



Validity and Reliability of a Questionnaire Based on Unani and Persian Concepts to Assess *Sū'-i-Mizāj* in Patients with Hypothyroidism

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Abstract

Hypothyroidism is not clearly defined in Unani and Persian medical literature, and there is a significant lack of standardized tools to assess *Sū'-i-Mizāj* (abnormal temperament). The objective of this study was to develop and validate a reliable questionnaire grounded in Unani and Persian texts, aimed at identifying *Sū'-i-Mizāj* in patients with hypothyroidism. This cross-sectional validation study was conducted at Ajmal Khan Tibbiya College and Hospital, Aligarh (2024–2025). Item generation was performed through an extensive review of classical Unani and Persian texts and expert consultation. Content validity was evaluated using the Content Validity Index (CVI). Reliability was assessed through internal consistency (Cronbach's alpha) and test–retest reliability using the Intraclass Correlation Coefficient (ICC) over a two-week interval. Fifty (50) clinically and biochemically diagnosed hypothyroid patients were recruited, of whom 29 completed both test and retest assessments. Ethical approval was obtained from the Institutional Ethics Committee (Approval No. 1401/FUM), and the study was registered with the Clinical Trial Registry of India (CTRI/2024/02/062913). From an initial pool of 61 items, 48 items were retained across six domains after content validation. The overall Scale Content Validity Index (S-CVI/Ave) was 0.89, indicating strong expert agreement. The questionnaire demonstrated high internal consistency (Cronbach's alpha = 0.89) and excellent test–retest reliability (ICC = 0.97; 95% CI: 0.93–0.98). The 48-item *Sū'-i-Mizāj* questionnaire demonstrates satisfactory content validity and strong reliability in patients with hypothyroidism. However, given the limited sample size and absence of construct and criterion validity analyses, the findings should be considered preliminary. Further large-scale studies are required to confirm the dimensional structure and establish broader clinical applicability.

Keywords: *Sū'-i-Mizāj*; Hypothyroidism; Temperament; Unani/ Persian questionnaire

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Introduction

In Unani and Persian medicine, health is conceptualized through the equilibrium of four primary qualities: heat, coldness, moisture, and dryness, collectively expressed as *Mizāj* (temperament) [1]. Disease arises when this equilibrium is disturbed, a condition termed *Sū'-i-Mizāj* [2-5]. Accurate identification of qualitative predominance *Bārid* (cold), *Hār* (hot), *Ratab* (wet), and *Yābis* (dry) is considered fundamental to diagnosis and therapeutic decision-making.

Hypothyroidism is among the most prevalent endocrine disorders worldwide. It affects approximately 5% of the general population in Europe, with an additional 5% estimated to be undiagnosed [6]. In contrast, the prevalence in India is notably higher, reaching approximately 11% [7]. The condition is more commonly observed in women and older adults. If left untreated, hypothyroidism can result in significant complications, including infertility, cardiovascular disease, neurological impairments, and musculoskeletal disorders.

In Unani and Persian medicine, the condition currently recognized as hypothyroidism is not explicitly described. Moreover, there is a lack of standardized tools for assessing *Sū'-i-Mizāj* (abnormal temperament), a fundamental component of the Unani system for understanding disease pathogenesis and establishing an accurate diagnosis.

Despite the centrality of temperament assessment in Unani practice, several methodological gaps remain. First, evaluation of *Sū'-i-Mizāj* is largely subjective and dependent on practitioner expertise, which may reduce reproducibility and inter-observer reliability. Second, although attempts have been made in traditional Persian medicine to develop structured *mizāj* questionnaires with acceptable psychometric properties [8-10], these instruments are not specifically designed for defined biomedical disorders such as hypothyroidism. Third, existing tools often focus on general temperament classification rather than disease-specific abnormal temperament, thereby limiting their applicability in clinical research settings.

In particular, the operationalization of classical symptom descriptions into standardized, domain-structured, and statistically evaluated instruments remains underdeveloped. The absence of such validated tools restricts objective assessment, impedes comparative research, and limits the capacity to assess treatment outcomes within evidence-based paradigms.

Given the notable overlap between hypothyroid symptomatology and classical descriptions of cold and moist predominance, systematic assessment of *Sū'-i-Mizāj* in this population may provide a structured bridge between traditional diagnostic reasoning and modern clinical research methodology. However, to date, no validated questionnaire exists within the Unani framework to assess abnormal temperament specifically in patients with hypothyroidism.

Therefore, the present study aimed to develop and prelim-

inarily validate a questionnaire based on the *Alamat* (signs and symptoms) of *Sū'-i-Mizāj* as documented in classical Unani and Persian medical literature for the assessment of *Sū'-i-Mizāj* in patients with hypothyroidism.

Methods

This cross-sectional study was conducted in four sequential phases. First, item generation was carried out by identifying and selecting *Alamat* (signs and symptoms) of *Sū'-i-Mizāj* *Baarid* (abnormal cold temperament), *Sū'-i-Mizāj* *Haar* (abnormal hot temperament), *Sū'-i-Mizāj* *Ratab* (abnormal moist temperament), and *Sū'-i-Mizāj* *Yābis* (abnormal dry temperament) as documented in Unani/Persian texts. These items were then used to construct a preliminary questionnaire. In the second phase, the draft questionnaire underwent expert review by Unani scholars to evaluate its relevance, integrity, and accuracy in the context of traditional diagnostic principles. The third phase involved content validation of the *Sū'-i-Mizāj* questionnaire. The final phase included reliability analysis of the items and the development of a binary scoring system to quantify responses. The study was conducted between 2024 and 2025 at Ajmal Khan Tibbiya College and Hospital, Aligarh. Ethical clearance was granted by the Institutional Ethics Committee, Faculty of Unani Medicine, Aligarh Muslim University (Approval No. 1401/FUM, dated 01/05/2023). The study is registered with the Clinical Trial Registry of India (CTRI/2024/02/062913). All participants were fully informed about the study's objectives and procedures and provided written informed consent, with assurances of confidentiality and anonymity.

Item generation

This section aimed to identify the dimensions and characteristics of *Sū'-i-Mizāj* based on Unani literature and expert opinions. In this phase, *Alamat* related to the *Sū'-i-Mizāj* *baarid*, *Sū'-i-Mizāj* *haar*, *Sū'-i-Mizāj* *ratab*, and *Sū'-i-Mizāj* *yābis* were extracted through a comprehensive review of selected Unani textbooks, including *Kamil al-Sinaa al-Tibbiyah*, *Al-Qanun fi al-Tibb*, *Kholasat al-Hikmah*, and *Exir-e-Azam*, as well as the recent research on *Sū'-i-Mizāj* was organized from Scopus, PubMed, Web of Science, Google Scholar, AYUSH portal, and Research Gate.

Unani expert review

In the second phase, semi-structured interviews were conducted with five expert academicians, each possessing over five years of experience in the fundamentals of Unani medicine. These interviews aimed to gather expert insights, clinical observations, and practical approaches related to the identification and assessment of *Sū'-i-Mizāj*. Based on the subjective parameters outlined in classical Unani texts and guidance from the initial expert panel, a preliminary pool of 61 items was developed to reflect the diagnostic criteria for *Sū'-i-Mizāj*.

Content Validity

In the third phase, the questionnaire's content validity was evaluated. A second expert panel was convened, comprising four Unani Medical Officers and five private Unani practitioners, each with over five years of clinical experience. All participants were informed of the study's objectives and procedures prior to their involvement. The experts were requested to assess each item in terms of clarity, relevance, and the overall comprehensiveness of the questionnaire. They rated each item on a 4-point Likert scale: 1 = not relevant to *Sū'-i-Mizāj*, 2 = somewhat relevant, 3 = quite relevant, and 4 = highly relevant. The responses were systematically collected and used to calculate the Content Validity Index (CVI) for each item to ensure the instrument's validity in assessing *Sū'-i-Mizāj*.

Reliability

Clinically and biochemically-diagnosed patients of hypothyroidism (elevated serum thyroid-stimulating hormone with or without reduced free thyroxine levels) were included with age range of 18–60 years of either gender. Participants were excluded if they had insulin-dependent diabetes mellitus (including Type 1 diabetes mellitus and insulin-treated Type 2 diabetes mellitus); chronic liver disease, including non-alcoholic fatty liver disease, viral or autoimmune hepatitis, cirrhosis, or other clinically-diagnosed hepatic disorders; chronic gastrointestinal diseases such as peptic ulcer disease, inflammatory bowel disease, or malabsorption syndromes; ischemic heart disease or other clinically significant cardiovascular disorders; or any other chronic systemic illness that could independently influence the *Mizāj* (temperament), metabolic, and psychological parameters. Pregnant or lactating women were also excluded. Participants on long-term medications that could influence *Mizāj* (temperament), or systemic symptoms (e.g., antidepressants, corticosteroids, antipsychotics, chronic antihypertensives affecting thermoregulation or metabolism) were excluded. Participants with current substance abuse or those unwilling or unable to complete both the test and retest phases of the study were not included. Prior to participation, the study objectives and methodology were explained by the researchers, and written informed consent was obtained. Participants were assured that their information would remain confidential. The questionnaire, developed based on the content validity assessment, was initially completed by participants and re-administered two weeks later to evaluate its reliability.

Results

Item generation

To develop the questionnaire items, a comprehensive review of Unani and Persian medical texts was conducted, with particular focus on identifying indices relevant to *Sū'-i-Mizāj*. The viewpoints presented across various

sources were compared for consistency and applicability. Ultimately, *Al-Qanun fi al-Tibb* by Ibn Sina was selected as the primary reference due to its authoritative status and detailed descriptions of temperamental assessment. Relevant chapters of the text were meticulously analyzed, with particular attention paid to terminology and descriptions that could inform item development for identifying *Sū'-i-Mizāj*. Items were selected based on their potential to reflect consistent characteristics of *Sū'-i-Mizāj* and their suitability for inclusion in a self-report questionnaire. In the initial stage, 61 items were formulated based on subjective diagnostic parameters, in consultation with a panel of five Unani expert academicians, each with over five years of professional experience. These items were then evaluated by a group of Unani professionals—including Medical Officers and private practitioners—for content relevance and clarity.

This questionnaire is designed to assess the *Sū'-i-Mizāj* in patients of hypothyroidism across five categories: General, Skin and Hair Problems, Gastrointestinal dysfunction, Difficulty coping or having mood swings, Sleep & dreams, and Disrupted waste disposal. The questions are structured to capture physical, emotional, and metabolic states, with a focus on distinguishing responses based on "Cold/Hot" and "Wet/Dry" tendencies. The questionnaire consists of 49 items (38 in hotness/coldness and 11 in dryness/wetness), categorized into the six domains.

Content Validity

The overall content validity of the instrument was evaluated across two primary dimensions, as shown in table 1: Cold/Hot and Wet/Dry, using the Scale-level Content Validity Index based on the average method (S-CVI/Ave). A total of 37 items were assessed under the Cold/Hot category, yielding an average S-CVI/Ave of 0.90, indicating strong expert agreement on the relevance and representativeness of these items. In the Wet/Dry category, 11 items were evaluated, resulting in an S-CVI/Ave of 0.88, which also reflects good content validity, albeit slightly lower than the Cold/Hot dimension. When considering all 48 items across both categories, the overall average S-CVI/Ave was calculated to be 0.89. This suggests that the instrument demonstrates a high level of content validity, with minor variability across domains, warranting further refinement in specific areas, such as the Wet/Dry items, to enhance consistency and clarity.

Reliability

A total of 50 patients with clinically and biochemically-confirmed hypothyroidism were recruited for the reliability phase of the study. Five individuals declined to participate, and seven were excluded due to predefined exclusion criteria (chronic comorbid conditions or continuous medication use likely to influence systemic parameters). Of the remaining participants, nine did not complete the retest phase within the specified two-week interval.

Table 1. Questionnaire's domain and its Content Validity Index

Cold/Hot Categories	S. No	Items	ICV	S-CVI/Ave
General	1	Are you easily affected by coldness?	1	0.86
	2	Do you easily tolerate heat during summer?	0.89	
	3	Do you like the summer season?	0.78	
	4	Do you prefer hot & dry food?	0.78	
	5	Have you noticed a persistent change in your voice?	0.78	
	6	Have you experienced your movements and activities as sluggish for the last 6 months?	0.89	
	7	Do you experience excessive heaviness in the body?	0.89	
	8	Do you feel tired?	0.89	
Skin and hair problems	9	Do you experience cold hands during normal days?	0.89	0.93
	10	Are you sensitive to skin allergies?	0.78	
	11	Is your hair color brownish white?	1	
	12	Do you observe a lot of hair fall in the last 6 months?	1	
	13	Do you observe slow hair growth?	1	
Gastrointestinal dysfunction	14	Is your digestion poor for the last 6 months?	0.78	0.87
	15	Do you experience poor appetite from last 6 months?	1	
	16	Do you experience your thirst is deprived from last 6 months?	0.89	
	17	Are you dependent on digestive pills?	1	
	18	Do you experience bloating on an empty or full stomach?	0.78	
	19	Do you experience sour burps on an empty or full stomach?	0.78	
Difficulty coping or having mood swings	20	Are you efficiently managing your daily life?	0.89	0.93
	21	Are you usually hopeless throughout the day?	1	
	22	Are you quickly unable to make decisions?	0.89	
	23	Do you lose confidence when interacting with your colleagues?	1	
	24	Are you lacking to retain somethings?	1	
	25	Is your power of perception and imagination slow?	0.89	
	26	Have you slowed down in your thinking?	0.78	
	27	Have you experienced frequent mild headaches in the last 2 months?	1	
	28	Have you felt angry during the past eight weeks?	1	
	29	Does your anger vanish away easily?	0.89	
Disrupted waste disposal	30	Do you experience the light color of the day's first-morning urine?	1	0.91
	31	Do you experience odorless urine in a day?	0.78	
	32	Do you experience more amount of urine in a day?	1	
	33	Do you experience light color on the first morning stool of the day?	0.89	
	34	Do you experience odorless first-morning stool of the day?	0.89	
	35	Do you experience more amount of stool in a day?	1	
	36	Do you pass your stool in the morning time daily?	1	
	37	Is your sweat odorless?	0.78	
	S-CVI/Ave			0.90
Wet/Dry Categories	S. No	Items	ICV	
General	38	Are you prone to illness in a moist or humid environment like rainy season?	0.89	0.94
	39	Has your weight increased in the last 6 months?	1	

Skin and hair problems	40	Does your skin remain smooth and soft naturally throughout the day?	0.89	
	41	Do you observe puffiness in your face in the morning time?	1	0.92
	42	Is your hair straight and thin?	0.89	
Sleep & Dreams	43	Do you take more than sound sleep (7-8 h)?	0.78	
	44	Do you wake up late in the morning?	0.89	0.81
	45	Do you see dreams of white and cold objects like water, rain, rivers, ice, etc.?	0.78	
Disrupted waste disposal	46	Do you observe excessive salivation in the last 6 months?	0.78	
	47	Have you observed excessive secretions from the nose in the last 2 months?	0.89	0.85
	48	Do you observe excessive sweating in the last 6 months?	0.89	
S-CVI/Ave				0.88
S-CVI/Ave of Total items				0.89

Consequently, 29 participants completed both the test and retest assessments and were included in the reliability analysis (see table 2). Listwise deletion was applied, and no additional missing data were identified among the analyzed cases.

Internal consistency of the 48-item questionnaire was assessed using Cronbach's alpha. The coefficient was 0.86 for the initial administration and 0.89 for the retest phase, indicating high internal consistency.

Test-retest reliability over a two-week interval was evaluated using the Intraclass Correlation Coefficient (ICC). The ICC for single measures was 0.97 (95% confidence interval: 0.93–0.98; $p < 0.001$), demonstrating excellent stability of total scores across time. The ICC for average measures was 0.98 (95% confidence interval: 0.96–0.99), demonstrating excellent stability of the total score over time, see table 3.

The questionnaire demonstrates high reliability (Cronbach's Alpha = 0.89), indicating that the items collectively measure a cohesive construct. However, there is room for improvement in specific domains, particularly general, Skin and Hair Problems, and Disrupted Waste Disposal, where weaker correlations were observed. Revising or replacing problematic items could further strengthen the scale's reliability and validity.

Scoring system and interpretation

The questionnaire employed a dichotomous (binary) scoring system consistent with classical Unani diagnostic principles of qualitative predominance. The assessment tool comprised 37 items to evaluate Cold/Hot qualities and 11 items to assess Wet/Dry qualities, each scored dichotomously (Cold or Wet = 1, Hot or Dry = 0). The Cold/Hot dimension was used to determine the presence and severity of *Sū'-i-Mizāj baarid* and *Sū'-i-Mizāj haar*, whereas the Wet/Dry dimension assessed for *Sū'-i-Mizāj ratāb* & *Sū'-i-Mizāj yābis*, see Tables 4 and 5.

Clinical thresholds were determined a priori based on proportional score distribution across the theoretical scoring range and expert consensus grounded in classical Unani

interpretative frameworks. For the Cold/Hot domain (maximum score = 37), higher scores represent increasing predominance of *Bārid* (Cold) qualities, whereas lower scores indicate predominance of *Hār* (Hot) qualities. Similarly, in the Wet/Dry domain (maximum score = 11), higher scores indicate *Ratāb* (Wet) predominance, lower scores indicate *Yābis* (Dry) predominance, and intermediate values indicate relative balance.

These cut-offs were not derived from post hoc statistical optimization, but were established conceptually before analysis to align with traditional diagnostic reasoning. The thresholds were intended to provide structured interpretative guidance rather than definitive diagnostic categorization. Empirical validation of these cut-offs using receiver operating characteristic (ROC) analysis or external clinical benchmarks will be necessary in future large-scale studies to confirm their diagnostic accuracy and predictive validity.

Discussion

The present study aimed to develop and preliminarily validate a questionnaire grounded in classical Unani and Persian medical literature for the assessment of *Sū'-i-Mizāj* in patients with hypothyroidism. From this perspective, both therapeutic interventions and dietary recommendations are deemed incomplete and potentially ineffective without a precise understanding of the patient's *Sū'-i-Mizāj*. Establishing a reliable and valid tool for its assessment is therefore essential for enhancing diagnostic accuracy and optimizing treatment outcomes within the

Table 2. Case processing summary (reliability statistics)

		N	%
Cases	Valid	29	100.0
	Excluded ^a	0	.0
	Total	29	100.0

a. Listwise deletion based on all variables in the procedure

Table 3. Intraclass correlation coefficient.

	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.970 ^a	.937	.986	64.260	28	28	.000
Average Measures	.985 ^c	.968	.993	64.260	28	28	.000

Table 4. Interpretation of cold/hot score

Total Score	Predominant Quality	Interpretation
≥ 30	Cold (Bārid)	Severe Sū'-i-Mizāj Bārid
23–29	Cold (Bārid)	Moderate Sū'-i-Mizāj Bārid
16–22	Balanced	No dominant thermal imbalance
9–15	Hot (Hār)	Moderate Sū'-i-Mizāj Hār
≤ 8	Hot (Hār)	Severe Sū'-i-Mizāj Hār

Unani framework.

A key strength of this study lies in its systematic item-generation process. Items were derived from an extensive review of Unani and Persian literature describing qualitative imbalances in the *Bārid* (cold), *Hār* (hot), *Ratab* (wet), and *Yābis* (dry) temperaments. Recurrent diagnostic descriptors and clinical indicators were identified and operationalized into measurable questionnaire items. Semi-structured consultations with experienced Unani academicians were subsequently conducted to refine item wording, ensure conceptual fidelity to Unani principles, and eliminate redundancy. This iterative process enhanced content representativeness and cultural validity prior to quantitative evaluation.

Following item generation, structured expert review, and content validation, the instrument was further refined. The initial questionnaire, developed from extracted indices, comprised 49 items. Following content validity analysis, one item was removed due to low I-CVI, resulting in a refined 48-item version. The overall Scale Content Validity Index (S-CVI/Ave = 0.89) indicates substantial expert agreement regarding clarity and relevance of retained items. Slightly lower indices observed within the Wet/Dry dimension suggest that moisture-related constructs may benefit from further conceptual clarification in future refinements.

To assess content validity, I-CVI was calculated for each item's relevance and clarity. This was done by dividing the number of experts who rated an item as "quite relevant" or "highly relevant" by the total number of experts [11–12]. Items with an I-CVI ≥ 0.70 were retained, as this level indicated acceptable expert agreement. The I-CVI scores for the final items ranged from 0.78 to 1.00, indicating strong consensus among experts on the items' relevance and clarity. Consequently, non-relevant items with an I-CVI < 0.71 were excluded from the final version. To evaluate the overall scale content validity, S-CVI/Ave was computed by averaging the I-CVI scores across all items [8]. Nevertheless, the findings support the adequacy of

Table 5. Interpretation of wet/dry score

Total Score	Predominant Quality	Interpretation
≥ 8	Wet (Ratab)	Sū'-i-Mizāj Ratab
5–7	Balanced	No dominant moisture imbalance
≤ 4	Dry (Yābis)	Sū'-i-Mizāj Yābis

the selected domains in reflecting classical theoretical constructs.

The instrument demonstrated high internal consistency (Cronbach's alpha = 0.89) and excellent test-retest reliability (ICC = 0.97), indicating stability of responses over a two-week interval. These findings are consistent with previously developed temperament-based questionnaires in traditional Persian medicine. Item-wise reliability was analyzed using the Weighted Kappa statistic in IBM SPSS Statistics version 20. Kappa values above 0.74 were considered excellent, values between 0.60 and 0.74 were regarded as good, 0.40 to 0.60 as moderate, and values below 0.40 as fair, supporting the overall consistency and reproducibility of individual questionnaire items [13].

Mojahedi et al. (2014) designed a 52-item *Mizāj* scale that demonstrated strong reliability (Cronbach's α = .71) and acceptable weighted kappa coefficients (0.40–0.82), ultimately producing a concise 10-item tool with good discriminative power (65–93% sensitivity and 52–97% specificity) [8]. Similarly, Salmannezhad et al. (2018) developed a Persian *Mizāj* questionnaire using ROC, ICC, and kappa analysis, yielding a reliable 20-item version with sensitivity and specificity ranging from 63% to 85% across temperament subtypes [9]. These studies underscore that temperament-based scales can reliably reflect traditional diagnostic categories when carefully designed and validated. Hashem-Dabaghian (2022) developed the *Treatment Satisfaction with Traditional Medicines*

Questionnaire (TSTMQ), comprising 14 items across three domains. Content validity was established with a content validity ratio (CVR) greater than 0.62 and a CVI exceeding 0.79. Exploratory factor analysis (EFA) confirmed the factor structure. The ICC for the entire questionnaire was 0.99 (95% CI: 0.95–0.99; $p < 0.001$), indicating excellent test–retest reliability. Internal consistency, as measured by Cronbach's alpha, was 0.87 [10]. The scoring thresholds were determined a priori based on proportional distribution across the theoretical score range and expert consensus rooted in classical interpretative frameworks. These thresholds were intended to provide structured guidance for categorizing qualitative predominance rather than serving as empirically optimized diagnostic cut-offs. Future studies employing ROC analysis or comparisons with expert clinical assessment will be necessary to validate and refine these interpretative boundaries empirically.

Despite promising reliability findings, several limitations must be acknowledged. First, the reliability analysis was based on a relatively small sample ($n = 29$ completing both assessments). Small sample sizes may inflate reliability coefficients and limit generalizability. Second, construct validity was not assessed through exploratory or confirmatory factor analysis due to insufficient sample size. As a result, the dimensional structure of the questionnaire remains theoretically grounded rather than statistically confirmed. Third, criterion validity was not evaluated by comparing expert clinical diagnoses, existing temperament tools, or relevant biomedical markers beyond the inclusion criteria. Consequently, claims regarding diagnostic accuracy or clinical utility should be considered preliminary.

The study nevertheless contributes to ongoing efforts to standardize diagnostic assessment within the Unani medical framework. By translating qualitative classical descriptions into structured, measurable items and applying contemporary psychometric evaluation methods, the study represents an initial step toward bridging Unani/Persian theoretical constructs with modern validation approaches. Further large-scale studies involving diverse populations are required to confirm the factor structure, establish external and criterion validity, and assess responsiveness to therapeutic interventions.

Conclusion

This study describes the development and preliminary validation of a 48-item questionnaire to assess Sū'-i-Mizāj in patients with hypothyroidism, grounded in classical Unani and Persian medical principles. The instrument demonstrated satisfactory content validity and strong internal consistency, along with excellent test–retest reliability, indicating stability of responses over time.

However, given the limited sample size and the absence of construct and criterion validity analyses, the findings

should be interpreted as preliminary. Further validation in larger, more diverse populations is required to confirm the dimensional structure, refine clinical thresholds, and establish external validity. With additional psychometric evaluation, the questionnaire may serve as a structured tool to support temperament assessment within the Unani medical framework.

Conflict of Interests

The authors declare no conflict of interest.

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