



The Relationship Between Mizaj and Its Indices in Persian Medicine

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Received 2017 January 29; Revised 2018 January 17; Accepted 2018 January 23.

Abstract

Background: As personalized medicine is developing, similar concepts in Persian medicine need standardization.

Objectives: The aim of this study was to compare the correlation of ten criteria of Mizaj assessment with Mizaj determined by experts.

Methods: In this cross-sectional methodological research, 74 medical student volunteers were examined by ten expert raters. The agreement between every ten indices and total Mizaj were assessed with the Spearman's correlation coefficient (r) and weighted by the Kappa coefficient (wk).

Results: Among ten indices, the largest agreement was observed amongst indices of psychic function, impressibility, physical function and physique with total warm or cold Mizaj and thus amongst indices of muscle and fat mass, touch, and physique with total wet or dry Mizaj, respectively ($k \geq 0.4$).

Conclusions: The four mentioned indices in assessing warmness-coldness and three in wetness-dryness are major criteria. Other indices, such as hair condition, skin color, quality of waste matter (stool, urine, and sweat), and sleep/wakefulness have a minor effect in Mizaj identification.

Keywords: Medicine, Mizaj, Reproducibility of Results, Temperament, Traditional

1. Background

Nowadays, as personalized medicine is developing (1, 2), trying to find new viewpoints on this concept can help develop better approaches (3).

Traditional Persian medicine (PM) is based on two main principles, holistic viewpoints (4) and personalized medicine, that is called "Mizaj" or temperament (5).

Although there are a number of studies based on PM-suggested treatments for a variety of diseases (6-8), surveys for organizing its diagnostic criteria are rare (5). Written references of PM proposed some Mizaj assessment indices and named them the "ten criteria" (Ajnase-Ashareh) of Mizaj identifiers (9); each of them should be assessed in two fields ranging from extreme warm to extreme cold and also from extreme wet to extreme dry to define the entire body's Mizaj (10).

As there isn't any standard protocol for Mizaj identification, trying to define the diagnostic criteria and standardizing them through reliability and validity assessment is a strategic plan in PM researches and can be used as a foundation for many future studies in this field (11).

2. Objectives

In this study, the researchers wanted to compare the ten criteria of Mizaj assessment with the gold standard (consensus of experts) and categorize the criteria based on their importance in determining Mizaj.

3. Methods

This cross-sectional methodological research was performed at the school of Traditional Persian Medicine of Babol University of Medical Sciences (North of Iran) on three consequent days in December 2016.

As a group of experts (expert panel), ten practitioners in PM, with at least five years of clinical experience in this field, were invited.

Students of Babol University of Medical Sciences were invited to participate in this study. The volunteers were recruited via convenient sampling, and their Mizaj was assessed through interviews and physical examination.

Invitation was performed by a banner advertisement at the university campus, dormitories, sports clubs, and also classrooms. The inclusion criteria were on age range

from 19 to 40 years in both genders and had no problems in speaking or listening. The exclusion criteria were pregnancy and menstruation in females at the time of Mizaj assessment, known physical or mental disease, continuous use of any drug and refusing to attend the interview and examination for any reason. Demographic data was recorded and a sheet to record Mizaj assessment was completed for each participant. This sheet had 11 rows and 2 columns. Ten rows were related to ten diagnostic criteria (Ajnase-Ashareh) of Mizaj identification on the basis of PM references and in the last row, raters had to note their final decision. In each row, there was two columns, one for warmness-coldness and another for wetness-dryness of Mizaj. Raters could choose a value from one to seven based on a Likert Scale (12). In assessing warmness-coldness of Mizaj, a score of one was presented for severe cold and score of seven was for severe warm Mizaj. Also, for evaluating wetness-dryness of Mizaj, the score ranged from one (for severe wetness) to seven (for severe dryness).

Volunteers attended the room where all the experts were present at the same time around a circular table. The experts based on their own method (based on their perception of PM references) asked questions (as an interview) and performed examinations to assess the Mizaj of volunteers. No discussion between practitioners was permitted. According to this process, the score of warmness-coldness and wetness-dryness of each 10 criteria and also Mizaj of the entire body were independently and confidentially recorded by each rater for each participant.

All study procedures were performed in the presence and supervision of a biostatistician and an epidemiologist.

This study was approved by the ethical committee of Babol University of Medical Sciences (MUBABOL.HRI.REC.1395.74).

Statistical analyses were performed using the Statistical Package for the Social Science (SPSS), version 16.0 (SPSS Inc., Chicago, ILL., USA). Demographic characteristics of the participants were described by frequency, percentage, mean, and standard deviation (13). The agreements between all ten indices and total Mizaj were assessed via the spearman correlation coefficient (r) and Weighted Kappa coefficient (wk). As with other validation studies, Cohen's calibration and Landis and Koch calibration were used to guide interpretation of the results of r and k in this report (14). According to this interpretation, r coefficient from 0.1 to 0.299 was considered as "small", 0.3 to 0.499 was considered to be "medium", and greater than 0.5 was considered to be "large". In this regard, the effect size of the k coefficient from 0 to 0.199 was considered to be "slight", from 0.20 to 0.399 was considered to be "fair", from 0.40 to 0.599 was considered to be "moderate", from 0.60 to 0.799 was considered to be "substantial" and 0.80 or greater was con-

sidered to be "almost perfect" (15).

4. Results

In this study, 74 volunteers out of the 85 students, who responded to the researcher's invitation, participated. The mean age of participants was 22.57 (\pm 4.98) years; 43 (58.1%) of them were females. From these participants, 10 (13.5%) were underweight, 37 (50%) were normalweight, 23 (31.1%) were overweight, and four (5.4%) were obese.

There were a large r and moderate weighted kappa coefficient (k) for agreement between indices of C2, C5, C6, C8, C10, and total warm-cold Mizaj (Table 1). Among other indices (C1, C3, C4, C7, and C9) and total warm-cold Mizaj, there were medium r and fair wk . There were a large r and moderate wk between indices of C1, C2, C5 and total wet-dry Mizaj. For other indices (C3, C4, C6, C7, C8, C9 and C10), there were medium r and fair wk , showing the degree of agreement with total wet dry Mizaj (Table 1).

5. Discussion

Although developing diagnostic questionnaires is the common problem of almost all Traditional medicine cultures, there are some studies that have attempted to make standard diagnostic tools in this field (16-20). However, there are only a few studies in PM trying to standardize the diagnosis (5), and a methodological study has not been done up to now. It seems that the current study was the first in the field of PM, and there isn't any similar study, whose finding can be compared to that of the current study.

It was shown in this study that in spite of mentioning ten criteria for Mizaj assessment in PM references, all of them were not used with an equal practical importance. To evaluate the results, the researchers compared the rate of agreement of all ten indices with the final diagnosis of Mizaj.

Since in written references of PM, no special relationship was mentioned among these indices with whole body Mizaj, the current findings can be the first study for prioritizing and giving special weight to all indices for Mizaj identification.

This study had some limitations and considering them can be a guide for future research. Lack of unique and exact methods of interview and examination to assess indices and also the Mizaj assessment was the first limitation of this study.

Another limitation of the current study was the non-random selection of the volunteers; thus, a generalization of the results is not claimed. The fact that in this method of

Table 1. Agreement Between All Ten Indices and Total Mizaj as Identified by the Raters

Indices of Mizaj	Description	Warm or Cold		Wet or Dry	
		wk	r	wk	r
C1	Touch	0.37	0.48	0.45	0.56
C2	Muscle and fat mass	0.38	0.51	0.59	0.73
C3	Hair condition	0.24	0.31	0.21	0.26
C4	Skin color	0.37	0.48	0.25	0.4
C5	Physique	0.4	0.52	0.41	0.55
C6	Impressibility speed	0.44	0.53	0.2	0.21
C7	Sleep and wakefulness	0.21	0.32	0.19	0.22
C8	Physical functions	0.41	0.5	0.23	0.29
C9	Quality of waste matter (stool, urine, sweat)	0.28	0.38	0.31	0.44
C10	Psychic function	0.46	0.57	0.34	0.42

Abbreviations: r, correlation coefficient; wk, weighted kappa.

selection of individuals with a warm Mizaj, they were more likely to take action and participate, could have affected the results. As studies that investigate the prevalence of various types of Mizaj are not available, it is recommended that a random sampling should be used in future studies.

This study did not claim to find a statistically significant relationship between proposed indices with the entire body's Mizaj. The authors can only suggest that they found an agreement between some indices with the entire body's Mizaj, which is of practical importance when using these criteria for Mizaj assessment.

For future studies, the researchers propose that a consensus is needed in the method of evaluating indices in both aspects and also Mizaj assessment, based on PM. Also, designing studies to obtain weight to each index for Mizaj identification can help make a standard questionnaire.

5.1. Conclusions

The indices of psychic function, impressibility speed, physical functions and physique had the strongest relationship with warmness-coldness of Mizaj. Also, in the field of wetness-dryness, the indices of muscle and fat mass, touch condition and physique had the most agreement with the entire body's Mizaj. Other indices, such as hair conditions, skin color, quality of waste matter (stool, urine, sweat), and sleep/wakefulness have minor effects in Mizaj identification.

Acknowledgments

The authors would like to acknowledge Dr. Ali Bijani and Dr. Hoda Shirafkan (Biostatisticians) for their supervision on the Mizaj assessment days, analyzing the data and drafting the manuscript.

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