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Natural forces (Umoor-e-Tabiya) in Unani medicine and functional physiology of organ systems: A comparative perspective

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Abstract

Unani medicine describes health as a dynamic equilibrium maintained by seven fundamental natural forces known as Umoor-e-Tabiya: Arkan (elements), Mizaj (temperament), Akhlat (humours), Aza (organs), Arwah (vital spirit), Quwa (faculties), and Af'al (functions). These principles collectively regulate the body's physiology and pathology. Systems biology in modern science similarly interprets health through the lens of interdependent biological networks and functional organ systems. This paper presents a comparative analysis of Umoor-e-Tabiya and organ-based physiology, identifying conceptual parallels between traditional Unani understanding and modern functional systems biology. The integration of these paradigms could foster a more holistic, personalized approach to healthcare.

Keywords: Umoor-e-Tabiya, Unani medicine, systems biology, organ function, mizaj, quwa, humours

1. Introduction

Unani medicine is a classical Greco-Arabic system of medicine that views the human body as a complex, integrated system maintained by natural principles. These principles, known as Umoor-e-Tabiya, serve as the foundation of physiological function and disease understanding. Each of these factors governs specific aspects of life and health, from elemental composition to physical and psychological functioning.

Modern medicine, particularly through systems biology and organ physiology, has moved toward a similarly holistic understanding of the human body. Systems biology emphasizes network-based interactions within and between biological systems. This paper aims to explore the alignment between these ancient principles and modern physiology to bridge traditional and contemporary perspectives.

2. Umoor-e-Tabiya and Their Systems Biology Counterparts

The following table provides a comparative view of each of the seven Umoor-e-Tabiya and their equivalent in modern physiology or systems biology:

Umoor-e-Tabiya	Unani Concept	Modern Equivalent	Physiological Function
Arkan	Four primary elements: Air, Water, Fire, Earth	Biochemical elements, electrolytes, and pH	Basis of tissue constitution, metabolic activity
Mizaj	Combination of elemental qualities (hot/cold/wet/dry)	Genetic, epigenetic traits; metabolic type	Governs predisposition to disease, metabolism
Akhlat	Blood, Phlegm, Yellow bile, Black bile	Blood, lymph, hormones, enzymes	Internal environment and systemic balance
Aza	Structural and functional organs	Anatomical organ systems	Structure-function basis of health
Arwah	Energy or vitality circulating in the body	Nervous system signals, bioenergetics (ATP)	Coordination of body functions
Quwa	Powers (natural, vital, psychic) that run organs	Organ functional capacity, enzymatic power	Efficiency of physiological processes
Af'al	Output of all internal processes	Functional output (breathing, digestion, locomotion)	Signs of health or disease

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3. Comparative Analysis

3.1 Arkan vs Biochemical Environment

Arkan corresponds to essential biochemical and elemental composition of the body in systems biology. Like Unani medicine links disease to elemental imbalance, modern medicine links it to biochemical or electrolyte imbalance. [1, 5]

3.2 Mizaj vs Metabolic Typing

Mizaj defines a person’s physical and mental tendencies. Systems biology parallels this with genetic makeup, hormonal profiles, and metabolic phenotypes. A hot temperament may reflect sympathetic dominance. [2, 4]

3.3 Akhlat vs Body Fluids and Immune Signals

Akhlat represent humoral changes. Their modern equivalent is body fluids and immune mediators like hormones or cytokines. For example, excessive yellow bile might correlate with inflammatory markers. [3, 6]

3.4 Aza vs Organ Systems

Aza in Unani corresponds to modern anatomical and functional organs such as heart, liver, kidney. Both traditions recognize organ hierarchy and functional integration. [7]

3.5 Arwah vs Neural and Energetic Networks

Arwah signifies the life force. Its counterpart in modern physiology is bioenergetics (ATP) and nervous system signals responsible for functional activity and consciousness [8].

3.6 Quwa vs Functional Capacity

Quwa reflects organ functional powers, such as digestion or circulation. These are today measured via function tests like GFR, ECG, and LFTs. [9]

3.7 Af'al vs Physiological Output

Af'al are end results of all body processes. In modern physiology, these translate to observable outputs like respiration, motor activity, or digestion. [10]

4. Visual Comparison

Figure 2. Conceptual hierarchy of Umoor-e-Tabiya from foundational elements to physiological functions.

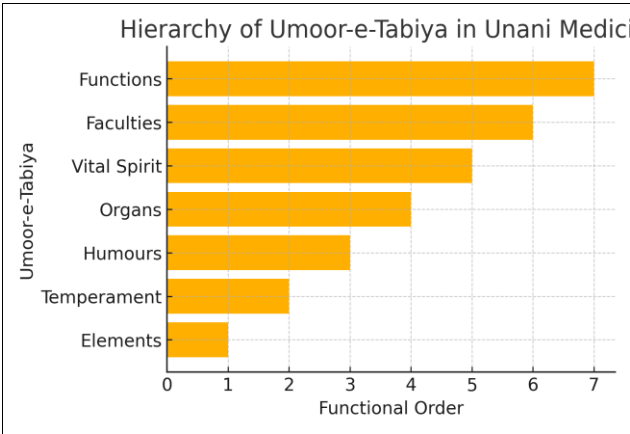


Fig 1: Comparative diagram between Umoor-e-Tabiya and modern physiology

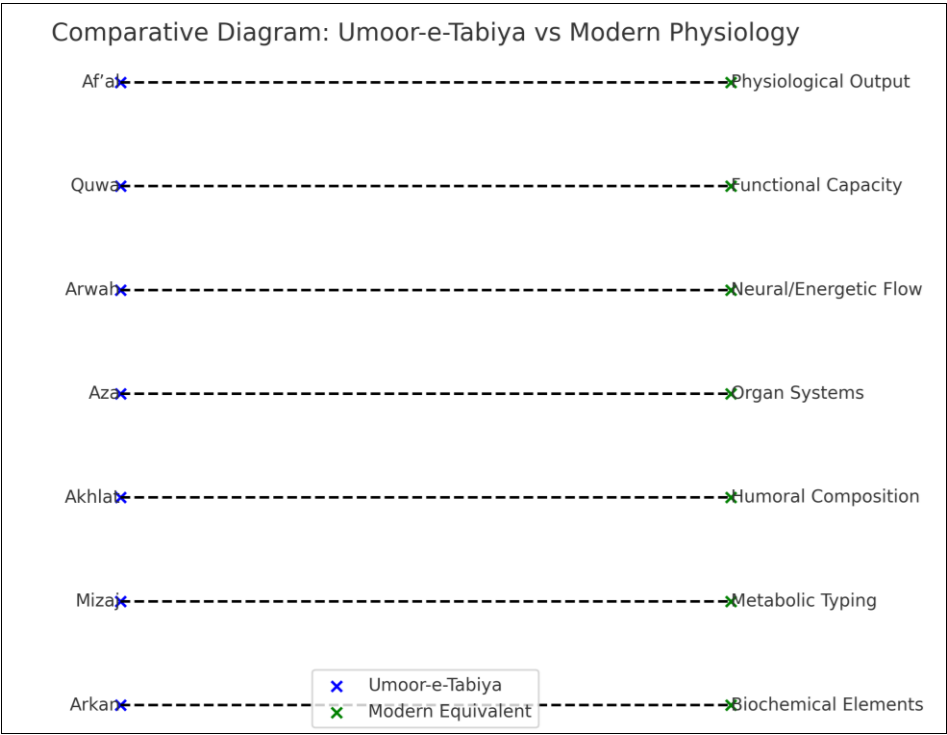


Fig 1: Visual depiction of the comparative mapping between Umoor-e-Tabiya and modern organ-based physiology.

5. Implications and Conclusion

Bridging the principles of Umoor-e-Tabiya with systems biology enhances our understanding of holistic health. This integrative approach supports personalized medicine, promotes preventive strategies, and opens cross-disciplinary collaboration between traditional and modern sciences.

Umoor-e-Tabiya offers a sophisticated framework that resonates with modern physiological insights. Each natural factor maps meaningfully with current biological science, validating the timeless relevance of Unani medicine and encouraging integrative research for better patient outcomes [11, 12].

Conflict of Interest

Not available

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