dominance of hot-dry temperament may suffer insomnia and light sleep (20, 21). Hot-wet tempered individuals are usually brave, venturous, genial, and warm. General characteristics of cold-tempered people are sluggishness and

Table 1. Criteria of Participants<sup>a</sup>

Variables	Value
Age, y	32.29 ± 5.10
Males age	32.20 ± 4.23
Females age	32.32 ± 5.29
Sex	
Male	20 (17.9)
Female	92 (82.1)
Marital status	
Single	36 (32.1)
Married	64 (57.1)
Widowed	3 (2.7)
Missing data	9 (8)
Level of education	
Diploma and lower	12 (10.7)
Associate's degree	5 (4.9)
Bachelor's degree	48 (49.8)
Master's degree and doctorate	38 (34.8)
Weight, kg	86.17 ± 12.23
Height, kg	165.09 ± 8.35
BMI, kg/m <sup>2</sup>	23.70 ± 2.94
BMI category	
< 18.5	1 (0.9)
18.51 - 24.99	57 (50.9)
25.00 - 29.99	25 (22.3)
> 30	3 (2.7)
Missing	26 (23.2)

<sup>a</sup>Values are expressed as mean ± SD or No. (%).

weariness in mental states. Other specific characteristics of these people are cautiousness, fear, taciturnity, and indecision at the time of talking. People with cold-dry temperament are very stable and usually work in peace without haste. They are usually astute, stringent, introverted, and cold in relationships and are susceptible to depression. Cold-wet tempered people are forgetful, drowsy, and cold. It is crucial to know that implications of temperament are not absolute in all conditions (10, 21, 22).

Jorjani, in Zakhireh-e-Kharazmashahi, described the characteristics of hot-tempered, cold-tempered, wet-tempered, and dry-tempered people in detail. In addition, he described the characteristics of people with compound temperament. According to Jorjani's views of the temperament of the brain, people possessing hot-dry and dry-tempered brains gain acuteness in their sensory

**Table 2.** Mizaj Distribution of Participants<sup>a</sup>

Mizaj	Value
<b>Hot or cold Mizaj</b>	
Hot	35 (31.3)
Moderate	65 (55.4)
Cold	15 (13.4)
<b>Dry or wet Mizaj</b>	
Dry	43 (38.4)
Moderate	44 (39.3)
Wet	25 (22.3)
<b>Mixed Mizaj of participant</b>	
Hot and dry	14 (12.5)
Hot and wet	8 (7.1)
Cold and dry	5 (4.5)
Cold and wet	3 (2.7)
<b>Moderate</b>	24 (21.4)
<b>Hot</b>	12 (10.7)
<b>Cold</b>	7 (6.3)
<b>Wet</b>	14 (12.5)
<b>Dry</b>	25 (22.3)

<sup>a</sup>Values are expressed as No. (%).

perception. It means that they react more rapidly and more vigorously to external stimuli. They are usually quick-witted and, concurrently, irascible individuals. People with wet and cold-wet temperament brains, on the contrary, react slowly to stimuli and are usually more tolerant and, concurrently, slower in sensory perception (21, 23).

Amrai et al. found a positive relation between spiritual intelligence and conscientiousness, agreeableness, and extraversion. They also showed a negative relation between neuroticism and spiritual intelligence (18).

According to a study by Salary and Shaieri there is a positive relation between happiness and extraversion. In addition, a negative relationship between happiness and suffering was revealed in this study. However, no significant relationship was seen between happiness and personality psychosis (24). Our study showed that most people with extraversion were in the moderate and hot temperament groups, however, only a small part were in the group with cold temperament (Table 4). It is in accordance with the results of Salary's study and also in line with PM sources that cold-tempered people are usually low-energy and introvert (10).

Mottus et al. found a relation between openness and dietary style in elderly people (25). The elderly usually pos-

sess cold temperament, according to PM, and, regarding wetness-dryness, their main organs such as CNS tend to be dry, however, their GI tends to have an accumulation of foreign moistness (26). In a study by Safarzadeh et al. the maximum sense of responsibility was found in cold-dry temperament, the least extraversion in cold-wet temperament, and the most gained experience in hot-dry temperament individuals. They also found that people with cold-wet temperament possessed the maximum emotional stability, while people with hot-wet temperament liked the rule in comparison to the others. This study showed a relation between choleric (hot-dry) temperament and openness (27), however, it was not in line with the results of our study that showed more frequent open personality traits in people who were average in hotness-coldness (Table 4).

Inconsistent results in different studies regarding the relation between personality and temperament (*mizaj*) may be due to different tools measuring *mizaj* and in the observance of the body organs' *mizaj* per se. To correct this fault and obtain more precise results, researchers in the field of PM should design standard tools for measuring *mizaj* of each body organ separately, with the whole body representing the average *mizaj* of all body organs.

#### 4.1. Limitations

We distinguish that one of the limitations of our study may be low sample size; therefore, to confirm the results, a future study with a larger sample size is recommended. The other is a higher number of women comparing to men, which was due to a high female to male ratio among the staffs of Shiraz Medical School.

#### 4.2. Conclusion

Some temperament variables correlated with the five-factor personality questionnaire, which was a promising step in tailoring comparative studies and enlisting PM-neglected capacities in field of psychoanalysis. PM suggests some lifestyle health measures including dietary changes for individuals with different temperaments. Based on the results of this study, hot and wet temperaments are correlated with neuroticism and extraversion, respectively. Taking advantage of PM nutritional measures to correct deviated temperament or suggest some dietary and herbal remedies to balance temperament may alleviate some negative personality traits. It may be a good target for researchers to design vigorous clinical trials for the evaluation of recommended foods and drinks in different individuals with different temperaments in the context of personality disorders.

**Table 3.** Personality Distribution of Participants<sup>a</sup>

Personality Types	Low	Moderate	High	Total
Neuroticism	65 (58)	47 (42)	0 (0)	112 (100)
Agreeableness	6 (5.4)	106 (94.6)	0 (0)	112 (100)
Conscientiousness	14 (12.5)	98 (87.5)	0 (0)	112 (100)
Extraversion	47 (42)	65 (58)	0 (0)	112 (100)
Openness	77 (68)	35 (31)	0 (0)	112 (100)

<sup>a</sup>Values are expressed as No. (%).

**Table 4.** Relationship Between Personality and Cold/Hot Mizaj<sup>a</sup>

Level of Personality Types	Mizaj						Total
	Hot	P Value	Moderate	P Value	Cold	P Value	
<b>Neuroticism</b>		0.02 <sup>b</sup>		0.41		0.55	
Low	15 (23.1)		41 (63.1)		9 (13.6)		65 (58.03)
Moderate	20 (42.6)		21 (44.7)		6 (12.8)		47 (41.97)
High	0		0		0		0
<b>Agreeableness</b>		0.07		0.06		0.58	
Low	4 (66.7)		1 (16.7)		1 (16.7)		5 (5.35)
Moderate	31 (29.2)		61 (57.5)		14 (13.2)		106 (94.64)
High	0		0		0		0
<b>Conscientiousness</b>		0.54		0.33		0.40	
Low	4 (28.6)		9 (64.3)		1 (7.1)		14 (12.5)
Moderate	31 (31.6)		53 (54.1)		14 (14.3)		98 (87.5)
High	0		0		0		0
<b>Extraversion</b>		0.47		0.57		0.45	
Low	14 (29.8)		26 (55.3)		7 (14.9)		47 (41.96)
Moderate	21 (32.3)		36 (55.4)		8 (12.3)		65 (58.03)
High	0		0		0		0
<b>Openness</b>		0.39		0.35		0.53	
Low	23 (29.9)		44 (57.1)		10 (13)		77 (68.75)
Moderate	12 (34.3)		18 (51.4)		5 (14.3)		35 (31.25)
High	0		0		0		0

<sup>a</sup>Values are expressed as No. (%).

<sup>b</sup>Statistically significant.

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### Footnotes

**Authors' Contribution:** Study concept and design, Mohammad Mahdi Parvizi, Majid Nimrouzi, Alireza Salehi; acquisition of data, Mohammad Mahdi Parvizi, Majid Nimrouzi, Fatemeh Amini, Mahdie Hajimonfarednejad, Reza Mousavi Shirazi; statistical analyses, Mohammad Mahdi Parvizi, Pyruz Rezaie; drafting of the manuscript, Mohammad Mahdi Parvizi, Majid Nimrouzi, Mehdi Pasalar; critical revision of the manuscript for important intellectual con-

**Table 5.** Relationship Between Personality and Wet/Dry Mizaj<sup>a, b</sup>

Level of Personality Types	Mizaj						
	Wet	P Value	Moderate	P Value	Dry	P Value	Total
<b>Neuroticism</b>		0.32		0.35		0.57	
Low	13 (20)		27 (41.5)		25 (38.5)		65 (58.03)
Moderate	12 (25.5)		17 (36.2)		18 (38.3)		47 (41.96)
High	0		0		0		0
<b>Agreeableness</b>		0.21		0.55		0.15	
Low	0 (0)		2 (33.3)		4 (66.7)		6 (5.35)
Moderate	25 (23.6)		42 (39.6)		39 (36.8)		106 (94.64)
High	0		0		0		0
<b>Conscientiousness</b>		0.35		0.49		0.46	
Low	2 (14.3)		6 (42.9)		6 (42.9)		14 (12.5)
Moderate	23 (23.5)		38 (38.8)		37 (37.8)		98 (87.5)
High	0		0		0		0
<b>Extraversion</b>		0.009 <sup>b</sup>		0.11		0.28	
Low	5 (10.6)		22 (46.8)		20 (42.6)		47 (41.96)
Moderate	20 (30.8)		22 (33.8)		23 (35.4)		65 (58.03)
High	0		0		0		0
<b>Openness</b>		0.12		0.23		0.48	
Low	20 (26)		28 (36.4)		29 (37.7)		77 (68.75)
Moderate	5 (14.3)		16 (45.7)		14 (40)		35 (31.25)
High	0		0		0		0

<sup>a</sup>Values are expressed as No. (%).

<sup>b</sup>Statistically significant.

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**Ethical Considerations:** Verbal informed consent was received from the participants and they were assured that all information gathered from them would be secured by researchers and would not be published.

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