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WOMEN IN MEDICINE: PAST, PRESENT, & FUTURE

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Since the beginning of human existence, women have been the healers, the caretakers, and the midwives in civilized society. Evolutionary psychology tells us that women have adapted to fit this role through natural selection, that we are somehow predestined to be caring and nurturing and to ensure the health of our families and communities. We are the mothers and the healers, expected to take on both the physical and mental healthcare of the people around us, yet we have only recently cracked through the glass ceiling separating us from mainstream acceptance into Western medical schools and the field of Western medicine. Western medicine has been widely dominated by men since ancient Greece; in the Middle Ages, this was intensified by the witch trials in which women healers and midwives were persecuted for practicing medicine, and the folk healing traditions in northern Europe were almost completely eradicated from written history. Despite this, however, women have been seen to be both numerous and significant in healing and healthcare throughout history. In this paper, I trace women and their role in medicine throughout history, with discussion mainly focusing on Western medicine, but Eastern traditions in medicine are also briefly examined.

Literature Review

To begin our journey around the world and through time to examine women's role in medicine, let us first look at ancient Egypt. It is here that we find where "medicine probably started" (Serageldin, 2013, p. 1). Serageldin (2013) goes on to discuss Imhotep, whose name was recorded not for his conquests, but for his contributions to knowledge and science more than 5,000 years ago (p. 1). He was an advisor to Pharaoh Zoser, an engineer who built the stepped pyramid of Saqqara (a "precursor" for pyramids to come), and a physician who started the "first true medical revolution": that disease was to be handled by observation, diagnosis, and

treatment rather than by “magic” (p. 1). According to Serageldin (2013), “Egyptians would later deify [Imhotep] as the god of medicine” (p. 1).

There are two surviving documents from this time, the Edwin Smith papyrus and the Ebers papyrus, that demonstrate knowledge of anatomy (notably the first record of cranial sutures, the meninges of the brain, the external surface of the brain, and cerebrospinal fluid) and mental disorders such as depression and dementia (Serageldin, 2013, p. 2). The Ebers papyrus also documents the use of contraception, the diagnosis of pregnancy and other gynecological care, intestinal disease, eye and skin problems, and the surgical treatment of tumors, abscesses, bone-setting, and burns (Serageldin, 2013, p. 2). Around 2700 BCE, Merit Ptah was an early physician who has noted as the first woman to be known by name in the field of medicine, and possibly the first named woman in the field of science.

As Egypt was slowly declining and eventually conquered by the Persians in 525 BCE, Greece was an already established civilization that soon took over the “torch of knowledge” and began its golden period that is still overwhelmingly discussed and admired today (Serageldin, 2013, p. 3). It is during the age of Pericles and through Hippocrates of Kos (c. 460 BCE – c. 370 BCE) that medicine was established as an independent field completely separate from both “magic” and the other sciences. Women were originally forbidden from practicing medicine, but in late fourth century BCE Athens, the physician Agnodike was “put on trial for pretending to be a man in order to practice medicine.” Her female patients, who were mostly the wives of important men, saved her from punishment and eventually had the law repealed (Serageldin, 2013, p. 4).

Hippocrates, who is known formally as the “Father of Western Medicine,” was indeed one of biggest historical contributors to the field of medicine. According to Serageldin (2013), it

is true that Hippocrates helped to establish the nature of disease in that it was not caused by “superstition and gods” but rather it was a “product of environmental factors, diet, and living habits”; the Hippocratic Corpus contains no mentions of any illnesses or cures due to “mystical” factors (p. 4). However, Hippocrates did work with information that has now been found to be based on incorrect anatomy and physiology, notably his theory of the four humors of the human body: blood, phlegm, yellow bile, and black bile.

Another known female physician around 200 – 400 CE was Metrodora, who is credited with authoring the oldest medical text written by a woman, *On the Diseases and Cures of Women*, which survives in two volumes, totaling 63 chapters. She followed Hippocrates and his Hippocratic Corpus, as did many physicians in her time. She practiced in many different medical specialties, including gynecology, which that and obstetrics were considered acceptable fields for the women who were able to be medically trained at that time, mostly due to the tradition of midwifery that was dominated by women. Metrodora did not focus on obstetrics or surgery in her treatise, for surgery was not typically practiced in ancient Greece or Rome, but rather on pathology, while another female physician, Aspasia, did cover gynecological surgery, including abortion, in her writing. However, it can be assumed that Metrodora was greatly experienced in clinical practice, as she detailed how she conducted her examinations both digitally (using only her finger) and with a speculum and displayed a vast knowledge of physiology, which she used to classify vaginal discharges and rectal parasitic infections, and it is also said that she was the first to create an alphabetized medical encyclopedia.

Sometime between Greece’s decline and Rome’s mighty rise to power, the field of medicine was dominated by the great city of Alexandria, founded by Alexander the Great 2,300 years ago, and at its center was the ancient Library of Alexandria, which would become the

zenith of learning (Serageldin, 2013, p. 6). In the third century BCE, a medical school opened in Alexandria, and although it was mostly influenced by Greek medicine and followed Hippocratic teachings, it was also largely influenced by ancient Egyptian medicine. Because it was possible to dissect the human body at this time, anatomy became increasingly advanced, and there were many famous physicians to graduate from Alexandria's medical school (Serageldin, 2013, p. 8). Galen, the famous Roman physician, studied in Alexandria, and his teachings survived well into the 16th century and helped to shape the modern medical practices of the Renaissance. After the great fire of 391 CE that destroyed the great Library of Alexandria, almost no record of Alexandrian medicine survived, except what was conserved by Christian monks and Arab and Jewish scholars of the middle ages, which was mostly the work of Galen (Serageldin, 2013, p. 8). Galen, then, once he moved from Alexandria to Rome, signaled the end of Hellenistic medicine and the beginning of Imperial medicine. Galen was a successful physician, researcher, writer, and lecturer during this time, writing no less than 500 treatises and serving as physician to three Roman emperors: Marcus Aurelius, Commodus, and Septimus Severus (Serageldin, 2013, p. 11). His death marked the end of that particular history of medicine, Rome's power was declining, and the Dark Ages were setting in, which allowed the Arabs and Muslims to "carry the torch of science and learning" until the beginning of the European Renaissance in the 16th and 17th century (Serageldin, 2013, p. 14).

From ancient Egypt, Greece, Alexandria, and Rome, we move to medieval medicine, both in Europe and in Islamic world. In the Middle Ages, convents were significant in their education of women, and some even provided opportunities for scholarly research; one well-known female physician from this time was the German abbess Hildegard von Bingen, who wrote extensively in natural history, botany, and medicine and is considered Germany's first

female physician. She suggested that disease in the human body was a result of an imbalance in a person's life, while balance resulted in health; her writings have come to be known as "Hildegard Medicine" (HM), which has been associated with the contemporary and alternative medicine (CAM) of the medical field today (Micke, 2011, p. 150).

Though Hildegard has been considered a saint by branches of the Roman Catholic Church for centuries, she was formally named a Doctor of the Church by Pope Benedict XVI in 2012. Her medicinal writings, though thematically complementary to her beliefs about nature in her visionary works, were founded on experiences in the monastery's herbal garden and infirmary rather than on her "visionary experience" and its divine authority. As she honed her practical skills in diagnosis, prognosis, and treatment, she combined physical treatments for physical diseases with more "holistic" practices that centered on spiritual healing, using tinctures, herbs, and precious stones; this notion, that everything on earth was for the use of humans, was ultimately derived from the book of Genesis.

Hildegard wrote two works that chronicled both her practical expertise and its theoretical basis: *Physica*, which details the medicinal uses for plants, fish, stones, reptiles, and other animals, and *Causae et Curae*, which explores the human body, how it connects to the natural world, and various causes and cures for diseases (Rauch, 2012, p. 395). In *Causae et Curae*, Hildegard detailed the use of bleeding and other home remedies for common ailments, and she also discussed treatment for common agricultural injuries such as burns, cuts, fractures, and dislocations. Her works are especially significant in that a lot of medieval medicine was not documented because their practitioners, who were mostly women, did not write in Latin.

Also significant is the organization of *Causae et Curae*: the first part sets the work within the context of the creation of the cosmos with humanity as its summit, and Hildegard

details the physical and spiritual interplay between the human individual as microcosm and the macrocosm of the universe. Specifically, she emphasized the “vital connection” between the “green health” of the natural world and the holistic health of the human person, and her “gardening” approach to medicine led her to an understanding of the importance of plants and elements of the garden as “direct counterparts” to the humors and elements of the human body, whose imbalances led to disease. Though humoral theory was based in ancient medicine as previously discussed, Hildegard brought her own unique approach to balancing the humors (and other patterns of four in nature—the four elements [fire, air, water, earth], the four seasons, the four winds, and the four zones of earth): that each humor corresponded to either a “superior” element or an “inferior” element. Blood and phlegm were considered “celestial” elements, corresponding to fire and air, while the two biles corresponded to the “terrestrial” elements of earth and water, and disease or illness was caused by the “improper” dominance of the “subordinate” humors over the others.

Rauch (2013) goes on to discuss whether Hildegard qualifies for accreditation as a female technical writer, noting that “women’s technological achievements have been routinely underreported...and cultural stereotypes discourage women from claiming credit for their achievements” (p. 396). In Hildegard’s case, her identity has been historically composed mostly of her work as an “abbess, visionary, mystic, poet, and musicologist,” and it is only recently that her technological and medicinal works have been more closely examined. This is evidenced by *Physica*’s inclusion in *The Houston Academy of Medicine: Texas Medical Center Library* as a significant work to be discussed in modern medicine and other scientific fields, demonstrating Hildegard’s “authorship and agency” as a credible female technical-medical writer from the Middle Ages (Rauch, 2013, p. 396).

According to Rauch (2013), only one other woman could claim such authorship and agency: Trotula of Salerno, an Italian female physician who wrote “a collection of texts on diseases and treatments for women” circa 1100 CE (p. 397). However, much skepticism exists on whether Trotula was even a woman; editor and translator Monica Helen Green states that “‘Trotula’, for whom no substantive historical evidence has ever been brought forth...is alleged to have written the most important book on women’s medicine in medieval Europe, *On the Diseases of Women (De Passionibus mulierum)*” (Rauch, 2013, p. 397). Green also mentions how “sources, however, assert that ‘Trotula’ did not exist and that the work attributed to her was written by a man” (Rauch, 2013, p. 397). Despite this, Rauch (2013) reaffirms that no matter how uncertain scholarship is of Trotula’s gender identity, her name is still “attached to a large medieval body of medical texts from the 12th century” and that Hildegard and Trotula should be considered “pioneers who paved the way for early 20th-century women writers in the healthcare field, such as Crystal Eastman and Alice Hamilton” (p. 397).

Before the 19th century, Italy seemed to have been more liberal than England in its education of women in the medical field, as Italy has been shown to have many medieval female physicians during the Middle Ages; another known medical doctor was Dorotea Bucca (1360 – 1436), about whom not much is known except that she held a chair of medicine and philosophy at the University of Bologna for over forty years from 1390, a position formerly held by her father (Waithe, 1989). Also worth mentioning are Anna Morandi Manzolini, who was a Professor of Anatomy at the University of Bologna in 1760 (Messbarger, 2010), and other Italian women whose names and contributions to medicine have been recorded: Abella of Salerno (who taught general medicine at the Salerno school of medicine in the 14th century), Jacqueline Felice de Almania (an Italian physician who practiced in Paris, France, in 1322), Alessandra Giliani

(who is credited with being the first female anatomist of the Western World and a “brilliant” prosector, or preparer of corpses for anatomical dissection), Rebecca de Guarna, Margarita, Mercuriade, Constance Calenda, Calrice di Durisio, Constanza, Maria Incarnata, and Thomasia de Mattio (Green, 1999).

To expand on some of these women’s histories, Jacqueline Felice de Almania was one of eight female physicians registered in Paris at the time. In 1322, however, she was put on trial for unlawful practice; during the trial, “many testimonies were given where she was said to have cured patients where other physicians have failed and given up hope for the patient’s recovery.” According to one witness, Jacqueline was a better physician and surgeon than the French physicians in Paris, but even though she was reported to cure the patients the male physicians had given up on, the court reasoned that “it was obvious that a man could understand the subject of medicine better than a woman because of his gender.” She was ultimately banned from practicing medicine and was threatened with excommunication if she tried again to do so. The court’s decision acted as a nationwide ban on women studying medicine and obtaining licenses in France until the 19th century (Bühler, 1986). This persecution of women practicing medicine can be reflected in the United States’ treatment of women healers during the witch trials of the seventeenth century, in which people, mostly women, were tried and convicted of witchcraft. This was because women exhibiting powers of healing were seen as dangerous and must therefore be practicing witchcraft in association with the Devil.

Also worth noting is Alessandra Giliani, the prosector, who is said to have died at the age of 19 of a septic wound in 1326. She worked as the surgical assistant of Mondino de’ Liuzzi, a world-renowned professor at the University of Bologna, and is said to have carried out her own anatomical investigations and developed a method for draining the blood of a corpse and

replacing it with a hardening colored dye, which could have possibly added to a greater understanding of the coronary-pulmonary circulatory system (Shearer, 1996).

To wrap up our discussion of medieval medicine, let's examine Eastern traditions in medicine and the world of Islam and its contributions during this time. Though little is known of specific female Muslim physicians, it is likely that women were regularly involved in medical practice in some capacity, as male medical writers frequently referred to female practitioners when describing certain procedures or situations. For example, the Andalusian physician and surgeon Abu al-Qasim Khalaf ibn al-Abbas Al-Zahrawi noted in his treatise that the excision of bladder stones is a difficult procedure for male physicians to perform on female patients because of the "need to touch the genitalia" (Golzari, 2013, p. 1125). For this, the male doctor would need to either find a female doctor, a eunuch physician, or a midwife who could take direction from the male surgeon. So although direct evidence of specific female physicians is rare, their existence can be inferred. From al-Zahrawi's example we can also infer the important role of midwives in medieval Islamic world in the delivery of women's healthcare.

Other examples of medieval Islamic medicine can be seen in Pormann's (2009) article examining women's roles in medicine, both as the patient and the practitioner. In terms of the literature examining Arabic medieval medicine, the diseases discussed are either specific to only women or affect women differently than they do men. Specifically, they are diseases of the "reproductive organs, complications after childbirth, lactation, and child-rearing" (Pormann, 2009, p. 1598). Gynecological diseases could include uterine cancer, inflammation, and "retention of the menses" (Pormann, 2009, p. 1598). Menstruation was, unsurprisingly, a prominent figure in medicine as blood was one of the four humors of the body, and its loss or disturbance from the body was examined closely in women. Uterine suffocation (or "hysteria")

in Greece and later around the world) was also a significant player; it was a disease thought to be caused by lack of sexual intercourse in which the uterus would wander around the body “in want of semen” (Pormann, 2009, p. 1598).

Pormann (2009) then goes on to discuss how physicians in the medieval Islamic world were ahead of even Greece in its views of sexuality; while some doctors viewed sexual intercourse as “not conducive to a healthy lifestyle” (except in the cases of melancholia or uterine suffocation), others wrote extensive treatises on sexuality, specifically sexual hygiene. Two famous works from this time included *Return of the Old Man to His Youth as Regards in Sexual Ability* and *Enlightenment about the Secrets of Sexual Congress*, the latter of which details “the secrets of women,” including beauty products, “drugs which make the vagina narrow, beautiful, and pleasant, and dry its moisture,” and love charms (Pormann, 2009, p. 1598).

Finally, Pormann (2009) examines women as medical practitioners in the medieval Islamic world, though evidence overwhelmingly suggests the medical profession was dominated by men during this time. Pormann (2009) asserts that his sources “occasionally talk about female physicians (sg. *tabība*) and a few women belonging to families of famous physicians seem to have received an elite medical education” (p. 1599). The indirect evidence, however, suggests that male physicians “complained” about their patients turning to “women and the rabble” instead of consulting them. One Christian physician in particular, Sā’id ibn al-Hasan, seemed “astonished by the role of women as healers,” noting how amazing it was that “patients could be cured at all” (Pormann, 2009, p. 1599). Thus, Pormann (2009) concludes that women provided medical care for both sexes, even if the “elite male physicians took a dim view about their activities” (p. 1599).

To continue in our historical examination of Eastern traditions in medicine, we will now briefly look at Chinese medicine in the 19th century. Although traditional Chinese medicine and the use of herbs, acupuncture, massage, and other therapies such as diet and exercise have been practiced for thousands of years, it was not until the 19th century that Western medicine was introduced in China, mainly by medical missionaries sent by Christian mission organizations (Xu, 2012). This resulted in many Western clinics and medical schools being established in the 1800s; however, due to the social custom that men and women were not to be near one another, the women of China were very reluctant to be treated by the male physicians of Western medicine. Thus, there was a tremendous demand for female physicians in 19th century China.

The United States had begun allowing women to enter medical school in the mid-1800s, with the creation of a school in Boston by Samuel Gregory in 1848 that was restricted to teaching “hygiene, physiology, obstetrics, and the diseases of women” (Xu, 2012, p. 138). The first medical degrees were awarded in 1854 in Boston, and women, though small in numbers, continued to “graduate as physicians for the next two decades” (Xu, 2012, p. 138). By 1880, thirteen colleges in the United States opened for women to obtain a medical education. This emergence of female physicians in America paved the way for female medical missionaries to go to China to “combine the essential physical strength and honorable bravery with dedication to the unselfish tasks of their medical practice” (Xu, 2012, p. 138).

Dr. Mary West Niles was the first American female physician to come to China in 1882 to teach and practice women’s and children’s healthcare at the Canton Hospital. Xu (2012) asserts that the female patients at the hospital were “pleased about the advantage of having a lady physician, to whom they could state their problems” (p. 139). Dr. Niles was soon appointed a head physician at the hospital for her work in childbirth and other gynecological problems, such

as performing ovariectomies, as well as making house calls in the Canton area, as native Chinese doctors were not skilled in obstetrics. By the end of the 1890s, she had seen to the arrival of three female medical missionaries as well as an increase in female patients and students, performed over 683 surgeries, visited over 508 patients in their homes, and was in charge of the women's ward in the Canton Hospital for fifteen years (Xu, 2012, p. 139).

Following Dr. Niles, the medical missionary Dr. Mary H. Fulton (1854 – 1927), who received her M.D. degree in 1884 from the Women's Medical College of Pennsylvania, which was a school that was "eminent for its missionary women," was the second female physician sent by the Foreign Missions Board of the Presbyterian Church of the United States to found the first school of medicine for women in Guangzhou, China, known as the Hackett Medical College for Women (Xu, 2012, p. 140).

By 1882, the Canton Hospital medical school had begun to admit Chinese women, with three women out of twelve students in that year. In 1884, there were four women, and there were nine women in the class by 1890. The students provided assistance in the hospital and made house calls to upper-class women; as the quality of care the female students were providing to their patients increased, the number of female patients also increased, surpassing over 160 house calls in 1894 (Xu, 2012, p. 142). However, in 1899, the head physician and medical school instructor at Canton Hospital, Dr. Kerr, retired from teaching and took his male students to help him care for the insane, leaving the female students "without an opportunity to complete their courses" (Xu, 2012, p. 142). Dr. Fulton, along with the five female students and two Chinese women doctors, soon founded the Hackett Medical College for Women, named for Mr. E. A. Hackett of Indiana, who provided a generous donation for the building of the school (Xu, 2012, p. 142).

Dr. Fulton initiated instruction at the school by offering a training course in 1902, where “eleven young women were brave enough to present themselves as students” (Xu, 2012, p. 143). Though originally a three-year program, it was soon lengthened to four years in 1904; by that time, six women had received their diplomas and began practicing medicine in the Canton area, either at mission hospitals or government institutions. Though the students “attended clinics, lanced boils, and delivered babies,” they never got to see a major operation before they graduated (Xu, 2012, p. 143). Since the Hackett students were all considered fine, educated young women, they were often demanded as wives for the upper class, resulting in huge losses of physicians. Dr. Fulton in response to this made it a “strict regulation” that “anyone to be married was prohibited from studying at the Hackett College” (Xu, 2012, p. 144). Despite this rule, by 1915 there were more than 60 students, close to all of them living on campus and graduating in spectacular numbers, and Dr. Fulton had lived to see her initial enterprise grow into a successful and brilliant institution that provided a multitude of opportunities for Chinese women to obtain a medical education.

Research for Presentation and Women’s History Month Event

To research this topic further and demonstrate what I have learned in my studies for this project, I planned and hosted an event on the Southern Illinois University Carbondale campus on Friday, April 3, 2015 as part of the Women’s History Month campus-wide celebration. My research for this presentation focused on the victories and struggles of women in medicine in modern-day 21st century United States rather than the historical information researched for the first half of this written portion of the project.

The conception of this event was in the early fall of 2014 at my first meeting with my faculty mentor Dr. Melinda Yeomans, the director of the Women’s Resource Center (part of the

Center for Inclusive Excellence) at SIUC. With her help and advice, I began planning the event and researching my topic for the project. Dr. Yeomans connected me with medical school hopeful La'Mayah Hodges, a student from the MEDPREP program on campus, to be my co-chair and assist me in planning and preparing for the event.

We first needed a location for my presentation, and Dr. Yeomans and I decided that a room in the Student Center was our best option in terms of space and cost-efficiency. We reserved the Illinois River Room through the Student Center Scheduling Offices for April 3, 2015, at 4:30 PM.

Before spring break, I met with La'Mayah to go over what we needed to do in the next few weeks to prepare. We discussed creating a panel of female physicians from the community and MEDPREP students to answer questions, both by me and by the audience.

I created a flyer that was to be distributed around campus around mid-March to inform the faculty, staff, and students at SIUC about the event, and La'Mayah assisted in creating multi-colored copies of it and distributing in buildings where other pre-medicine and MEDPREP students could see it, particularly Wheeler Hall and the Student Center. I took the other copies to the Life Science buildings I and II, Lindegren Hall (where first-year medical students and physician assistant students are taught), and the University Honors Program office, where it was also advertised in the "4-1-1," the weekly email that is sent to all the students in the honors program every Friday.

I began researching and putting together my PowerPoint presentation for the event, drawing from sources that focused on gender bias in medical school and academic medicine, how gender affects what specialties medical graduates enter, gender differences in patient care, and the wage gap: issues that affect women entering the field of medicine in the 21st century.

While researching gender bias in medical school and academic medicine, I came across Elizabeth Blackwell's story, who was the first woman to obtain a medical degree in the United States in 1849 (Ward, 2008, p. 64). The one school that had accepted her presented her application to the all-male student body to determine admittance, which is granted under the assumption that it was a practical joke. "Despite resistance from fellow students, professors, and the community," Blackwell graduated at the top of her class (Ward, 2008, p. 64). Despite this, she was unable to secure a position with hospitals and instead established her own infirmary (Ward, 2008, p. 64).

The next bit of research I found discussed whether women are overinvesting in their education by going to medical school (Chen, 2012). This conclusion was reached based on evidence that shows that women are spending hundreds of thousands of dollars on medical school only to not get their investment back once they earn their degrees and begin practicing. While this can be attributed to the wage gap between men and women, it is worth noting that it has been found that male physicians work longer hours during the week than female physicians, which would mean that the investment in medical school almost always pays off for men in the medical field. Instead, the researchers discovered that completing a physician's assistant program is a lot more worthwhile financially for women, as it is a much shorter curriculum for a lot less money than medical school, and they would also enter the workforce faster than female medical graduates. They also found that physician's assistant programs and careers are much more flexible in terms of hours per week, giving women more options for their home and family life than if they were in medical school (Chen, 2012).

There has also been research that supports adding gender medicine to medical school curriculums, which has been shown to work in medical schools in Europe (Risberg, 2009).

Gender medicine is the school of thought that medicine should be taught to differentiate between male and female patients. This means that different diseases and disorders affect men and women differently, which should be addressed specifically in medical school, but it also means that medical students should not disregard physiological similarities between men and women when diagnosing (Risberg, 2009). Gender medicine could be very beneficial in that it helps medical students focus on not only what is different about men and women and how to treat each gender, but also focus on what is similar, which could help break down negative thoughts about gender-specific diseases.

According to Ward (2008), there is also major gender bias in academic medicine, where women are *vastly* underrepresented in high-up medical faculty, specifically full-time professors and deans. There is also a huge lack of mentorship for female faculty in medical schools, making it more likely for women to leave academic medicine because of feelings of isolation and “not fitting in” (Ward, 2008, p. 67). They are also less likely to participate in research and committees because men in medical schools have dominated these areas for so long, it can be hard to break into them as a woman, which is why women in academic medicine are more likely to participate in clinical activities and patient care over research. There have been some schools to integrate programs for research, committees, and mentoring specifically for women, and it has shown to improve female faculty’s morale, in addition to recruitment and retention (Ward, 2008, p. 68).

We know that women are now making up the majority of students both entering and graduating medical school, which means that more women than ever are entering the workforce as doctors, known as the feminization of medicine. However, according to Davis (2013), there has been a maintenance of hierarchy in terms of what specialties women and men are more likely

to enter. What this means is that women are more likely to enter fields such as family medicine, pediatrics, psychiatry, dermatology, and obstetrics/gynecology, while men are dominating the fields of surgery, anesthesiology, radiology, emergency medicine, and internal medicine (Davis, 2013, p. 18). In other words, women are more likely to enter specialties that are still conventionally seen as “feminine” (e.g., taking care of children). The specialties men are more likely to enter are typically seen as more intense, difficult, and time-consuming, specifically surgery and emergency medicine. This is most likely due to women wanting the more flexible hours provided in the aforementioned specialties, which again gives them more options for personal or familial obligations, while men are less likely to choose a specialty based on personal or familial obligations (Davis, 2013, p. 21).

In terms of patient care, female and male physicians differ on a few levels. There have been a few well-known studies that examine gender differences in language, in which they found that male physicians are more likely to interrupt female patients while they’re talking than male patients while conversely, male patients are more likely to interrupt female physicians while they’re talking than male physicians. Research has also found that female physicians were more likely than male physicians to use preventative measures (such as mammograms, Pap smears, cancer screenings, etc.) and to promote overall health and well-being (Hedden, 2014, p. 9).

Finally, there were many articles I found focusing on the pay gap between male and female physicians, such as by Esteves-Sorenson (2012), which found that men “outearn women by 13% at the outset of their careers and by 28% eight years later” (p. 37). The rest of the research focused on the pay gap in general rather than in the medical field, so they were not used in my research for my presentation.

To add to my presentation, my event co-chair La'Mayah found YouTube clips of women in medicine, particularly surgery, to share to the audience in order to spark discussion and group participation.

On the day of the event, I bought cookies, a vegetable tray, and lemonade and apple juice as refreshments for the audience and set them up on a table in the Illinois River Room, along with plates and cups. Soon, people started arriving and sitting in the audience, talking amongst each other. Dr. Yeomans introduced me and La'Mayah and gave some background information on what I was to be presenting, along with information on the Women's Resource Center in the Center for Inclusive Excellence.

After my presentation, La'Mayah shared her story of what she experienced while she was in her undergraduate years, explaining that her situation was a lot different than what other women may have experienced. She discussed how, at her institution, she had great experiences with her fellow classmates and had lots of opportunities to connect with faculty members as mentors, something that a lot of women in science, especially Black women, might not get to experience while as an undergraduate student.

In response to La'Mayah's story, many women in the audience spoke about their personal experiences in their undergraduate and graduate studies, explaining how many of them had experienced discrimination either because of their gender or their race, or both. Many of them discussed how they were told by their advisers that they were not suitable for medical school or the field of medicine, or even the field of science; they also talked extensively of their feelings of isolation while students at predominantly white schools and their feelings of not connecting with other students or with their professors on a deeper level. Also in the audience were four medical students from the Caribbean, and most of them also had stories detailing their experiences of

trying to get into medical school. Their experiences also exhibited the issue of advisers and even family members discouraging them from entering medical school, that they could do something easier or more meaningful with their lives. These discussions really solidified the idea that while in school, women need peer connections and faculty mentors in order to feel comfortable and successful in their studies and to help them feel as if they belong, as well as unconditional love and support from their families and loved ones.

All in all, the event was a success in terms of attracting audience members and helping to spark discussion and group participation. It was both incredibly empowering and humbling to hear these women's stories as they navigate their ways to success in medicine, stories that undoubtedly inspired all of us to help each other on our personal journeys.

As discussed previously in this research, women have been practicing medicine since the beginning of time, naturally taking on the role of caregiver in their families and communities, especially in terms of alternative and homeopathic medicine, but it is only recently in human history that women have been able to enter the medical field professionally and not without a fight. As women continue the feminization of medicine, we can hope to see an increase in patient health and satisfaction as we use our own unique, personal experiences, ideas, and motivations to influence how we care for others, a thought that should inspire all of us to follow our dreams no matter what obstacles are in our way.

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At Duke, women constituted 69.4 percent of this year's incoming class. That figure is nearly 3 percentage points higher than the concentration of women at the school that ranked second in the nationwide analysis: the CUNY School of Medicine, where women account for 66.7 percent of first-year students. Rounding out the top three: Quinnipiac's Netter School of Medicine, with a first-year class that's 66.0 percent female. Recommended Citation. Livingston, Ryleigh S., "Women in Medicine: Past, Present, & Future" (2015). Honors Theses. Paper 390. Literature Review To begin our journey around the world and through time to examine women's role in medicine, let us first look at ancient Egypt. It is here that we find where medicine probably started (Serageldin, 2013, p. 1). Serageldin (2013) goes on to discuss Imhotep, whose name was recorded not for his conquests, but for his contributions to knowledge and science more than 5,000 years ago (p. 1). He was an advisor to Pharaoh Zoser, an engineer who built the stepped pyramid of Saqqara (a precursor for pyramids to come), and a physician who started the first true medical revolution:... The percentage of women among physicians and medical students indicates that, numerically, medicine is indeed 'feminising' and that this process will continue in the coming years. The implications in terms of the number of specialists needed and training capacity are smaller than generally assumed. [Increasing number of women in medicine: past, present and future]. Ned Tijdschr Geneesk. 2008 Oct 4;152(40):2165-71. [Article in Dutch]. Authors. L F J van der Velden 1 , L Hingstman, P J M Heiligers, J Hansen.