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Importance of Mizaj and Nutrition in Treating Adolescent Aggression

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Abstract: Background: Aggression in adolescents is a current problem related to psycho-emotional state and physiological factors. The concept of mizaj in traditional medicine suggests that individual temperament influences behavioral responses. Diet also plays an important role in regulating the nervous system.

Objective: To examine the impact of Mizaj temperament on aggression and gastrointestinal dysfunction, with a focus on dietary preferences based on Unani medicine principles.

Methods: 212 adolescents (13.5-14.8 years old) were analyzed. Mizaj assessment by traditional diagnosis, analysis of aggression by Buss-Durkee scale, study of dietary habits

Results: Correlations between mizaj, diet and level of aggression were determined. Adolescents with a particular type of mizaj (e.g., saffravium or damavium) showed increased rates of aggression, especially with magnesium, vitamin D, and omega-3 deficiencies.

Conclusion: Nutritional correction and consideration of mizaj can reduce aggression in adolescents, which can be used in prevention programs.

Keywords: Mizaj, aggression, nutrition, temperament, adolescents, gastrointestinal health, Unani medicine.

1. INTRODUCTION

Adolescence is a critical period characterized by hormonal, emotional, and behavioral changes. Aggression, a common issue, has been linked to temperament and dietary habits. In fact, the roots of traditional medicine and modern medicine are intertwined, both based on Hippocrates' humoral theory (circa 460-377 BC). This theory emphasizes that human health and temperament depend on the balance of four essential bodily fluids: blood, phlegm, yellow bile, and black bile. According to this theory, when the balance of these fluids is disrupted, various diseases and changes in temperament occur. Hippocrates explained human character in relation to the predominance of these fluids [1]. The scholar scientifically validated temperament and was able to apply it in practice. Temperament is a fluid that transforms based on the food we consume. However, after Hippocrates, the medical science based on the humoral theory significantly declined and was largely forgotten. In the first century AD, Claudius Galen revitalized it. After Galen, medical science was directed towards specific specialties, which compromised its overall coherence. Abu Bakr Muhammad ibn Zakariya al-Razi (854–925 AD) aimed to consolidate the fragmented medical knowledge. Abu Ali Ibn Sina (1015–1024 AD) enriched the medical science that had been developed up to his time, contributing to the evolution and practical application of

the humoral-temperament theory by presenting it as a unified mechanism or system. Over six centuries, the medical school he established gained popularity, and the term "medicine," derived from the name of Avicenna, became widely recognized, alongside his works, which became essential references in the field of medicine. Mizaj is defined as the individual manifestations and characteristics caused by the difference in the constituents of people's bodies [11]. Nowadays, conventional medicine is also heading towards personalizing medicine and paying attention to individual differences in the pathogenesis, progression of diseases and response to therapeutics [13,14]. Metabonomics, nutrigenomics and also pharmacogenetics that try to classify individuals according to their possible response to medicine are the new promising areas of personalized medicine [12, 14, 15]. Basically mizaj is developed due to the interaction of different elements in the human body and affects the normal physical and emotional characteristics and also the physiological functions of the body [16, 17]. According to this concept, each person has a unique characteristic named mizaj which is recognized and classified by his or her morphological, physiological and psychological features [16, 18]. The ancient Unani system of medicine classifies individuals based on their Mizaj (temperament), which influences their physical and psychological traits.

Temperament type (Mizaj)	Boys (n=116)	Girls (n=96)
Damavi (Sanguine)	27	22
Safravi (Choleric)	28	23
Balghami (Phlegmatic)	32	26
Saudavi (Melancholic)	29	25

Unani Medicine and Mizaj Classification

According to Unani medicine, temperament is classified into four main categories:

Mizaj (temperament)	Dominant Humour	Personality traits
Damavi (Sanguine)	Blood (Dam)	Cheerful, sociable, optimistic
Safravi (Choleric)	Yellow bile(Safra)	Hot-tempered, ambitious, reactive
Balghami (Phlegmatic)	Phlegm (Balgham)	Calm, slow, stable
Saudavi (Melancholic)	Black bile (Sauda)	Introvert, anxious, deep thinker

Unani medicine suggests that dietary balance helps maintain Mizaj stability, preventing mood disorders, aggression, and gastrointestinal dysfunction. This study investigates the relationship between Mizaj, dietary habits, and aggression-related health concerns.

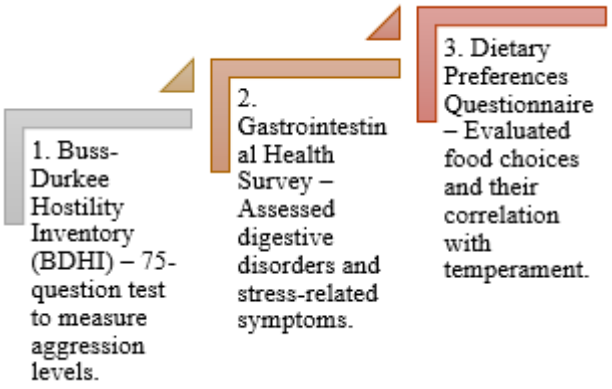
Objective: To examine the impact of Mizaj temperament on aggression and gastrointestinal dysfunction, with a focus on dietary preferences based on Unani medicine principles.

2. MATERIALS AND METHODS

Study Population

A total of 212 adolescents (aged 14–15) participated in the study, including 116 boys and 96 girls. Temperament was assessed using a standardized Mizaj evaluation.

Assessment Tools



3. RESULTS AND DISCUSSION

1. Aggression Levels Based on BDHI and Mizaj

Type of agression	Boys (M± SD)	Girls (M± SD)	Total sample (M±SD)
Physical agression	20.4±5.8	14.7±4.9	17.8±6.2
Verbal agression	16.3±4.5	13.8±4.2	15.1±4.4
Indirect agression	14.1±4.2	16.2±3.9	15.0±4.1
Irritability	18.9±5.1	19.3±4.8	19.1±5.0
Resentment	135±3.8	15.4±4.0	14.4±3.9
Suspicion	12.8±3.9	13.2±3.7	13.0±3.8
Guilt	109±3.5	12.5±3.8	11.7±3.7

Mean scores by types of agression Choleric (Safravi) and melancholic (Saudavi) individuals exhibited the highest aggression scores.

Mizaj (temperament)	Boys (Mean BDHI score)	Girls (Mean BDHI score)
Damavi (Sanguine)	12.4	10.8
Safravi (Choleric)	18.9	15.6
Balghami (Phlegmatic)	9.5	8.3
Saudavi (Melancholic)	17.2	14.1

Interpretation: Choleric and melancholic adolescents showed higher aggression scores, indicating a possible link between temperament and emotional regulation.

2. Gastrointestinal Dysfunction and Mizaj

Choleric and melancholic boys exhibited the highest incidence of gastrointestinal dysfunction.

Mizaj (temperament)	Boys with GI dysfunction	Girls with GI dysfunction
Damavi (Sanguine)	3	1
Safravi (Choleric)	4	2
Balghami (Phlegmatic)	3	3
Saudavi (Melancholic)	4	3

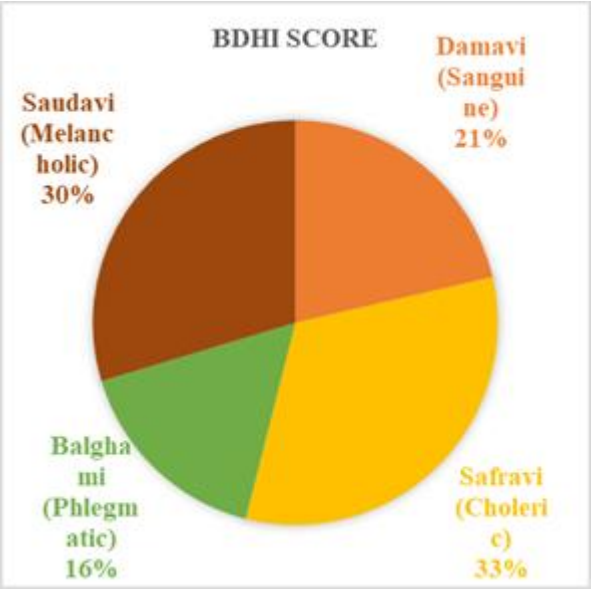
Interpretation: Emotional instability in choleric and melancholic types may lead to stress-related gastrointestinal disorders.

3. Dietary Preferences According to Mizaj

Temperament influenced food choices significantly.

Interpretation: Choleric boys preferred bitter foods, while phlegmatic girls favored sweets, aligning with Unani dietary recommendations.

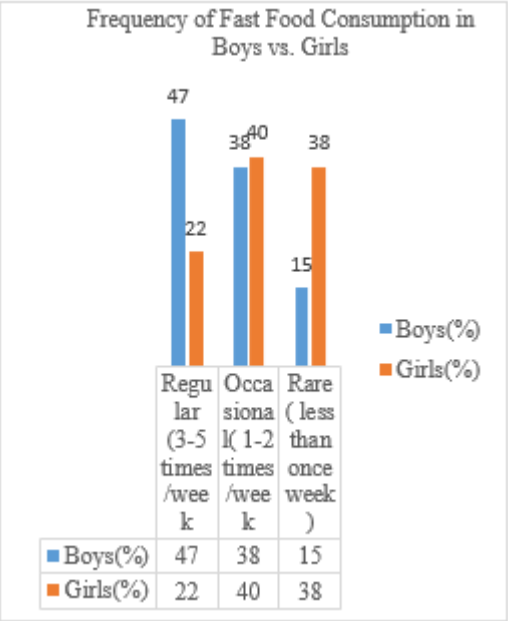
Mizaj (temperament)	Preffered food taste (boys)	Preffered food taste (girls)
Damavi (Sanguine)	Savory	Balanced
Safravi (Choleric)	Bitter	Spicy
Balghami (Phlegmatic)	Sweet	Sweet
Saudavi (Melancholic)	Sour	Mild flavors



4. Fast Food Consumption and Aggression

Many choleric and melancholic boys had high fast food intake, which may contribute to aggression and digestive issues.

In modern medicine, the nutritional value of foods and their effects on the human body are determined by their nutrient and bioactive component composition. Key factors such as moisture content, ash, energy, macronutrients (carbohydrates, proteins, and fats), and micronutrients (water-soluble and fat-soluble vitamins, along with minerals) play a crucial role in routine diet planning[3-5]. In recent years, there has been a shift toward a personalized nutrition approach, aiming to maximize health benefits from dietary intake for both healthy individuals and patients[2].



Philosophers emphasize the importance of maintaining health and treating diseases through proper food and drink consumption. Food serves as the foundation of metabolism, leading to the production of the four humors—blood, yellow bile, phlegm, and black bile [6–8]. The type and amount of food consumed directly influence the balance of these humors, and many illnesses stem from neglecting a healthy diet and lifestyle [3–5, 7, 8]. Mohammad Zakaria Razi famously stated, "Whenever food can be used as treatment, avoid using medicine," highlighting a key principle in traditional medical philosophy for both healthy individuals and patients [7].

From this perspective, nutrition should be personalized based on individual factors such as age, season, gender, climate, occupation, weather conditions, and digestive system function. Additionally, the characteristics of food, including its temperament, should be carefully considered when designing an optimal diet [9, 10].

In Iranian medicine, foods with a warm temperament enhance metabolism and energy production in the body by generating warm humors. As a result, energy levels are closely linked to the consumption of warm-tempered foods. Based on current knowledge, a warm temperament naturally stimulates molecular activity and boosts energy production. Moreover, this study found a significant association between energy levels and foods with a warm temperament [10, 19].

This study demonstrates a strong correlation between Mizaj, dietary habits, aggression, and gastrointestinal health. Choleric and melancholic adolescents displayed higher aggression levels and were more prone to digestive disorders. Unani medicine principles suggest that dietary modifications can help balance Mizaj, reducing aggression and improving gut health.

Future research should focus on dietary interventions based on Unani medicine to improve emotional and digestive health in adolescents.

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