

The Growth and Development of Medicine in Medieval India: The Age of the Delhi Sultans

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*व्यायामात्लभतेस्वास्थ्यं दीर्घायुष्यं बलं सुखं ।
आरोग्यं परमं भाग्यं स्वास्थ्यं सर्वार्थसाधनम् ॥*

Health is the biggest wealth in one's life. It is the only thing with which all the other things can be achieved in life. With exercise, one can achieve perfect health, happiness, longevity and strength.

Abstract: This article meticulously traces the evolution of medical services and public health in India, from the ancient civilization of the Harappans, through the reign of Ashoka in the Mauryan Empire, to the influence of Buddhist teachings, and the extensive development of Ayurvedic and Unani medicine. Highlighting the significant contributions of Ashoka to public health, the propagation of medical knowledge under Buddhism, and the foundational aspects of Ayurveda, it delves into the origins and expansion of Unani medicine in India, facilitated by Indo - Persian and Greco - Arab influences. The narrative underscores the establishment of healthcare systems, hospitals, and the dissemination of medical knowledge across different dynasties, including the Delhi Sultanate and the Mughal Empire, showcasing the integration of medical practices over centuries. The emphasis on public health, sanitation, and the provisioning of medical aid across these periods illustrates a rich history of medical evolution that underscores the importance of healthcare in the socio - political fabric of ancient and medieval India, offering insights into the development of a healthcare ethos that prioritized the well - being of its people.

Keywords: Ashoka, Ayurveda, Unani Medicine, Public Health, Medical Education

1. Introduction

The story of free medical services and aid provided for the masses can be traced from the time of the reign of Mauryan king Ashoka.ⁱ The references to this can be found in the rock edicts engraved, placed in the look corners of his very vast empire. Each line mentioned in his edicts shows how concern and much attention he gave to his subject's health and public sanitation. Some of them were translated as:

- 1) Everywhere in the dominion of king Devanampriya Priyadarsin, and likewise among (his) borderers, such as the Chodas, the Pandyas, the Satyaputa, the Ketalaputa, even Tamrapani, the Yona king Antiyaka, and also the kings who are the neighbors of these Antiyaka, - everywhere too (kinds of) medical treatments were established by king Devanampriya Priyadarshini, (viz) medical treatment for men and cattle.
- 2) And wherever there were no herbs beneficial for men and cattle (everywhere), they were caused to be imported and planted.
- 3) Wherever there were no roots and fruits, (everywhere) they were caused to be imported and to be planted.
- 4) On the roads, wells were caused to be dug, and trees were caused to be planted for the use of cattle and men.

Ashoka, who was a believer in Buddha, also propagated the idea of telling his neighbors about the need for free medical services and how one can aid the other. His edicts show the humanitarian institutions introduced to his friendly neighbors. The accounts of Fa - Hien state that there were free hospitals and medicine provided for poor and helpless patients. Medical Relief Organization was brought into practice, under which a dispensary with a well - qualified physician was appointed. Every village with almost 5000 people had its dispensary setup. Essential drugs are made

available in local pharmacies. Buddhism paved the way for magico - religious medicine and rational scientific medicine in the process of medical science in India. It is written and believed that Buddha was himself a great physician (bhisakko) as well as a great surgeon (sallakatta).ⁱⁱ He gave essential training to his followers who could handle people with mild health issues and who could retain their health till they needed surgery or medicine. Under his guidance, two learning centers for medical teachings were introduced, one in Thakshasila and the second in Varanasi.

India's Long - Established Medicine

The remains of one of the world's ancient civilizations, the so - called Harappan Civilization, recall the need and importance of public health and sanitation. Steatite seal showing the unicorn, an animal with a single horn, which was assumed as an Indian Donkey by the great philosopher Aristotle, whose horn was considered a miraculous "cure for all ills".ⁱⁱⁱ From this, we can understand that the history of medicine and public health began with these civilizations. The same for India also happened, but it's unknown about the exact time, as we lack authentic sources and evidence. It is known that Vedic medicine lasted in India until the 8th century B. C. when the foundation was laid for the formation of the Ayurvedic system of medicine. A thousand years witnessed the rise and fall of many dynasties and kingdoms in south India. The ancient kingdoms often encouraged the study of Vedas, vedankas, and sastras. It is believed that Ayurveda or the science of life and health was originally included under Vedangas. Ancient lists of sciences include certain branches of Ayurveda and sometimes Ayurveda itself. Dhanyakataka and Andranagara in the north and Kaveripatanm and Kanchi in the south must have been not only great centers of learning and merchandise but also phases of pilgrimage to the streams of patients seeking relief

from a variety of ailments. Pandits and physicians must have taught at the universities of these ancient kingdoms of south India. There is limited literature and inscriptions about this period. Many of the classical works of South India which are still unknown by medical historians need to be studied and researched. India's contribution to medical sciences started through medical Samhitas. These Samhitas carry their own methodological and scientific principles which paved theories for medical education. The Samhitas have standardized ethics and etiquette. Indians have already developed a much higher system of diagnosis and prognostication.

2. Mythology of Ayurveda

Myth reveals that the 'science of life was taught by Brahma from his memory to the lord of creatures, Daksha Prajapati, who imparted the knowledge to 'Aswini Kumar who was a Vedic physician. Who again transferred his knowledge to Lord Indra and so on the knowledge passed on, to generations of physicians.^{iv}

Origin and Development of the Unani Medicine

يَشْفِينِ فَهُوَ مَرَضْتُ وَإِذَا

And when I am ill, it is [God] who cures me."^v

The concept of Unani was not familiar in India in pre colonial medical literature. This discipline was named *tibb* which means medicine. Most of the Indo - Persian medieval literature mention some eminent Greek philosophers. The earliest well - known Indo - Persian medicine work was Tak - mila - yi - Yunani. This was a work composed by Shah Ahl Allah. The book furnishes the traditional of treatment for diseases. It is written in an order from head to foot. Shah Ahl also composed the Tak - mils - yi - hindi which was an Indian perfection.^v

The Greeks laid the founding stone of Unani Medicine. Thus, the theories and practices were also influenced by the Greeks. Greeks had great knowledge on health and sanitation. Greek medicine was given form and recognition by Hippocrates or Buqrat (460 - 377 B. C.) who is considered as the father of Unani medicine. He was the one who tried to rationalise Unani medicine. Because it was freed from superstition and black magic. The tradition of expanding this system was taken over by a group of Greek scholars after the age of Hippocrate. One of the famous among that group of scholars was Jalinoos or Galen. Galen was famous the scholars because he was experimental with his theories. The Unani medicine fell into the hands Arab and actually started developing during the time of Abbasid Caliphate. Eminent scholars and scientists those who were Greeks and Romans were converted to Arabs by the Arab scholars. Rhazes was a very famous Unani scholar, he was known for his work *Al Havi Libre Continents*. According to him words in textbook have less experience than a doctor. The book can be considered as a handbook for Unani medicine as it contains all practical and theoretical aspects of medicine. Another famous writer and a Unani scholar was *Abul Qasim Zahravi*, he was famous for his excellent work '*Al tasreef*'.^{vi} In this book Abul tried to sequence the tools and surgical techniques of that time. He also tried to

picturise the same by offering pictures of tools in his textbook. The term and concept called as 'Walcher Position' so called posture of women during labour was introduced by Zahravi in his book. Many European Medical Colleges have accepted Zahravi's textbook as a must - read book for medical students. By which the status of Unani system of medicine changed and reached at the apex.

By the 10th century, Unani system of medicine was redefined and revised by Ibn Sina. Sina travelled across the globe to collect the scattered documents of Unani Medicine. He gathered the documents and produced his work known as to be *Al Qanun fil tibb or The Canon of medicine*. This was an extensive work done by him. Sina was so famous with his work that other scholars like *Isami* mentioned him in his textbook *Futuhus - Salatin*.^{vii}

Advent of Unani Medicine in India

The Greco - Arab or the Unani Medicine came to India with the advent of Muslim conquerors. These rulers came along with their scholars, healers and physicians. In this way a new culture of medicine began in India. The Delhi Sultans and the Mughals gave these Unani physicians patronage and recruited them in state affairs and as court physicians. There was a straight upward graph which means a peak stage for the Unani medicine in India. Unani was mainly urban based. The very first centre of Unani Medicine was set up in Lahore under the patronage of Khusro Shah. He was son of last Ghazni king Khusro Malik. This was the first official setup for Unani Medicine in South Asia. Unani Medicine was incorporated into the syllabus of medicinal studies. For example, during Muhammad bin Tughlaq's reign tibb was made a subject of curriculum. Also many tibbi madrasas were opened. Firoz Shah opened the first tibbi madrasa inside a deeni madrasa.

The popularity of Unani Medicine began with the establishment of Unani Hospitals or so called as *Shifakhana*s. the initiative was taken by both Sultans and Mughals together. The main intention of such step was to give free and effective medication for the poor and needy. Mohammad Bin Tughlaq also gave immense interest on building hospitals, he sometimes visited these hospitals or *shifakhana*s as a sick person by himself also. The medieval ruler also tried to be practitioners of Unani medicine. Like for example Firoz shah Tughlaq studied the Unani Medicine and worked as hakim while treating his patients.^{viii} Later on, Unani medicine also faced some religious criticism. There were theological and practical clashes existed which actually affected the popularity of the system.

Philosophy of Unani Medicine

In Unani Medicine, there 7 principals for a better functioning of a human body. These are elements (arkan), temperament (mizaj), humours (akhlata), organs and systems (aza), vital breaths (arwah), energy (quva), and actions (afzal). Like ayurveda, the Unani medicine also believed that the human body is a combination four elements like air, water, fire and earth. These elements actually helped in measuring the temperament of a person like hot, cold, dry or moist.^{ix}

Contact and Exchange of Ideas With West Asia

Many of Indian spices and aloes - wood are often found even in pre - Islamic poetry. Names of the Indian drugs, like Kafur (Karpūra), Misk (Muska), Zanjabil (Srhgavera) and ud (Aguru) etc. occur even in the holy Qur'an and Prophet's tradition. Many of the jats migrated themselves to Arabs even before the complete formation of Arabs. They were well versed in Indian medicine. It is also seen that many of the Arab words were actually derived Sanskrit like, Faniz, Tütia, Narjil, Bish and Sandal. A Chinese monarch offered a gift to the first Ummayyd caliphate. This gift was offered in a form of book. Now this was not a simple story or novel book. the book contained some secrets and wisdom regarding Indian medicine, alchemy and astronomy. Many Sanskrit works were translated to Arabic language during the period of Abbasid Caliphate. The Charak Samhita was translated to Persian by Manaka Hindi. And later it was again translated to Persia by Abdu Habin. The Sanskrit book for poison was also translated into Persia by Manaka and Sanjhal. There were trading of Indian medicine towards Middle East mainly Baghdad and Damascus. These were traded by the Arab merchants. Along with trade, knowledge regarding medicines also started exchanging.^x

The Arabs poured at most respect and love towards Indian Medical scholars. Many of the Indian medicine got harmoniously with the medicines of the Arabs. This incorporated product of medicine came back to India along with the Muslim rulers who came to India. The tressure of the European medical system was lost when the great library of Alexandria was burnt. Many Greek manuscripts were kept safely in Arab universities. The loss of books for Europeans and abundant herbal plants in the east.^{xi} Favoured Arab medicine to flourish. The Arab physicians were very keen to learn the Indian form of medicine as the world was really shocked by the tremendous growth in the field of medicine. Delhi was made a key centre for administration and cultural development. More physicians and medical aspirants rushed to Delhi to take over their carrier. Terms for hospitals of the medieval period were named like Bimaristan or Maristan. This actually boosted the Arab's grip on India.^{xii} Sources say that the first hospital was built by Harun - al - Rashid in Baghdad. this was probably built in the ninth century. The Adudi hospital was built by Adud - ul - Dowlah in Baghdad. This hospital was much bigger and had new technology and facilities. These hospitals just didn't play the role of curing people but also attracted medical students from different parts of the country. A number of physicians were invited to Baghdad to run hospitals and to translate the Indian medical Samhithas into Arabic.

The Unani stream of medicine was introduced by Unani Hakeems who was a physician. He came to India along with the Muslim invaders who came to India between the 8th and 10th centuries. This stream of medicine slowly and steadily spread throughout India, especially during the Mohammedan rule. *Abul Kasin* actually changed the definition and the way of surgery in his book. Medicine and surgery were differentiated and separated into two different departments. India was a country abundant resource. Many Unani physicians like Peroz was sent to India to collect ayurvedic textbooks. The country was rich in herbal plants and minerals. Seeing this abundance and the peak of ayurveda,

the Unani physicians started having curiosity over learning the new herbs and medicine of India. So, they gradually started collecting plants and drugs and carefully started learning the medicinal benefits of these plants. Resulting, the Unani development a combination of two great medicine system. It may be concluded that Arabs enlarged their commitment towards public health and medicinal cures. They also poured and offered their respect towards Indian physicians and took their knowledge for further studies. These all can be referred from the sources we get from *Qaisda*.

Unani under the Sultans

The sultans gave more and more attention towards the healthcare of there subjects. This was because they wanted their subjects for political and economic purposes. The interest was not one sided but they also cared about their people and land. During this period (1206 - 90) there was constant fierce struggle for the throne in Delhi. Alberuni's '*Kitab - al - Saidana*' is an Arabic work. Later this work was translated to Persia by Abu Bara b. Ali b. Usman Asfar - al - kashani. This is a translated work and is preserved even today for reference. Jalauddin Khilji gave a progressive development for Unani to grow in India. Sheikh Fiqih Jamaluddin Maghribi was a prominent Physician of his time.^{xiii} Not only scholars and poets but physicians and astronomers were given more status and importance during the Khilji and Tughlaq time. Hisamuddin Marikeli, Maulana Hamiduddin Murtiz, Maulana Sadruddin, son of Maulana Hisamuddin and Maulana Azizuddin Badaoni. Not only these there were Indian Physicians also present. Some of prominent scholars were Nagorian Brahmans, Jayoteyang and Mahchandra were prominent physicians. Jaja was renowned surgeon. Famous physician Maulana Sadrudin would diagnose the disease by just looking at the face of the person. He was very talented and had gained much popularity during his time.

Unani under Alauddin Khilji

Unani flourished and got everyone's attention during the reign of Alauddin Khilji (1296 - 1316). If compared to other dynasties like Ghori, Ghaznavi and Slave Unani become more prominent and practical in India during Alauddin's reign. During Alauddin's time there were skilled doctors, it is referred that there were 45 doctors who worked as professors in universities. Time showed great economic and political prosperity during his time, this attracted brilliant men of intelligence across the globe. Scholarships came from Iran and Central Asia. According to Ziyauddin Barani (a contemporary historian), the most wonderful thing that people saw in Alauddin Khilji's reign was the multitude of great men of all nationalities, masters of every science and experts in every art. The capital of Delhi had become the envy of Baghdad, the rival of Cairo, and the equal of Constantinople due to the presence of men of great talents. Such scholars and savants were present in Delhi that could not be found in the whole world.^{xiv} Barani has given account *Alai Period*, Atibba (physicians) of Alai period had complete skill in medicine and there can be no comparison in them and Hippocrates and Galen in treatment of diseases.^{xv} Badruddin Damishqi, a prominent physician of Alauddin Khilji's reign was an unequalled physician of his time in skill counseling, pulse feeling and examination of urine.^{xvi}

He was so experienced physician that he could smell the urine and say whether the urine was a defect sample or an intermixed sample. Another famous Physician of his time was Maulana Hamid Mautraz who was a genuine orator and physician of his time. His lectures were based on Al - Qanun and Qanuncha. Hakeem Rashid - u - Din Fazl Ullah was the court physician of Mongol ruler Abaqa He became a close friend of Alaaddin Khilji during his visit to India. The sultan regularly sent presents of drugs and oils which were a peculiarity of India.^{xvii}

Unani under the Tughlaq

The tradition of taking the prosperity of Unani Medicine during the reign of Alaaddin Khilji was taken over by the Tughlaq dynasty. The peculiarity of this time period was that rulers just didn't patronise Unani but also studied and became practitioners of the discipline. Although **Ghiyasuddin Tughlaq** didn't give much importance to *Tibb*, but patronized it during his era. He himself bandaged his wounded soldiers when they fought against Khusro Khan. This shows the simplicity and eagerness of the towards his subject and here we see the relevance of Unani practitioners.

Mohammad Bin Tughlaq was not mere a king but also was proficient in other subjects like logic, philosophy, mathematics, astronomy and physical sciences. He was keen in medical science thus he also acquired medical knowledge too.^{xviii} He had given great concern over diseases of Europeans countries, fearing that they would come in India he took long discussions with prominent physicians and scholars of his age. During his time there were about 70 hospitals in Delhi alone and 1200 physicians were enrolled as state employees.^{xix} His main aim was to operate hospitals for the poor and the needy. At times he would visit the patients directly to provide them aid. Mohammad Bin Tughlaq had court physicians like Hakim Khwaja Shamsuddin Mustaufi and Hakim Zia Mohammad Masud Rashid Zangi Umar Ghaznavi alias Mubarakbad. Zia Mohammad who was a court physician of Mohammad Bin Tughlaq wrote *Majmua - i - Zia*. This work was a compiled work of *tibb* and Indian medicine. This work was an extensive work produced during Mohammad Bin Tughlaq's time. Zia tried to expertise in Sanskrit, this was because he refereed ayurveda textbooks. After getting the knowledge of Sanskrit Zia confidently wrote his books which contained information about herbs, surgery, anatomy and digestion.

Feroz Shah Tughluq was the next ruler after Muhammad bin Tughluq. He had also great interest in building hospitals. Before that we should understand that the era of Firoz Shah saw prosperity and peace in Hindustan. There was cultural progress in the society during his time. Firoz Shah believed in not wasting money in wars. So, he decided upon using the money for public welfare and health. From the writing of *Tarikh - i - Firoz shahi* it is well known that he gave importance for the formation of hospitals and dispensaries. The king constructed 50 dams, 40 mosques, 30 schools, 20 monasteries, 100 palaces, 115 hospitals, 100 mausoleums, 10 public baths, 150 wells and hundred bridges as well as a large number of gardens. He gave grants for their upkeep.^{xx} *Futuhat - i - Firoz Shahi* contains many such anecdotes of

Firoz Shah Tughlaq. To quote him: "Moreover, God Almighty gave me the opportunity to establish a hospital to which rich or poor who were ill and suffering from any ailment could come. Here doctors were in attendance so that illness could be diagnosed and medicines, treatment and diet prescribed. The expenditure on medicines, and food was defrayed out of the endowments established for this purpose. All patients, whether resident or travellers, high or low born, freemen or bondsmen come there for treatment and by the grace of God Almighty are cured of their diseases."^{xxi} A large sum of 36 lakh tankas out of the revenues of the kingdom was provided for the expenses and 4200 afflicted persons received monthly allowances. A public announcer (Chaush) used to announce and invite the patients to take advantage of state aid.^{xxii} There was an instrument which was used to find out the position of child in the womb of mother.^{xxiii} This period was considered to be a golden age for medicine in India. Afif writes that Firoz shah attached great importance to Karkhanas. Sultan maintained 36 Karkhanas and did his best to collect raw materials for them. One of the Karkhanas was Daroodar Khana or medical store.^{xxiv} Firoz shah was acknowledged for opening a Unani *tibb* Madrasa inside *denni* Madrasa for the very first time. This actually enabled students and followers to study about religion and along with - it Unani medicine was also taught. Veterinary science also was given considerable amount of attention. He discussed the diseases and treatment of animals in a pamphlet entitled *Shikarnama i Firozshahi*. Veterinary hospitals were also built by him.^{xxv}

Dar - u - Shifa

The Grand Hospital in CE 1595, **Sultan Muhammad Qutab Shah IV** built a hospital known as Dar - u - Shifa (the house of cure) on the banks of the Mossi River. According to the journal *Mahanama*, Dar - u - Shifa had accommodation for 4000 patients and many physicians were appointed for the treatment of the patients. It was perhaps the biggest hospital in the world. There were also good facilities for a nutritious diet.^{xxvi}

After Firoz shah's reign the dynasty was success taken by Ghiyasuddin II, Abu Bakr and Nasiruddin Muhammad. But officially after the death of Muhammad Shah the throne of the sultans came to an end. Since the rulers became weak and and less passionate about Unani. The importance towards Unani became weaker and started falling. After the invasion of Timur in India in 1398 and 1399, he gave an order that each city of his territory should be provided with at least one mosque, one school, one inn and one hospital.^{xxvii}

Again, medical science got its shine back during the Lodhi. **Sikandar Lodhi** took extensive ideas and projects towards medical since during his period. Mian Bhowa one of the very efficient ministers of Sikandar, developed great interest in medical science. He wrote treaties on Indian medicine *Maadan - ul - shifa Sikandashahi*, also called *Tibb - eSikandarshahi*. The book wasn't an easy one. Bhowa while compiling the textbook he actually consulted a number of ayurvedic physicians. And came to a conclusion that Indian medicine and Unani medicine are the most known and perfect healing medicine of all time. Bhowa after the completion of his work dedicated his book to Sultan.

Besides curing diseases, eminent physicians were also appointed on important posts. For example; Ibn Batuta writes about a distinguished doctor Ala - al - Mulk, who had come from Khurasan to India to join the King of India and had been appointed as governor at Janani (a large town on the bank of the river of Sindh) and province of Lahari in Sind.^{xviii}

Closure

The period from 800 B. C. to about 1000 A. D. in India is considered the "golden age" of Indian medicine, mostly due to the emergence of the medical Samhita. The decline of European medicine paved the way for Arabian medicine, in the form of Unani medicine, to gain international attention. Archaeological evidence from ancient India and Rome reveals the existence of surgical tools. These tools actually showcase the relevance of being talented in the field of medicine. Archaeologists suggest that these tools were often used for brain surgery, eye surgery, etc. Rhinoplasty and lithotomies were common medical procedures in India. Ancient civilizations taught us the need for public sanitation and health. People of this civilization put more stress on making proper channels for medication and cures. They also had their own indigenous method of preserving and processing herbs, which they used among themselves. This ensured that each community was self - sufficient. The growth and emergence of new medical schools in earlier times in India reveal that Indians gave more importance not only to war and acquisition but also to the well - being of their subjects. The information gap between the scholars of the east and west was filled once they met each other. Both scholars benefited from the exchange of knowledge and techniques. As they were considered the greatest lifesavers of all time, they were seen next to the gods.

The Muslim conquerors and the people brought into India a system of medicine with which they were familiar. It was the Unani system of medicine. The system was based on philosophy founded by Hippocrates. Later this tradition of system was taken very carefully by the Sultans of Delhi. The system of medicine began its growth from the era of Alauddin Khilji and remained to be in peak till the time of Firoz Shah Tughlaq. The importance of this system was laid and benefited by many people of that time. Kings gave more importance to public health and involved themselves in constructing hospitals (*Shahfanans*) and dispensaries. The key aim was for the poor and needy where the king himself would visit these hospitals as practitioners. The poor and needy were offered free service and food during their treatment. Which was a big relief for them.

Eminent learned students from different parts of the world came to India to learn about this traditional system. Separate universities and platform were arranged for students to take their courses. There were discussions and seminars held for teachers. It actually acted as a refresher course for teachers. The peculiarity of this discussion was that the students also could take part in these seminars. By which the students got a tint of practical examinations. Many of the surgeons changed their carrier to becoming a teacher. Teaching was considered as a very respectful and divine during this period. More importance was given to ethics while teaching medicine and surgery practises. Dissection of human body was considered to be a taboo. So, knowledge and experience

towards internal organ and human structure didn't much develop. By which only simple surgical operations took place.

One should be understanding through this paper that health is the key to a healthy nation. Century back rulers took public health in a very serious note. That's why most of the epidemics and pandemics were curable in India. India should be taking these examples and re - introduce the traditional system of medicine which are very much human body friendly and non - toxic.

END NOTES

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