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Original Research

An Assessment of the Agreement between Persian Medicine Experts on Mizaj Identification

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Abstract

Although Mizaj (temperament) as a basic concept is introduced by ten criteria in Persian Medicine (PM), methods of assessment and priorities of these criteria are unclear. Having expert teams with an acceptable consensus in clinical diagnosis is one of the basic requirements to design and standardize Mizaj diagnostic scales. In this cross-sectional study, three PM specialists assessed the Mizaj of 150 healthy volunteers. At the first step of this study, each participant was separately visited by raters to determine warmness-coldness and wetness-dryness. To assess the agreement between experts, Intraclass Correlation Coefficient (ICC), weighted kappa (wk) and Spearman correlation Coefficient (r) were calculated. At the second step in an expert panel discussion, agreed criteria in 10 criteria of Mizaj identification were extracted. ICC between expert was 0.62 (CI: 0.53-0.73) in warmness-coldness and 0.64 (CI: 0.56-0.72) in wetness-dryness. Wk and r between every two experts were in the range of 0.41-0.60 and 0.58-0.67, in warmness-coldness and in the range of 0.49-0.61 and 0.58-0.69 in dryness-wetness, respectively. In determining warmness-coldness of Mizaj, psychic function, impressibility speed, muscle and fat mass, physical functions and touch condition were mostly used. In addition, muscle and fat mass, touch and sleep condition were mostly used in regard with dryness-wetness aspect of Mizaj. The agreements between three experts seem acceptable. It can be concluded that the weights of 10 criteria for Mizaj assessment in PM are not equal. The aims of the future studies in this field can be weighing these criteria.

Keywords: Traditional Medicine, Reliability, Iranian medicine, Temperament

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Introduction

In recent decades, conventional medicine has payed special attention to biological differences between individuals, while new scientific disciplines such as nutrigenomics and pharmacogenetics are trying to classify individuals according to these differences as the new promising area of personalized medicine [1, 2].

Persian medicine (PM) is one of the oldest paradigms of traditional medicine that has been widespread in Persian civilization since ancient times (8000 yr. B.C.) up to the present time. It fairly was established according to the basic concepts of Mizaj (temperament, nature) [3]. According to this viewpoint, everybody within the defined warm-cold and dry-wet range has its own quality or Mizaj. As long as the individual's quality is in the right conditions, it is known as health Mizaj [4]. Written PM references have proposed some indices for Mizaj identification and named them as Ajnas-e-Ashara (The Ten Criteria) of Mizaj. These ten criteria includes Touch condition, Muscle and fat mass, Hair condition, Skin color, Physique, Impressibility speed, Sleep and wakefulness, Physical functions, Quality of waste matter (stool, urine, sweat), and Psychic function [4, 5].

Although many of the aforesaid references have described the properties of Mizaj identification indices, they are generally considered qualitatively and the method of evaluation, prioritization, weight and status of most of them in determining the Mizaj is not clear [6]. Therefore, significant practical differences are observed in Mizaj identification among PM experts [5]. On the other hand, due to increasing interest in alternative and holistic medicine in recent years, researchers have payed special attention to PM, and to evaluate the relationship between clinical findings of conventional medicine and the concept of Mizaj in PM, various studies have been conducted [7-9].

Although the main focus of such studies is Mizaj of participants, standard scales have not been used to determine the Mizaj, and even some of them did not mention a way to set the Mizaj of volunteers [7]. Even though other schools of traditional medicine have the same problems such as lack of access to standard scales and diversity in medical diagnoses, some important steps have been taken towards standardization of their diagnostic scales [10-12].

Having expert teams with an acceptable level of consensus in clinical diagnosis is one of the basic requirements for designing and standardizing the diagnostic scales [13].

PM as an academic field is novel and less than 100 physicians have been graduated in this field by 2016 and there isn't any report on agreement between PM experts in Mizaj identification.

To take the first step towards developing a standard questionnaire, the present study intends to investigate agreement between PM experts in Mizaj identification and to categorize the criteria used for Mizaj identification

Methods

Sampling

This cross-sectional study was conducted at the school of Traditional Medicine, Babol University of Medical Sciences in the North of Iran. Three PM specialists with at least 5 years of clinical experience were invited and 150 healthy volunteers aged 18-40 years were invited based on convenience sampling. Volunteers with chronic disease or, any disease at the time of the study and those taking any drug continuously were excluded from the study. The method of research was explained to the volunteers and it was emphasized that their personal information will remain confidential. Written informed consent was completed by participants. Ethics Committee of the university approved the proposal.

Visit of participants

At the first step, each participant was visited

by three PM specialists separately (all visits for each participant in one day) and volunteer's Mizaj was determined as warm, temperate or cold in warmness-coldness and wet, temperate or dry in wetness-dryness. The order of visits were rotary (the first visit by a specialist not fixed). Each specialist determined participants' Mizaj based on his/her clinical methods and recorded reason for diagnosis (warm or cold and dry or wet) in an open sheet. As the Mizaj was determined from two aspects, the qualities of cold, temperate and warm were coded as 1, 2 and 3, and of the wet-dry aspect, coded as 1, 2, and 3 for the qualities of wet, temperate, and dry, respectively. The recorded data were entered into the software and analyzed through SPSS (version 20) and STATA (version 11.2).

Statistical analysis

To evaluate the correlation between specialists in determination of warmness-coldness and wetness-dryness of Mizaj, Intraclass Correlation Coefficient (ICC) was calculated and to assess mutual agreement, weighted Kappa (WK) coefficient and Spearman correlation Coefficient (r) were calculated [14, 15]. In this study ICC > 0.7 is considered good agreement, for r and wk, negative scores indicate agreement less than chance, 0.01- 0.20 shows slight agreement, 0.21- 0.40 shows fair agreement, 0.41-0.60 shows moderate agreement, 0.61- 0.80 shows substantial agreement, and coefficient 0.81-1.00 indicate almost perfect agreement [15].

Expert panel discussion

For this section the sheets of cases in which there was complete agreement between experts were extracted. Complete agreement in this step was defined when 3 experts had the same diagnosis in warmness-coldness or wetness-dryness of participant's Mizaj. Then, in an expert panel discussion (with the same experts in step 2), agreed criteria for Mizaj assessment about these cases were defined separately based on two dimensions of Mizaj ("warm, temperate or cold" or "dry, temperate or wet") [13].

Then, the criteria that support each agreed diagnosis commonly between 3 experts were extracted. Usage rate of these common criteria for mentioned cases and their percent were calculated and categorized under 10 criteria of Mizaj assessment (Ajnas-e-Ashara) in separate tables.

Results

This study was conducted in September 2015. Of 150 invited participants9 , participants were withdrawn at baseline7 , participants were taking medication due to chronic disease and 11 participants could not fulfill the whole visiting process. Eventually, the Mizaj of 123 people were determined by three PM experts. 58(47.2%) of volunteers were female and their average age, weight, height and BMI were 23.12 ± 5.17 years, 67.88 ± 15.35 kg, 1.69 ± 0.09m and 23.57 ± 4.05, respectively. Of the three experts participating in the study, two were male and one was female; they have 6-10 years of clinical experience in Mizaj determination.

Intraclass correlation coefficient (ICC) between experts in determining the warmness-coldness Mizaj was 0.62 (0.53 - 0.70) and in determining the dry-wet was 0.64 (0.56 - 0.72). The results of calculating r and wk to assess the mutual agreement is presented in Table 1. In 62 (out of 123) participants (50%), the diagnosis of experts in warmness-coldness were the same (49 warm, 5 temperate and 8 cold). In another dimension in wetness-dryness in 59 (out of 123) participants (48%), complete agreement occurred (25 wet, 5 temperate and 29 dry). In 29 out of 123 cases, there was full agreement between experts in both dimensions (warmness-coldness and wetness-dryness). Criteria of each diagnosis were discussed and common utilized criteria were categorized according to 10 Mizaj criteria (Ajnas-e-Ashara) in Table 2.

Table1: Agreement coefficient between the two raters in two conditions

Mizaj characteristic	raters	r*	wk**(CI 95%)
Warmness-coldness	R_1-R_2	0.67	0.6(0.48-0.72)
	R_1-R_3	0.63	0.5(0.38-0.62)
	R_2-R_3	0.58	0.41(0.3-0.53)
Wetness-dryness	R_1-R_2	0.69	0.56(0.45-0.67)
	R_1-R_3	0.68	0.61(0.5-0.72)
	R_2-R_3	0.58	0.49(0.37-0.62)

*: Spearman Correlation Coefficient

**: Weighted Kappa Coefficient

Table 2: agreed criteria in warmness-coldness between 3 PM experts for Mizaj assessment

Criteria of Mizaj assessmnt	Warmness-coldness (n=62)						Wetness-dryness (n=59)					
	warm (n=49)	N (%)	Equilibrium (n=5)	N (%)	Cold(n=8)	N (%)	Wet (n=25)	N (%)	Equilibrium (n=5)	N (%)	Dry (n=29)	N (%)
Touch	P: warm in Touch I: warm in Touch	31 (63%) 23 (47%)	I: Not warm, not Cold in Touch	4 (80%)	P: Cold in Touch I: Cold in Touch	6 (75%) 6 (75%)	P: soft and smooth skin	20 (80%)	P: Not soft, not coarse skin	4 (80%)	P: hard and coarse skin	19 (65%)
Muscle and fat mass	P: Muscular body	35 (71%)	P: Not Muscular, not fatty, not thin body	5 (100%)	P: Obesity (fatty body) P: Thin with low muscle	4 (50%) 2 (25%)	P: muscular of fatty	23 (92%)	P: Not Muscular or fatty, not thin	5 (100%)	P: thin	24 (83%)
Hair condition	-		-		-	-	P: straight	10 (40%)	-		P: Curly	8 (27%)
Skin color	P: Reddish or yellowish	28 (77%)	P: white reddish	5 (100%)	P: Whiteness or Gloomy	3 (37%)	-		-		-	
Physique	P: Vast chest P: Large extremities P: Strong pulse	15(30%) 18(37%) 10(20%)	P: Moderate chest	3 (60%)	P: Small extremities P:Weak pulse	5 (62%) 4 (50%)	-		-		-	
Impressibility speed	I: Rapidly impress from warm weather I: Rapidly impress from warm natured food (Honey, Pepper, etc.)	38 (77%) 32 (65%)	I: Equal impress from warm and cold weather I: Equal impress from warm and cold natured food	4 (80%) 2 (40%)	I: Rapidly impress from cold weather I: Rapidly impress from cold natured food (yoghurt, cucumber, etc.)	7 (87%) 6 (75%)	-		-			
Sleep and wakefulness	-	-	-		-		I: More sleepy	16 (64%)	I: Normal sleep	4 (80%)	I: more wakeful	14 (48%)
Physical functions	I: Strong voice I: Rapid (continuous) speech I: Swift movement	34 (69%) 28 (57%) 40(81%)	I: Moderate voice	5 (100%)	I: Weak voice	2 (25%)	-		-		-	
Quality of waste matter (stool, urine, sweat)	I: strong urine odor I: strong sweat odor	8 (16%) 12 (24%)	-		-		-		-		-	
Psychic function	I:Stronge rage I: Brave I: optimistic I: happy I: not much impressible	24 (49%) 37 (75%) 17 (35%) 36 (73%) 23 (47%)			I:Weak rage I: very impressible	3 (37%) 2 (25%)	I: Weak memory	8 (32%)	-		- I: Persistence of reactions (anger, pleasure, etc.)	4 (14%)

P = Physical exam, I = Interview

Discussion

Designing and validating standard scales to achieve consistent diagnosis is one of the basic needs in each medical school including PM. Having access to metric measures included Rater-administered or self-administered questionnaires as well as the physical diagnosis equipment are the most important requirements of strategic development in this field [16]. One of the first steps to achieve this goal is existence of a diagnostic agreement between experts [13, 17].

Based on our result, there was moderate agreement between experts to determine the two dimensions of Mizaj ("warmness- coldness" and "dryness- wetness"). As this study was the first one in this field, it can be interpreted acceptable, but to achieve a standard and valid scales it needs more agreement between experts. This is the problem that other alternative medicine schools encounter and are trying to solve it [18-20].

In this study, eight out of ten criteria were used for diagnosis of warmness or coldness of Mizaj. Five of them including Psychic function, Impressibility speed, Muscle and fat mass, Physical functions and Touch condition were mostly used. Three of them including Skin color, Physique and Quality of waste matter (stool, urine, sweat) were less used. But Sleep & wakefulness and Hair condition were not used for warm and cold Mizaj diagnosis. Regarding dryness-wetness aspect of Mizaj identification, five out of ten criteria were used by experts in this study. Three of them had important effects including Muscle and fat mass, Touch and Sleep & wakefulness, respectively. Two criteria were less important including Hair condition and Psychic function. Other criteria seem to have the least effect in dryness-wetness of Mizaj assessment in our study. (Table 2)

As in PM, no standard protocol for Mizaj assessment has been developed so far. Hence, each expert in our study participated in the project using his/her own method to determine Mizaj. Although the achieved agreement had the least favorable score, results were remarkable. However, attaining to better objectives requires more studies to increase the agreements between experts in determining the Mizaj.

It may be concluded that the weights of criteria for Mizaj assessment are not equal. So, weighing these criteria can be the aim of future studies in this field. In addition, studying the correlation between each criterion and Mizaj of the body can indicate the importance of its role in Mizaj identification.

Conflict of Interests

None.

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