OPEN ACCESS

IJABR

International Journal of Advanced Biotechnology and Research (IJABR)
ISSN 0976-2612, Online ISSN 2278–599X,
Vol-16, Issue3, 2025, p-20-26

DOI: 10.5281/zenodo.15872057

Research Article

Correlation of Mizāj with Blood Parameters: A Retrospective Study

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Article Info

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Received: 09/06/2025
Accepted: 11/07/2025
Published: 13/07/2025

DOI: 10.5281/zenodo.15872057

Publisher's Note: IJABR Press stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Abstract

Background: In the Unani system of medicine, Mizāj (temperament) is considered a fundamental determinant of individual health, disease predisposition, and response to treatment. Traditionally assessed through qualitative parameters, recent efforts aim to explore scientific correlations between Mizāj and measurable physiological indices.

Objective: The present study was conducted to investigate the correlation between Mizāj and selected haematological parameters in healthy individuals.

Methods: An observational study was conducted in the Department of Ilmul Amraz, Ajmal Khan Tibbiya College, AMU, Aligarh in 2023. Twenty healthy volunteers aged 25–35 years, with no history of medication, smoking, alcoholism, or drug addiction, were enrolled. Mizāj assessment was carried out using the classical method of Ajnās 'Ashara. Blood samples were analyzed for haemoglobin percentage, red blood cell (RBC) count, total leucocyte count (TLC), and platelet (Plt.) count using a haematology analyzer. Data were statistically analyzed using GraphPad Instat and Microsoft Excel.

Results: The participants were categorized into various Mizāj types, including Ḥārr Yābis, Ḥārr Raṭb, Ḥārr, Bārid Yābis, and Bārid Raṭb. Although no statistically significant correlations were observed between Mizāj or Kayfiyāt and haematological parameters, some trends were noted, such as relatively higher haemoglobin levels in individuals with Bārid Mizāj and lower levels in those with Yābis Mizāj.

Conclusion: This preliminary study suggests that Mizāj may subtly influence haematological parameters. However, more extensive and more comprehensive studies are required to establish statistically significant correlations. Scientific validation of Mizāj through objective parameters can enhance diagnostic accuracy in the Unani system of medicine.

Keywords: Mizāj, Temperament, Haemoglobin percentage, Red Blood Cell (RBC), Total Leucocyte Count (TLC), Platelet.

Introduction

The concept of Mizāj (temperament) forms a foundational pillar in the Unani system of medicine. Nafis states that the word "Mizāj" literally means "intermixture", since it comes from the Arabic word "imtizaj" which means intermixture[1]. It is pivotal in understanding individual physiology, disease predisposition, and response to therapeutic interventions. Every individual is believed to possess a unique Mizāj, which is determined by the qualitative interaction of four elements and their corresponding qualities, i.e. Ḥarārat (hot), Burūdat (cold), Yubūsat (dry), and Ruṭūbat (moist)[2,3,4,5].

Sū'-i-Mizāj, or abnormal Mizāj, is a state of imbalance of the Mizāj attributes. Ibn Sina classified it into nine categories: hot, cold, dry, wet, cold-wet, hot-wet, hot-dry, cold-dry, and the balanced one (Mu'tadil)[2,3,4]. Every individual possesses all four humours: Dam (sanguine), Balgham (phlegmatic), Ṣafrā' (yellow bile), Sawdā' (black bile), but one of them dominates the body[6]. The prevailing humour in an individual determines their vulnerability to some diseases and the efficacy of some drugs. In the context of the Unani System of Medicine, Mizāj is conceived as the expression of humours' qualities in the body, viz., hotness and dryness. A change in the amount of these humours results in the formation of sui Mizāj (dystemperament)[3,7]. The assessment of Mizāj offers valuable insights into the individual and helps maintain health and treat disease according to the temperament.

In classical Unani texts, the assessment of Mizāj is conducted through multiple parameters collectively termed Ajnās 'Ashara (ten determinants), which reflect the body's physical and functional attributes. While Mizāj has traditionally been determined qualitatively, recent efforts are being directed towards exploring its correlation with measurable physiological and biochemical markers to establish objective tools for temperament assessment.

The present study aimed to explore the possible correlation between Mizāj and haematological parameters in healthy individuals. By assessing key blood parameters—Haemoglobin percentage, Red Blood Cell (RBC) count, Total Leucocyte Count (TLC), and Platelet (Plt.) count, this study attempts to investigate whether specific patterns or trends can be observed about different temperaments and Kayfiyāt (qualities). If substantiated through scientific inquiry, such correlations could offer a significant step towards integrating traditional diagnostic principles with modern biomedical standards.

This observational study, carried out in the Department of Ilmul Amraz, Ajmal Khan Tibbiya College, Aligarh Muslim University (AMU), Aligarh, provides an initial glimpse into this integration by correlating Mizāj types with haematological indices in healthy male volunteers. The study aims to contribute to the growing body of evidence supporting the scientific basis of Unani principles. It encourages further research to strengthen diagnostic objectivity in the Unani system of medicine.

MATERIALS AND METHODS

Place of Study: The study was conducted in the Department of Ilmul Amraz, Ajmal Khan Tibbiya College, AMU, Aligarh, in 2023.

Study Subjects: 20 healthy volunteers in the age group of 25-35 years without a history of medication, drug addiction, smoking and alcoholism were selected for the study. Written consent collected from each of participants and study approved by the institutional ethics committee of Ajmal Khan Tibbiya College, AMU, Aligarh.

Study Design: Observational study of the correlation of Mizāj with haematological parameters

Mizāj Assessment: Mizāj was assessed by Ajnās 'Ashara[8,9].

Haematological parameters:
The following haematological parameters of blood were assessed[10,11]:
1. Haemoglobin percentage
2. Red blood cell count (RBC)
3. Total Leucocyte count (TLC)
4. Platelet count

Procedure of study:
Mizāj of each volunteer was assessed in terms of Kayfiyat Fa'ila and Kayfiyat Munfa'ila with the help of Ajnās 'Ashara (ten determinants), and the final Mizāj is recorded after the determination of Mizāj, 2.5 ml venous blood was drawn from the median cubital vein through venipuncture by a sterile 5 ml syringe. After that, 0.5 ml of blood was kept in an EDTA vacuum vial. It is rolled on a Tube Roller Mixer for 5 minutes so that the blood can get mixed well with EDTA. Afterwards, it was placed on a haematology analyzer (ERBA H560) to know the haematological parameters.

Statistical Analysis:
Data obtained is analysed statistically using GraphPad Instat and Microsoft Excel. P value < 0.05 is considered statistically significant. Data following normal distribution is calculated in Mean & SD and parametric test is used for testing significance.

Observation and Results
Based on Ajnash-e-Ashra, 20 subjects were assessed and found in Mizāj categories; Ḥārr Yābis, Ḥārr Raṭb, Ḥārr, Bārid Yābis and Bārid Raṭb. Correlation of haematological parameters of these subjects with different Mizāj and Kayfiyāt Fā'ila or Kayfiyāt Munfa'ila is presented in tables and figures below.

Table 1: Haematological parameters according to different Mizāj

MIZĀJ (No. of subjects)	TLC 10^3uL (Mean)	RBC 10^6uL (Mean)	HB g/dL (Mean)	Plt. 10^3/uL (Mean)
Ḥārr Yābis (6)	7.99	5.01	15.60	214.69
Ḥārr Raṭb (8)	7.73	4.97	15.75	210.64
Ḥārr (1)	5.97	4.76	15.6	201
Bārid Yābis (3)	9.95	5.14	15.7	168.5
Bārid Raṭb (2)	9.4	4.98	16.5	213

Table 2: Haematological parameters according to different Kayfiyāt

KAYFIYĀT (No. of subjects)	TLC 10^3uL (Mean)	RBC 10^6uL (Mean)	HB g/dL (Mean)	Plt. 10^3/uL (Mean)
Yubūsat (7)	8.72	4.97	15.52	201.57
Ruṭūbat (8)	7.79	4.98	15.74	210.69
Motadil in Yubūsat & Ruṭūbat (1)	5.97	4.76	15.6	201
Ḥarārat (13)	7.83	4.96	15.60	212.80
Burūdat (3)	9.77	5.08	15.96	183.30

No significant correlation was found between any blood parameter and Mizāj or Kayfiyāt, although some trends were observed and can be seen in the figures given below:

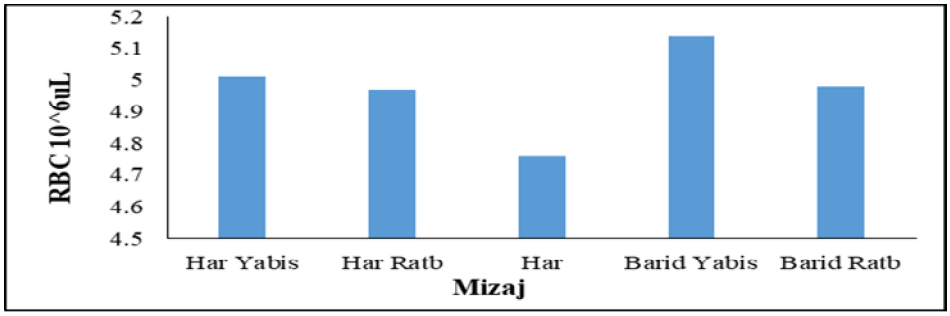

Figure 1: Mizāj (Temperament) & RBC

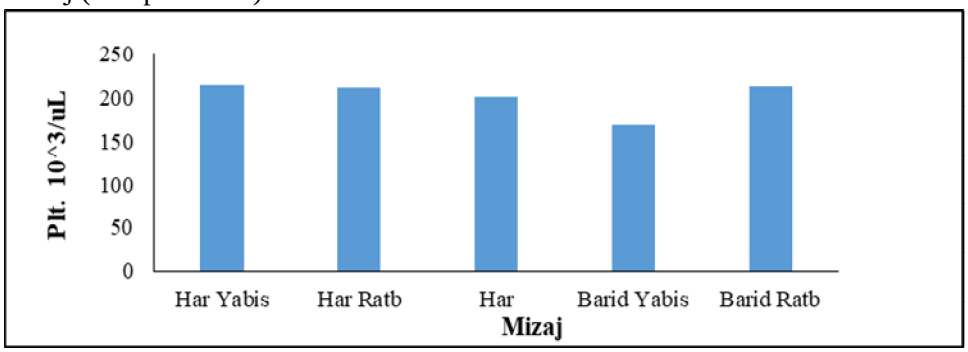

Figure2 : Mizāj (Temperament) & Plt

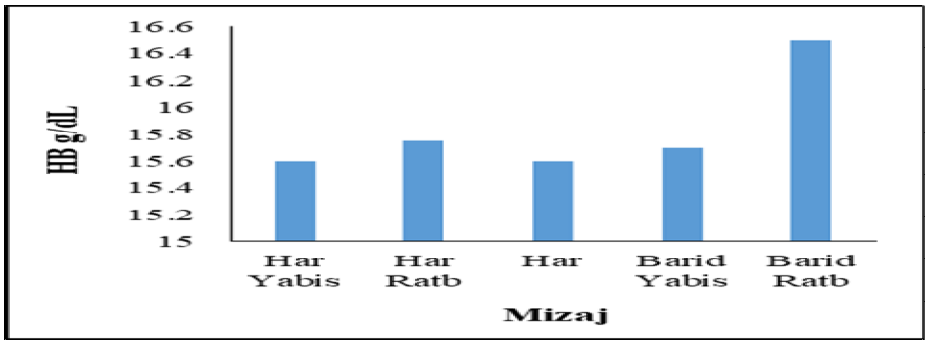

Figure 3: Mizāj (Temperament) & HB

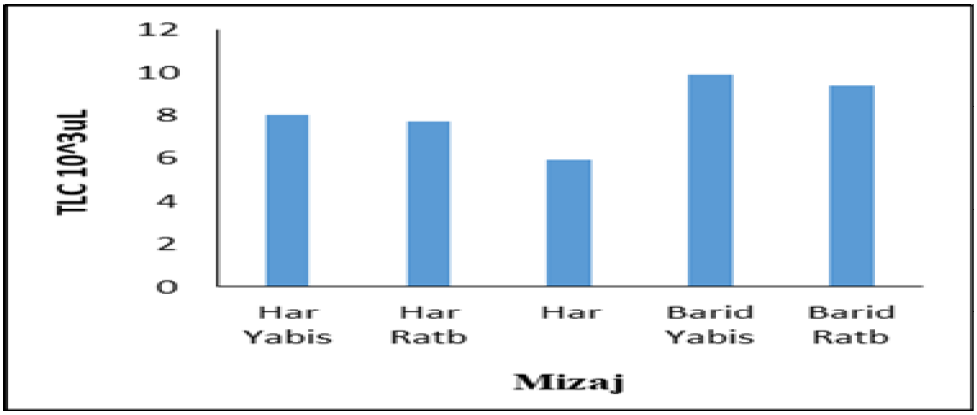

Figure 4: Mizāj (Temperament) & TLC

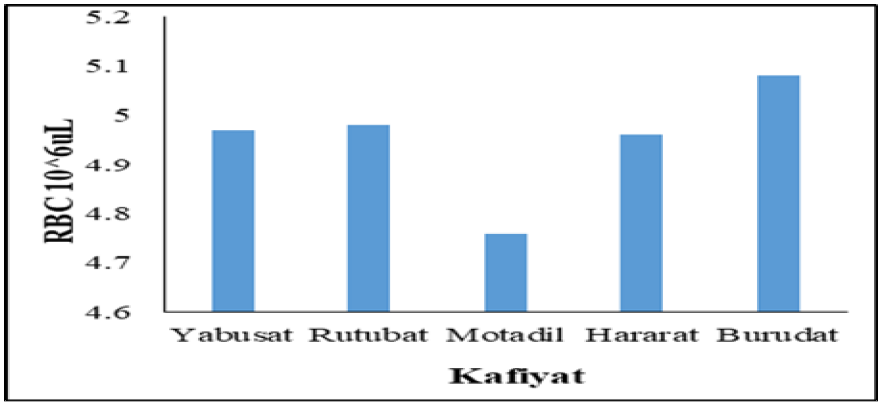

Figure 5: Kayfiyāt & RBC

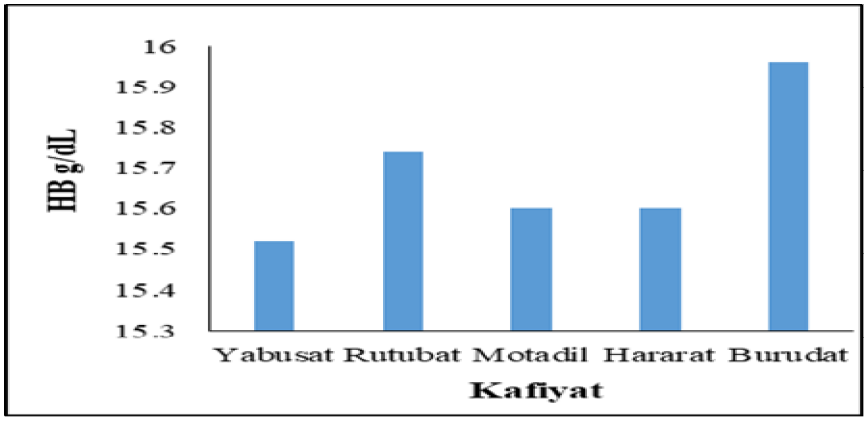

Figure 6: Kayfiyāt & HB

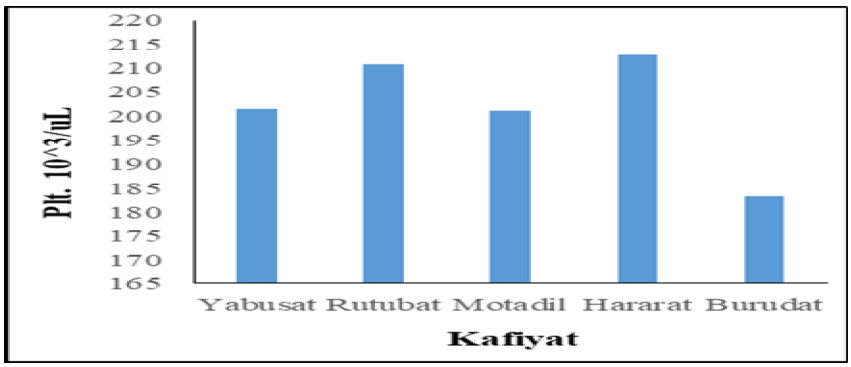

Figure 7: Kayfiyāt & Plt.

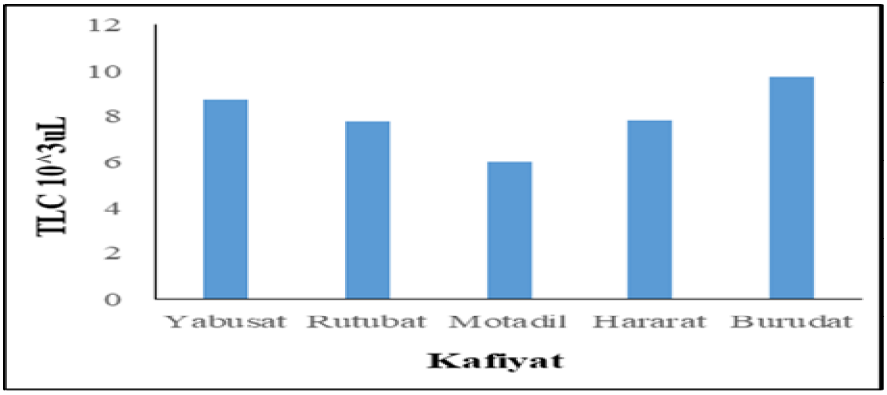

Figure 8: Kayfiyāt & TLC

Discussion

The present study was undertaken to explore the potential correlation between Mizāj and haematological parameters in healthy individuals. Temperament (Mizāj) was assessed using Ajnās 'Ashara, a classical method described in Unani literature, and key blood parameters were analyzed to identify any emerging patterns.

Although no statistically significant correlations were observed between Mizāj types or individual Kayfiyāt (qualities) and haematological parameters, certain trends were noted. For instance, individuals with Bārid Mizāj (cold temperament) demonstrated a relatively higher mean haemoglobin concentration, while those with Yābis Mizāj (dry temperament) exhibited comparatively lower values. These findings suggest that while the correlation may not reach statistical significance in a small sample, temperament may have a subtle influence on physiological parameters such as blood composition.

Furthermore, analysis based on individual Kayfiyāt revealed a similar pattern; Burūdat was associated with slightly elevated haemoglobin and RBC values, whereas Yubūsat was associated with lower platelet count and TLC. These trends align partially with classical descriptions in Unani medicine, where the qualities of the temperament are believed to influence bodily functions and humoral balance.

It is noteworthy that this pilot study was limited by its small sample size and inclusion of only healthy male participants. Moreover, the diversity of Mizāj types observed—Ḥārr Yābis, Ḥārr Raṭb, Ḥārr, Bārid Yābis, and Bārid Raṭb - highlights the complexity and individual variability in temperament classification. The study also underscores the need to revisit the classical understanding of temperament beyond the limited Khilṭi classification often used in modern practice. The concept of Khilṭi Mizāj pertains more accurately to Sū'-i-Mizāj (abnormal temperament), as emphasised in traditional texts.

Given these insights, future research should focus on larger, well-designed, and multicentric studies to validate these preliminary trends. Incorporating biochemical markers along with haematological parameters may further enhance the scientific understanding of Mizāj and contribute toward developing objective diagnostic tools in the Unani system of medicine.

CONCLUSION

The findings of this study suggest a potential, albeit non-significant, association between individual temperaments (Mizāj) and haematological parameters. While trends were observed in relation to specific Kayfiyāt, such as Burūdat and Yubūsat, the small sample size limits the generalizability of these results.

To advance the scientific basis of Unani diagnostics, it is imperative to undertake large-scale, multicentric studies to establish robust correlations between Sū'-i-Mizāj and haematological and biochemical indices. Such evidence-based approaches will enhance the objectivity of Mizāj assessment and contribute to the development of standardized diagnostic criteria in Unani medicine.

SUMMARY

This observational study was conducted to examine the relationship between individual temperament (Mizāj) and haematological parameters in healthy male volunteers aged 25–35 years. Temperament assessment was performed using the classical Ajnās 'Ashara method, and blood analysis included haemoglobin percentage, RBC count, TLC, and Platelet count.

Although no statistically significant correlation was found, some trends were noted—for example, higher haemoglobin levels in individuals with Bārid Mizāj and lower levels in those with Yābis Mizāj. These findings suggest that Mizāj may influence physiological processes, warranting further investigation.

Future studies with more extensive and more diverse populations are necessary to

substantiate these observations and pave the way for integrating objective diagnostic tools into the Unani system of medicine.

Informed Consent: Written informed consent was obtained from the volunteer.

Financial support and sponsorship: Nil.

Conflict of Interest: There is no conflict of interest.

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