

INTERNATIONAL JOURNAL OF UNANI AND INTEGRATIVE MEDICINE



E-ISSN: 2616-4558
P-ISSN: 2616-454X
www.unanijournal.com
IJUIM 2025; 9(2): 115-117
Impact Factor (RJIF): 6.3
Peer Reviewed Journal
Received: 21-06-2025
Accepted: 24-07-2025

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Study of serum vitamin D level in young adults with reference to different mizaj (Temperaments) in Unani medicine

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DOI: <https://doi.org/10.33545/2616454X.2025.v9.i2b.348>

Abstract

Ethnopharmacological relevance: Unani medicine emphasizes the concept of *Mizaj* (temperament), a foundational principle influencing individual health, disease predisposition, and treatment strategy. The correlation between temperament and modern biochemical markers like serum Vitamin D has not been widely explored^[1,2].

Aim of the study: To assess the *Mizaj* of young adults, evaluate their serum Vitamin D levels, and analyze the correlation between these Unani concepts and biochemical parameters.

Materials and methods: A cross-sectional, descriptive, randomized study was conducted on 70 healthy volunteers aged 19-30 years at A & U Tibbia College, New Delhi. Participants were assessed for *Mizaj* using a standard *proforma*^[3]. Serum Vitamin D levels were estimated using the Mindray CL-900i Chemiluminescence Immunoassay System. Statistical analysis, including one-way ANOVA and t-tests, was performed using Python.

Results: The highest mean serum Vitamin D level was observed in individuals with *Safrawi Mizaj* (19.32 ± 7.20 ng/ml), followed by *Balghami* (18.93 ± 8.11), *Saudawi* (17.83 ± 6.32), and *Damwi* (14.97 ± 2.78). One-way ANOVA showed a significant difference ($p=0.039$). Post hoc Tukey and Bonferroni tests revealed a significant difference between *Damwi* and *Safrawi* groups ($p<0.05$). Merging *Mizaj* into hot (*Damwi* + *Safrawi*) and cold (*Balghami* + *Saudawi*) groups showed cold *Mizaj* had a slightly higher Vitamin D mean, though not statistically significant ($t = 0.67$, $p > 0.05$).

Conclusion: This study highlights a potential link between traditional Unani temperaments and serum Vitamin D levels. Individuals with *Safrawi Mizaj* displayed the best Vitamin D profile. Findings may contribute toward integrative diagnostic and preventive approaches, although larger sample sizes are needed for conclusive validation.

Keywords: Mizaj, Vitamin d, Unani medicine, temperament, safrawi, damwi, ethnopharmacology, tabiat

Introduction

The Unani system of medicine, rooted in Greco-Arabic traditions, is based on the equilibrium of four *humors* (*Akhlat-e-Arba*): *Dam* (blood), *Balgham* (phlegm), *Safra* (yellow bile), and *Sauda* (black bile)^[1, 2]. Each individual's temperament (*Mizaj*)—a qualitative reflection of the dominant humor—guides diagnostic and therapeutic principles^[3].

This holistic system conceptualizes *Tabiat* (*medicatrix naturae*) as the supreme force governing physiology^[4]. Identifying individual *Mizaj* aids in diet, lifestyle, and disease prediction. However, correlation with modern parameters like serum Vitamin D—essential in immune regulation and bone metabolism—is underexplored^[5, 6].

This study investigates serum Vitamin D levels across different *Mizaj* types, aiming to validate Unani theory through modern biomarkers.

2. Materials and Methods

2.1 Study Design

- **Type:** Randomized, descriptive cross-sectional study
- **Duration:** 18 months (2022-2023)
- **Location:** Department of *Munafe-ul-Aza* (Physiology), A & U Tibbia College (University of Delhi), New Delhi

2.2 Ethical Approval

Approved by the Institutional Ethical Committee, A & U Tibbia College (University of Delhi)

2.3 Sample Size and Selection

- **Total Participants:** 70 healthy students
- **Age range:** 19-30 years
- **Inclusion:** Apparently healthy individuals of both genders
- **Exclusion:** Smokers, alcoholics, chronic illness, trauma, pregnancy

2.4 Mizaj Assessment

Standard *proforma* based on *Ajnas-e-Ashra* (ten parameters) used to determine temperament [3]. Participants categorized into:

- *Damwi* (sanguine).
- *Safrawi* (choleric).
- *Balghami* (phlegmatic).
- *Saudawi* (melancholic).

2.5 Serum Vitamin D Estimation

- **Equipment:** Mindray CL-900i Chemiluminescence Immunoassay System
- **Parameter:** 25(OH) Vitamin D (ng/ml)

2.6 Statistical Analysis

Data processed using Python. One-way ANOVA, t-tests, and post hoc analyses (Tukey, Bonferroni, Holm) were conducted. Significance threshold was $p < 0.05$.

3. Results

3.1 Distribution of Mizaj

Mizaj Type	Number of Participants	Percentage (%)
<i>Damwi</i>	32	46%
<i>Safrawi</i>	20	29%
<i>Balghami</i>	11	15%
<i>Saudawi</i>	7	10%

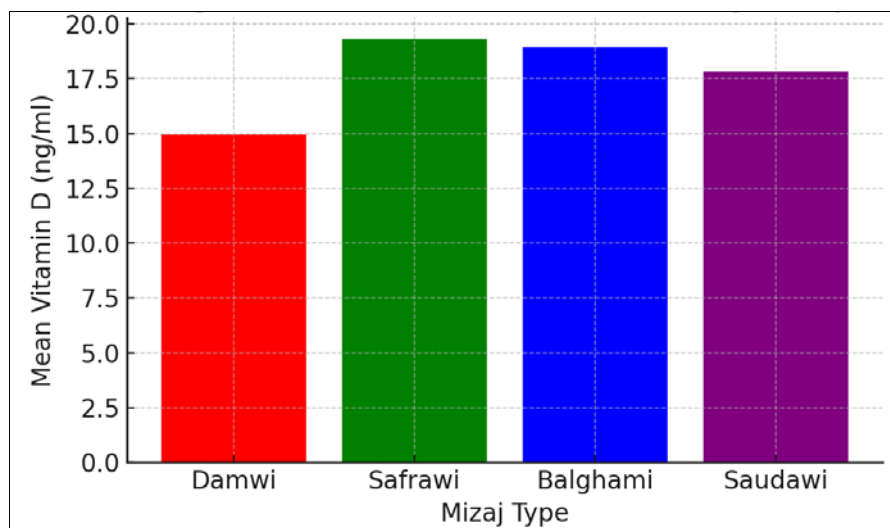


Fig 1: Mean Vitamin D Levels by Mizaj

3.2 Mean Serum Vitamin D Levels by Mizaj

Mizaj Type	Mean Vitamin D (ng/ml)	Standard Deviation
<i>Safrawi</i>	19.32	± 7.20
<i>Balghami</i>	18.93	± 8.11
<i>Saudawi</i>	17.83	± 6.32
<i>Damwi</i>	14.97	± 2.78

One-way ANOVA

- F-value = 2.87
- $p=0.039 \rightarrow$ Statistically significant

Post Hoc Analysis

- **Tukey:** *Damwi* vs *Safrawi* ($p < 0.05$)
- **Bonferroni & Holm:** *Damwi* vs *Safrawi* ($p < 0.05$)

3.3 Hot vs Cold Temperament (t-test)

Temperament	Mean (ng/ml)	Std Dev
Hot (<i>Damwi</i> + <i>Safrawi</i>)	16.65	± 5.91
Cold (<i>Balghami</i> + <i>Saudawi</i>)	18.50	± 6.41

$t = 0.67$, $df = 68$, $p = 0.50 \rightarrow$ Not statistically significant

3.4 Gender-wise Vitamin D Levels

Gender	Mean (ng/ml)	Std Dev
Male	17.66	± 6.05
Female	16.70	± 6.02

ANOVA: $F = 0.45$, $p = 0.505 \rightarrow$ Not statistically significant

4. Discussion

Unani medicine integrates individual constitution (*Mizaj*) with disease predisposition [3]. This study found significant variation in Vitamin D levels across *Mizaj* types, supporting Unani principles. *Safrawi* individuals showed the highest serum Vitamin D levels, possibly reflecting metabolic efficiency or increased sun exposure behavior.

While all groups displayed some degree of deficiency, the pattern suggests the need for *Mizaj*-based nutritional screening. Cold temperaments, according to Unani understanding, exhibit slower metabolism, which might contribute to Vitamin D conservation, aligning with their marginally better levels [6].

These findings support integrating traditional classification systems with modern biomarkers for personalized, preventive healthcare.

5. Conclusion

- *Safrawi Mizaj* individuals exhibited the highest Vitamin D levels, significantly different from *Damwi* types.
- Cold *Mizaj* types showed marginally better Vitamin D levels than hot types, though not statistically significant.
- Male participants had slightly higher Vitamin D levels than females, without statistical significance.
- Results support a potential correlation between Unani temperaments and biochemical markers, encouraging further studies with larger samples.

Conflict of Interest

Not available

Financial Support

Not available

6. References

1. Ahmad SI. Introduction to Unani Medicine. New Delhi: CCRUM, Ministry of AYUSH; 2012.
2. Ibn Sina. *Al-Qanoon fil Tib (The Canon of Medicine)*. Trans. Ed. New Delhi: Jamia Hamdard; year unknown.
3. Khan A. Concept of Temperament (*Mizaj*) in Unani Medicine. *Indian J Tradit Knowl*. 2008;7(4):590-595.
4. Nafis A. *Kulliyat-e-Nafisi*. Delhi: Idara Kitab-us-Shifa; 1954.
5. Holick MF. Vitamin D deficiency. *N Engl J Med*. 2007;357(3):266-281.
6. Rana R, Khan L. Vitamin D levels and disease susceptibility. *J Hum Ecol*. 2015;49(3):223-228.
7. Kumar A, Gupta A. Vitamin D and health: A comprehensive review. *Int J Health Sci Res*. 2021;11(1):100-107.
8. World Health Organization. Vitamin D status and guidelines. <https://www.who.int/>

How to Cite This Article

Haq EU, Kumar R. Study of serum vitamin D level in young adults with reference to different *mizaj* (Temperaments) in Unani medicine. *International Journal of Unani and Integrative Medicine* 2025; 9(2): 115-117.

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