ANCIENT AND MODERN HEALTHCARE FOR AND BY WOMEN

By
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Abstract

The topic of women's healthcare has always been a convoluted issue affected by the politics, religion, and culture of a region. As society moves forward, retrospective analysis of history often reveals improved areas, and where progress is needed. It is therefore imperative to reflect on antiquity when striving for equality in modern healthcare systems. There have been few analyses that reconstructed the female patient and practitioner experience based on evidence from ancient texts. By examining the civilizations of Egypt and Greece, I sought answers to questions such as: *What were visits to the gynecologist like in antiquity? Did women ever play a role as medical providers? How did the patient experience differ between males and females?*

In order to contrast ancient texts and modern experiences, individuals from diverse backgrounds in academia and healthcare were then interviewed about their lives and career paths. While some questions were more targeted to their field of study, most were open ended relating to challenges they have faced and different aspects of their job. The most prevalent theme among the women interviewed was that their work ethic and drive had to be much higher than their male counterparts for them to be successful.

Acknowledgements

Without the invaluable guidance of Dr. Rankin – and all of the amazing interviewees – this work would not have been possible. I hope that I am able to pay homage to the tireless efforts of women in academia and healthcare; one day I hope to stand on their shoulders. To the past, I extend my thanks to those who considered medical knowledge essential enough to document and preserve, ego vobis maximas gratias ago.

Introduction

While Humanities-based literature reviews are not the typical theses to come out of the Physiology department, they are nonetheless necessary. As a double major in both the Humanities and STEM, I felt that blending the two studies would be vital in order to truly represent all my interests and capstone my final year. Embarking on this research, my goal was to learn as much about the "history of medicine" as possible. This quickly proved to be a tall order, and, as I eliminated options, the topic of "healthcare for and by women" continued to pervade my mind. As women's healthcare continues to be a hot topic in modern politics and society, I wondered what evidence existed regarding the same issues in ancient times. By juxtaposing modern and ancient practices, I hope to shed some light on the ways in which society has improved, and where progress is still required. Regarding the contemporary interviews, I wanted a more comprehensive view of the types of people in healthcare, how they achieved their positions, and the sorts of challenges they faced in becoming successful. The culmination of my research can also be found in a poster format in *Appendix B* and a broad timeline of women's history is shown in *Figure 12.*

My classics studies lead me to study abroad in Greece, and I was able to conduct precursory research throughout the mainland and the Cycladic Islands. I then made a special detour to a tiny island off the coast of Turkey – Cos – where I was able to walk amongst the botanical gardens of Hippocrates and examine his doctrine more closely. These visits were invaluable for fleshing out my Greek medical knowledge while inadvertently steering me towards the study of women. In my later perusal of medical texts and commentaries, nearly every text followed the same format, which placed gynecology and women's health at the end, just before the index. The structure was usually a history of medicine, important male physicians,

diseases, and specialized branches of medicine, such as OB/GYN, at the end. The notable exceptions to this were texts that focuses predominantly on female health. As of the 2017 report from The World Bank, women make up slightly more than 49.5 percent of the global population, and yet so often our bodies are treated as an afterthought and we are tacked on as deviances from male anatomy. With a Physiology Department made up of a large proportion of female faculty and students, I feel that it is necessary to know the history of the female practitioner and our place in modern healthcare.

Unfortunately, we live in a society that, for women, often demands the extraordinary but expects mediocrity. The purpose of this thesis is therefore to highlight achievements made for and by women in the realm of healthcare, modernly and historically, keeping in mind the various, omnipresent pressures of society. I would also like to acknowledge that this account is by no means all encompassing, and that the women discussed here are for the most part cisgendered; this was done not to intentionally exclude, but rather for ease of information, and as a result of the unfortunate exclusion of LGBTQ members from history – for those interested, I recommend looking into the life and insights of Dr. James Barry, a transgender male and fascinating figure. The goal here was not to prove or collect evidence for a specific hypothesis. Instead, I sought to voyage into the unknown for more information and return wiser and more informed about our healthcare system.

Background

We can thank a human popsicle for our earliest glimpse into antiquated medicine. Ötzi the Iceman was found in an amazingly preserved condition in the Alps in 1991, and his belongings and body have hinted at shockingly advanced forms of medicine from the Stone Age,

around 3,300 BC. Based on charcoal tattoos on his body, and the variety of fungi and plants found with him, researchers believe his people had developed early forms of acupuncture and herbal medication (Solly 2018) (Wilford 1998). Although the contents of his bag do not give any information about women in healthcare, they do suggest a rudimentary, widespread knowledge of medicinal plants that could be used by non-physicians. Around the same time, the Ayurvedic medical system was being formed in the Indian subcontinent and this knowledge is still used today throughout the world as alternative or supplementary medicine. While Eastern Asia continued with its Ayurvedic practices, Egyptian medicine was also blooming, and from this great, African empire comes the earliest recorded medical doctrines and one of the first "Father's of Early Medicine", Imhotep.

Egypt

As a man who Sir William Osler once called "the first figure of a physician to stand out clearly from the mists of antiquity," not much is known about Imhotep. It is understood that he served many roles in ancient Egypt: chief vizier (equivalent to a prime minister or chancellor) to the pharaoh Djoser, an engineer for Djoser's pyramid, a high priest of Ra, and later a physician for those working on the pyramids, with dates ranging between 2980 and 2600 BC. His possible contributions to the Edwin Smith papyrus following his discoveries on injured workers has some scholars claiming "Imhotep as the grandfather of occupational medicine" (Brant-Rauf 1987: 69). Following his death, Imhotep was deified as the Egyptian god of medicine, and there is evidence of votive offerings left in his honor. Similar votive offerings were commonplace in Greek healing ceremonies millennia later, and in Greek Christian Orthodox religion in modern times.

Figure 1. A bronze statue of Imhotep from the National Archaeological Museum in Athens. June 9, 2018.

Scholars have gathered an impressive amount of Egyptian medical knowledge from the bodily remains and representations of disease in art; however, John F. Nunn claims that "the most important sources of our knowledge are the medical papyri" (Nunn 2002: 24). Several of the papyri relate specifically to gynecological medicine, and thus give an expansive look into the treatment and maladies of women in ancient Egypt ranging from around 1825 BC with the Kahun papyrus, to the Carlsberg VIII papyrus in 1300 BC. The Kahun Gynaecological Papyrus is the oldest from Egypt, and the second oldest medical text – just behind some third millennium BC clay tablets from the Mesopotamian civilization. Although it is highly fragmentary, the Kahun papyrus is typically divided into 34 paragraphs and four sections. The first portion gives instructions for how to treat different illnesses predominantly affecting the reproductive organs, then provides a script for diagnosis, and instructions for tincture production. For instance, a typical entry in the Kahun Papyri would read as follows:

> *Treatment for a woman suffering in the wandering of her*
>
> *own womb. Diagnosis: Thou shalt say as to it: 'What is the smell that*
>
> *causes to be perceived?' If she says to thee: 'I am emitting*
>
> *the smell of roast meat,' thou shalt say as to it, it is the [inner*

> *wrappings of the womb]. Treatment: Thou shalt do for it: fumigate her with every sort of roast meat, the smell of which she emits. (Griffith n.d: 2)*

Such descriptions and treatments are found throughout the papyri, and may be varying degrees of offensive to the modern, western reader. The trope of the wandering uterus, for instance, (see *The case of the "Wandering Womb"* for more details) is found consistently throughout ancient texts and is believed to have originated in Ancient Greece. Nowhere in the Kahun Papyri are there instructions on examining the female patient, whereas later papyri do include instructions on examining male patients. Whether this is a result of the fragmentation or in relation to the gender of the patient cannot be determined, but at the time of its writing, the physicians relied mostly on subjective symptom reporting. This suggests that, at the very least, female patients had autonomy in seeking treatment, and their self-reported symptoms were believed. Nunn sums up the Kahun Papyri as "disappointing to the medical reader" due to the fact that its contents relate little to gynecology "and nothing at all about obstetrics" (Nunn 2002: 35). Unfortunately, for those interested in ancient Egyptian obstetrics, the later Ramesseum IV and Carlsberg papyri are either badly damaged or contain the same information as the texts from Kahun. However, because the information between the papyri seems consistent, it can be assumed that the treatments were widely used, seen as effective, and performed over long periods of time. Thus, the treatments of Imhotep for female patients might have looked similarly to those prescribed a millennia later.

What we know about female Egyptian patients mostly comes from the gynaecological and obstetric methodologies in the aforementioned papyri. Nunn cites "a certain reluctance" towards the bizarre gynaecological treatments and "concepts of modesty" as the reasons women might have avoided female-related healthcare (Nunn 2002: 191). In an early form of a

pregnancy test, women were made to urinate on emmer and barley seeds, the growth – or lack thereof– would then determine if the woman was pregnant and the gender of the baby. This technique was then tested in 1963 by Dr. Paul Ghaliounghui and his team to varying degrees of success but seemed to be "a good indicator of pregnancy" if not the birth sex (Nunn 2002: 192). In my exploration of ancient Egyptian gynaecological papyri, most of the remedies involve vaginal pessaries or fumigations of various unpleasantness, which undoubtedly discouraged women from seeking treatment. After all, alligator dung as a contraceptive may have been effective due to its alkalinity, but abstinence would probably have been seen as a more appealing alternative.

The Egyptians famously held the human body in high regard, so dissections were unlikely performed until the Greek physician, Herophilus, began studying at the Alexandrian library around 300 BC (Loukas 2011). Instead, many of the references to anatomy found throughout medical papyri can be attributed to the embalming process of the dead. Herophilus' absorption with medicine has made him an unlikely champion of female healthcare. Through his studies, Herophilus compared male and female sex organs (he called ovaries "testicles" and drew resemblances between seminal ducts and utero-ovarian ligaments) while working on what he intended to be a doctrine on midwifery from a science perspective. Longrigg remarks that his investigation of reproductive organs yielded data that "were a considerable advance upon the rather primitive beliefs previously held" (Longrigg 1998: 91). Additionally, Herophilus wondered if women were more prone to certain conditions, which he concluded was not the case excepting menstruation, gestation, and other reproductive processes (Dobson 1925: 23). While we know today that many of these conclusions are not accurate, Herophilus' contributions to the medical community and the study of female anatomy should not be overlooked, despite the

sensitive time in which he began his controversial dissections. Instead, he shed light upon topics and organs that were otherwise avoided and may have been dismissed. Note that in Fig. 2, there was already an instilled sense of motherhood and nurturing when regarding the uterus, which could be translated literally as "mother of mankind".

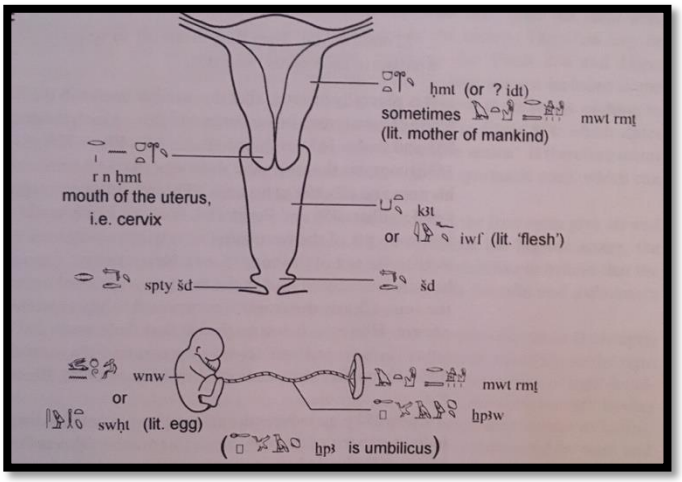


Figure 2. A diagram showing the Egyptian understanding of the female reproductive organs, the placenta, and fetus (Nunn 2002:47).

A common misconception regarding female healthcare is that no there were no women practitioners in the ancient world. While this is true on the large scale, there are a few documented cases of females serving in a medical role. For instance, around the same time as Imhotep, there is evidence for a female doctor known as Peseshet. During a time when medical education was thoroughly systemized, Peseshet is documented to have been the "lady director of lady physicians" suggesting that she would have overseen other female doctors in addition to her duty of looking after the health of the king's mother (Pahor 1992: 1249). In a video recreation of a day in Peseshet's life, it is suggested that she also practiced on commoners – male and female alike (Cox 2018). Nearly everything known about the Peseshet originates from a single stele (a type of gravestone or commemorative stone plaque common in antiquity) found in the tomb of her son Akhethetep; but she is thought to have practiced around 2500 BC when the great pyramids at Giza were under construction. Her status as an aristocratic woman who was an "acquaintance of the king" may have ensured the survival of her name by earning her a stele

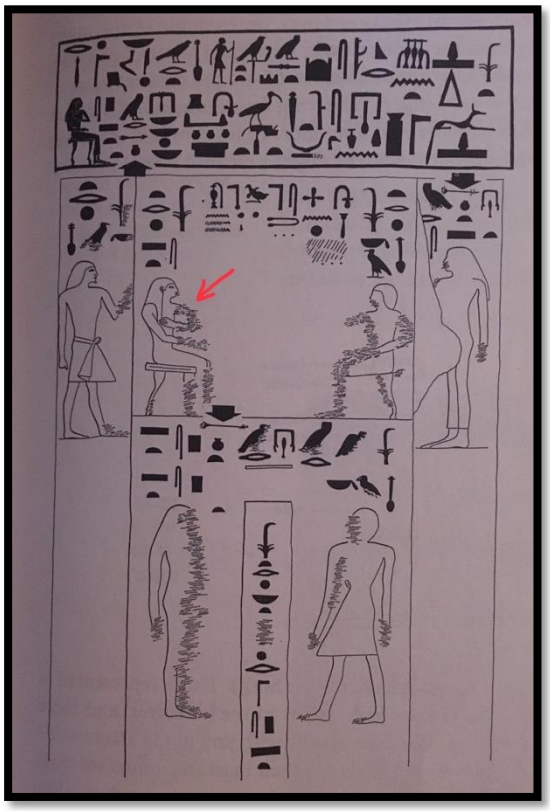


Figure 3. A restored sketch of Peseshet's stele. The red arrow identifies the physician, note that she is placed in equal size and position to her husband, shown seated across from her (Nunn 2002: 125).

whereas there is no other documentation of female physicians. Peseshet is remarkable in the inscription in regards to both her size (in that it is the same as her husband's) and her numerous titles, suggesting that the females were necessarily marginalized and that doctors were highly regarded (Harer 1989: 961). Another Egyptian female doctor comes two millennia after Peseshet, when a woman named Tawe is mentioned, but little besides her name is known. By this point, Egypt was part of the Roman Empire, but it is suspected that female family members "provided medical care in the home, just as in every other civilization" (Dawson 2005: 43). This view of females as nurturing caregivers can be seen as both damaging and intrinsic to the female gender. On one hand, if women are understood to be caring for scraped knees and fevers at home in antiquity, then we can look for evidence of them in that capacity in ancient texts. However, when women then step outside or reject that role, they are frequently seen as lesser by society, but are immortalized by history. For instance, the ideal woman in Athenian Greece according to the countless accounts of male authors was demure, chaste, and devoted to rearing a family. By contrast, the women who deviated from the societal expectations, such as the poets Sappho of Lesbos, and the Roman Sulpicia, are still remembered today by their own words and represent some of the attitudes of ancient women in more oppressive societies.

A common theme throughout most of ancient medicine is that diseases could be attributed to the supernatural or divine. This is true of the Egyptians, who commonly used spells in the treatment of disease, and especially of the Greeks, who worshipped several gods for deliverance from affliction. Mario Bunge sums up this interaction, saying: "the sick person in the ancient world paid two fees: to his healer and to the god in charge of his particular disease" (Bunge 1919: 2). Among the two most commonly worshipped gods for the Greeks were Apollo and Asclepius, and they are mentioned in the opening lines of the original Hippocratic Oath: "I swear by Apollo the physician, and Asclepius, and Hygieia and Panacea and all the gods and goddesses as my witness, that, according to my ability and judgement, I will keep this Oath and this contract" (Greek Medicine 2012). Hygieia and Panacea were both goddesses of healing but were worshipped less than Apollo and Asclepius, and for more specific maladies.

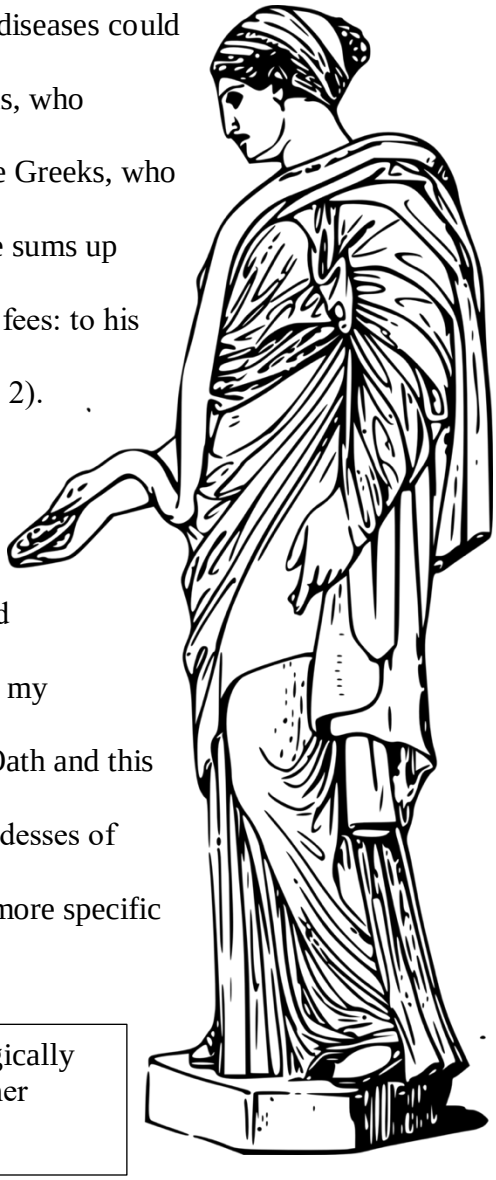


Figure 4. A depiction of the goddess Hygieia, her name it etymologically related to what we now call "hygiene" and she is shown here with her patron animal, the serpent. (Public Domain (n.d.)).

Greece

The myth surrounding the god Asclepius sadly begins with the murder of a his mother at the hands of his father, Apollo. The god Apollo was infamous for his pursuit of women, and during one escapade he impregnated the mortal woman Coronis. Coronis choose to be with a mortal lover, and Apollo killed them both in a fit of rage, burned her body on a pyre, and cut his son Asclepius out of Cornois' womb in the first ever Caesarian section. Asclepius was then sent

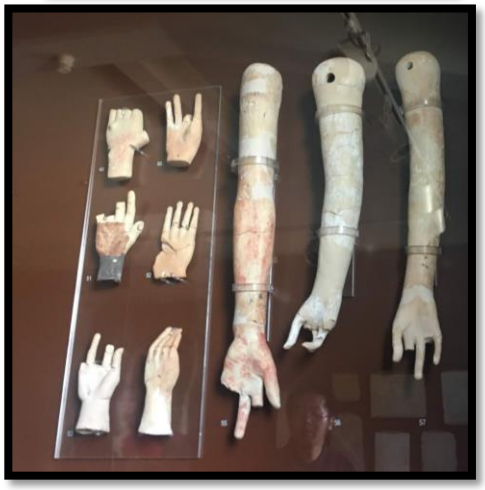
to live and learn with the centaur Chiron, from whom he learned the art of medicine and eventually surpassed both his teacher and father in terms of his skills as a physician. According to the myth, Asclepius became so good at healing that he was actually bringing people back from the dead. This angered both Zeus – god of the heavens – and Hades – god of the dead– as there were then too many people on earth and too few in the underworld. As a result, Zeus struck down Asclepius with a thunderbolt, deifying him in the process. James Longrigg describes the cult of Asclepius as "the most influential healing-cult in ancient Greece…[which] spread to the Aegean, Asia Minor and Egypt" (Longrigg 1998:11). Today, there still stand remnants of temples from the fifth century BC for Asclepius, known as Asclepions, throughout Greece with the two most prominent in Epidaurus and Cos.

Figure 5. Shown here is the view from the uppermost tier of the Asklepion in Cos. This structure had different uses for each level and included beds for hundreds of patients at a time. Located within walking distance from Hippocrates' botanical gardens and headquarters, his pupils and generations of physicians following him likely came to the asclepion to treat patients. July 8, 2018.

The Greeks believed that they would be healed by visiting these structures and undertaking several ritual steps. First, the visiting sick were purified (this sanitizing step alone might have aided in their recovery) and then instructed to sleep in the adyton, or the deepest, holiest portion of the temple. The floor of this room was famously crawling with snakes – one of the holy animals of Asclepius – and the priests would then interpret the worshipper's dreams for instructions on how to heal their particular malady. Such treatments appear to have been available for women as well, based on written accounts as well as feminine votive statues left at

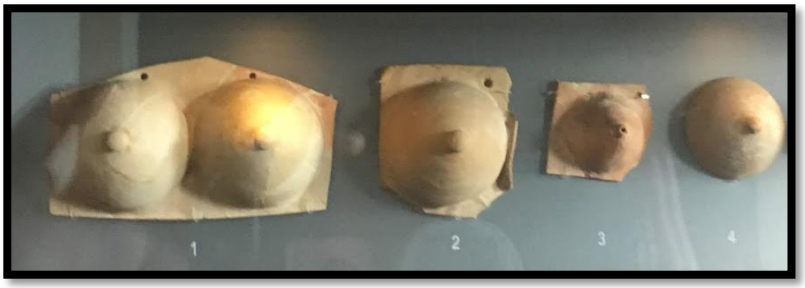
the sites. The Roman author Claudius Aelianus recorded one particularly interesting tale of a woman visiting the Epidaurian Asclepion in his work De Natura Animalium. After her local doctor was unable to cure her worm, Aelianus wrote that:

> *...she went to Epidaurus and begged the god to free her from the parasite. The god was not there, but the attendants made her lie down where the god was in the habit of healing...But the servants of the god began to treat her and removed her head from her neck. Then one of them inserted his hand and drew out the worm...But they were no longer able to fit the head in place and restore it to its usual fitting. Then the god arrived and was angry with them for undertaking a task beyond their wisdom and he himself with the irresistible power of a god restored the head to the body and raised up the suppliant. (Longrigg 1998: 12).*



This passage reveals several key things about Greek healing ceremonies. First, it suggests that women had some degree of autonomy that allowed them to seek treatment and interact with the priests and gods. Whether this was a result from her status (upper class women would have had more freedom and financial means than their lower class counterparts), or she was in some way accompanied, is unknown, but the tale and others like it still suggest women visitors were not uncommon. Secondly, Aelianus' text supposes a more intimate relationship between the gods and people. This is seen in most Greek/Roman mythology as well, where men and women can speak to the gods more directly, whereas Egyptian pharaohs mostly acted as godly conduits by

passing divine words along to the people. The votive offerings were carved by artists and sold to the sick as gifts for the deities; the statues were typically in the shape of the body part that needed to be healed and then were left in specially-made stands in or around the temples. These votives are similar to the Milagros of the modern Hispanic culture or the Tamata of the Greek Orthodox church.



Figures 6, 7, 8. Various votive body parts found at healing temples throughout Greece. The two above show legs and arms respectively. To the left are carved breasts. June 17, 2018.

Among the earliest accounts of disease in Greece comes from Homer's Iliad when the god Apollo sets a plague upon the Greek army. This tale is notable for two interconnected reasons: firstly the god Apollo, who is typically the god of medicine among other things, becomes the afflicter, and secondly, Greeks do not try to treat their sick because they understood disease as having a divine cause. Through the lens of an ancient society, diseases and illnesses such as epilepsy became holy and marked people as prophetic. This was the mentality in most civilizations at the time, and the Greeks are remembered as the first to transition to what we know as "rational" medicine. With this understanding of health, disease and sickness do not have a divine cause, but rather are due to imbalances within the person and natural causes. James Longrigg emphasizes that "this emancipation of medicine from superstition" paved the way for medicine to develop as a science whereby the world could be explained "in terms of its physical constituents" (Longrigg 1998: 28). It is therefore thanks to the Greeks that medicine first evolved from an art dealing with the supernatural to one managing natural causes.

Perhaps the most famous figure of antiquated medicine is Hippocrates, the man remembered as the " Father of Western Medicine", who is known for maintaining the idea of Rational Medicine. The truth of his life likely lies somewhere between the shrouded mythology and the heroized caricature, but he is know to have lived around 460-375 BC, and was born on the Greek island of Cos. I was fortunate enough to be able to take a solo trip to Cos and learn more about Hippocrates at the International Hippocratic Foundation (IHF). Many works are attached to his name regardless of veracity, so traveling to his birthplace and where he taught enabled me to obtain the most undiluted information.

From the International Hippocratic Foundation, I was able to gain insights into Hippocrates' stance on female healthcare and patient examination. Hippocrates' observational skills were notoriously thorough and closely resemble modern osteopathic methodology. He collected not only subjective patient information, but also observed all the various bodily secretions of the patient and took into account the diet and culture of the person. Hippocrates was also very knowledgeable about embryology and obstetrics. According to the IHF, he would examine chicken eggs at different gestation times to enlighten himself about human fetuses. Although a line in the Hippocratic Oath states, "I will not give to a woman a pessary to cause abortion. But I will keep pure and holy both my life and my art" Hippocrates himself did not disagree with abortion, as is widely assumed. In fact, this line is often used incorrectly by people with a pro-life stance, and can even be found on the American Right to Life organization's website where they then write "medical schools still commonly administer a Hippocratic pledge but sadly, in pro-abortion cultures, they have removed the promise to not kill an unborn child...abortion is wrong because it's a baby, and it's always wrong to intentionally kill a baby" (The Hippocratic Oath and Abortion 2017). While most people would probably agree that the

deliberate killing of a living infant is immoral, Hippocrates would likely disagree with their pro-life agenda and this pathetic appeal. Instead, this line instead refers to his refusal to "administer vaginal ovulas impregnated with toxic substances" as Hippocrates had probably observed necrosis or vaginal damage from pessary treatments containing noxious substances (Obstetrics and Gynaecology (n.d.)). The IHF also notes an occurrence wherein Hippocrates instructed a singer to "jump up and down seven times, her heels touching her hips" in order to spontaneously abort a six-day old fertilized ovum (Hippocratic Obstetrics (n.d.)). While this methodology might not be an actual abortifacient, the intent behind the instruction supports the idea that Hippocrates was not against abortion, but rather against substances that would cause undue harm to the patient. He also performed embryotomy procedures using his own tools and medicines – further evidence that he was not against abortion, especially when the health of the mother was in jeopardy.

While Hippocrates is praised for his contributions to medicine, the Greeks, like the Egyptians, do have some evidence for female practitioners. Despite being the birthplace of democracy, ancient Greece was a more trying country for women as they were not seen as equal to their male counterparts. This meant that women could not vote and that they were discouraged from writing or studying science. In fact, most of what we do know about the lives of ancient Greek women stems from their centralized role as child bearers, and that they are otherwise on the periphery. The ancient woman going into labor faced many challenges, many of which are outlined in the Hippocratic treatise, *Epidemics*. Not only did none of the modern, lifesaving techniques such as blood transfusions, sterilization, and ultrasound exist yet, but the women who successfully delivered were at high risk for puerperal infection, characterized by fever, malaise, uterine tenderness, and an 80-90 percent mortality rate (Demand 1994: 75). This

illness affected not only the ancient Greeks but women as late as the nineteenth century, and many of the cases can be attributed to bacterial infections resulting from unsanitary tools and hands.

According to the Roman Author, Gaius Julius Hyginus, around 300 BC, Athenian women were dying during childbirth as there were no midwives (this has been deemed inaccurate as evidence for midwifery is evident from before Hyginus's time) and their sense of shame prohibited them from receiving treatment from a male physician. He goes on to write of Agnodice, a young Athenian woman, who, desiring to study medicine "cut her hair, put on male clothing, and entrusted herself to a certain Herophilus for her training" (Nunn 2002: 191). Agnodice would then travel to women in labor, and, when they refused treatment, she would lift her tunic to reveal that she was a woman. Although the legitimacy of her life is not known, Agnodice became a powerful symbol and set a precedent for the inclusion of women in medicine.

Figure 9. A drawing of Agnodice exposing her breasts to prove she is a woman when she was put on trial for possibly seducing her patients as a male physician (Public Domain (n.d)).

The Hippocratic Corpus is a vital collection of nearly sixty works ranging from the fifth century BC to the first century AD that are either attributed to Hippocrates or his teachings. The collection provides significant insight into the history of medicine, and is especially helpful in

studying women's medicine. In her research, Nancy Demand studied the specific text, *Epidemics,* from the Hippocratic Corpus, to examine how female patients were being treated. She noted that the descriptions of the female patients did not significantly differ from their male counterparts, and that despite there being fewer female than male patients documented, there "is no suggestion that the physician involved himself less in the care of his female patients than that of his male patients" (Demand 1994: 48-49). While there did not seem to be a difference in the treatment of female patients, Demand interestingly suggests that the gender of an infant being delivered may have affected patient outcomes:

> *Given the general preference for male offspring in Greece, the complications following the birth of female infants [five out of six cases were female where infant gender was mentioned] in the Epidemics might reflect less attentive postpartum care given to mothers of girls by midwives and other care givers, motivated by lower social support (financial or emotional) for such women. (Demand 1994: 49)*

While this supposition may be compelling, overall Demand did not find much evidence for gender bias among Greek doctors. In the cases where female menstruation might have been blamed as the cause of illness, "the doctor took pains to characterize the grief as *prophasios,* 'with a cause'" (Demand 1994: 51), meaning that ancient Greek doctors may have had more sense than to dismiss female irritability as simply a symptom of menstruation than some of our 21st century politicians. There does, however, persist the trope of the wandering womb throughout the Hippocratic Corpus, a topic so perverse in ancient medical texts, that it deserves its own section.

The case of the "Wandering Womb"

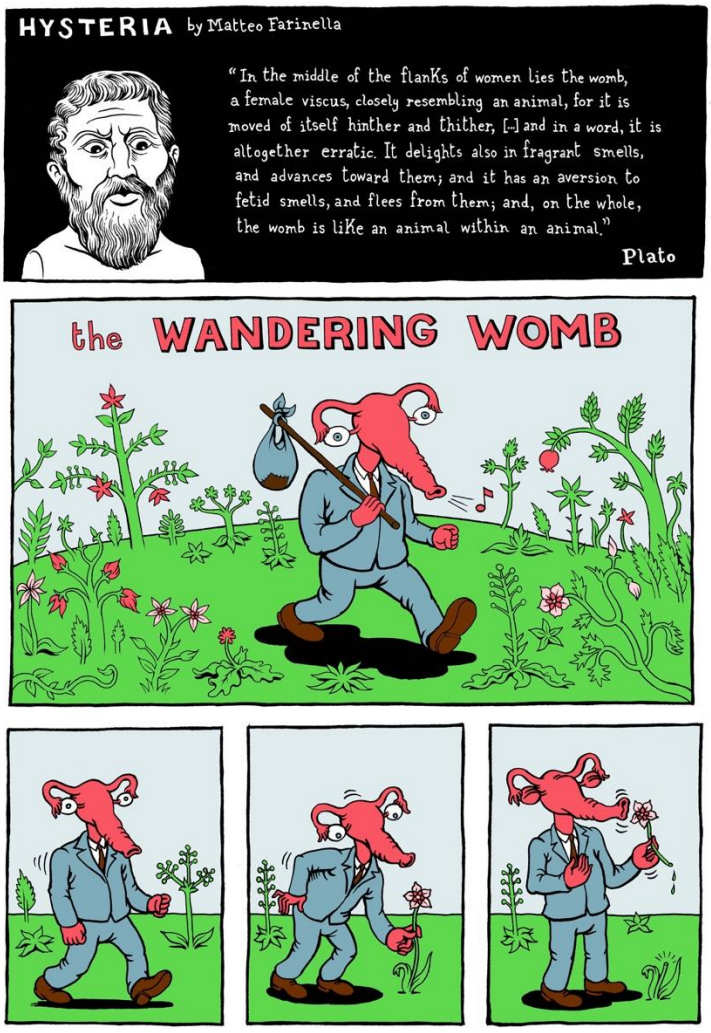


Figure 10. This modern comic by Matteo Farinella is the opening to a larger satire series on the wandering womb. (Farinella (n.d.).

Not much perusal of ancient texts is required to find misconceptions and inaccuracies regarding not only the female body, but medicine as a whole. Perhaps the most comical is the trope of the wandering womb, which, although it can be found throughout ancient world, there is some debate as to the origin of the idea. While Ilza Veith in her *Hysteria: The History of a Disease* describes the earliest displacement as originating in Egyptian papyri, another text argues that ancient Greece was the source of the mobile womb (Merskey, Potter 1989). Regardless of the point of origin, the "wandering womb" related the idea that the uterus was able to travel throughout the female body and cause various maladies. The diagnosis of a displaced womb was used to describe many female pathologies and continued to Freudian times. It was commonly known as the condition of hysteria. In Hippocratic times various scents and pessaries may have been used to appease the uterus, which was sometimes personified as a sentient creature with its own desires and needs. Although the original intentions of treatment may have been pure, the attribution of hysteria to feminine qualities has been damaging to the female profile throughout time. In more recent history, the description of

women as “hysterical” and thereby weaker can be seen as a form of suppression. Art and literature alike capitalize on this trope, from the prescribed slap across the face in films when a woman shows strong emotions, to short stories like Charlotte Gilman’s 1892 *The Yellow Wallpaper*. The history of hysteria is very dark and full of inappropriate treatments plans for serious pathologies. The subjection of women to such treatment was especially rampant in the nineteenth century and is an area I am interested in for future research. Overall, the wandering womb embodies the idea that ancient descriptions of medical ailments can have lasting effects on following societies.

Advice from the Present

Although women have long been categorized as nurturing due to their close association with child birthing and rearing, as time progressed and gender roles became more instilled within cultures, women were given less autonomy and expected to be subservient. Thanks to large scale movements (eg. Suffrage) down to the influence of individual people, each day progress is being made to counteract negative gender stereotypes and allow for gender equality in more fields. To understand the experiences within our own region, I interviewed seven people currently living and working within Tucson. Of these people, six are female researchers, practitioners, or students, and the male is an OB/GYN. Initially I had hoped to be able to connect with a larger range of people, but even amongst this smaller group, a surprising number of commonalities emerged. While each person had unique attributes and life experiences, all of the female interviewees emphasized the importance of hard work and persistence.

Identity	**Number**
Total	7
Females	6
Researchers	2
Practitioners	3
Students	2
Parent	5
Older than 40	5
Person of Color (“non-white”)	4

Figure 11. A table showing the main demographics of the interviewees.

The first person I interviewed was a female researcher examining the effects of botanicals on the body. Her work now primarily surrounds turmeric, which has been an essential medicinal spice for centuries. When my original plan was to examine the history of medicine, I happened upon a text that discusses the therapeutic effects of various spices once used in ancient times through a scientific lens (Aggarwal et al. 1950) and which has been a source of interesting connections between this interviewees’ work and that of ancient medical practitioners. For instance, the book has an entire section covering turmeric including the various receptors, mechanisms, and clinical applications the plant may provide. The authors list “antioxidative, anti-inflammatory, and anticancerous effects” among the therapeutic benefits for the active ingredient curcumin, and believe that understanding the mechanisms to these actions would “ultimately prove to be helpful to the designing of safer and more effective drugs in the treatment

of human cancer" (Aggarwal et al. 1950: 416-418). Meanwhile, the female researcher discussed that in her studies of human inflammatory processes, she happened upon the protective effects of turmeric and, due to her newfound interest, began studying botanicals. As an interesting aside, this particular interviewee informed me that, in ancient Greece, the bark of the willow tree was once used to treat pain for women in childbirth as it has an active ingredient similar to aspirin. It was fascinating for me to talk with someone who has primarily conducted research for decades and stressed the importance of remaining scientifically skeptical even towards one's own work. Throughout the interview I was astounded by the persistence of the interviewee; even after being told by her boss that, "her husband would be very pleased to know what the benefits were [to a job with no pay]", she showed up, claimed an office, and continued her work. The same researcher was told "you don't need salary support because your husband has a job" by another director, and has only received salary support during the last three years of her work, despite having worked in the same department for years.

Unfortunately, such gender-related biases are not as uncommon as I had previously thought. As someone who has grown up thinking that the discussion of women's pay was well in the past, hearing nearly every female practitioner and researcher share a similar story was a source of great consternation for me. While these conversations were several decades ago, it is disheartening to know that women have treated this way, even under the guise of workplace equality, and that such pay bias has continued well into the twenty-first century. The level of devotion this researcher displays for her work is undoubtedly one of the many reasons why she is successful.

In my interviews, I asked people about their previous diversity training. Excepting one individual – a student who was trained in social justice and inclusion for an on-campus job –

none of the interviewees had any formal diversity training. This astounded me since several of the people have worked in or are currently holding diversity and inclusion-related jobs. After earning her diversity position, one practitioner took it upon herself to seek out diversity training so that she could best create educational material and seminars for students and those under her supervision. The same practitioner, in addition to the male OB/GYN, a female surgeon, and a female researcher all lauded over their department's diversity and praised the efforts that have been undertaken to ensure a diverse group of people within each department. Two of these people also shared their beliefs regarding the importance of representation within their field for potential healthcare providers and patients. The male OB/GYN discussed the pressure he felt to present himself in a manner that would encourage other males to join the field. He said that "[the field of OB/GYN] is going very predominately female, and one of our goals should always be to strive for equity. We know from how difficult it was to crack open those male dominated fields that we do not want it to go to one dominant gender or another. We know that if potential students do not see people who look like them, they wont consider a field as easily." Similarly, a female family doctor said that representation in the Tucson community is essential for inner city high school students, as they often to do not receive one-on-one time with a physician and therefore do not consider medicine as a career because "they do not have that representation. We [the department] try to have a variety of involvement in the program that would represent our patient population." Prior to these interviews I had not given much considered to the importance of opening up more fields to men. However, striving for equality by breaking down systemized gender roles and expanding opportunities to all people regardless of race or gender, should mean equal representation in all career paths.

Of the people interviewed, four of the women are from a non-European background including two women of African origin, a Korean student, and a Lebanese student (while there is some debate over whether people of Middle Eastern descent should be considered people of color (POC), for the sake of this paper she shall be considered "non-white"). During the interview, I asked each person if they had personally experienced or perceived any gender-related biases. Interestingly, among all of these non-white interviewees, they cited not being able to distinguish whether biases they had faced were related to race or gender. In the case of an African American DO, she shared that "it is a little hard for me to distinguish if it is gender or racial, I think in some cases they are interlocked together. On top of that I am a DO in an MD world, so it is hard to distinguish which is being targeted." The same doctor sourced the case of a patient who was adamant that a white, male medical student was in charge rather than the DO as one situation where she could not tell if she was being discriminated against. Both of the two students interviewed have aspirations for a career in medicine. One of them was recently accepted into a physician's assistant (PA) program in the southern United States whereas the other is hoping to apply to MD programs in the next year. When asked about her acceptance, the future PA student admitted she felt discouraged from pursuing her goal due to her being a minority, and she feared that she was accepted into the program to satisfy diversity requirements rather for being a qualified applicant. This is an unfortunate circumstance related to the complex issue of affirmative action and the resulting "diversity quota" that has left minorities and women confused about their own qualifications. An interesting area of future research may be the examination of healthcare field opportunities for suppressed people throughout history. While this was not my own main goal of study, two of the females I spoke with are passionate about caring for underserved populations. The one is a doctor working in family practice who works

within the Tucson community in conjunction with medical students and residents to form mobile clinics for pregnant women. She cites this work as her "greatest love", and placed great emphasis on the importance of understanding a patient's circumstances to best care for them. The other is a regional research coordinator whose project centers around creating a national database of medical information. As part of this project, her goal is to ensure that there is fair representation of people from each region, so she oversees work with the Arizona indigenous populations to best respect their autonomy while also provide the same benefits to them as the other participants.

My interview with the male OB/GYN was one of the most insightful conversations I had during the course of this process. I was initially hesitant about the opinions that he might have of female healthcare, but this apprehension quickly transformed into appreciation when I shadowed him. I was able to watch first-hand the compassion and deep respect with which he regarded his patients. He said that although he frequently has patients who prefer female doctors, some of them actually seek out male OB/GYNs in the cases where they have felt that their issues had been dismissed by a female physician. He also noted that some of the roughest pelvic examinations he observed were conducted by women, and that when men act dismissively towards female patients it is written off as bad or patriarchal behavior, but if "a woman does it to another woman, it is somehow super stingy." When I asked him if he felt the regulation and discussion of female healthcare was being fairly governed, he shared that he believed that "anytime you have disparities across the country regarding access to birth control or abortion, then no, its not fair…you actually have two forces that are always pushing things in two directions. One of them is the progress of the science and the progressive education of the physicians, and the other is attorneys and they are sitting there waiting for bad outcomes."

According to this interviewee, some of the most regressive aspects of medical equality are the complicated laws surrounding access to healthcare as well as the potential monetary gain driving both new doctors who are deeply in debt due to their education and lawyers who are able to profit off of perceived mistakes.

Due to the complex tangle of religious doctrine, science, and gender roles that have been interwoven in societies throughout the years, there can neither be a definite conclusion regarding the role of women in women's healthcare, nor a clear solution on how equality should be achieved. Since ancient times, the subversion and oppression of the female body has become ingrained in western society, and while great strides have been made in recent years, it has become evident to me through these interviews that we should by no means stop pushing for change. On the other hand, each of the conducted interviews offered hope and showed that even across the timespan of an individual career, progress can been made.

Each of the people interviewed were incredibly gracious and willing to help me. Three of the women offered me contact information for their colleagues, and two of them sent me follow-up information and articles relating to what we had talked about previously. Regarding the inclusion of women in medicine and professional fields, many of the interviewees shared similar opinions. Interestingly, two female interviewees likened female success to climbing a ladder while also alluding to the extra tasks that fall upon women. One of them stated that "as you go up the ladder, women fall off…women still do most of the work at home [in addition to being present in the workplace] and this is not necessarily true of their male counterparts". The other shared with me an article related specifically to the networking of professional women and the tendency for successful women to maintain a close group of female contacts who help each other climb the career ladder (Yang et al. 2019). I find that this article parallels my interviewing

experience remarkably well in relation to the support I received. Coming into this project I was incredibly terrified by how much I did not know about my own topic. In wanting to seem informed for interviews and know more information as quickly as possible, I actually stressed myself out much more than was necessary. But each time I hit "stop" on a recording and walked away from a successful conversation, I was struck by how much the people I interviewed wanted me to succeed and wanted to support my endeavor. Rather than muddle my own words with their invaluable advice, the following are some truly notable quotes offered to me about life, careers, and being a woman:

- "It is your responsibility to know yourself and be honest about it. And that's not to know a perfect self, it is not about how you qualify that self, it's about being comfortable in your own skin… if you are not authentic, you are going to be lost. If you do not define yourself clearly and own by your definition, other things will define you" – Female researcher
- "In medicine we always look for the people with the most funding; but that does not necessarily make them the best people for leadership positions" – Female Surgeon
- "The only way to leave your mark on time or history – if this is something that you want to do – is by touching the life of somebody else. It's not by the structures that you build, its not by the things that you do, its by how you made other people feel"– Female researcher
- "The thing is finding your passion, what it is you love that jazzes you and makes you feel like this is worth doing. And as long as you can do that or motivate somebody else to do that, you're okay. Its when you cant do that anymore then you start asking yourself what am I doing here" – Female DO

- "It [male dominated healthcare] is something we need to age out of…we could certainly use more advocates, and a lot of the time our patients become advocates for too, and they can really move the bar. I think it is getting better, but again I think regarding getting women and unrepresented minorities into leadership positions we just cannot give up at this point. We can't just say 'oh we got it'. We will slide right back down" –Female surgeon
- "For women, somehow, because we are playing catchup and we are trying to prove that we can do *this* and we have got *this* and we have *earned our right* to be there and to be heard, sometimes in the drive to do this thing that we are doing –because we already know that we are going to have to work twice as hard – in trying to do that we are also doing everything else. And our male counterparts are not necessarily doing those things" – Female researcher
- "Sometimes you just start to think 'oh this has just got to be me' because they make you feel that way...its actually very isolating, and it is isolating to be in the leadership position anyway. But it is really awful when they act like you aren't doing your job when in fact you are doing your job quite well. Its just not the way that others would do it" – Female surgeon
- "If we can manage to extend grace to the people around us, we get a whole lot more done. we don't have to agree. That's the beauty of our understanding that everyone has value. It's not only the people who look like me, sound like me, have done what I have done. Value comes in so many different ways – and thank goodness for that." – Female Researcher

Reflection

On my embarkment of this thesis I was quite uncertain what the final project would look like, what I should be searching for, and what questions to ask. However, I never would have reached out to the people I interviewed if not for the appeal of this research and the encouragement from my wonderful advisor. Throughout this project I was truly given the freedom to pursue what I found interesting and really format my own research around my findings rather than following the typical lab format or pursuing an answer to a hypothesis. It is not often in science that we are able to blend literature reviews of the humanities and classical works, and I greatly appreciated the autonomy I was allotted for my own interests.

Many of the interviewees are people who I one day want to be, and others showed me careers in healthcare that I had previously not considered. These women are strong and have successfully defeated gender roles while leading a life they are proud to live. By making the interviews anonymous, I feel that the interviewees were much more willing to be honest about their experiences. However, as a trade off for the candor, one of the limitations in making the interviews anonymous is my inability to fully describe all the wonderful deeds these people have done. Many of the interviewees hold multiple positions, and thus reducing them to just the label of "researcher" or "student" feels unjust and unrepresentative of their work. I also feel that, most of the time, undergraduates are focused only on the career or track that they want to go into and therefore neglect to speak with people from other fields. However, since no one works within a vacuum, it was really enlightening for me to witness the overlap between difference specialties and fields.

One of the most frustrating aspects of this project is that I am unable to include all of the interesting subjects I read about, heard of, and researched. In ensuring paper fluidity, I had to

sacrifice some fascinating information. Hopefully, this material – such as maternal impression theory and ancient Greek interpretations of ensoulment – can be an opportunity of future research for me. I would also like to explore more of the reasons behind the eventual suppression of women and LGBTQ populations by speaking with people within the gender studies realm. Overall, I was able to garner some invaluable information and advice that will undoubtedly inform how I move through my future in medicine and my life in general.

Broad Timeline of Women's Healthcare

Figure 12. To the left is a broad timeline of women's healthcare. While by no means all-encompassing, this figure includes areas of future research as well as interesting historical figures who impacted on healthcare for women.

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Appendices

Appendix A

List of Helpful Resources Regarding Ancient Female Practitioners and Patients and Areas for Future Research

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Appendix B

Poster Presentation Titled: *Ordinary Women cannot be Successful*