

The role of Bimaristans in the development of the medical movement in the Islamic world

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Abstract

Medicine is considered one of the noble sciences and professions that held an important status in the Islamic world in general and in the Islamic Maghreb in particular. Its role emerged as both a science and a craft, especially since it combines theoretical knowledge with practical experience, and it is closely linked to religious and human values. The Holy Qur'an and the Prophetic Sunnah established a legitimate religious reference for medicine, considering treatment and medication as forms of taking the means and preserving life. Hence, physicians combined knowledge and wisdom and endeavored to consolidate health principles and embody them through the utilization of bimaristans and health institutions. Through this study, we seek to highlight the role of bimaristans and health institutions in the revival of the health reality in the lands of the Islamic Maghreb, and to highlight the educational role of bimaristans in the Central Maghreb.

Keywords: medicine, bimaristans, Central Maghreb, health reality, medicine.

Introduction:

In according with the civilizational and intellectual flourishing witnessed by the Islamic world in both its eastern and western parts, the scope of the scientific movement expanded and the transmitted and rational sciences diversified accordingly. Moreover, many poets, scholars, and philosophers emerged who combined literature and science. Interest was not limited to poetry, geometry, and the arts; rather, medicine emerged as a science that attracted multiple interests due to its importance in ensuring people's well-being,

treating epidemics and plagues, and warding off disease from human bodies. Consequently, it received great care from rulers and sultans, who devoted schools to teaching medicine in the various urban centers of the eastern and western Islamic lands. To ensure people's safety and achieve proper and safe treatment, they aimed to build institutions for healing and treatment known as hospitals and bimaristans.

First Axis: Medicine and Its Status in Islamic Civilization

Medicine has occupied a broad place in human interest since ancient times, due to its direct impact on human life and the continuity of existence. Even though people were familiar with primitive methods of treatment in ancient ages, Islamic civilization gave medicine special care and exalted it to the rank of recognized sciences, until it became one of the most refined and esteemed disciplines.

I. The Nature of Medicine

Scholars defined medicine as: "A science through which the conditions of the human body are known in terms of health and illness, and its practitioner is called a physician." It was also said: "It is a science that preserves health and restores what has been lost from it." Thus, it is a science that examines the human body in terms of what maintains health (Al-Jurjani, 1983, p. 89) and what departs from it. Medicine is a theoretical and practical science belonging to the natural sciences (Sina, 1999, p. 200); medical practice involves the treatment of both the body and the soul (Ibn Abi Usaybi'ah, 1965, p. 7).

The Linguistic and Terminological Definition of Medicine:

From a linguistic aspect, medicine is associated with skill and perspicacity. In *Lisan al-‘Arab*, the physician is described as the knowledgeable and skillful person who excels in handling matters. Furthermore, Al-Khalil ibn Ahmad al-Farahidi likened the effect of medicine to that of magic in terms of the subtlety of its influence on both the body and the soul (Ibn Manzur, 1414 AH/1993 AD, p. 112). For, in *Al-Mu‘jam al-Wasit*, medicine is defined as “knowledge of precaution, like magic and habit,” meaning that it combines scientific practice with practical skill acquired through experience and close involvement. Inasmuch as, the *Mutabbib* is the one who practices medicine without possessing sound knowledge of it (Al-Shatibi, 1997, pp. 19-20) and all these definitions disclose that medicine was not a mere technical practice, but rather an art based on wisdom, knowledge, and insight.

Ibn Khaldun, in his *Muqaddimah*, emphasized that medicine is “a craft that examines the human body in terms of health and illness, whereby its practitioner seeks to preserve health and cure disease through medicines and foods.” This definition clarifies the practical, craft-based nature of medicine, as it combines theoretical and experimental knowledge (Ibn Khaldun, 2004, p. 443). What further adds precision to Ibn Khaldun’s definition is his emphasis on the role of nutrition in treatment, a matter later confirmed by modern medicine, which has shown that nutritional prevention is no less important than medication.

The Religious Evidence for Medicine:

In the Islamic conception, the Holy Qur’an and the Prophetic Sunnah framed medicine within its religious dimension. For, the Qur’an indicates that seeking healing and treatment is a righteous act for which a Muslim is rewarded. God Almighty says: “From their bellies emerges a fluid of varying colors, containing healing for people” (Surah An-Nahl) and also: “And when I fall ill, it is He who cures me.” (Surah Ash-Shu’ara) These verses affirm that true healing is in the hands of God Almighty, and that seeking treatment is one of the forms of taking the means commanded by Islamic law.

The Qur’an also describes malady as suffering and affliction, as in the Almighty’s saying: “And remember Our servant Job, when he called to his Lord, ‘Indeed, Satan has touched me with hardship and torment.’” (Surah Sad) This is a reminder that illness is a test of a person and of their patience. As for the Qur’anic guidance, “Eat and drink, but do not be excessive; indeed, He does not like the extravagant,” (Surah Al-A’raf) it represents a major principle in the science of nutrition and health prevention. Furthermore, modern medicine has proven that moderation in food and drink is the foundation of bodily health and well-being (Al-Bukhari, 2002 AD, p. 119). In this regard, many Prophetic hadiths were transmitted that open a wide door for diligence in searching for medicines and developing them. It is also well known that the Prophet (PBH) guided people to practical therapeutic methods such as cupping, phlebotomy, and cauterization, and he even practiced some of them himself, which made them among the approved medical methods in the early Islamic eras. There is no doubt that the adoption of these therapeutic methods during the time of Prophet-hood granted them additional legitimacy and opened the way for Muslims to expand upon them through research and experimentation.

It is noticed from the religious texts that medicine in Islam was not merely a worldly necessity, but rather an act of worship and a righteous intention if a Muslim aimed through it to preserve life, which God commanded to be safeguarded, and this explains the elevated status that physicians held in Islamic societies, where they were regarded as people of virtue and mercy.

As for the physician, the term in the Arabic language refers to “the one knowledgeable in medicine,” and its plural is physicians. It is used to denote the skilled and proficient person in their profession, as well as the gentle and compassionate individual who treats patients, and in *Lisan al-‘Arab*, the physician is described as the man knowledgeable in medicine, skillful and insightful, who masters his profession and excels in it.

The root of the word indicates skill and expertise; hence the physician was so named because he treats patients with insight and experience (Ibn Manzur, 1414 AH/1993 AD, p. 114).

The term physician was also used metaphorically by Sufis, who applied it to the spiritual master knowledgeable of God, capable of healing hearts and refining souls, likening him to the physician who treats bodies. Thus, the physician in the general sense is the one who knows what harms and what benefits a human being, gathers for them the causes of health, wards off the causes of illness, preserves the body in soundness, or restores well-being when it is lost. From here, the concept of the physician in the Islamic imagination became associated with both knowledge and wisdom, to the extent that he was viewed as a comprehensive intellectual who combined medical, intellectual, and literary knowledge.

Second: The Characteristics of Islamic Medicine and Its Status

Among the characteristics that distinguished Islamic medicine is that it was not separated from ethics. For, the physician was required to embody gentleness and compassion, and to adhere to Islamic legal principles in treatment, such as respecting the human body and refraining from using methods that cause severe harm. Ibn Abī Uṣaybi‘a reported that some caliphs used to test physicians not only in their technical skill, but also in their morals and their manner of dealing with patients (Ibn Abi Usaybi'ah, 1965, p. 45), which reveals that medicine was an ethical craft as much as it was a scientific one.

1. **Consultation and Counsel:** The status of the physician in Islamic society was not confined to the clinic or the bimaristan; rather, it extended to the councils of sultans and princes. Inasmuch as, physicians were summoned to advise rulers on matters of public health, and sometimes on political issues related to epidemics and wars. In the Central Maghreb, for example, some physicians held official positions at court, such as the physician Abū al-Qāsim al-Shāṭibī al-Tilimsānī, who became the

personal physician of Abū Tāshfīn I which highlights the value of medicine in both political and social life (Al-Idrisi, 1989, p. 219).

2. Encyclopedic Knowledge and Expertise:

The Muslim physician was not a mere medical practitioner, but was often encyclopedic in culture, combining medicine with jurisprudence, philosophy, and literature, which is evident in figures such as Ibn Abī Jum‘a al-Tallāsī, who combined medicine and literature, or Ibn al-Raqqām, who combined medicine with engineering and mathematics.

This encyclopedic nature made the physician in Islamic civilization a comprehensive intellectual who contributed to various fields of knowledge.

Second Axis: Medicine and Bimaristans in the Lands of the Islamic Maghreb

Bimaristans in Islamic Civilization

Medical care and treatment are closely linked to the role of care and the provision of places of healing. Health care requires facilities and buildings to ensure care and protection from disease; therefore, therapeutic stations diversified and multiplied, leading to the emergence of bimaristans, known today as hospitals.

The term bimaristan is of Persian origin, composed of two words: bimar, meaning the sick or afflicted person, and stan, meaning place or house; thus, its meaning becomes “the house of the sick” or “the place for treating patients.” (Al-Zubaidi, 1994, p. 112) The term became widespread in Islamic civilization to denote public hospitals that were concerned with treating various diseases, whether internal, surgical, ophthalmic, or mental. Over time, the term was shortened to maristan, becoming commonly used in the Maghreb and al-Andalus in particular (Al-Qalqashandi, 1913, p. 441).

I. The Spread of Bimaristans in the Eastern Islamic World:

Islamic sources differ in determining the beginning of the emergence of bimaristans, but the prevailing view is that they first arose in the eastern Islamic world before spreading westward. It is reported that the Prophet (PBH)

ordered the erection of a tent in his noble mosque to treat the wounded, as occurred in the incident of Sa'd ibn Mu'adh, may God be pleased with him, during the Battle of the Trench (Al-Qalqashandi, 1913, p. 441). In the Umayyad period, it is mentioned that the caliph al-Walid ibn 'Abd al-Malik (d. 96 AH / 715 CE) established a bimaristan in Damascus in 88 AH / 707 CE, staffed it with specialized physicians, and ordered the isolation of lepers and the provision of care for them (Al-Tabari, 1987, p. 115).

1. The Emergence of Bimaristans in the Eastern Islamic World:

Bimaristans flourished especially during the Abbasid period, reaching their peak under Caliph Hārūn al-Rashīd (d. 193 AH / 809 CE), who established a large bimaristan in Baghdad under the supervision of his physician Jibrā'il ibn Bakhtīshū'. Subsequently, these institutions continued to develop until they became among the greatest medical establishments in the Islamic world. Among the most famous was the 'Aḍudī Bimaristan, founded by 'Aḍud al-Dawla al-Būwayhī in 372 AH / 982 CE, which included about twenty-eight physicians from various specialties, in addition to a large library and pharmacy (Al-Qalqashandi, 1913, p. 441). In Egypt, Aḥmad ibn Ṭulūn (d. 270 AH / 884 CE) founded a bimaristan in Cairo in 259 AH / 872 CE, equipping it with physicians and specialized departments, including a ward for the mentally ill. The caliph used to visit it every Friday to inspect it and check on the patients (Al-Maqrizi, 1996, p. 365). These experiences laid the foundation for a golden phase in the organization of medicine and health care, making Islamic bimaristans integrated institutions that rivaled the most advanced known in other civilizations.

2. Organization and Functions of Bimaristans:

Islamic bimaristans were distinguished by being integrated therapeutic and administrative institutions. For, at their head was the chief physician, responsible for supervising hospital affairs, examining patients, organizing physicians' work, monitoring practitioners, and even issuing licenses (Al-Qalqashandi,

1913, p. 445) to practice medicine and under his supervision worked a number of specialists, including:

- **The surgeon:** responsible for performing delicate surgical operations.
- **The ophthalmologist:** specializing in eye diseases.
- **The bonesetter:** specializing in treating fractures.
- **The phlebotomist:** who performed bloodletting.

There were also male and female nurses, along with cooks, guards, and clerks, each receiving a fixed salary from the endowment treasury. Bimaristans also had separate wards for different diseases, and special rooms to isolate lepers and the mentally ill, reflecting an early awareness of the concepts of public health and contagion.

3. Fixed and Mobile Bimaristans:

Islamic civilization knew two main types of bimaristans:

1. **Fixed bimaristans:** hospitals built in major cities such as Baghdad, Damascus, and Cairo, which were large institutions equipped with libraries and pharmacies.
2. **Mobile bimaristans:** carried on camels or mules, resembling modern field hospitals, accompanying armies on their campaigns as well as during pilgrimage seasons. Caliph Yazid ibn Mu'awiya (d. 64 AH / 683 CE) was among the first to order the تجهيز of a field bimaristan for his army (Ibn Kathir, 1985, p. 122).

II. Bimaristans in the Islamic Maghreb:

The lands of the Islamic Maghreb in the medieval period witnessed clear interest in the transmitted sciences and economic aspects to revitalize the political entities representing the region at the time. However, with the political developments the region undergo, and the emergence of new political entities such as the Fatimid state, followed by the rise of independent principalities and major urban centers, intellectual expansion turned toward

the rational sciences. Hence, Interest in medicine increased due to its role in warding off disease and achieving prevention and treatment, especially in the face of political transformations. Consequently, medical shops, pharmacies, and bimaristans appeared in major cities such as Constantine, Fez, Kairouan, and other major urban centers.

1. Bimaristans of the Lower Maghreb:

Although the eastern Islamic world preceded the west in establishing bimaristans, the experience later spread to the Maghreb. During the Aghlabid period, a special bimaristan was established in Tunisia for treating chronic and incurable diseases, known as al-Dimna, named after the quarter in which it was built (Ibn 'Idhari, 1980, p. 177). Besides, in the Hafsid period, Sultan Abū Fāris 'Abd al-'Azīz founded a new bimaristan in the al-Nahḥās quarter of Tunis, dedicated to sheltering the sick and the disabled (Al-Qalqashandi, 1913, p. 441).

2. Bimaristans in the Far Maghreb:

In the Far Maghreb, the Almohad caliph Abū Yūsuf Ya'qūb al-Manṣūr (d. 595 AH / 1199 CE) established a large bimaristan in Marrakesh in 585 AH / 1189 CE, adjacent to the Great Mosque. He supplied it with running water, food, and drink, and endowed it with substantial endowment properties to ensure its continuity (Al-Nasiri, 1997, p. 115). Furthermore, it is reported that al-Manṣūr himself used to visit the patients in the bimaristan after Friday prayers, reflecting the importance of these institutions in religious and social life.

3. Bimaristans in the Central Maghreb:

The Central Maghreb (present-day Algeria) was not isolated from this experience, as several bimaristans emerged in its major cities. In Béjaïa, al-Idrīsī noted that after it became the capital of the Banū Ḥammād, it included bimaristans equipped with various methods of treatment, including a special bimaristan for the mentally ill and another for women, it also had pharmacies for preparing syrups and medicines, and food suited to the seasons (Al-Idrisi, 1989, p. 221). On the other hand, Tlemcen followed Béjaïa's example and established several bimaristans, some for the

general public and others within royal palaces. Among the most famous was the bimaristan of Sultan Yūsuf ibn Ya'qūb, which was staffed by physicians and men of letters alike, and in which the physician Abū Jum'a al-Tallāsī was among the most prominent figures (Ibn Khaldun, 1996, p. 325). Further, these bimaristans were also used as shelters for the poor and the needy, providing them with food and lodging in addition to medical treatment.

Third Axis: The Social and Religious Dimensions of Bimaristans

The bimaristan was not just a medical institution; rather, it was primarily a charitable project. For, Caliphs and sultans regarded its establishment as an ongoing charity, and a means of protecting society from epidemics. Further, Many of them used to visit bimaristans personally to check on patients. This ethical and religious dimension is what distinguished the Islamic experience from its counterparts in other civilizations, as it combined science with humanity.

1. The Educational Role of Bimaristans:

Islamic bimaristans were not merely places for treating patients; over time, they developed into educational institutes and research centers comparable to modern universities in their role and function. Medical lessons were held in their halls under the supervision of senior physicians, with students and trainees participating, and the student would receive knowledge from his teacher theoretically, then accompany him on rounds among patients to apply what he had learned in practice (Al-Sa'ati, 1966, p. 112).

Ibn Abī Uṣaybi'a described this experience by saying: "After the physician finished treating the resident patients in the bimaristan, I would sit with him and observe how he inferred diseases, the treatments he prescribed for patients, and what he wrote down for me so that I could study with him many diseases and their treatments. (Ibn Abi Usaybi'ah, 1965, p. 71)" This indicates that education in the bimaristan was direct and practical, based on observation and practice rather than theoretical instruction alone.

Bimaristans also contained rich medical libraries with collections of books that included the works of Galen, Hippocrates, al-Rāzī, Ibn Sīnā, Ibn al-Bayṭār, and others. Both students and physicians were able to benefit from them, making the bimaristan an integrated scientific institution that combined treatment, education, and research (Al-Qifti, 1986, p. 245).

Young physicians were also required to pass practical examinations before being granted licenses to practice medicine, and it were supervised by the chief physician, who tested their abilities in diagnosis and prescribing medication which reflects the existence of an official medical system that ensured the regulation and quality of medical practice (Al-Qalqashandī, 1913, p. 448).

2. Bimaristans as Centers of Research and Development:

The role of bimaristans was not limited to teaching only, they also served as laboratories for experimentation and research. These experiments were conducted on medicines, and physicians' observations of patients' cases were recorded, contributing to the accumulation of medical expertise and the development of therapeutic methods.

Historians mention that many Muslim physicians, such as Ibn al-Nafīs (d. 687 AH / 1288 CE), carried out their teaching and research in the bimaristans of Damascus and Cairo, where he discovered the pulmonary circulation, which confirms that these institutions were incubators of scientific creativity (Ibn al-Nafīs, 1988, p. 89). They also paid great attention to the preparation of medicines, to the extent that pharmacy became one of the principal sciences that developed within bimaristans, being closely linked to medicine. Muslims devoted great care to the study of medicinal plants, their properties, and methods of use. The pharmacist was known as the *ʿaṭṭār* or *ḥakīm*, and held a special status within the bimaristans, as he was responsible for preparing and distributing medicines under physicians' supervision (Al-Rāzī, 2000 CE, p. 177), and medicines were divided into two categories:

- **Simple medicines:** plants, herbs, and substances derived from animals and minerals, such as saffron, cinnamon, opium, honey, camphor, and dissolved gold.
- **Compound medicines (antidotes/theriacs):** mixtures of several medicinal elements, used to treat chronic diseases and combat poisons, especially snake venom. These medical formulations were prepared with great precision, according to specific quantitative and temporal measures.

In the field of pharmacy, many scholars emerged who contributed to the development and proper use of medicines, as stated by the following examples:

1. Ibn al-Bayṭār al-Andalusī (d. 646 AH / 1248 CE):

Ḍiyā' al-Dīn Abū Muḥammad ʿAbd Allāh ibn Aḥmad al-Māliqī, known as Ibn al-Bayṭār, is considered one of the greatest pharmacists and botanists in Islamic history, and indeed in world history. He was born in Málaga in al-Andalus, then traveled to the Maghreb and the East, visiting Egypt, the Levant, and Asia Minor, where he acquired extensive experience in the study of plants and herbs. Further, his most famous work is his encyclopedic book *al-Jāmi' li-Mufradāt al-Adwiya wa-l-Aghdhiya*, which included more than 1,400 plant, animal, and mineral substances, many of which were previously unknown. He was distinguished by precise description, reliance on experimentation and direct observation, and differentiation between similar plants, his book spread in Europe, was translated into Latin, and remained a fundamental reference for several centuries.

2. Rashīd al-Dīn al-Ṣūrī (d. 639 AH / 1241 CE):

Rashīd al-Dīn Abū al-Manṣūr al-Ṣūrī was one of the physicians and pharmacists of the seventh Hijri century, he was renowned for his precision in describing medicinal plants through direct observation in their natural environment, he also authored *Kitāb al-Adwiya al-Mufrada*, considered the first pharmaceutical book to include colored illustrations of medicinal plants, which he

drew himself while collecting them from nature. Thus, this method enabled accurate identification of herbs and avoided confusion between them, a methodology that preceded its time by centuries.

3. Ibn al-Tilmīdh (d. 560 AH / 1165 CE):

Abū al-Faraj ‘Abd Allāh ibn al-Ṭayyib, known as Ibn al-Tilmīdh, was a Baghdadi physician and pharmacist of Christian origin who lived under the Abbasid state and was associated with its court. Ibn al-Tilmīdh combined expertise in medicine and pharmacy and was renowned for compounding complex medicines (theriacs), he introduced rare Indian drugs into the eastern Islamic world and left major works on medicines and syrups. He also contributed to organizing the pharmacy profession in Baghdad.

4. Sābiq al-Dīn ibn al-Sā‘ātī (d. 606 AH / 1209 CE):

One of the physicians and pharmacists of Damascus, he was known for his book on medical drugs, in which he compiled his experience in preparing simple and compound medicines. He was among the firsts to discuss methods of preserving and storing medicines, and he explained the effects of humidity and heat on their efficacy.

5. Sa‘īd ibn Qasūm al-‘Ashshāb (6th AH / 12th CE):

One of the scholars of the Central Maghreb (present-day Algeria), he was known for his extensive expertise in local medicinal plants. Sa‘īd ibn Qasūm practiced herbalism in the markets and served as a reference for people in preparing both popular and scientific remedies, and helped transmit Maghrebi herbal knowledge to al-Andalus and the eastern Islamic lands.

3. Pharmacy in the Central Maghreb:

The Central Maghreb was distinguished by the abundance and diversity of its natural environments, ranging from coast to mountains and desert. This provided wide opportunities for the use of medicinal plants in pharmaceutical practices, where physicians and herbalists excelled in extracting benefits from these plants and transforming them into drugs and medicines to treat various diseases

such as fevers, inflammations, stomach ailments, and skin diseases. Hence, this natural diversity was reflected in the richness and variety of pharmaceutical practices, which became an integral part of daily life in the region.

Pharmacy was strongly present in the bimaristans established in major cities such as Béjaïa and Tlemcen, where specialized pharmacies existed under the supervision of herbalists and directly overseen by physicians. These institutions relied on written prescriptions, reflecting an early scientific awareness of documenting medicines and regulating their use according to precise measures, thereby giving pharmaceutical practice a structured scientific character.

Among the herbs and drugs commonly used in the Central Maghreb were (faklik) for treating scorpion stings, bitter orange peels for stomach pain and preventing putrefaction, (ḥaḍaḍ) and (barberry) for skin and eye diseases, wormwood to combat fever, and (aṭrablā) as a laxative and purifier. These plants were also used in preventive practices, such as disinfecting water and limiting the spread of epidemics, indicating an advanced level of health and social awareness.

Herbalists played a noteworthy social role, as their shops spread throughout the markets of major cities, they sold medicinal drugs, perfumes, and spices, and some combined popular experience with scientific knowledge. In addition, authorities closely monitored their activities to prevent fraud and ensure the quality of medicines, demonstrating that the profession of herbalism was regulated and codified in Islamic society.

Pharmacy in the Central Maghreb was also linked to religious and social dimensions, as endowments were established to secure the purchase of medicines and distribute them free of charge to the poor and needy. Physicians and herbalists considered their work a humanitarian mission connected to the objectives of Islamic law in preserving life. This endowed pharmacy with an ethical and spiritual dimension, combining scientific knowledge with religious duty 37.

This activity was not limited to practical application alone, but extended to authorship, as some scholars of the Central Maghreb contributed to writing dictionaries and treatises on medicinal herbs, such as Ibrāhīm al-Thaghīrī, who authored a specialized lexicon of plants. Over and above, pharmacists also benefited from maritime trade through the ports of Bejaïa and Oran, through which new medical drugs arrived from al-Andalus and the East, enriching the local pharmaceutical experience and increasing its diversity 38.

Conclusion:

This research has shown that medicine in Islamic civilization was not merely a therapeutic profession, but rather an integrated civilizational project that blended medical knowledge with religious vision and a humanistic dimension. Its foundations were based on the revealed texts, which made the preservation of life a legal objective and a human goal, and considered seeking treatment a form of worship and the proper taking of means. This religious foundation granted the practice of medicine in Islam an ethical and humanitarian dimension that other civilizations of that era did not possess. Humanitarian values were also manifested in their clearest form through the establishment of bimaristans, which were not limited to treating the wealthy and the influential, but opened their doors to the poor, strangers, and the needy, and even to the mentally ill and lepers, for whom separate halls and departments were designated. This reflects the Islamic intellectual precedence in the concept of comprehensive social and health care, long before Europe came to know it by many centuries.

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