HISTORY OF MEDICINE

WOMEN PHYSICIANS IN INDIA AND GREECE: SUCCESS AND RECIPROCAL INFLUENCES FROM ANTIQUITY TO THE PRESENT

„Of all the evils of which man has himself been responsible, none is as degrading, shocking or brutal as his abuse of the better half of the mankind; The female sex (not the weak sex)”

Mahatma Gandhi

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Abstract

This article draws comparisons between the place of women in medicine in India and in Greece, from ancient times to the present. It identifies key figures and textual traditions in the practice of ancient Greek and Indian medicine and shows that although women were excluded and marginalized from the practice of medicine, nevertheless they played a significant, unacknowledged role. The focus of the article then shifts to describe the origins of women’s university training in the nineteenth century and the biographies of some of its earliest graduates. Finally, it analyses the participation of women in the contemporary medical profession.

Keywords: woman doctor, Greece, India, Ayurveda, Countess Dufferin, Kalopothakès, Anandibai Joshi.

Résumé

Les femmes médecins en Inde et en Grèce: réussites et influences réciproques entre l’ancienne médecine hellénique et indienne

Dans cet article nous avons établi une comparaison de la place de la femme en médecine en Inde et en Grèce, de l’antiquité à nos jours. Le parcours professionnel des pionnières dans ce métier montre que les femmes ont été exclues et marginalisées dans la pratique médicale. Mais, elles ont néanmoins joué un rôle important, bien qu’il ne soit reconnu par leurs coreligionnaires masculins. Le rappel de la formation universitaire de ces premières diplômées en médecine au XIXe siècle, montre les difficultés qu’elles ont du subir pour s’imposer. Nous terminons par une analyse de la participation des femmes dans la profession médicale contemporaine.

Mots-clés: femme médecin, Grèce, Inde, Ayurveda, comtesse Dufferin, Kalopothakès, Anandibai Joshi.

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INTRODUCTION

At the first glance, the cases of Greece and India do not make for a propitious comparison. On the one hand, Greece is a small country that stretches across continental Europe and almost a thousand islands, with a current population of 11 million people. Its cultural and ideological footprint belies its small size, as Greece is commonly identified as the birthplace of Western civilization and of the democracy. In more recent history, Greece has been under Ottoman domination for nearly four centuries, gaining independence in 1831. On the other hand, India is an immense country, 25 times the size of Greece. It is the second most populous country in the world, occupied by more than 1,300 million inhabitants—120 times that of Greece. India too is an ancient civilization, a land of eternal wisdom and spiritual renewal. During the eighteenth century, Indian states came under pressure from European trading companies, and ultimately the subcontinent was occupied by Britain for almost a century. In its more recent history, India is associated with the non-violent revolution of Mahatma Gandhi, and the origins of the non-aligned movement. In short, everything seems to differentiate these two countries, in terms of demography, geography, and history. If we look more closely, however, and compare these two regions from the point of view of the history of medicine, we receive a very different impression.

Western medicine finds its historical starting point in ancient Greece. This period saw the development of rational concepts that came to define medical thought and practice in Europe for more than two thousand years. The touchstone of these concepts is work attributed to Hippocrates (450-377 BC). The foundations of Hippocratic medicine were the theory of four humours (blood, bile, phlegm and atrabilial). Another aspect was its concerns with the ethical behaviour of physicians, from whence the „Hippocratic oath”. Yet the writings attributed to Hippocrates were a combination of his own observation and the codification of knowledge inherited from India and Egypt.

In ancient India the art of healing was the prerogative of Brahmans. Healing was in the hands of the priests and was essentially a religious practice. The divinized physician, the Asclepius of India, is Dhanvantari. Dhanvantari revealed medicine to human, with the consent of Brahma. Thus, the ethical basis for Indian medicine stemmed from Brahminic or Buddhist charity and from the infinite respect of the disciple for the Master. The two foundational works of Indian medicine—the “Hippocrates” of India—are the Samhita of Charaka and the Ayurveda of Sushruta. In the Ayurvedic tradition, the human body is composed of the five elements that make up the universe (earth, water, fire, wind and emptiness). From an ethical point of view, there are also points of resemblance insofar as both medicines are concerned with professional ethics. Like the Hippocratic Oath, a speech by Charaka focused on the moral imperatives of the profession and gave advice to young practitioners. Both doctrines subject the learning and practice of medicine to very strict moral rules.

This article sets out to compare the status and place of women in ancient, modern and contemporary medicine in India and in Greece. It summarizes developments in medical practice and shifts in the status of physicians, but also provides more in-depth historical snapshots and biographical details.

WOMAN IN ANCIENT MEDICAL PRACTICE: EXCLUSION AND MARGINALIZATION

In ancient Egypt, the evidence of archaeological excavations attests to the existence of a body of female doctor under the leadership of Peseshet, the oldest female doctor in the historical record. This was not the case for ancient India or Greece, where there are no records attesting to women’s formal status as doctors—whom is not to say that they did not occupy a significant role as healers and careers.

In ancient Greece, the title of doctor was not controlled, and any male citizen could establish himself as a doctor. Training in diagnosis, prognosis, and medical procedures was mostly accomplished through apprenticeship to a master, who was often a family member. Indeed, Hippocrates himself was a son, grandson, father, and grandfather of doctors. Despite the lack of formal registration, women were doubly excluded from the formal practice of medicine. First, women were confined socially to tasks within the home and household economy and denied access to education. Second, medicine was considered a divine science derived from the gods, and women and slaves were not allowed to perform its rituals.

Exclusion did not, however, mean the absence of women from the realm of medicine. Women assumed the roles of healers, birth attendants, and nurses: work that was no less valuable for being invisible. The knowledge produced by these healers and practitioners was appropriated by male doctors, whose understanding of the diseases of women was limited to the descriptions provided by midwives. Exceptions to the silence around women healers include Agnodice, born in Athens in the sixth century BC, the first midwife to be mentioned in ancient Greek literature. Another midwife referenced in sources is Phararete, mother of Socrates, who was noted for her ability to transmit the „Maieutic¨ the art of giving birth. These
women enjoyed great prestige and the status as priestesses possessing a supernatural power bestowed by the Gods. Some centuries later, two exceptional women left their mark as physicians: Aspasia (c. fourth century AD) and Cleopatra Metrodora (c. 7th century AD). Aspasia gained fame as a midwife and gynecologist, founding the origins of the obstetrical practice. Cleopatra Metrodora was Greek surgeon who wrote a great number of medical treatises.

These figures were exceptions, not the rule, and the restrictions mentioned above marginalized women to the sphere of gynecology and obstetrics. Women’s exclusion and marginalization within formal medicine would persist until the creation of an independent Greek State and the launch of women’s emancipation as well as the creation of the first schools for girls.

A different story of exclusion and marginalization can be found in ancient India. Although women were hailed in scripture in the ideal form of the incarnation of motherhood and the example of the faithful wife, in daily life women faced discrimination due to the patriarchal regime and caste system. The principal role afforded to women Indian medicine was that of „dais“, midwife, and attendant to women. Dais historically belonged to lower castes and passed their skills from mother to daughter. From the nineteenth century, these „traditional“ attendants came into conflict with practitioners of western medicine.

Whereas in Greece the entry of women into medicine took place under the auspices of the independent state, in India women gained access to formal medical training in the context of British colonialism. In 1885, the Countess Dufferin Fund was founded to provide medical education and scholarships to Indian women. This set in motion the medicalization of childbirth, an objective which continues to be the focus of international and national health policy even as dais and other practitioners of „traditional“ medicine continue to help many women to give birth, especially in villages and slums.

**Women in modern medicine**

The history of women in professional medicine begins in the United States of America in 1849 with Dr. Elizabeth Blackwell (1821-1910), the first woman to earn an M.D. in modern times. The story of the first Greek female doctor also connects with developments in education in North America, as well as in France.

Mary Hooper Blackler Kalopothakès (1859-1841) was born in Athens, studied in Greek schools, and graduated from the Harvard Annex (Radcliffe College). She wished to study medicine, but the University of Athens would not allow women to register. Consequently, she went to Paris to study, becoming the first Hellenic-American to study medicine and practice the profession of doctor. She graduated in 1894 and returned to Greece, where she was the first female doctor. Kalopothakès was an active member of the Union of Greek Women, which played a role during the Greek-Turkish war of 1897. During the war, she went to Thessaly (Volo) to head the hospital of the Union of Greek Women, recognized by the Red Cross as a public utility. After the war, Kalopothakès headed a 12-bed gynecological hospital established by the Union of Greek Women, where she performed surgeries and trained medical students. In 1897 she was elected a member of the Medical Society of Athens. Kalopothakès subsequently opened a clinic for women and children, where she trained public health nurses and tuberculosis prevention, all the while working full-time as a pediatrician. In 1909, she published a report describing rates of infant mortality,
poor hygiene, and tuberculosis, contributing to the development of Greek public health. Kalopothakès died in January 1941, leaving behind the image of a pioneer in medicine and a patriotic philanthropist. The Hellenic Medical Society of New York honours her memory each year by awarding the „Distinguished Female Physician Award” in her name.

In addition to Dr. Kalopothakès, we can mention the achievements of Anthi Vassiliadou, Anna Kastigras, Vassiliki Papageorgiou, Eleni Kosmidou, Isabelle Theotoki and Hélène Emmanuel. Dr. Anthi Vassiliadou graduated in 1894, was appointed in 1902 as a doctor at a woman’s prison, where she began a study of the psychology of women’s prison life. Dr. Anna Katsigras refused a post of obstetric assistant at the University of Athens to devote her career to school hygiene. Dr Amalia Koutsouri-Vourekas (1912-1986), better known as Lady Fleming, was born in Istanbul and was a Greek politician who was a member of PASOK. She studied medicine at the University of Athens, specializing in bacteriology. Having been part of the anti-Nazi resistance during the Second World War, she left Greece and her first husband in 1946 for London. She then worked with Professor Fleming (penicillin discoverer) at the Wright-Fleming Institute at St Mary’s Hospital in London before returning to Greece in 1951. She married Professor Fleming in 1953 (Figure 1).

Women’s access to university medicine in India took place under different circumstances, namely British occupation and rule. In 1869, a woman doctor, Clara Sweris settled for the first time in India. In 1880 the Cama Hospital was opened under the direction of Miss Pechey Phinson, a graduate of the University of Bern. From that point, women’s participation in medical studies began to grow. The first woman to graduate in medicine from the University of Bombay was Franny Camain 1892.

Four years later, Anandibai Joshi (1865-1887) became the first Indian woman to qualify as a doctor (1886). She was a high-caste woman in Indian society. She was married off at only nine years old to a 29-year-old man. When she was only 14 years of age she gave birth to a son, who died because of a lack of medical care in the area. This was influential in her decision to study at the Woman’s Medical College of Pennsylvania, in the United States. Her thesis was „Obstetrics among Aryan Hindus,” and she earned her M.D. at only twenty-one years old. She then returned to India and started working at the Albert Edward Hospital in Kolhapur, where she was appointed physician-in-charge of the female ward. Never very healthy, she died a month before her 22nd birthday of tuberculosis.

Chandramukhi Basu was the first woman to jointly graduate in medicine from an Indian university in 1886, the same year as Joshi’s graduation: a first within the entire British Empire. Battling stereotypes and refusing to fall into the norms of marriage and childbearing, Basu opted, instead, to pursue medicine at the Calcutta Medical College. She earned her degree in 1886, becoming the second female Indian doctor to practice western medicine. In the same year, Kadambini Ganguly (1861–1923) took a different route to medical training. At a time when a woman travelling far from home, let alone being a doctor, was almost impossible to fathom, Ganguly travelled to Britain to study and returned home only after she had LRCP and LRCS degrees attached to her name. Having made a name for herself in an overwhelmingly
male-dominated profession, Ganguly was offered a job at Lady Dufferin Hospital, Calcutta, after which she opened her own practice. In retrospect, Ganguly’s example was a stepping-stone and inspiration for women aspiring to a career in medicine16 (Figure 2).

The next generation of women inspired by these pioneers included Muthulakshmi Reddi (1886-1968), who was born in the princely state of Pudukottai of Tamil Nadu. In spite of various constraints faced by girls in India of her time, she completed higher education, and was admitted into the medical profession. In 1907, she joined Madras Medical College, where she achieved a brilliant academic record. During her college years, she came under the influence of Mahatma Ghandi. Reddi graduated in 1912 to become one of the first woman doctors in India. She went to England for higher studies and she gave up her rewarding practice in medicine in response to a request from the Women’ s Indian Association (WIA) to enter the Madras Legislative Council. She was elected unanimously as its deputy president. She led the agitation for municipal and legislative franchise for women. She was nominated to the Madras Legislative as a member of the legislative council in 1926 and became the first woman to be a member of any legislature in India. Reddi was the author of numerous social reforms. In 1930; she resigned from the Madras Legislative in protest following the imprisonment of Mahatma Gandhi17.

Mary Poonen Lukose (1886-1976) was a doctor and the first female Surgeon General. Mary aspired to be a doctor like her father. She achieved first class marks and a gold medal in her high school exam but was refused admission to the Maharaja College science course because of her sex. Instead, she took another route, becoming the first woman graduate of arts from the University of Madras in 1909. Determined to become a doctor, Lukose went to the University of London to study science, where she was the first Indian student to join the MBBS course at the University of London. She then opted for postdoctoral study in obstetrics and gynecology at Rotunda Hospital in Dublin and attended pediatric training at the Children’s Hospital, Great Ormond Street, London. Lukose returned to India in 1915. In 1916 she was appointed Obstetrician of Thycaud Hospital, becoming the first Indian to hold the post. In two years at Thycaud, she conducted more than a thousand caesarean sections and set up a training centre for nurses. Gradually, the system became extremely popular, and a network of training centres emerged. Like Reddi, Lukose entered politics and in 1922, she became the first woman legislator in Travancore. In 1924, she oversaw the department of public health of Travancore. In 1938, she became the first woman general surgeon of India. It established the tuberculosis sanatorium in Nagercoil. She was president of the YWCA for 50 years18.

T.S. Soundaram Ramachandran (1904–1984) was an Indian physician, social reformer and politician. She was married at a young age—barely fourteen—in 1918, and her husband encouraged her to study. Ramachandran took a medical degree at Lady Harding Medical College in Delhi, qualifying as a doctor at the age of 32 in 1936. During her college days in Delhi, she became friends with Sushila Nayyar and through her met Gandhi. She was immediately drawn to the freedom struggle and she

Figure 3. Second generation of female doctors in India. 
a) Mary Poonen Lukose. c) Soundaram Ramachandran. d) Muthulakshmi Reddi
and her husband were soon in the thick of the Quit India Movement, but Ramachandran did not give up her studies. As freedom neared Gandhi thought she would serve India better by not getting involved in politics. He made her the representative in South India of the Kasturba Gandhi National Memorial Trust and entrusted her with setting up an institution in a rural area that would improve the lot of the poorest of the poor\(^9\) (Figure 3).

**THE CONTEMPORARY SITUATION**

In Greece, as in many other parts of the world, the feminization of the medical profession is becoming more and more evident. The situation in India is in marked contrast to this global trend. Indeed, in India there has been a clear decline of women's participation in the medical sector, despite the presence of many women as heads of hospital services and the relatively optimistic discourse of public authorities. The reasons for this are attributed to the patriarchal traditions of Indian society, which places restrictions on women's choices: as the study of university enrolments makes clear\(^{20}\). At the graduate level, the number of Indian women enrolled in medical studies was equal to that of men in 2010. At the doctoral and postdoctoral levels, however, a gender gap opens and women's participation drops to one-third. Of the estimated 25,000 female students who succeed in their medical studies each year despite difficult competition, many women doctors are lost to the profession because they leave the medical profession to stay at home. The dropout rate after 5 years is high. Consequently, only 17% of the country's doctors are women, compared with 51% of medical students. In rural areas, where the need for doctors is even higher, the rate of female physicians is only 6%\(^{21-23}\).

**CONCLUSIONS**

This article has paid tribute to the extraordinary achievements of Greek and Indian women across history. Their achievements facing social obstacles and professional exclusions are a force that cannot be ignored. The history of women's place in medicine can be as a window onto women's role in society more broadly. In India, women's participation and advancement in medical careers are currently held back by cultural expectations and stereotypes. If women's place in medicine starts to change, it will be a result of the progressive improvement of women's socio-economic status.

Author Contributions:

L.A. conceived the original draft preparation. L.A. and Y.M. were responsible for conception and design of the review. L.A. and Y.M. were responsible for the data acquisition. L.A. and Y.M. were responsible for the collection and assembly of the articles/published data, and their inclusion and interpretation in this review. L.A. and Y.M. contributed equally to the present work. Both authors contributed to the critical revision of the manuscript for valuable intellectual content. Both authors have read and agreed with the final version of the manuscript.

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