


Modalization and Transcendence of Health in the Coming Decade: Emphasizing the Human Cognitive System in the Stories of Prophets in the Holy Quran

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What's Known

- The foundation of medicine is "health".
- Medicine grapples with concepts such as the 'soul', 'mind', and 'spirit', and often struggles to accurately elucidate their relationship with the human physical body.
- In Transcendental Medicine, the cycle of establishing health in humans begins with the 'soul'. The soul utilizes the 'intention' or the practical intellect of the human being. This intention, in turn, leads to the establishment of 'mental' health or the individual's behavior. Consequently, behavioral health results in bodily health.

What's New

- In this research, the stages of evolution of the human cognitive system from birth to old age (inner intellect) are compared with the stages of modalization of intellect in the divine messengers (external intellect) as depicted in the stories of the prophets in the Holy Quran. This comparison aims to express the course of evolution, which includes sensory perception, apprehension, imagination, intelligence, and intuition. The medical domains of the future will be sprito-epigenetico-psycho-neuro-endocrino-immuno-pharmacology.

Abstract

In this study, the progression and importance of health knowledge is explored, projecting its future path. We do this by comparing the stages of evolution of the human cognitive system from birth to old age (inner intellect) with the stages of intellectual modalization in divine messengers (external intellect), as depicted in the stories of the prophets in the Holy Quran. This comparison aims to articulate the course of evolution, which includes sensory perception, apprehension, imaginalization, intellection, and intuition. Future medicine will consider the influence of spiritual factors (soul) in the form of human cognition and intention, as well as material effects (genes and biology). The seven medical domains of the future will encompass the field of 'sprito-epigenetico psycho-neuro-endocrino-immuno-pharmacology'. This perspective emphasizes the need for a transcendent outlook in health and medicine. This study employed a library research method, including studies in medical journals from the last forty years.

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Introduction

Developments in Medicine

Before the Renaissance, medical discussions were primarily focused on descriptive medicine. However, with the advent of the Renaissance and the onset of modernity, the influence of the Iranian philosopher and physician Ibn Sina extended to the West. This event led to a new medical paradigm centered on cause and effect.¹ Ibn Sina proposed that disturbances in the soul or psyche could lead to physical illnesses. This concept resonates with contemporary understandings of psychosomatic illnesses, where mental disturbances can manifest as physical disorders.²

Ibn Sina's approach to Sinai medicine involved the extensive use of experimental methods that aligned with contemporary medical knowledge, emphasizing empirical evidence. As the Book of Law documented, Ibn Sina employed experimental methods such as dissection, demonstrating an early form of autopsy practices.³

When we examine the evolution of medicine from the Renaissance to the modern era, four fundamental developments emerge:

1. The Transformation of the First Era (Biological Medicine)

Medicine was approached from a purely biological and experimental standpoint during this era. It was posited that humans share similarities with animals, particularly mammals. The foundation of medical science is rooted in the knowledge derived from experimental biology.⁴

2. The Evolution of the Second Era (Biopsychological Medicine)

Nearly three centuries later, it was recognized that viewing humans solely through the lens of biology neglects that they are more than mere biological machines; humans possess a unique psyche. This realization became more pronounced when the focus shifted from animals to mammals. Consequently, experimental psychology gained recognition and eventually entered the medical realm through clinical psychology and psychiatry.⁵

3. The Transformation of the Third Era: (Biopsychosocial Medicine)

With the beginning of the 20th century, a distinctive psychological aspect emerged in humans, individually and collectively. This unique facet, absent in animals, is humans' collective and cultural psychology. Recognizing this additional dimension, biopsychosocial medicine has garnered special attention. Additionally, community medical groups were established during this period.⁶

4. The Evolution of the Fourth Era (Biopsychosocio-spiritual Medicine)

After the conclusion of the First and Second World Wars, health scholars began to acknowledge the spiritual aspect of human beings. Following the Second World War, numerous studies and research were conducted on spiritual health and its effects on physical health. This surge in research was triggered by three significant events: the emergence of AIDS, the discovery of epigenetics, and the incorporation of spiritual health into medicine as the fourth paradigm. The current scientific paradigm also highlights the effects of human knowledge and intention on emotion, suggesting that balanced emotions can reduce the likelihood of disease.⁷

From 1980 to the present, numerous studies and research endeavors have explored the realm of spiritual health and its impact on individuals' mental and physical well-being. The predictors have been divided into the following groups:

A: This group emphasizes the significant transformation driven by new technologies and their application to biology, specifically highlighting the concept of 'Personalized

Medicine' (PM). Technological innovations and digital medicine are ushering in fundamental changes in the healthcare sector. As a result, there is a shift from a population-oriented approach to medicine to a more personalized one in the 21st century, known as PM, which focuses on individualized healthcare.⁸

B: This group concentrates on understanding the influence of an individual's psyche and environment on their genes. They believe that identifying epigenetic changes triggered by environmental shifts, whether natural or socioeconomic, is crucial for a comprehensive exploration.⁹

C: This group recognizes the influence of the soul on human cognition and intuition (both theoretical and practical intellect) alongside material influences such as genes and biology. The rapid advancement of technology, particularly in the era of artificial intelligence, has sparked fundamental changes and remarkable developments across various fields, including life sciences, medicine, and health. This progression underscores the urgency for future research aimed at designing a suitable model to shape the future of medical sciences in Iran.

An approach that considers genetic differences, environmental factors, and individual lifestyles is crucial in medicine and involves redefining our understanding of the origins and progression of diseases to enhance treatment responses and health outcomes. Accurate measurements of molecular and environmental factors, as well as behaviors influencing health and illness, are key components in shaping a favorable model for the future of medicine and health, which will be achieved through robust future research models.¹⁰

This process involves a thorough analysis of textual content to extract core themes related to the advancement of human intellect. Through this exploration, we reveal a sequential progression in the development of human cognition, consisting of distinct phases: sensory perception, apprehension, imagination, intelligence, and intuition. Unfortunately, in the global community, more attention is paid to discussing health development and medicine from a materialistic point of view (sensory and experimental). Transcendental Medicine is holistic as it considers the intention, knowledge, internal intellect (human cognitive system), and external intellect (divine prophets) to contribute to human health.

The article emphasizes that doctors' engagement in sacred matters significantly enhances scientific productivity. This fusion of scientific rigor with a transcendental approach

enhances the doctor's effectiveness and impact.

Methodology of Research

This research is conducted through a descriptive-analytical approach, exploring explanatory and narrative sources related to Qur'anic verses, the viewpoints of thinkers, and the tales of prophets in the Qur'an. Our methodology in this study hinges on a comprehensive description and analysis of textual content and the extrapolation of verses, narrations, and authoritative sources from libraries to inform our investigation. This study employed the library research method, including studies from medical journals in the last 40 years.

Human Physical Characteristics (History of Genetics)

The complete genetic material within a cell is collectively called the genome, encompassing genes and other DNA segments that do not contribute to protein structure.¹¹ Genomes vary significantly in size and gene count across different organisms. Some viruses with the simplest and smallest genomes store their genetic material in RNA.¹²

On the other end of the spectrum, plants can exhibit a notably large number of genes, with the estimated number of distinct protein structures produced from these genes being around 5 million.¹³ A more precise and comprehensive definition of genes has reduced the number of known genes in the human body, currently estimated at approximately 20,000 genes in human DNA.¹⁴ However, conceptual stagnation is evident in the ongoing nature/nurture debate. A revolutionary shift in medical science and genetics is underway, and the dynamics of diseases are poised to undergo transformative changes in the near future.¹⁵ It is worth noting that the gene expression pattern remains stable in eukaryotic cells, even in the absence of an inducing agent.¹⁶

Epigenetics refers to the process that alters gene expression without modifying the nucleotide sequence. It is associated with the mitotic or meiotic inheritance of variations in gene expression, which occur without changes in the DNA sequence.^{17, 18}

In ancient times, genes were considered as the foundation of human existence. However, contemporary belief suggests that if human intention becomes robust, it may exert control over genes.¹⁹ Therefore, by harnessing the power of our intention, we could potentially eliminate many physical ailments, rendering several engineering fields less essential. This event establishes a connection between

human intention, knowledge, and matter, with epigenetics serving as the bridge between the spiritual aspects of human existence and the physical domain.²⁰

Since 1900, genetics has emerged as a scientific discipline, beginning with Mendel. It has progressed through approximately eleven stages, culminating in the last stage, the interplay of Nature and Nurture.²¹ While genes represent one level of understanding biology as an information process, other levels, such as actual biochemical pathways or mechanisms in organs including the brain, are more accessible than genetic information.²²

Indeed, studying individual genes is akin to peering through a narrow keyhole. However, applying the comprehensive science and technology of genes and information processing in biology reveals numerous exciting developments with current and future clinical applications, offering immense potential.²³ Therefore, the future of medicine need not be dominated solely by machines. A more compassionate and adept doctor, augmented by technology, may be the path forward.²⁴

The Relationship between the Spiritual and Physical Dimensions of Man

The spirit serves as the intermediary between the soul and the body. Consequently, the soul is responsible for coordinating and planning all the faculties of the body. This spirit, derived from God's command, is instilled into existence with varying intensities corresponding to inanimate objects, giving rise to plants, animals, and, ultimately, the supreme spirit. Within the human body, this spirit exercises different degrees of control and management over its components.²⁵ According to Transcendental Medicine, understanding and strengthening the effects of this self-control on the body can help one avoid illness.²⁶

Hence, the soul possesses objectivity and unity across all faculties and levels. Mullah Hadi Sabzevari²⁷ and Hakim Sadr al-Mutalahin noted that the soul encompasses all powers in its unified state.²⁸ It is important to consider the source of intellect, whether it resides in perspective, where the power of reason or rationality lies, or in the realm of imagination. It is worth clarifying that the reference here is to a potent form of imagination, not merely a robust memory.²⁹ In summary, a human being embodies a comprehensive structure, and this structure can be divided into three components:

Body (Jism): The physical body, composed of limbs and material substances, is similar to the bodies found in animals. However, this material

form is more complex in humans and can be considered the most advanced and intricately connected mechanism among living beings. The Qur'an also acknowledges the grandeur of human creation, stating, "You were created great"³⁰

Self (Nafs): Nafs denotes the essence of an individual, encompassing their self, character, the true nature of something, intention, and purpose, which persists and is not lost.³⁰ In Plato's philosophy, the self represents "perfection," signifying the vital functions of nutrition, growth, and reproduction.³¹ Aristotle defines the perfect self as inherent in a natural body with organic characteristics, emphasizing its capacity for growth. The term "perfection" carries connotations of human essence, personhood, and individuality. Using the analogy of a body, we can illustrate the essence of a natural body or an organ to embody this concept.³² Ibn Sina subscribes to the belief that "a pure self in a body is based on the principle of the issuance of haters who do not want to be like this".³³ The human soul encompasses many feelings, emotions, inclinations, desires, and aspirations. Its essence is shaped by a unique journey and experiences, reflecting the individual's inherited or acquired traits.³⁴

Soul (Ruh): The soul, as a dimension of human existence, derives meaning from experiences, making events conceivable. It holds religious concerns, tendencies, and a distinctive relationship with death.³⁵ Ancient Greek philosophers used the terms 'body' and 'Soul' interchangeably, positing that the soul resides in the body, bestowing life upon it and instigating the movement of living beings.³⁶ In the Qur'an, the soul is referred to in the singular form, signifying a profound connection between the human body and the revealed soul, and the human soul is perceived as pure and abstract.³⁷ This philosophical cosmological framework is mirrored in the philosophy of Islamic medicine. Muslim physicians regard the human body as an extension of the soul, emphasizing an intimate connection between the body and soul.³⁸

The center of emotion, known as the limbic system, is located at the base of the brain and includes parts such as the hypothalamus and thalamus. These components form a connection with the pituitary gland through an axis. The hypothalamus plays a crucial role in regulating the pituitary gland, which, in turn, oversees the endocrine system. Despite its small size, constituting less than one percent of the total brain volume, the hypothalamus is highly significant in motivation.³⁹ Its primary focus is on regulating the endocrine and autonomic

nervous systems (ANS). Emotional signals are also transmitted to the cerebral cortex above the base of the brain.

Additionally, the brain stem, peripheral system, and endocrine glands contribute to the manifestation of emotional behaviors.⁴⁰ For instance, the release of adrenaline from the adrenal glands and the terminal branches of the sympathetic nerves has dual effects. On one hand, it facilitates rapid and widespread bodily responses, preparing the body for emergency activities. On the other hand, it induces the release of glucose from the body's reserves, providing additional energy to the body.⁴¹

Continuous emotional upheaval can lead to tension and psychosomatic disorders.⁴² Recent studies in psycho-neuro-endocrinology suggest that the root cause of almost all diseases lies in an imbalance in the emotional system.⁴³

Artificial intelligence can foster a relationship by saving valuable time for those involved in clinical affairs, from nurses to doctors. It can act as a universal health service provider for the patient.⁴⁴ Contrary to a purely material perspective, medicine is not solely concerned with physical aspects but recognizes that health emanates from the soul. Consequently, the science of medicine encompasses elements that contribute to strengthening an individual's spiritual powers.

The Development of Human Cognitive Systems According to Philosophical Perspectives

The development of the human intellect can be understood through five distinct stages: sensory perception, apprehension, imaginalization, intellection, and intuition.⁴⁵ These stages represent a progressive trajectory of cognitive systems and human intellectual advancement. Here, each stage is explored in detail:

Sensory Perception: During early gestation, the fetus lacks sensory perception and resides in a watery environment. As the pregnancy progresses, sensory organs develop, allowing the fetus to perceive and store sensory information. This event begins abstract thinking and lays the foundation for intellectual development.⁴⁷

Apprehension: This stage, which typically extends to the age of seven, is characterized by a human mind that operates within a realm where mental concepts do not fully align with objective reality. Children may perceive fictional elements as real, and their imagination serves as the basis for thinking, remembering, and memorizing.⁴⁷

Imaginalization: Around the age of seven, the intellect emerges, enabling individuals to engage in artistic pursuits, technology, and experimental

sciences. This phase signifies imaginative thinking and abstract contemplation, laying the foundations for adolescent development.⁴⁷

Intellection: Puberty marks the onset of the intellection stage, where individuals gain the ability to comprehend mathematical and philosophical sciences. The growth of theoretical and practical intellect, guided by Islamic law, allows for abstract thinking and reasoning independent of external stimuli.⁴⁸

Intuition: Between 30 and 40, individuals gain insight from proof and reasoning while recognizing the necessity for heart-based understanding. Intuition gradually unfolds, furthering one's comprehension of reality beyond apprehension.⁴⁶

Exploring the Development of Intellect in the Stories of Divine Prophets and the Correlation Between Human Cognitive Systems

The stories of divine prophets in the Qur'an hold paramount importance as educational resources, offering intellectual and spiritual development frameworks. These narratives serve as examples for analyzing human and spiritual progress, acting as benchmarks for behavioral growth. Here, we delve into the modalization of intellect in some of the key prophets (ololazm) mentioned in the Qur'an:

Noah's prolonged efforts to guide his people exemplify the struggle between wisdom and ignorance. He employs his intellect and critical thinking skills to confront the apprehensions prevalent in his society. Noah's struggle against these apprehensions underscores the importance of practical intellect in overcoming challenges and guiding others toward truth.⁴⁹

Abraham's life unfolds in four stages, each marked by the development of intellect and the pursuit of love. From his youth struggling against apprehensions to his migration and eventual submission to God's command, Abraham's journey embodies the modalization of intellect. His story underscores the importance of theoretical and practical intellect in spiritual growth.⁵⁰

Moses' journey involves the struggle against Pharaoh's apprehension and the liberation of his people. His practical intellect enables him to confront Pharaoh with arguments and miracles, showcasing the power of intellect in overcoming falsehood. Moses' story emphasizes the importance of fighting against apprehensions and leading others toward the truth.⁵¹

Jesus, known as the locus of the word, embodies the perfection of theoretical and practical intellect. His miracles are a testament to his practical intellect and deep connection with the divine. Jesus' story exemplifies the manifestation of God's life-giving and creative

power through intellect.⁵¹

Muhammad serves as the culmination of the modalization of intellect. From childhood to adulthood, his intellectual growth encompasses the stages of fighting apprehension, migration, jihad against apprehension, and overcoming apprehension. Muhammad's intellect reaches its peak as he guides humanity towards truth and unity with the divine.⁵⁰

As we meticulously examine the accounts of the prophets as recounted from Adam to the seal of prophethood, it becomes evident that these cognitive and intellectual stages have been manifested in the world through these divine messengers. Much like the narratives of the prophets within the Qur'an, human intellects must initially contend with apprehensions. They then transition away from their hold, subsequently engage in a battle against these apprehensions at the opportune moment, and triumph over them. This iterative process enables the intellect to reach its zenith of refinement and evolution. Guided by the teachings of the prophets and the constructive, regulatory counsel of these profoundly sanctified and inherently sublime beings, the intellect ultimately progresses toward the state of intuition.

Transcendental Medicine

The theory of Transcendental Medicine, rooted in the wisdom of Mullah Sadra, adopts a holistic approach to medicine.⁵² This perspective highlights the interconnectedness of the soul and body, emphasizing the body's healing through the elevation and treatment of the soul. Ancient philosophers and scholars, including Mulla Sadra and Ibn Sina, have consistently emphasized the significance of the soul. Transcendental Medicine places the human soul at its core, recognizing a hierarchy of cognition in humans that includes sensory cognition, illusory cognition, imaginary cognition, intellectual cognition, heart cognition, and revelation cognition. Hence, the modes of human cognition encompass senses, apprehension, imagination, intellect, and intuition.⁴⁴

The significance of the scientific dimension in medicine is underscored by Sezgin's observation that Razi regards medicine as one of the philosophical sciences characterized by argumentation.⁴⁵ This viewpoint aligns with the perspective of Ishraqi Ibn Sina, Henry Carbone, and Seyyed Hossein Nasr, who have illuminated the Enlightenment philosophy.⁵³ In Transcendental Medicine, the pursuit extends beyond merely comprehending the wisdom of the body and identifying the cause and effect of health and disease. This approach involves deep phenotyping and deep learning, aided

by intelligent machines employing machine learning and algorithmic processes. Moreover, this accumulated knowledge is employed to enhance the upward trajectory of the self.⁵⁴

These venerable figures believed that the spirit undergoes gradual development, progressing through evolutionary stages until it attains unity with the spirit of God, who embodies absolute perfection. Through introspection and meditation, individuals can perceive God by contemplating their spirits. According to this perspective, the soul coordinates and plans all the body's powers. Strengthening self-control and recognizing its effects on the body can lead to a state of health, as bodily ailments are attributed to the diminishing influence of self-control over the body. For instance, those who bolster their well-being through practices involving the soul and spirit may experience swift recovery from bodily injuries.⁵⁵

Based on recent insights from pharmacology and psychology, human health can be encapsulated in the figure, providing a clear roadmap for the future of medicine and human well-being. In this model, the individual's soul influences the ego and manifests in physical symptoms. The person, in response, employs substances known as drugs for treatment, a process intricately tied to establishing a harmonious relationship with the human soul and preserving spiritual health.

In broad terms, the trajectory of medicine, from the Renaissance and the first millennium AD, has moved from right to left, grounded in the principles of physics, chemistry, and Newtonian physics. Looking ahead into the new century until 2050, we can observe a shift from left to right. This issue will signify the emergence of seven medical domains in the future: *spirito*, *epigenetico*, *psycho*, *neuro*, *endocrino*, *immuno*, and *pharmacology*. In this framework, the system of will and cognition influences the genetic system, and reciprocally, the genetic system impacts the mind, nerves, glands, immune system, and the effects of drugs—all interconnected in a dynamic web of influence.

The intricate relationship between the immune, nervous, and hormonal systems forms the foundation of neuroendocrine neurology. In today's scientific paradigm, the profound impact of human knowledge and intention on emotions is acknowledged. Therefore, by skillfully leveraging knowledge and intention to maintain emotional balance, individuals can mitigate the risk of diseases and enhance overall health. Many diseases are rooted in mental and emotional distress, and strengthening one's mental resilience can extend to effective

management of the body. Drawing inspiration from the concept of the "perfect man" found in the profound works of Ibn Arabi and integrating it with transcendental wisdom, the evolved form of Transcendental Medicine can elucidate the principles encapsulated in the third dimension of profound medicine—"deep empathy."

However, the concept of health from a transcendental perspective, rooted in Islamic teachings, asserts that human existence encompasses different dimensions.⁵⁶

These phenomena include the body, mind, and soul, whose interaction shapes human health, emphasizing a holistic approach to medicine. In the future of medicine, the source of health is seen as the soul, which influences and activates an individual's intention or practical intellect. This intention, in turn, impacts mental health or behavior, ultimately resulting in physical well-being. Venzmer noted that during the Islamic era in the 8th century AD, magnificent hospitals were constructed in the Islamic world, with the most abundant ones found in Damascus and Cairo.⁵⁷ The interconnectedness of metaphysics, cosmology, and Islamic philosophy is emphasized in this perspective, where the body, soul, and spirit form a microcosm that encapsulates all of existence. This correspondence between the microcosm and the macrocosm is considered the key to understanding existence.⁵⁸ Presently, approximately 1,350 medical schools worldwide share a common objective: training future doctors.⁵⁹ As medical education is dynamic, it should evolve with societal changes.⁶⁰ Therefore, in the coming decade, we anticipate six significant phenomena: nanotechnology, biotechnology, information technology, cognition, intention, and culture.

In the future, advancements in biotechnology are expected to enable significant genetic changes, transforming all human body tissues and organs into younger versions. This breakthrough could lead to the conquering of major diseases and a substantial deceleration of aging. The integration of nanotechnology, particularly microtechnology, has the potential to surpass the limitations of past biology and current bodily functions, offering a revolutionary extension of life. As microtechnology advances, it may address the environmental challenges posed by earlier, less sophisticated industrial technologies.^{61, 62}

This transformative era is envisioned to enhance human qualities such as intelligence, wisdom, creativity, beauty, and love, resembling a spiritual evolution that moves closer to an ideal state. In medical philosophy, there is a perpetual quest for a "face-to-face" relationship between doctors and patients, creating a shared time and

space for mutual understanding. This healing relationship emphasizes that “another body is within my real reach, and my body is within his reach”.⁶³

Moreover, dedicating time to physical and spiritual studies through mindfulness can allow health workers and professionals to rejuvenate and maintain mental well-being. This issue, in turn, enables them to convey and impart vitality to patients, establishing a reciprocal relationship that transforms the state of health and happiness.²³ In light of this reality, one cannot ignore an individual's spiritual, physical, and mental health. The human soul is the pinnacle of existence, the path to ascent to the transcendent realm, and the means of connection to the governing spirit of the universe that permeates everything.

Conclusion

The future of medicine, as described, emphasizes the importance of aligning scientific development with submission to God and humility rather than pride. Transcendental Medicine, characterized by spiritual depth and ethical considerations, is presented as an ideal for the future of healthcare. The absence of such values in the future of medicine might potentially lead to a gap between advancements in healthcare and medicine's ethical and spiritual dimensions.

The concept of Transcendental Medicine, characterized by spiritual depth and ethical considerations, is presented as an ideal for the future of healthcare. In other words, there is a correlation between the evolution of intellect in the Stories of Divine Prophets and human cognitive systems: sensory perception, apprehension, imagination, intelligence, and intuition. The pure human intellect is the most important part of Transcendental Medicine. The stages of modalization of intellect, from Sensory Perception to intuition, serve as a roadmap for individuals aiming to refine their intellect and evolve towards the highest levels of Transcendental and spiritual medicine.

In the next decade, human will face six phenomena. Evolved medicine will include microtechnology, biotechnology, and information technology. Transcendental Medicine will include cognition, intention, and culture. Health and medicine need a transcendent view. It is expressed as a hope that doctors in the future will cultivate their souls, becoming transcendental doctors who prioritize both physical and spiritual health. The reference to the apocalypse and the presence of Imam Asr (AS) suggests a utopian vision where moral and spiritual values become

predominant, leading to complete spiritual health for individuals.

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Authors' Contribution

F.Kh and S.E: Data gathering and interpretation, drafting; SZ.T: Study concept, critical reviewing the manuscript, All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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