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EXAMINING HEALTH INEQUITY IN ANCIENT EGYPT

A Master's Thesis

Presented to

The Graduate College of
Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts, History

By

Samantha Rose Gonzalez

July 2021

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EXAMINING HEALTH INEQUITY IN ANCIENT EGYPT

History

Missouri State University, July 2021

Master of Arts

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ABSTRACT

This thesis explores the history of medicine in ancient Egypt between the Middle and New Kingdoms, and offers a case study highlighting the use of religion and magic in healing and analyzing health inequity. I am interested in medical practices, treatments, diagnosis methods, and access to healthcare in the ancient world. I seek to bridge the gaps and help unify the knowledge surrounding ancient Egyptian medical practices and contribute to the studies in the history of medicine. I explore types of diseases that commonly affected the ancient Egyptians and how they integrated religion and magic into their understanding and treatment of diseases. My main area of research focus is how hierarchical society influences health inequities in the ancient world and specifically focuses on women's health in ancient Egypt. This thesis will demonstrate that there was differential access to healthcare in ancient Egypt based on gender and class. This thesis contextualizes medical texts within their broader roles in healthcare and utilizes an interdisciplinary approach to re-examine assumptions about medicine in the ancient world.

KEYWORDS: ancient Egypt, religion, magic, health inequity, history of medicine

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In the interest of academic freedom and the principle of free speech, approval of this thesis indicates the format is acceptable and meets the academic criteria for the discipline as determined by the faculty that constitute the thesis committee. The content and views expressed in this thesis are those of the student-scholar and are not endorsed by Missouri State University, its Graduate College, or its employees.

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I dedicate this thesis to my family, my partner, and my cats.

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INTRODUCTION

Research Problem

When beginning my research, I noticed that most articles, journals, and books regarding the history of medicine tended to focus around early Western medical traditions with minimal discussion on earlier medical practices or other regions of the world. The history of medicine is an extensive and complex study, yet it is a relatively new study that gained more attention during the second half of the nineteenth century.¹ With modern medicine rapidly evolving, it is important to study the history of medicine for both physicians and historians. Farokh Erach Uwadia said, “to gain a proper perspective, the never-ending canvas of medicine is best viewed in its entirety – the past, the present, the changing unfinished future.”² Jacalyn Duffin also describes that the history of medicine provides a “conceptual tool for learning about medicine,” one that medical (or humanities) students can apply the past to their contemporary lives and career goals.³ By studying medicine in antiquity, scholars learn more about the social and economic cultures of the past. Health and medicine are foundational pillars for any culture and have been practiced throughout the world.

Western medical tradition has been accepted as the norm and therefore has created a bias in research and analysis. The history of ancient Egypt tends to focus on the political, artistic, or religious worlds. The field was also catered heavily towards the royals and elites whose remains and artifacts have decorated museum exhibitions.⁴ For instance, the Grand Egyptian Museum in

¹ Cristian Bârsu, “History of Medicine between Tradition and Modernity,” *Clujul medical* (1957), 90(2), 243–245. <https://doi.org/10.15386/cjmed-794>

² Bârsu, “History of Medicine between Tradition and Modernity,” 243–245.

³ Jacalyn Duffin, *History of Medicine: A scandalously short history*, (Toronto, 2004), 7.

⁴ One of the most, if not the most famous, discoveries is the tomb of King Tutankamun from the 18th Dynasty. The discovery in November of 1922 by Howard Carter revealed an intact tomb of a king that has subsequently led to many exhibitions that have traveled the world.

Giza, Egypt is the largest archaeological museum complex in the world and hosts more than 100,000 artifacts (dating from the prehistoric, pharaonic period, and through the Greek and Roman periods of Egyptian history) and has the entire King Tutankamun treasure collection on display.⁵ There is a fascination with ancient Egypt that has existed for many decades.

Archaeology is primarily concerned with the study of human history through the excavation of sites and analysis of remains and artifacts. What each of these areas lacks is a focus towards the broader social context and how a culture responds to illness. As a result, there is a lack of understanding of both physiological health and social health care. To resolve this, it is necessary to create an interdisciplinary approach to the field of history and the history of medicine that combines biological and social factors to analyze an ancient culture's healthcare system.

The attempts that have been made to study ancient Egyptian medicine are often coming from individuals who have specialty in one area. A trained Egyptologist will not have the medical knowledge as a physician and vice versa. There has also been clear separation of ancient Egyptian beliefs in religion or magic with their medical practices. Again, by separating these areas there is a failure to account for the social aspects of medicine and of the culture. Much like in our modern world, there is some element with patients that may turn to religious support or traditional/ non-Western methods of healing. As humans are social beings, we must take into account the biological, cultural, and social elements that make up all of medicine. Healing and medicine cannot exist without understanding the world or society that it belongs to. In discussing the importance of studying the history of medicine, John L. Thornton notes, "the history of medicine has been studied for centuries, but remains a fluid subject. Fresh facts can reveal new fields of research, and even result in a re-evaluation of the subject. A misinterpretation may have

⁵ John Nicholson, "About the Grand Egyptian Museum," accessed June 24, 2021, <https://grandegyptianmuseum.org/about/>.

led to false assumptions which in turn have misled later writers, resulting in errors which have been perpetuated for centuries. Only comparatively recently have professional medical historians, armed with an appreciation of both medical knowledge and a background of social history, attempted to unravel the intricacies of the development of medical progress.”⁶ This is not an easy task to combine science and the humanities, yet there is more to gain through interdisciplinary approach. In following Thornton’s approach, re-examining our previous assumptions about the history of medicine can bring progress to the field.

Research Purpose

This thesis falls under the history of medicine in ancient Egypt and offers a case study highlighting the use of religion and magic in healing and analyzing health inequity. I am interested in medical practices, treatments, diagnosis methods, and access to healthcare in the ancient world. I seek to bridge the gaps and help unify the knowledge surrounding ancient Egyptian medical practices and contribute to the studies in the history of medicine. I will explore types of diseases that commonly affected the ancient Egyptians and how they integrated religion and magic into their understanding and treatment of diseases. My main area of research focus is how hierarchical society influences health inequities in the ancient world and specifically focuses on women’s health in ancient Egypt. I have found that previous historiographical, Egyptological, and archaeological studies neglect these areas. This thesis will demonstrate that there was differential access to healthcare in ancient Egypt based on gender and class.

⁶ John L. Thornton, “The importance of the study of the history of medicine,” *Health Libraries Review* vol. 4, 3 (1987): 139. doi:10.1046/j.1365-2532.1987.430139.x

To determine the healthcare system of ancient Egypt, I have structured my thesis into several research categories. The thesis is structured to build upon the knowledge of the prior section following these main research questions:

1. What did the ancient Egyptians believe caused illness and disease and how did they respond to disease?
2. How intertwined were medicine, magic and religion to the ancient Egyptians?
3. Who had access to healthcare in the ancient Egyptian system and what differences in access to healthcare between different socio-economic, sex/ gender, and racial groups?
4. What common ailments affected women in ancient Egypt and how was women's health addressed?

The thesis's organization begins with the foundations of medical knowledge in ancient Egypt by examining textual sources, including literature, which are our most robust and direct evidence for medicine. I will examine, transliterate, and translate various medical papyri and artifacts to demonstrate the ancient Egyptian medical knowledge. I will also analyze the role of religion and magic in ancient Egyptian medicine through the treatment plans outlined in the medical papyri. The treatment plans include a variety of spells used to cure an individual. This section will then lead to how the ancient Egyptian medical system was set up and how different individuals had access to healthcare from literary medical knowledge. Healthcare in the ancient world, much like today, can be varied among individuals of different sex/ gender, occupations, and socioeconomic status.

The thesis's primary purpose is to examine health inequity for women in ancient Egypt's Middle and New Kingdom periods and how this system responded to women's health needs. This time period is the focus of this thesis because the majority of the surviving medical papyri dates to this period along with more textual and representational evidence. The areas of particular interest in women's health are fertility, contraception, and childbirth. Women's

medicine was given special attention due to their childbearing abilities. The medical texts centered on how to increase a woman's fertility, predicting the sex of the child, and other ailments that were linked to the womb. Women were a vital part of ancient Egyptian society. Women in ancient Egypt were able to own land, divorce their spouses, and even rule Egypt.⁷ I argue that there were more female practitioners than previously thought in prior scholarship (this will be further discussed in Chapter 5). I will also analyze ancient Egyptian disease transmission theory and diseases that affected the female populations over the male population. Examining and analyzing healthcare access among the ancient Egyptian population demonstrates the social mechanisms to combat illness and disease. Disease does not target specific groups over others, and all populations are subject to illness and death. For clarification in this thesis, I sometimes use disease and illness interchangeably or I list them separately. However, our modern interpretations of disease and illness are problematic to implore on Middle Egyptian (the ancient Egyptian language).⁸ Disease holds roots in biological aspects and can be traced to microorganisms or other causes, while illness is our social understanding of disease and its collection of symptoms. The practitioners in ancient Egypt treated their patient's symptoms and sometimes would link their symptoms to their definitions of disease, some of which we are unable to identify, but that have been named (i.e., *akhu*, *khayt*, *nesyt*, and *temyt*).⁹

By analyzing ancient Egyptian texts, art, artifacts, and previous historiographical works, I will contribute to the history of medicine. This thesis will demonstrate how an interdisciplinary approach to historical research can benefit the field and others. We gain a better understanding of

⁷ Gay Robins, *Women in Ancient Egypt* (Massachusetts, 1993), 127-131.

⁸ The following books provide further discussion on the hieroglyphs, transliteration, and translation of disease and the names of diseases that modern scholars are unable to translate: Eugen Strouhal, et al. *The Medicine of the Ancient Egyptians: Internal Medicine* (2021) and John F. Nunn, *Ancient Egyptian Medicine* (1996), Appendix D, 217-26, lists the hieroglyphs, transliteration, and translations for several medical terms in Middle Egyptian.

⁹ Eugen Strouhal, Břetislav Vachala, and Hana Vymazalová, *The Medicine of the Ancient Egyptians: Internal Medicine*, (Cairo, 2021), 350.

the past and its history by using other methods and approaches. We can combine the knowledge of modern medicine with Egyptology research and historiographical analysis. This thesis will encourage more interdisciplinary work and research in the humanities.

Historical Context for a Study on Health

The history of ancient Egyptian medicine has captivated historians and other scholars since the late 19th and early 20th centuries.¹⁰ In 1862 the Edwin Smith papyrus was discovered, but it did not have hieroglyphic transcription and translation until 1930 by James Henry Breasted along with medical notes prepared by physician Arno Luckhardt.¹¹ There have been several books and publications on the medicine of the ancient Egyptians.¹² The history of medicine in ancient Egypt has drawn modern-day physicians, historians, archaeologists, and Egyptologists. The first medical papyrus was discovered in 1875 by Ebers, who subsequently named the papyrus after himself.¹³ A couple of decades later led to the discovery of the Kahun papyrus in 1898 and the Hearst papyrus in 1905.¹⁴ Several historians and Egyptologists attempted to translate the medical cases and treatment plans in these medical papyri with some success. However, there were not many attempts to present the sum of ancient Egyptian medical knowledge as a whole. Instead, this would be a nearly impossible task due to the limited medical

¹⁰ Flinders Petrie was the first Egyptologist who surveyed the Great Pyramid in 1880 and was at the forefront of the development of archaeology in the country. The work of Petrie led to other scholars like Ernest Gardner and James Henry Breasted, to modern scholars such as James P. Allen, Salima Ikram, Gay Robins, Marc Van de Mieroop, and many others. Egyptomania in the Western world began during the 1920s and continues to the present day.

¹¹ James H. Breasted, *The Edwin Smith Surgical papyrus (facsimile and hieroglyphic transliteration with translation and commentary, in two volumes)*, (Chicago, 1930).

¹² The following are some of the most comprehensive publications of Egyptian medicine and medical texts: Halioua and colleagues (2005) and Nunn (1996) offer detailed discussions of Egyptian medicine, while Grapow and colleagues (1954-1973) and Bordinet (1995) provide nuanced translations of the primary medical papyri.

¹³ Ludwig Christian Stern, (1875). Ebers, Georg (ed.). *Papyros Ebers: Das hermetische Buch über die Arzneimittel der alten Ägypter in hieratischer Schrift, herausgegeben mit Inhaltsangabe und Einleitung versehen von Georg Ebers, mit Hieroglyphisch-Lateinischem Glossar von Ludwig Stern, mit Unterstützung des Königlich Sächsischen Cultusministerium.*

¹⁴ Paul Ghalioungui, *Magic and Medical Science in Ancient Egypt* (Great Britain, 1963), 7.

papyri and other artifacts that have survived. The majority of the ancient Egyptian medical papyri dates to the New Kingdom.¹⁵ Given the knowledge and research from previous scholars, this thesis will attempt to bridge the gap between our current understanding of ancient Egyptian medicine and apply it to women's health in ancient Egyptian society, mainly during the Middle to New Kingdoms.

In ancient Egypt, it appears that the practice of healing and medicine was not restricted to a particular class of people, evinced by the disparity in extant magico-medical artifacts. Healthcare was so robust that it even allowed for specialization, with the physicians of ancient Egypt being able to specialize in different ailments of the body.¹⁶ The Egyptian term for a physician is *swnw*. Though most, if not all, physicians were male, a grammatical uncertainty in the spelling of physician with an extra “t” in the so-called Leyden Papyrus has led to debate amongst Egyptologists about whether there were female physicians.¹⁷ Paul Ghalioungui argues that it is, in fact, a feminine “t”; thus, the papyrus records the existence of a *swnw.t* or female healer.¹⁸ Given women's participation in related professions, such as scribes and priests, it is reasonable to presume some physicians were female, even if this was not the norm. In any case, the *swnw* (or *swnw.t*) treated a person with external injuries where the cause is known. It is also argued that ancient Egyptian physicians were literate, with some holding titles of physician and scribe.¹⁹

Given that the medical papyri were written documents (though oral education was also likely present), it is assumed that physicians had to know about how to read the text and

¹⁵ Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 7.

¹⁶ Ghalioungui, *The Physicians of Pharaonic Egypt*, 1.

¹⁷ The Leyden papyrus was first translated by Conrad Leemans in 1863. The papyrus dates to the second or third century C.E. and is written in Demotic. *Leiden I 343-I 345* is currently preserved at Leiden University in the Netherlands.

¹⁸ Ghalioungui, *The Physicians of Pharaonic Egypt*, 1.

¹⁹ Ghalioungui, *The Physicians of Pharaonic Egypt*, 8.

transcribe their knowledge to teach future physicians. Physicians may have also played roles as priests and magicians because of religious ties to the gods Sekhmet and Thoth that were called on in spells and incantations to heal an individual. For example, there was a distinction between a *swnw* and a *wab sxmt* or a “pure-priest of (the goddess) Sekhmet.”²⁰ The *wab sxmt* treated ailments with no immediately visible ailment. It is not always clear how physicians’ designation was defined in ancient Egypt and the scope of practice for each physician’s title. Physicians worked in different areas of Egypt, from the Chief Physician of the royals to the rural and country physicians.²¹

By examining health from an evolutionary and historical perspective, it will combine the knowledge from various fields that can be used to analyze women’s health in the ancient Egyptian medical system. Gay Robins has contributed to the study of women in ancient Egypt and has explored the various roles that women played in ancient Egyptian society.²² Most of what historians and other scholars know about the ancient Egyptians’ lives comes from the elite individuals who had access to material goods, burials, and mummification. More knowledge is accumulated from temples and religious inscriptions on temples and other monuments. Fertility was a significant concern for Egyptian men and women. In many cultures, including ancient Egypt, goddesses were often characterized by fertility and motherhood. Some of Egypt’s earliest anthropomorphic figurines seem to accentuate the female form and may have ties to religious artifacts for fertility.²³ Women’s roles in ancient Egypt centered around the household, their

²⁰ University College London. “Healing Titles.” <https://www.ucl.ac.uk/museums-static/digitalegypt/med/healingtitles.html>

²¹ Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 62.

²² Gay Robins’ book, *Women in Ancient Egypt* (1993), provides extensive research on women in ancient Egypt and explores several sectors that they inhabited in ancient Egypt. Robins has chapters dedicated to royal/ elite women and non-elite women, women in the household, temple and ritual, and women in power.

²³ The Brooklyn Museum PreDynastic *Female Figurine* (07.447.505) which dates to c.3500 BCE, <https://www.brooklynmuseum.org/opencollection/objects/4225#:~:text=In%20fact%2C%20this%20figurine%20wa>

husbands, and the family.²⁴ In some ancient Egyptian literature, there were instructions for men and women and what their roles would be (e.g. In “The Instructions of Any”, a man must take a wife while he is young, so that his wife may produce a son).²⁵ The prominent goddesses of ancient Egypt include Isis and Hathor, who were mothers and wives or daughters of the king. These goddesses were protectors of their husbands and families, associated with nurturing features and motherhood, and called upon fertility help.²⁶ Even Hatshepsut, who ruled Egypt as a King, held the royal titles of “King’s Daughter” and “Great Royal Wife” though no male equivalent existed (e.g., there were no “King’s Father” or “Great Royal Husband” titles). The purpose of marriage in ancient Egypt was to produce children and have a family. In the instances where couples were childless, the couple would dedicate shrines to deities of fertility and childbirth or adopt children.²⁷

s, Upper Egypt (southern Egypt). Also the *Fertility Statuette of a Woman* (Brooklyn Museum, 48.25) which dates to c. 1938 BCE, <https://www.brooklynmuseum.org/opencollection/objects/3491>.

²⁴ Papyrus Prisse column 10, lines 8-12: “If thou wouldst be wise, provide for thine house, and love thy wife that is in thine arms. Fill her stomach, clothe her back; oil is the remedy of her limbs. Gladden her heart during thy lifetime, for she is an estate profitable unto its lord. Be not harsh, for gentleness mastereth her more than strength. Give (?) to her that for which she sigheth and that toward which her eye looketh; so shalt thou keep her in thine house....”

Battiscombe G. Gunn, *The Instruction of Ptah-Hotep and the Instruction of Ke’Gemni: The Oldest Books in the World*, The Project Gutenberg EBook (Ebook #30508), 2009. Translated from the Egyptian text. The Instructions of Ptahhotep indicate how a man should treat their wife in order to live a successful life. An alternative translation and transliteration is provided by University College London’s Digital Egypt, “If you are excellent, found your household, love your wife within reckoning. Fill her belly, clothe her back, ointment is the remedy for her body. Gladden her heart as long as you live. It is a field of benefit for its lord. Do not impose her in affairs. Distance her from power, restrain her. Her eye is her storm when it sees. This is what keeps her in your house. Your quelling her, is water. The womb puts her in her arms. In her turmoil a canal is made for her.” <https://www.ucl.ac.uk/museums-static/digitalegypt/literature/ptahhotep.html>. Accessed 2 July 2021.

²⁵ “The Instructions of Any,” is a literary work of which the extant copy dated to the 21st or 22nd Dynasty, but is thought to date to the 18th Dynasty is written in Middle Egyptian. The instructions are between the scribe Any and his son, also a scribe, Khonsuhotep. Although the instructions are between Any and Khonsuhotep, the instructions can be applied to men in ancient Egypt. The instructions indicate that a son should take a wife young (or a young wife) so that she can produce a son for him, “Take a wife while you are young, that she make a son for you; she will make a son who will be like you”. “The Instructions of Any”, Maxim 6 (pBulaq IV, plate 16, lines 1-3), transcriptions and translations provided by Dimitrios Trimijopoulos.

https://www.academia.edu/38972986/_The_Instructions_of_Any_Maxim_No_6.

²⁶ Richard H. Wilkinson, *The Complete Gods and Goddesses of Ancient Egypt*, (London, 2003), 139-149.

²⁷ Gay Robins, *Women in Ancient Egypt* (Massachusetts, 1993), 76-77.

Women's health in ancient Egypt has not been closely explored. There is plentiful research in childbirth and fertility, with scholars often noting several dangers of childbirth, but there is little information about other aspects of women's health. For instance, how did women deal with menstruation, pregnancy, contraception, abortions, and other diseases? The ancient Egyptians had an understanding that coitus to produce pregnancy was well-known and that a failure to have a period was recognized as a possible sign of conception.²⁸ The medical papyri show that there were methods to provide contraception, pregnancy tests, and methods to induce abortions.²⁹ Further research should be conducted in women's health of ancient Egypt, utilizing historiographical, archaeological, and Egyptological methods. This thesis will not be able to delve as deeply into this topic as is deserved, but its goal is to at least push the conversation forward.

Scope and Limitations of this Study

History of medicine has primarily been used to study medicine through literature, art, and the effect of disease on society.³⁰ The majority of the historical study of medicine has focused on Western medicine (e.g., timeline for the history of medicine center on moments in Western medicine).³¹ Additionally, ancient medical practices and knowledge tend to be skimmed over. Alternatively, archaeology primarily addresses disease and health through biological factors in the study of human remains.³² There are several books on bioarchaeology, paleopathology, and

²⁸ Gay Robins, *Women in Ancient Egypt* (Massachusetts, 1993), 78-79.

²⁹ Paula Veiga, "To Prevent, Treat and Cure Love in Ancient Egypt. Aspects of Sexual Medicine and Practice in Ancient Egypt." *Proceedings of the II International Congress for Young Egyptologists* (2010), 453-65.

³⁰ J.N. Hays, "Introduction," in *The Burdens of Disease*, (New Jersey, 2009), 1-3.

³¹ Rachel Hajar, "History of Medicine Timeline," *Heart Views: the official journal of the Gulf Heart Association*, vol. 16(1), (Jan-Mar 2015), 43-45. doi: 10.4103/1995-705x.153008

³² Anne E. Austin, "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina" (PhD diss., University of California, Los Angeles, 2014), 1.

the archaeology of disease. These studies remove the social aspects and context of disease.³³ In order to combine social and biological factors of disease, healthcare and ancient populations, it is necessary to develop an interdisciplinary approach. To understand healthcare and medical practices of the past, scholars should analyze how an individual died, and what happened to them to survive in the past and what social contributions influenced their health. In ancient Egypt, the history of medicine should incorporate an interdisciplinary approach to understanding medicine in religious, social, and biological factors.

An interdisciplinary approach to the history of medicine is not an easy feat. The artifacts that document healthcare and medical knowledge of the ancient Egyptians are scarce and can be compromised. There may be gaps in the papyri scrolls (e.g., the Kahun papyrus), or when an artifact is found, it can be ambiguous and difficult to identify (e.g., female figurines). One of the major considerations for this research is the accessibility of primary sources. Thankfully, some universities and museums have online access to their medical papyri and other artifacts, which sometimes offers both the translation into modern English and hieroglyphic forms of the text or inscriptions.

Access to healthcare is not necessarily demonstrated in medical texts or artifacts. It does not tell historians and other researchers how a community dealt with a differently-abled person or a difficult illness. We know that access to adequate healthcare is necessary for survival and good health in the modern world. In the modern world, other contributing factors can impact a person's health, like race, socioeconomic status, sex/ gender, and education, among others.

Presumably, factors such as these may also have affected health in antiquity, though many of

³³ The following publications are some of the most comprehensive: Tony Waldron *Paleopathology* (2009), Charlotte Roberts and Keith Manchester *The Archaeology of Disease*, Third Edition (2007), Tim D. White and Pieter A. Folkens *The Human Bone Manual* (2005), Jane E. Buikstra and Lane A. Beck *Bioarchaeology: The Contextual Analysis of Human Remains* (2006).

these states and identities may be obscured within the archaeological record. Sex is a marker that is more readily identifiable in the records, and therefore a point of focus in this study. It remains, though, clear that medicine and personal care are major contributing factors to the survival and the health of an individual.

Another consideration is that there may not be enough human remains to research women's health in ancient Egyptian society adequately. Recent technologies have allowed for some mummies to be scanned using CT or MRI machines, which allows for a non-invasive examination of the remains for further analysis.³⁴ For instance, a radiological examination of a first century BCE mummy revealed a pregnant woman that died between the ages of 20 and 30 together with a fetus in age between the 26th and 30th week of pregnancy; discoveries such as this provide new possibilities of study of pregnancy in the ancient world and ancient Egyptian burial customs and interpretations of pregnant women in ancient Egyptian religion.³⁵ Diseases that do not affect the human skeleton are also not likely to appear in the archaeological record. The ancient Egyptian texts and artworks do not always depict an individual with an illness or other health ailments. The text and art were believed to carry on for eternity, so it was common to portray a person in good health. However, this is not always true, and there are some portraiture of individuals with dwarfism and holding elite positions.³⁶ Some kings are also depicted as overweight or with an untraditional king portraiture.³⁷

Historians, Egyptologists, and archaeologists are unique in accessing information about healthcare in the past and the relationships between health and society. Given the extensive work

³⁴ Carlos Prates, et al., "Prostate metastatic bone cancer in an Egyptian Ptolemaic mummy, a proposed radiological diagnosis." *Int. J. Paleopathol.* (2011): 98-103, doi: 10.1016/j.ijpp.2011.09.002

³⁵ Wojciech Ejsmond, *Journal of Archaeological Science*, <https://doi.org/10.1016/j.jas.2021.105371>.

³⁶ Cornelius Stetter, *The Secret Medicine of the Pharaohs* (Illinois, 1993), 77.

³⁷ Gay Robins, *The Art of Ancient Egypt* (Massachusetts, 2008), 148-153.

of archaeologists who have studied the paleopathology of human remains, historians can build upon this to take a closer look in combination with the textual records. Combining archaeological analysis with textual evidence can integrate approaches to better understand disease and health in the ancient world. A common area of research has focused on the elite or royal individuals in ancient Egyptian society. This does not give insight into the larger population of non-elite individuals who need medical attention and treatments. Furthermore, there are some areas of ancient Egyptian medicine that have garnered more attention than others. The Ebers and Edwin Smith papyri have a large focus on the cases that require surgical intervention, which includes diagnosis and treatment plans. Despite several medical papyri from ancient Egypt that mention gynecology diagnosis and treatments, there has not been an extensive analysis that utilizes an interdisciplinary approach. We need a case study or a more extensive analysis of the history of healthcare in ancient Egypt and address the gap of knowledge we have regarding women's health in ancient Egyptian society.

Defining health and differences in healthcare is not an easy task and can spur debate. This becomes even more complex and perhaps problematic when trying to address healthcare in the ancient world. Our resources are incredibly limited and, at times, inconsistent. In order to address these issues, I will use modern definitions of health and disease to apply to this research and integrate with historiographical analysis of diagnosis and treatment in ancient Egypt. Using several theoretical approaches to this thesis will broaden the scope of medicine in the ancient world and how we approach the history of medicine. An interdisciplinary approach is the best way to understand the ancient Egyptian medical system, its history, and its people. These theoretical approaches can then be applied to archaeological efforts to bridge the gap between the material record and theory.

Disciplinary Context and Research Significance

As I developed my thesis, I chose to focus on health inequity in ancient Egypt as the focus to re-examine our assumptions about medicine in the ancient world. I believe that by understanding the healthcare system and using women's health as a case study, we can significantly contribute to the history of medicine. Many of the medical papyri date to the New Kingdom period, the oldest medical texts and evidence of knowledge to date in the historical record. However, these surviving documents led historians to assume that older texts and passed down knowledge and training was shared amongst physicians. I chose to focus this thesis on women in ancient Egypt to contribute to ancient Egypt's current scholarship. This thesis will also contribute to the studying of non-elite individuals of ancient Egypt and their access to healthcare. This thesis contributes to the history of medicine, the history of ancient Egypt, disease transmission theory, and contextualized medical texts within their broader roles in healthcare. This thesis contributes to the scholarship on healthcare in bioarchaeology and ancient healthcare systems. This thesis also sheds light on the lives of women in ancient Egypt and their health. The thesis expands upon the current scholarship to include other approaches to the history of medicine. The medicine and medical knowledge of ancient Egypt have drawn various scholars from different backgrounds and professionalization. There are medical professionals interested in Egypt, Egyptologists interested in magic, and Egyptologists interested in medicine. The medicine and magic approaches to ancient Egyptian medicine studies have been common throughout the current scholarly literature. This can create issues with medical professionals and Egyptologists not holding proper training in the opposite fields and can complicate matters. This thesis will seek to combine knowledge from medical professionals, Egyptologists, archaeologists, and

historians to analyze the ancient Egyptian medical system, their medical knowledge, and examine women's health in ancient Egyptian society.

Thesis Organization

My thesis will examine medicine in ancient Egypt through textual, artistic and archaeological methods. The final chapter of my thesis will examine women's health in ancient Egypt in further depth to highlight health inequity. The first half of my thesis provides a foundation for understanding the ancient Egyptian society and how medicine functioned within their worldview. The first two sections provide the bulk of current knowledge of the ancient Egyptian medical theory, practices, and where scholars have gathered their information from. The second half of my thesis discusses health inequity in ancient Egypt and how a hierarchical society influenced access to healthcare, the status of healers, and the treatment that was given to different social classes. The final chapter then focuses on women and their health concerns within this system and how women dealt with health inequity.

The second chapter of my thesis will set the stage for terms, methods, and essential elements to note when examining health in the ancient world. Publications on the history of medicine in ancient Egypt provide an overview and lack the depth of discussion into certain areas in medicine. However, recent publications from Egyptologists are diving deeper into the medical papyri and specialized branches of medicine in ancient Egypt.³⁸ This chapter will highlight the vocabulary and describe how medicine was discussed in ancient Egypt through

³⁸ The most comprehensive research comes from John F. Nunn (1996) and Halioua and colleagues (2005). Another comprehensive survey of medical knowledge and practice in ancient Egypt written by Eugen Strouhal, Bretislav Vachala, Hana Vymazalová, and Katerina Millerova (released in 2020 and 2021, respectively) have released two of their three volume series that discusses medicine in ancient Egypt. The first volume covers surgery, gynecology, obstetrics, and pediatrics; the second volume discusses internal medicine.

hieroglyphic writings, teachings, monuments, and other artifacts. This chapter will also describe the language surrounding diseases and treatment and highlights the current limitations of our knowledge of ancient Egyptian medical models, given the artifacts that have survived or other limitations that we find in literature or artwork. This chapter also defines health, disease, health status, and other factors that one can expect to encounter in ancient Egyptian medical knowledge and practices.

The third chapter will discuss the ancient Egyptian medical system, in an effort to answer questions such as what ancient Egyptians believed caused illness and disease; and how the ancient Egyptians responded to illness and disease. It will discuss methods for treatment and how medical knowledge was passed to physicians. This chapter will highlight the numerous medical papyri and examine their specialties.

The fourth chapter explores how religion and magic are tied to medicine and medical knowledge. Religion and piety were a strong force in the ancient Egyptian literature, art, and artifacts with various mythological explanations for the world. Naturally, religion can play a role in medicine and the understanding of the ancient Egyptians. This chapter will highlight the types of artifacts that were used for religion, magic, and medicine.

The fifth chapter examines the ancient Egyptian healthcare system regarding who had access to healthcare and treatment, gender, socioeconomic and other differences in their health and treatment options. It aims to explore if there were obstacles that some groups faced compared to others when facing illness, injuries, or other diseases. By investigating the hierarchy among ancient Egyptian healers, I argue that this affected the type of care that all Egyptians received. The elites would have had access to the best healers in Egypt while farmers or slaves would receive minimal care.

Finally, the sixth chapter examines healthcare for women in ancient Egypt, specifically it examines the differences in healthcare for women in ancient Egypt and how this system addressed women's health needs. Women's health in ancient Egypt centered on their reproductive health and fertility. Women faced other health concerns like their male counterparts, but the texts focus on fertility, contraception, pregnancy, and childbirth. I argue that the patriarchal society of ancient Egypt is what caused this focus on the reproductive health of women.

ACCESSING HEALTH IN THE PAST: DEFINITIONS AND LIMITATIONS

Definitions of Health, Disease, and Health Status

Defining health and the disparities in health status is a debated and challenging task that occurs throughout the history of medicine. To discuss health, disease, and health status in the ancient world, it is important to define key terms that will occur throughout the text and to note that this difficulty is due to limited skeletal human remains and artistic interpretations in reliefs and artifacts. Historians and archaeologists can use these resources, though limited and inconsistent, to study health and disease in the past.³⁹ This thesis will utilize modern definitions of health and diseases to integrate and apply anthropological and historical methods of studying the health and medicine of ancient Egypt. I will demonstrate each approach's limitations and how combining these methods provides the most effective analysis of health, disease, and medicine of the past.

The modern definition of health comes from the World Health Organization (WHO), one of the leading scientific and medical organizations in the modern era that is internationally recognized. According to the WHO website, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."⁴⁰ Although this definition seems highly adequate, the application of this definition to peoples of the past and their remains can be problematic. First, not all diseases will display evidence in the skeletal remains as most diseases primarily affect the soft tissues. Secondly, we cannot assume that a person was in good

³⁹ Anne E. Austin, "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina" (PhD diss., University of California, Los Angeles, 2014), 17.

⁴⁰ Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948. The definition has not been amended since 1948.
<https://www.who.int/about/who-we-are/frequently-asked-questions>

health, considering the lack of evidence in their skeletal assemblage. Thirdly, as Tony Waldron points out, there is no means of knowing the state of health during the individuals' lives because we are unable to interpret their mental health (or the health of internal organs) solely through skeletal remains.⁴¹ Also, it is important to know that we are only seeing the health of the individual at death. Thus, we are only seeing a snapshot of their health which may or may not reflect the realities of the health experiences one had throughout their life. Some of these things may affect skeletal remains and compound over time (e.g., compressed vertebrae or a broken bone, even healed can be seen postmortem), but others might be invisible years later (e.g.

Despite the opacity of the bioarchaeological record, evidence indicates that the ancient Egyptians were able to recognize and discuss health and disease. This is evinced by their use of medical papyri and the training of specialized professionals to treat illness. Though the ancient Egyptians were fully aware of the physical causes of physical harm (e.g., a fall might be the cause of a broken bone), “disease” in the abstract was caused by the gods, demons, or ancestors. Analysis of human remains shows that the ancient Egyptians suffered from parasitic diseases, congenital disease, infectious diseases, dental disease, joint disease, deformities, trauma, and many other ailments. The next chapter will further discuss the ancient Egyptian medical system through its language, texts, and materials. The medical system of the ancient Egyptians is also tied to their religious beliefs and magic. This will be further discussed in a later chapter as well.

Medical and Magical Papyri

The largest contribution of ancient Egyptian medical knowledge has come from medical papyri. The medical papyri have been extensively published in *Der Grundriss*

⁴¹ Tony Waldron, “Introduction and Diagnosis,” in *Paleopathology*, (Cambridge, 2009), 10.

der Medizin der alten Ägypter, and there have been more modern updates and summarized by Nunn.⁴² There are numerous papyri that have survived and the most notable are the Edwin Smith papyrus, Ebers papyrus, and the Kahun papyrus.⁴³ These three papyri share a large amount of modern knowledge of the ancient Egyptian medical system. Several of the medical texts date to or around the start of the New Kingdom, which is evidence that the medical knowledge was passed down to later physicians and that there was a continuity in the medical tradition.⁴⁴ These texts demonstrate how the ancient Egyptian healers would diagnose and treat their patients. Unfortunately, there have not been any artifacts, specifically identified as uniquely medical instruments that have been identified from the pharaonic period.⁴⁵ Artifacts that were used in magical and medicinal applications are known, but these artifacts also held other functions (see Chapter 4). The medical papyri discuss diseases of the eye, women's health, the structure of the body, and remedies. Majority of the medical papyri have been found and bought within the last two centuries with little to no detail of their provenance.⁴⁶ Additionally, almost all of the medical papyri are written in hieratic, the cursive script of ancient Egyptian hieroglyphs, and it is highly likely that many other texts were lost during tomb robberies.⁴⁷ This section will discuss all of the medical papyri that have been discovered and the components of each papyrus. The dates listed in the table below (Table 1) are approximate and based on the published dates by Nunn.⁴⁸

⁴² John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 24.

⁴³ For the Ebers Papyrus, see footnote 11.

James H. Breasted (1930), *The Edwin Smith Surgical papyrus* (facsimile and hieroglyphic transliteration with translation and commentary, in two volumes). The University of Chicago Press, Chicago.

Stephen Quirke (2002), *The Kahun Papyrus*, Petrie Museum of Egyptian Archaeology, UC 32057, 1-3. The transliteration, sound, and translation are available on the University College London's website <https://www.ucl.ac.uk/museums-static/digitalegypt/med/birthpapyrus.html>.

⁴⁴ Anne E. Austin, "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina" (PhD diss., University of California, Los Angeles, 2014), 41.

⁴⁵ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 24.

⁴⁶ Nunn, *Ancient Egyptian Medicine*, 24-25.

⁴⁷ Nunn, *Ancient Egyptian Medicine*, 25.

⁴⁸ Nunn, *Ancient Egyptian Medicine*, 25.

Table 1: List of the Most Complete Medical Texts

Title	Date of copy	Contents
Edwin Smith Papyrus	1550 BCE	Surgical, mainly trauma
Ebers Papyrus	1500 BCE	General, mainly medical
Kahun Papyrus	1820 BCE	Gynecological
Berlin Papyrus	1200 BCE	General medical
Chester Beatty Papyrus	1200 BCE	Rectal diseases
London Papyrus	1300 BCE	Mainly magical

Three of the most detailed papyri that are worthy of highlighting are the Kahun papyrus, Edwin Smith papyrus, and the Ebers papyrus. The Kahun papyri have an extensive detail on women's health and gynecological issues. The texts were found in April and November of 1889 by Flinders Petrie near Lahun in the Fayum.⁴⁹ This town flourished during the Middle Kingdom of ancient Egypt. There is a note on the back of the papyrus that dates the text to year 29 of Amenemhat III, c. 1825 BCE.⁵⁰ The Kahun papyri are severely fragmented and comprise three pages with thirty lines or less. The Kahun papyri shares a similar discussion of the cases like the Edwin Smith and Ebers papyri in which it discusses the symptoms of a patient, followed by the treatment methods. However, there are no indications to examine the patient, but there are

⁴⁹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 34.

⁵⁰ Nunn, *Ancient Egyptian Medicine*, 34.

questions to be asked instead.⁵¹ The papyri discuss women's gynecological issues, childbirth, and pregnancy. Other papyri that contain substantial gynecological components are the Berlin, Carlsberg, Ebers, London and Ramesseum papyri.

One of the greatest medical papyri that has been discovered was purchased by the American Edwin Smith in 1862 and thus named, the Edwin Smith papyrus. This papyrus was tentatively translated by Breasted in the early 20th century.⁵² This publication was a landmark, according to Nunn, because it was the first time that a medical text from ancient Egypt was free of any magic and showed the rationale of diagnosis and treatment.⁵³ The Edwin Smith papyrus dates to around the 16th Dynasty and the start of the New Kingdom. It is believed that this papyrus is a copy of an older manuscript which demonstrates continuation in the Egyptian medical tradition.⁵⁴ If, and there is a very high possibility, that the Edwin Smith papyrus is a copy from an older text, then it shows that the Egyptians passed down their medical knowledge. This papyrus would indicate that there may have been a shift from oral knowledge to text instead.

The Ebers papyrus dates slightly later and shares similarities with the Edwin Smith papyrus. The Ebers papyrus was said to be found between the legs of a mummy in the Theban necropolis area, but this is not known for certain.⁵⁵ Perhaps it came from the same tomb as the Edwin Smith papyrus since both papyri were purchased at the same time by Mr. Smith himself, and perhaps it was a tomb of a doctor. The papyrus was purchased by Georg Ebers in 1872 who

⁵¹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 34.

⁵² James H. Breasted (1930), *The Edwin Smith Surgical papyrus* (facsimile and hieroglyphic transliteration with translation and commentary, in two volumes). The University of Chicago Press, Chicago.

⁵³ Nunn, *Ancient Egyptian Medicine*, 26.

⁵⁴ Anne E. Austin, "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina" (PhD diss., University of California, Los Angeles, 2014), 41.

⁵⁵ Nunn, *Ancient Egyptian Medicine*, 30.

then released it in a publication as the Ebers papyrus.⁵⁶ The Ebers papyrus is the longest of all known medical papyri with 110 pages and dates to the ninth year of Amenhotep I around 1534 BCE.⁵⁷ The contents of the Ebers papyrus primarily discuss general medicine approaches and techniques. Unlike the Edwin Smith papyrus, this text has no apparent organization on the cases that are described.⁵⁸ The way in which the cases were documented suggest that the text was copied onto the same roll. There are a few duplicate encounters for the cases and the cases are numbered in different ways. For the most part, the Ebers papyrus lists remedies for certain body parts, yet the diseases themselves are hard to identify.⁵⁹

Between the three medical papyri discussed and the other selected works from the chart above demonstrate a specialization in the medical papyri. Some papyri are more general while others predominately discuss certain areas of the body. The medical papyri also suggests that the physician or healing profession was one that required the healer to be literate. Although there may have also been other healers that were illiterate, the medical papyri contain information on cases that may have been commonly seen or striking cases that needed to be documented for other healers to learn from. It should also be noted that medical knowledge and healing practices may have been taught and passed down orally prior to the creation of the medical papyri. However, there is an additional possibility that the older medical papyri simply did not survive to be discovered by archaeologists. The medical papyri have their respective medical topics that are discussed which could indicate the specialization amongst healers. Furthermore, there are several

⁵⁶ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 30.

Ludwig Christian Stern, (1875). Ebers, Georg (ed.). *Papyros Ebers: Das hermetische Buch über die Arzneimittel der alten Ägypter in hieratischer Schrift, herausgegeben mit Inhaltsangabe und Einleitung versehen von Georg Ebers, mit Hieroglyphisch-Lateinischem Glossar von Ludwig Stern, mit Unterstützung des Königlich Sächsischen Cultusministerium.*

⁵⁷ Nunn, *Ancient Egyptian Medicine*, 30-31.

⁵⁸ Nunn, *Ancient Egyptian Medicine*, 32.

⁵⁹ Nunn, *Ancient Egyptian Medicine*, 32.

instances where ancient Egyptian physicians take titles that indicate their specialty in certain areas of the body and its corresponding diseases.

The Archaeology of Disease

Disease and illness are inevitable parts of human life, and humans have healed each other since the beginning of civilization. The human skeleton is the “voice” of the past. Human bones and teeth can show the physical signs of a person’s diet, stress, disease, and lifestyle.⁶⁰

Bioarchaeologists and paleopathologists analyze human remains to understand the past and the diseases they experienced. Bioarchaeology is a relatively new field of study that contributes to further research in history and archaeology because it utilizes scientific methods for analyzing and recording information from skeletal remains in conjunction with archaeological knowledge.

Paleopathology, the study of ancient diseases, also contributes to the fields of history and archaeology by improving our understanding of “the evolution of diseases and their role in human biological and social history.”⁶¹ Paleopathology also examines how the evolution and progress of disease over long periods of time and human adaptation to the changes in their environments.⁶² By understanding the diseases and pathologies of the past, we can broaden our knowledge of the ancient Egyptian’s natural world, and the diseases, illnesses, and injuries they may have faced during their lifetime.

The archaeology of disease, paleopathology, and bioarchaeology are areas that should be included in the history of medicine. Diseases and pathologies have been around since the

⁶⁰ Clark Spencer Larsen, “Tales from the Dead: What Bones Tell Us about Our Past, and Why We Should Know,” in *Skeletons In Our Closet: Revealing Our Past through Bioarchaeology*, (Princeton, 2000), 3.

⁶¹ Michael R. Zimmerman, “Studying mummies: Giving life to a dry subject,” in *Paleopathology in Egypt and Nubia: A century in review*, ed. Ryan Metcalfe, Jenefer Cockitt, and Rosalie David (Oxford, 2012), 119.

⁶² Charlotte Roberts and Keith Manchester, “The Study of Paleopathology,” in *The Archaeology of Disease*, third edition, (Ithaca, 2005), 1.

development of early humans and have evolved along with many societies and civilizations. Historians and archaeologists can work with professionals in the biological sciences to further understand how disease has impacted human populations. Disease and pathologies are present in the modern world today and will continue to be part of human history.

Identifying Healthcare in Ancient Egypt

Archaeologists and historians can identify healthcare in ancient Egypt, mainly through texts and archaeological remains. The healers of ancient Egypt were doctors, priests, and magicians.⁶³ This is not surprising as religious healers are common in various cultures, including in some modern Western practices. It is difficult to define the past through our modern lens and neatly define conventional medicine in ancient Egypt. Instead, historians can examine the ancient Egyptian medical practice and its relations to their disease, illness, and healing concepts, as proposed by John F. Nunn.⁶⁴ This method calls for an examination of the ancient Egyptian healthcare system without the bias of modern, Western medicine. It is impossible to understand how the ancient Egyptian healthcare system worked completely, and there are disparities amongst social classes, making it difficult to speak about a singular healthcare system for ancient Egypt without major generalizations. Instead, we can examine how the ancient Egyptians could pass their medical knowledge down and explore their methods for diagnosis and treatment.

The largest contributor to the modern scholarship of the ancient Egyptian healthcare system is through the medical papyri texts. Several medical papyri have been

⁶³ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 113.

⁶⁴ Nunn, *Ancient Egyptian Medicine*, 113.

discovered, with the earliest dating to the end of the Middle Kingdom around 1800 BCE.⁶⁵ The medical papyri of ancient Egypt provide evidence for diagnosing symptoms of a patient, description of wounds and ailments, and how, if possible, to treat wounds and disease. Through the translation and study of the Edwin Smith papyrus and Ebers papyrus, historians have concluded that perhaps medical knowledge was passed down from healers. The Ebers and Edwin Smith papyri are extensive in the cases that are documented and because the cases are systematically documented, it does not appear that the physicians and other healers were taking notes as they encountered diseases and trauma wounds.⁶⁶ Thus, this knowledge was seemingly shared through reference works or compendiums of knowledge, exemplified by both the Ebers and Edwin Smith papyri. The medical papyri and its contents will be further discussed in the next chapter.

Though the earliest extant medical papyri date to the Middle Kingdom, the inception of an organized medical care in ancient Egypt appears to have been established as early as the Third Dynasty, estimated around 2705 BCE. King Djoser's vizier, Imhotep, is noted as the earliest physician in the ancient Egyptian records.⁶⁷ Unfortunately, there is no systematic Egyptian work on anatomy that has survived from antiquity.⁶⁸ However, there was some anatomical knowledge amongst the ancient Egyptians even if it was limited to certain professions like embalmers and healers. The mummification process involved understanding some human anatomy. Furthermore, as previously noted, the medical papyri were systematically written and broken into different

⁶⁵ Stephen Quirke (2002), *The Kahun Papyrus*, Petrie Museum of Egyptian Archaeology, UC 32057, 1-3. The transliteration, sound, and translation are available on the University College London's website <https://www.ucl.ac.uk/museums-static/digitalegypt/med/birthpapyrus.html>.

⁶⁶ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 25-30.

⁶⁷ Richard Sullivan, "A brief journey into medical care and disease in Ancient Egypt," *Journal of the Royal Society of Medicine*, vol. 88 (March 1995): 141.

⁶⁸ Nunn, *Ancient Egyptian Medicine*, 42.

parts of the human body. Nunn describes that the medical papyri held a “consistent structure of the individual case descriptions is matched by a highly systematic progression through different parts of the body.”⁶⁹

Additionally, the titles that several physicians held in ancient Egypt suggest that there were specializations in medicine and healing. There is record of some physicians of ancient Egypt that specialized in diseases of the eye or doctors of the abdomen.⁷⁰ It is clear in some of the medical papyri and the ancient Egyptian healthcare system that doctors, priests, and magicians were all involved in the healing process. The doctors of ancient Egypt also held different titles that demonstrates a hierarchy amongst themselves and defines their royal connections. The duties and further discussion of ancient Egyptian healers will be discussed in further detail in the following chapter.

Identifying Disease and Illness in Ancient Egypt

The ancient Egyptians faced many diseases, illnesses, and traumas. However, many of the diseases and illnesses are unlike those found in modern-day Egypt, and as such modern anthropological and sociological studies are limited in their utility. In the ancient world, there were many elements that affected one’s survival. Historians and archaeologists are able to identify disease, illness, and treatments from the ancient Egyptians through the medical papyri that have survived as well as artifacts and human remains. Each material that historians and archaeologists use to gather information about the ancient Egyptians and their health poses its own set of limitations. By combining the

⁶⁹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 29.

⁷⁰ Nunn, *Ancient Egyptian Medicine*, 119.

methods of information, historians are able to capture what diseases the ancient Egyptians faced and how the ancient Egyptians responded to disease.

The climate of Egypt is suited for the preservation of human remains than that of other areas in the world. The human body is what many naturally think of to examine the health of the ancient Egyptians because of the ancient Egyptian mummification process's capability to preserve the body. Ancient Egyptian mummification can provide a great deal of information through preserving the body, but it also has a large drawback. Some organs are removed during the process and either discarded or preserved.⁷¹ Due to mummification, the body's tissues went through an elaborate preservation process that poorly reveals the presence of disease. Under ideal conditions, the skeleton, muscles, and skin remained intact which can well preserve any injuries to the body.⁷² Human remains provide information about a person's life when the bones, hair, skin, and tissues remain intact. Some information that archaeologists can gather are the person's age, sex, illnesses they suffered, diet, any injuries and so forth.⁷³ Another limitation to the human remains analysis is that mummification was typically reserved for elite individuals and not all ancient Egyptians had access to mummification. The inequalities for preserving the deceased's body does not allow for modern scholars to gain a complete understanding of diseases and other information that can be gained from studying human remains.

Ancient Egyptian iconography often depicted individuals in the best of health and with idealized, youthful appearances.⁷⁴ Most paintings and statues of the ancient Egyptians were elite individuals. The men were depicted as youthful with well-developed muscles, in most cases, and

⁷¹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 65.

⁷² Nunn, *Ancient Egyptian Medicine*, 65.

⁷³ Mike P. Pearson, "Learning From the Dead," in *The Archaeology of Death and Burial*, (Texas, 1999), 3.

⁷⁴ Gay Robins, *The Art of Ancient Egypt* (Massachusetts, 2008), 12-29.

the women were also youthful, tall, and slender.⁷⁵ Egyptologists credit this idealized artistic style to the ancient Egyptian belief that the deceased would have this body in the afterlife for eternity.⁷⁶ The ancient Egyptians wanted to take their best body into the afterlife as well as any belongings and food among other items. The idealized portraiture and documentation of illness and disease would not show into any artwork. Instead, the art may be accompanied by text in hieroglyphs to describe the scene.

The medical papyri provide the greatest insight into how disease and illness was approached and treated by the ancient Egyptians. Some medical papyri are organized in areas of the body and describe the symptoms or injury and how the physician would treat the patient, if applicable. There are some instances in the medical papyri that indicate that an injury or illness was not curable by the physician. The medical papyri is also very sparse in what has survived to modern day. Due to the delicate nature of papyrus, most texts are damaged or lost. Even in the surviving medical papyri there are parts that are damaged or appear to be missing. It is also unknown how the medical knowledge was passed down for it to be documented into medical text. Perhaps most of the early physicians shared their knowledge through oral methods to their apprentices. By combining the human remains analysis, art, and medical papyri, it is possible to piece together the ancient Egyptian healthcare system.

⁷⁵ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 66-67.

⁷⁶ Gay Robins, *The Art of Ancient Egypt* (Massachusetts, 2008), 12.

THE ANCIENT EGYPTIAN MEDICAL SYSTEM

The ancient Egyptian medical system (used interchangeably here with the term “healthcare system”) was developed over the course of its entire 3,000-year history. To analyze the ancient Egyptian healthcare system, I focus on three main components: the theory of disease transmission, the system of diagnosis, and mechanisms for treatment. This allows for further analysis into the healers, proactive and reactive treatments, the types of diseases and potential injuries, and how the ancient Egyptians responded to disease. I will explore what the ancient Egyptians believed caused disease through their natural and supernatural worldviews. In order to ensure good health, the ancient Egyptians practiced maintaining *maat* (the ancient Egyptian concept of balance and order in the universe).

This chapter will explore the ancient Egyptian theory of disease transmission which will lead to the ancient Egyptian methods for diagnosing and treating individuals. Through the discussion of the medical papyri as well as medical artifacts that have been discovered, I will examine how these tools were used and what can be understood of the ancient Egyptian medical system. It is valuable to understand the complexities within any medical system. The ancient Egyptian healer must determine the method of disease transmission or the perceived agents involved in causing disease in order to treat an illness or injury. Through the large number of medical papyri that have survived, scholars are given a glimpse into how ancient Egyptians healed themselves and others. Much like modern medicine, there are sometimes inequities in healthcare. The inequities in ancient Egyptian medicine will be further discussed in later chapters. However, a strong historical approach to gathering the information that is available to historians and academia assist in the analysis of the ancient Egyptian medical system.

Ancient Egyptian Theory of Disease Transmission

While discussions of disease transmission in ancient texts indicate that the patients were believed to have been subject to many supernatural forces in their health, no singular theory regarding disease transmission is extant from ancient Egypt. Instead, historians must construct this theory from various artifacts, most notably the medical papyri. The previous research on the ancient Egyptian theory of disease transmission has been limited. The Egyptians did not reference any physiological or pathological explanations, but the ideas were evident. Austin argues that the ancient Egyptians held a concept of contamination that is used to describe the Egyptian ideas for the agents of disease.⁷⁷ An overarching theory of disease transmission is not present in current research, but as Austin notes, “specific studies have begun to explore Egyptian perceptions of the body, disease, and medicine.”⁷⁸ This section will explore the ancient Egyptian conceptions of disease transmission as evidenced by their medical texts and other materials.

In the ancient world, disease and illness were nearly impossible to escape. From the moment of birth, infants and children could be plagued by a variety of ailments and natural dangers. A child that survived infancy and their early years was a great feat. However, there were still many dangers that threatened the health of a child into their adulthood. Women, for instance, had to face the dangers of childbirth and surviving childbirth. Men may have to go off to battle or face other risks of their daily lives and professions. In order to effectively treat illness and injury, one must determine the source.

Ancient Egyptian knowledge of anatomy and physiology is believed to be attributed to the mummification process. The ancient Egyptians were the first to understand the role of the

⁷⁷Anne E. Austin, “Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina” (PhD diss., University of California, Los Angeles, 2014), 36-37.

⁷⁸Austin, “Contending With Illness in Ancient Egypt,” 38.

heart, hold concepts of the circulatory system, and believed that the heart was the critical organ of the human body.⁷⁹ The heart was believed to carry a person's mind and soul, evinced by the dual meaning of the ancient Egyptian word “*jb*” which can be translated both as “heart” and as “mind.” According to the Ebers Papyrus, the body contains twenty-two *mtw*-vessels that opened the body to the outside world, allowing the passage for substances into and out of the body.⁸⁰ The *mtw*-vessels acted as passageways for various substances to flow and be irrigated the body. These vessels were felt by ancient Egyptian healers to feel for a pulse to determine that the *mtw*-vessels were clear.⁸¹

The *Oracular Amuletic Decrees* names agents of illness as they claim to protect an individual from the threats of health.⁸² These texts date to the 21st and 22nd dynasties, c. 1069 to 715 BCE, during the Third Intermediate Period of ancient Egyptian history. The texts illustrate that there was a well-established set of culturally shared ideas about disease and illness from previous dynasties.⁸³ The decrees were written on pieces of papyrus and then rolled and placed in a container to be worn around the neck of the owner. The decrees are composed of repetitions of the phrase *jwt=j snb* “I shall keep healthy,” followed by an anatomical list from head-to-toe.⁸⁴ These assurances of health are used consistently to protect against several agents of illness. These protective amulets were designed to protect an individual from any and all possible threats to their health throughout their lifetime.

⁷⁹ Paragraphs 854 and 859 of the Ebers Papyrus mention the *mtw* vessels. Please see footnote 11. John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 54-55.

⁸⁰ Laura M. Zucconi, “Medicine and Religion in Ancient Egypt,” *Religion Compass* (2007), 27-28.

⁸¹ Zucconi, “Medicine and Religion in Ancient Egypt,” 28.

⁸² Anne E. Austin, “Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina” (PhD diss., University of California, Los Angeles, 2014), 39.

⁸³ Austin, “Contending With Illness in Ancient Egypt,” 39.

⁸⁴ Austin, “Contending With Illness in Ancient Egypt,” 39-40.

Recurring phrases throughout the medical papyri and the *Oracular Amuletic Decrees* allow us to further understand the ancient Egyptian theory of disease transmission during the Middle Kingdom to the early Third Intermediate Period. The causative agents of disease are categorized and analyzed into two different ways: (1) who or what could manifest illness and (2) why did they exact it upon another individual.⁸⁵ According to the ancient Egyptians, disease was commonly caused by: deities, demons, foreigners, poisonous animals, spirits of the dead, and internal ailments. By understanding why and how these disease agents cause illness, it is possible to understand how to defend against them and treat illnesses. The ancient Egyptian theory of disease transmission is best understood by examining the causative agents of disease. In this section, I focus on two main causative agents of disease that are discussed in ancient Egyptian literature and medical papyri.

Deities are the primary group of disease-causing agents in ancient Egyptian texts. Typically, the deities are named in the *Oracular Amuletic Decrees*, the most common was “Sekhmet and her son.”⁸⁶ The goddess Sekhmet has correlations to disease, and Sekhmet’s control over demons which bring disease.⁸⁷ Additionally, *wab* priests of Sekhmet had a role in hygiene. In addition to general references to the gods mentioned in the decrees, Austin also found that the Theban triad is consistently prominent among the *Oracular Amuletic Decrees* which suggest that many of the texts come from Thebes.⁸⁸ Austin categorizes the reasons for divine interference into “actions based on predetermined fates of an individual, actions taken arbitrarily against an individual due to other circumstances, or a directed attack against an

⁸⁵ Anne E. Austin, “Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina” (PhD diss., University of California, Los Angeles, 2014), 42.

⁸⁶ Austin, “Contending With Illness in Ancient Egypt,” 43.

⁸⁷ Austin, “Contending With Illness in Ancient Egypt,” 43.

⁸⁸ Austin, “Contending With Illness in Ancient Egypt,” 43.

individual.”⁸⁹ Another important concept was that there was a need to balance *maat*, and divinities could seize someone when they were unappeased. The gods also could act out against an individual as a form of punishment. The gods had a variety of reasons to harm an individual, and the medical texts mention several ways the gods can cause illness in an individual. The gods could harm an individual through their influence, such as a “stroke”, their shadow, or by infecting them with his or her poisonous semen.⁹⁰ The poisonous semen occurs most frequently, and symbolizes the physical manifestation of pollution from a divine source. The poisonous semen and other disease substances caused illness in any part of the body by traveling through the *mtw* vessels.

One method that a god could use to cause illness on an individual was to send their own disease demons to cause illness indirectly. In modern English, the word “demon” has a negative connotation that is mostly referring to evil and is associated with beings that are of service to Satan in the Christian hell. However, when discussing demons in pharaonic Egypt, “demons” can be misleading. As Rita Lucarelli notes, when discussing demons in ancient Egypt it is “referring to supernatural creatures or minor deities of pre-Christian religions, whose nature and function is more complex and multi-faceted.”⁹¹ According to the Oracular Amuletic Decrees, demons were one of the dominant forces in spreading illness.⁹² The demons are often mentioned among a list of gods and in others they counter the protections against a list of diseases. The ancient Egyptian ideology blurs the boundary between symptoms, disease, and agent. In the Edwin Smith papyrus

⁸⁹ Anne E. Austin, “Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina” (PhD diss., University of California, Los Angeles, 2014), 43.

⁹⁰ Austin, “Contending With Illness in Ancient Egypt,” 44.

⁹¹ Rita Lucarelli, “Illness as Divine Punishment: The Nature and Function of the Disease-Carrier Demons in the Ancient Egyptian Magical Texts,” in *Demons and Illness from Antiquity to the Early Modern Period*, (Boston, 2017), 53.

⁹² Anne E. Austin, “Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina” (PhD diss., University of California, Los Angeles, 2014), 46.

and the Calendar of Good and Bad Days, demons were incredibly active during the epagomenal days as this period was viewed as a liminal position between the boundaries of the old and new year.⁹³ Additionally, demons were associated with insects as agents of disease and illness. In reality, insects were viewed to carry disease and could indeed lead to potential infections. Disease demons were able to infect their victims through vicious attacks on the body. The ancient Egyptians had to protect from the deities and disease demons both proactively and reactively.

Disease in Ancient Egypt

The ancient Egyptians faced a number of diseases which developed as a result of their environment and the natural world. In the medical papyri, we find that there were several prescriptions for the same illness according to the patient's age and sex.⁹⁴ Much like modern Western medicine, the height and weight of the patient is also considered when prescribing medication and treatment options. The types of diseases that the ancient Egyptians faced are many of what humans combat in the modern world. There were dangers from parasitic disease, dermatological disease, diabetes, trauma and injuries, tuberculosis, leprosy, vascular disease, and congenital diseases. The medical papyri combined with archaeological evidence and analysis provides the scholars with an abundance of information to research. Current research developments of medicine and treatment in ancient Egypt has revealed incredible findings. There is evidence of some oncological disease as well as amputations as a method of treatment (see

⁹³ Anne E. Austin, "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina" (PhD diss., University of California, Los Angeles, 2014), 47.

⁹⁴ Paula A. Veiga, *Health and Medicine in Ancient Egypt* (Oxford, 2016), 46.

specific references below). This section will provide a brief overview of the many diseases that were common in ancient Egypt.

The study of the pattern of disease in pharaonic Egypt relies on three main sources- human remains, representations of persons, and accounts of disease in the papyri. There is not much overlap between these three sources which is why it is necessary to analyze these sources together. Additionally, the three sources of information also have their scope of limitations that must be considered when studying disease in the ancient world. Human remains are a useful source in studying disease and Egypt's dry hot climate is perfect for the preservation of these remains. However, not every Egyptian had access to an elaborate or preserved tomb as this was a huge economic taking for the individual and their family. Thus, many of the remains that scholars are able to study today come from elite classes of individuals. Another limitation to human remains is that diseases that affect the soft tissues and organs are not as well preserved compared to traumas or other diseases that can affect bones.

Artistic representations of the body and diseases described in the medical papyri have their set of limitations as well. Much of ancient Egyptian art followed a strict iconographic convention where the Egyptian idealized their features. Most of the ancient Egyptians were portrayed as youthful, with perfectly proportioned limbs, muscles, minimal fat.⁹⁵ Women were usually depicted as tall, slender, and beautiful. In the funerary portraiture, there is more realistic representation of the deceased individuals. Much like the limitations faced with the preservation of human remains, portraits, statues, and other iconography are predominantly from elite classes. The medical papyri seem to be the biggest source of information available for study. However, the papyri have well documented injuries and it is not difficult to visualize the clinical conditions

⁹⁵ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 66-67.

while it is much more difficult to identify medical conditions in the papyri.⁹⁶ Nunn notes that the main medical papyri tend to assume that the diagnosis has already been made and only identify it by a name which is often difficult or impossible to translate.⁹⁷ In the medical papyri there are often fragments that are missing or items that have not been translated. Although the medical papyri have not been completely translated, it does demonstrate that the diseases, illnesses, and traumas were documented in ancient Egypt and the healers followed a system to diagnosis and treatment.

In ancient Egyptian medical theory, disease could be caused by external and internal agents of disease. By knowing the source of disease, the healers would know how to treat and care for the infected individual. The ancient Egyptians believed that people were naturally healthy and diseases had its causes, whether visible or occult. The external causes for disease included eating too much, drinking in excess, or transmission by the air and insects. The internal causes for disease were not caused by the natural world. Thus, it was common for frequent purges to cleanse the body of any unwanted substances.⁹⁸ In the Ebers Papyrus, there is a repeated reference to difficult diseases with the name *aaa*. This has led to a debate among scholars to what exactly is the *aaa*. Several possibilities exist as it could be an intestinal parasite or believed to be evidence for a substance that is secreted by the gods or demons that cause disease. The internal diseases that ancient Egyptians faced were difficult to both recognize and treat. Unlike traumas and injuries where the treatment and cause were apparent, the healers relied on their experience to treat these issues.

⁹⁶ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 68.

⁹⁷ Nunn, *Ancient Egyptian Medicine*, 68.

⁹⁸ Paula A. Veiga, *Health and Medicine in Ancient Egypt* (Oxford, 2016), 46.

Some congenital diseases were evident in the royal and elite circles due to some practices by the royal family, such as incestuous marriages between family members, which were pursued due to political and religious reasons. Ideologically, this was justified by mythic narratives; for example, the Ennead deities, Osiris, Isis, Seth, Nephthys, and other creation myth deities were all brother and sister pairs.

Evidence for Diagnosis and Treatment

Through the medical papyri, historians, Egyptologists, and archaeologists are able to find a great deal of the information surrounding the ancient Egyptian methods for diagnosis and treatment. In the medical papyri text, treatments and remedies ranged from natural to supernatural and a combination of methods. It is through these texts that we can see the approaches and methods for dealing with illness and traumas. The medical papyri reveal that there were specialized healers that dealt with certain areas of the body like ophthalmology or gynecology. The medical papyri tend to follow a method that observes, records symptoms of the patient, diagnoses, then prescribes treatment. In the modern world, this type of method is referred to as the Subjective, Objective, Assessment and Plan (SOAP) note that is widely used among healthcare professionals.⁹⁹ Through this format of documentation in the medical papyri, scholars can decipher what the diagnosis would be in the modern day and analyze the ancient Egyptian medical model.

There were several types of healers in ancient Egypt. The most common is the *swnw*, typically translated as physician. Other healers were considered “folk healers” and served their communities. The titles of ancient Egyptian doctors and healers show that there was some

⁹⁹ Vivek Podder; Valerie Lew; Sassan Ghassemzadeh. SOAP Notes.
<https://www.ncbi.nlm.nih.gov/books/NBK482263/>

organization in the ancient Egyptian medical system. The healers will be further discussed in Chapter 5 along to analyze the hierarchy amongst ancient Egyptian society and their access to healthcare. Moreover, A fascinating component within the medical papyri is that ancient Egyptian healers knew their limitations for healing and how to help if they were able. In the medical papyri, the healers of ancient Egypt would state their methods for treatment if at all possible. In some instances, the trauma or illness was too severe that there were no options for the healer to treat their patient. The methods for viewing treatment of patients were:

“A medical condition which I will handle/ deal with.”

“A medical condition I will fight with”

“A medical condition that cannot be handled/ dealt with”

Nunn highlights in his discussion of the medical papyri the components that are evident for how a majority of the cases described are organized. Most notably, in the Edwin Smith papyrus the cases are presented with a title, then a description of their observation, followed by diagnosis and prognosis, and finally treatment.¹⁰⁰ The majority of the cases documented within the Ebers and Edwin Smith papyri reveal that more often than not, there was a practical medical remedy or prescription that was used in healing. Prescriptions could utilize several herbs or plants that scholars are unable to identify.

Additional materials that display medical knowledge and various methods for treatment. In the collection from the Metropolitan Museum of Art, presents various artifacts that were used by physicians or other items that pertain to religion, magic, and medicine. These artifacts range from protective amulets that were worn by individuals to the ointment jars that were used by

¹⁰⁰ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 27-29.

Chief Physicians. Additional evidence for diagnosis and treatment in ancient Egypt comes from the specialization that are outlined in the medical papyri. It appears from the textual evidence that the healers could specialize in diseases of the eye, dentistry, gynecology and obstetrics, amongst many other fields.

Moreover, the ancient Egyptian healers were skilled in surgery and had experience with any traumas that needed care. Although the evidence of surgical techniques is indirect and stems largely from written records, recent research has been conducted to find physical evidence of surgical treatments. The Edwin Smith and Ebers papyri have surgery as a recommended form of treatment in much of the cases that are described for disease or trauma.¹⁰¹ There is debate whether metal artifacts that were discovered were used for surgery as well as iconographic depictions that are believed to be surgical instruments that were found on a wall panel in the temple of Kom Ombo.¹⁰² It is important to note that surgery can be difficult to identify, and there is no reason to exclude the possibility that metal artifacts or iconographic depictions would not potentially be surgical instruments. Trephination and amputation would be defined as surgical procedures and thus, there is some physical evidence that surgical procedures were performed in addition to the textual evidence from the medical papyri. There is also evidence in the medical papyri that the ancient Egyptian healers would use splinting as a method to treat fractured bones. However, the method of amputation may not have been the most ideal treatment for the ancient Egyptians because it could hinder labor forces and it also goes against needing the whole body for the journey to the afterlife.¹⁰³ Although there certainly must have been extenuating instances where amputation was the best method of treatment for survival of the individual.

¹⁰¹ T.L. Dupras, et. al, "Evidence of Amputation as Medical Treatment in Ancient Egypt," in *International Journal of Osteoarchaeology*, (March 2009), 405. DOI: 10.1002/oa.1061.

¹⁰² Dupras, et. al, "Evidence of Amputation as Medical Treatment in Ancient Egypt," 405.

¹⁰³ Dupras, et. al, "Evidence of Amputation as Medical Treatment in Ancient Egypt," 406.

Conclusion

The ancient Egyptian medical tradition consists of the disease, illness, and injuries that they endured in combination with their medical theory of disease transmission. Disease transmission was attributed to causative agents of the natural and supernatural worlds. Often, the cause of disease was believed to be the work of the gods, demons, a deceased relative, or foreign magicians. The ancient Egyptians also attributed illness as an imbalance within the body which corresponded with treatments to restore homeostasis. By utilizing practical experience with the supernatural, the ancient Egyptians knew how to recognize disease, symptoms, and illness with its corresponding medicine, spells, and treatments.

The ancient Egyptian healers had to combine their knowledge of the human body with religious and magical practices in order to heal their patients. As described in the causative agents and the types of diseases that were faced in the ancient world, it was incredibly valuable for the healer to be trained in medical and religious practices. The healers would prescribe treatments and use alternative techniques if necessary. The following chapter explores the roles of religion and magic in ancient Egyptian medicine and how these healing methods were blended together in order to heal the patient. The use of religion and medicine is an element that is common among many medical practices and has carried into the modern day.

RELIGION, MAGIC, AND MEDICINE

In the modern world, it is quite natural for most scholars to separate religion, magic, and medicine. Our scholarship often approaches each of these areas distinctly with very little, if any, overlap (despite many contemporary hospitals having chapels, religious professionals on staff, and many being explicitly religious). For the ancient Egyptians, religion, magic, and medicine went together hand in hand. Religion and magic in ancient Egyptian society were used in a variety of aspects. Religion and magic were used for both proactive and reactive medical treatment. Furthermore, magic was not necessarily pejorative in ancient Egypt and was used alongside other “intellectual” interventions and was believed to have real efficacy.¹⁰⁴ In many examinations of ancient Egyptian medicine, there is a fixation on the medical papyri to demonstrate rational or magical treatment.¹⁰⁵ By refocusing the study to include religion and magic in ancient Egyptian medicine, it shows that their medical practices incorporated the divine and natural worlds for treatment. It is also evident that these practices were normal as there were various types of healers in ancient Egyptian medicine. The ancient Egyptian medical system included religion and magic to treat disease while also finding conventional methods for other healing practices.

Ancient Egyptians did not see a dichotomy between religion and medicine nor between magic and medicine. Religion and magic were used to promote health and to treat illnesses and diseases. To the ancient Egyptians health and illness were “manifestations of a person’s relationship with the universe around him.”¹⁰⁶ Through the use of different incantations, spells,

¹⁰⁴ Geraldine Pinch, *Magic in Ancient Egypt*, (Austin, 2010), 134-38.

¹⁰⁵ Laura M. Zucconi, “Medicine and Religion in Ancient Egypt,” in *Religion Compass* (2007), 26.

¹⁰⁶ Zucconi, “Medicine and Religion in Ancient Egypt,” 27.

and amulets the ancient Egyptians invoked their deities to promote their own health and the health of their children. The ancient Egyptian medical model believed that deities could both cause and prevent disease, thus invoking the divine in proactive and reactive treatment was common. The modern views that are placed to separate religion, magic, and medicine defies the ancient Egyptian conceptions of the world and their healing. It is evident that ancient Egyptian healers filled the role of physician and brought religion into their healthcare. The combination of religion, magic, and medicine is an integral part of the ancient Egyptian concepts of physiology and disease etiology. However, many past scholars have maintained the modern view to create the dichotomy between religion/magic and medicine. Through more recent research and scholarship, amendments are being made and reanalyzed to correct past misconceptions of ancient Egyptian medicine. This chapter will focus on the use of magic, religion, and medicine in ancient Egyptian healing and assert that these methods should not be viewed as a dichotomy. Additionally, this chapter will also introduce the concepts of *heka* (often translated as “magic”) and its influence in ancient Egyptian medical practices.

Religion and Medicine

Modern interpretations on ancient medical practices can hinder our understanding of the ancient world. In many other cultures throughout time, invoking religion into their medical practices are quite common. Modern Western medical practices tend to separate between medicine and religion and place a higher emphasis on the biomedical model. The biomedical model follows scientific methods and explanations in disease, anatomy, and physiology. The biomedical model does not consider any holistic or traditional medical approaches, and deems these practices unscientific. Religion is also (wrongly) thought of in terms of faith and a lack of

rational method. The ancient Egyptians did not see such a strict dichotomy between medicine and religion. In fact, illness and health were manifestations of a person's relationship with the universe around them, and that included "real" natural and supernatural agents.¹⁰⁷ The ancient Egyptians did distinguish between the mundane and mortal and the supernatural/ divine worlds the same way that modern conceptions do, yet this interchange between worlds was frequent. In ancient Egyptian religion, there are several gods and goddesses that are invoked to promote health and called upon to alleviate any ailments.

In ancient Egypt, the idea of *maat*, balance and order, was in control of all relationships in this world and within the supernatural realm. The goddess Maat personified the harmony and divine order of the universe.¹⁰⁸ The principle of *maat* was justified to explain the political order and explain how the body functioned. When a person was "balanced" and adhered to *maat*, then that individual would have good health. The system of *mtw*-vessels exhibited the role of *maat* in human physiology. According to the Ebers Papyrus, the body contains twenty-two *mtw*-vessels that work as a network of vessels that connect different parts of the body together such as the heart and anus.¹⁰⁹ A survey of treatments reveals that a number of medications were applied as enemas. The anus, mouth, eyes, ears, and nose were natural openings to the world, so the treatments tended to be applied to these areas in order for the medication to reach the internal *mtw*-vessels. The ancient Egyptian healers also often felt the pulse of their patient to determine if the *mtw*-vessels were clear.¹¹⁰ The health of the individual relied on the balance within their

¹⁰⁷ Laura M. Zucconi, "Medicine and Religion in Ancient Egypt," in *Religion Compass* (2007), 27.

¹⁰⁸ Zucconi, "Medicine and Religion in Ancient Egypt," 27.

¹⁰⁹ Zucconi, "Medicine and Religion in Ancient Egypt," 27-28.

¹¹⁰ Zucconi, "Medicine and Religion in Ancient Egypt," 28.

body, just like Egypt relied on the regularity of the Nile flooding and stability in the natural world.

The idea of purity also influenced how the ancient Egyptians understood the body to function. There was an understanding on the importance of good hygiene, especially for the *wab* priests that came into contact with the divine. The *wab* priests were the “pure priests” (with “*wab*” directly translated as “pure one/thing”). Their purity was achieved through processes of purification, which for males (this is not as well recorded for women) included washing, shaving all hair, circumcision, and sexual abstinence while working in the temple.¹¹¹ Purity ensured the integrity of all rituals performed in the temple. The human body would influence the attitudes of the divine toward the mortal world and maintaining *maat*. Thus, illness signaled that something disrupted *maat*. This could easily happen if substances clogged the *mtw*-vessels or an improper diet. However, substances blocking the *mtw*-vessels may also have been a result of something other than human physiology according to the ancient Egyptians.

The divine were able to cause disease and illness in individuals, but also had the power to heal and protect them. There are several deities that have some connection to health, medicine, and healing. Notable among these gods were Serqet, Sekhmet, Bes, Taweret, and Thoth. In the artifacts that were used in medical practices, there are many references to religion and numerous invocations of these various gods. The god Bes had their image on several objects as a form of protection and prevention of disease or ailments.¹¹² The god’s image was also worn as an amulet or displayed in the home. The divine displayed protection and assistance in healing amongst

¹¹¹ Laura M. Zucconi, “Medicine and Religion in Ancient Egypt,” in *Religion Compass* (2007), 28.

¹¹² James P. Allen, *The Art of Medicine in Ancient Egypt* (New York, 2005), 10.

individuals, which is why their images were often used in certain objects, uttered during incantations and spells, and invoked for healing.

Serqet was a goddess that dates to at least the First Dynasty of the Old Kingdom.¹¹³ She was identified with the scorpion, and was usually represented with this creature on her head. The need to appease Serqet provided her with a major role in protection from scorpions and other venomous animals.¹¹⁴ It is also believed that Serqet is tied to curing victims of respiratory failure because her name derives from the verb *sereq*, meaning “to cause to breathe.” Serqet highlights how the ancient Egyptians believed that the causes of disease or ailments can also be invoked for healing.

Sekhmet was the lion-headed goddess, who formed the Memphite Triad with her husband Ptah and son Neferetem. Sekhmet was a powerful goddess that was also known for spreading terror and had the capacity for spreading pestilence.¹¹⁵ Sekhmet also needed to be appeased in order to heal individuals. In the case of Sekhmet’s priests, there was a possibility that they were somewhat inferior to the *swnw* in terms of practicing medicine.¹¹⁶ However, there are several medical papyri that note the medical role of her priests (i.e the Ebers papyrus, 854a, p. 113 and the Edwin Smith papyrus, case 1, gloss A).¹¹⁷ Sekhmet epitomizes how the gods were believed to both cause disease on humans, but also play an important role in the healing of humans as well.¹¹⁸

¹¹³ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 100.

¹¹⁴ Nunn, *Ancient Egyptian Medicine*, 100.

¹¹⁵ Nunn, *Ancient Egyptian Medicine*, 101.

¹¹⁶ Nunn, *Ancient Egyptian Medicine*, 101.

¹¹⁷ Nunn, *Ancient Egyptian Medicine*, 101.

¹¹⁸ In the *Tale of Sinuhe* (c. 1295-1186 BCE), Amunenshi, an Asiatic ruler, compared fear of Senwosret I (12th Dynasty) with that of “like Sekhmet’s in a plague-year.” Translation by R. B. Parkinson, based on the 12th Dynasty version in Papyrus Berlin P 3022. For an annotated translation see *The Tale of Sinuhe and Other Ancient Egyptian Poems 1940–1640 BC* (Oxford, 1999). The Metropolitan Museum of Art’s online collection: <https://www.metmuseum.org/art/collection/search/591471>.

There are two deities that are tied to childbirth and protecting women and small children, Bes and Taweret. According to Nunn, there is no evidence that the *swnw* are linked or involved in childbirth.¹¹⁹ However, we can likely assume that there were some forms of midwives or women that assisted in childbirth, and it is likely that magic was a popular means of seeking a favorable outcome. Bes was believed to exert a favorable influence in pregnancy and childbirth. His image is often depicted in the birth houses attached to temples.¹²⁰ Additionally, his image was also used on amulets that were carried by the living and buried with the dead.

Taweret, also known as Ipi or “The Great One,” was the hippopotamus goddess that was protective of women and childbirth. Figurines of this goddess served as defensive devices.¹²¹ In ancient Egyptian religion, the most dangerous animals were also representative as gods and believed to be also dangerous to potentially harmful forces. Taweret had a special role in helping women in childbirth and was also a favorite subject for amulets.

Ancient Egyptian religion was reflected in many aspects of daily life and medicine was no different. Since religion was such a large factor of ancient Egyptian life, it is natural that it was combined with medicine and healing. The concepts of *maat*, purity, and influence of the gods for both causing disease and healing are reflected in the medical papyri, prescriptions, and protective objects. The gods associated with medicine often demonstrated the dangers of disease while simultaneously serving as a method of protection with proper appeasement to the gods. Religion and magic in ancient Egypt were used in medical healing and in proactive measures. It is erroneous to assume that the ancient Egyptians separated religion and magic from their medical practices.

¹¹⁹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 101.

¹²⁰ Nunn, *Ancient Egyptian Medicine*, 102.

¹²¹ James P. Allen, *The Art of Medicine in Ancient Egypt* (New York, 2005), 10.

Heka: Magic and Medicine

Magic is an area that has been studied extensively in ancient Egypt. Robert K. Ritner suggests that the Egyptians themselves gave a name to the practice which has been identified with the Western concept of magic.¹²² *Heka* is both a god and the ancient Egyptian concept of magical, effective power.¹²³ According to the Coffin Texts Spell 261, *heka* existed before creation and it was his power that infused and protected the act of creation and nature. *Heka* serves as both a concept and a personification of the divine. Notably, *heka* could be used in healing individuals with an illness or trauma. There were no major temples built for *Heka*, but there was a priesthood and shrines dedicated to him in Lower Egypt.¹²⁴ *Heka* is not good or bad, but can be used by anyone with the skill to do so. There are three components to *heka*: speech, charged substances, and physical rite. *Heka*, as both a concept and a deity, is attested from the Old Kingdom through the Roman Period.¹²⁵

The medical works of the ancient Egyptians were passed down over long periods of time and are believed to have been kept in temples. The specialist vocabulary of the medical papyri is extremely difficult to translate, so the exact nature of the illnesses and treatments remain uncertain, but it is apparent that *heka* played a role in many of them.¹²⁶ Because of this, the medical papyri are often referred to as magical papyri as well because of the use of spells or incantations in the treatment methods. Additionally, the rubrics to some spells state that they are to be spoken by any doctor or Sekhmet priest.¹²⁷ In Egyptian pharmacopoeia, there is a use of

¹²² Robert K. Ritner, *The Mechanics of Ancient Egyptian Magical Practice*, (Chicago, 1993), 14.

¹²³ Laura M. Zucconi, "Medicine and Religion in Ancient Egypt," in *Religion Compass* (2007), 31.

¹²⁴ Geraldine Pinch, *Magic in Ancient Egypt* (Austin, 2010), 11.

¹²⁵ Ritner, *The Mechanics of Ancient Egyptian Magical Practice*, 15.

¹²⁶ Pinch, *Magic in Ancient Egypt*, 133.

¹²⁷ Pinch, *Magic in Ancient Egypt*, 34.

blood and excrement which may seem as weird as any of the ingredients used in magic. However, the notion to treat like with like was used in ancient Egyptian medicine. The ancient Egyptian methods in their medical treatment do show that there were some healing properties that were used in urine, as an antiseptic, and honey, to combat infection.¹²⁸ Unfortunately, detailed rubrics and rationale were not always included in the spells for the sick as these may have been accompanied by standard medical procedures. Geraldine Pinch notes that the majority of anti-venom spells seem entirely magical, but this may have been due to the accompanying medical treatment being too well-known.¹²⁹ There are general spells that accompany some treatments. One early second millennium BC spell is to be said during the drinking of a medicine, and it describes the medicine as a form of *heka* that will drive out harmful substances from the body.¹³⁰ From the medical papyri, we are able to gather how medicine, religion, and magic were used in conjunction for treatment methods.

There is evidence that there are certain areas of medicine where magic seems to be more prominent than others. The divide between conditions treatable by ancient Egyptian medical means and those that were beyond those means was clear. The Egyptians would use ritual to fill the gap between their technology and healing. Ailments that were brought on by immediate causes would be treated medically, such as a scorpion sting or a broken bone. However, illnesses that were caused by microorganisms often were treated through magic and religious means because the disease was believed to be caused by the gods. The use of *heka* in ancient Egyptian medical healing was able to bring the supernatural world to the natural world in order to heal the patient.

¹²⁸ Geraldine Pinch, *Magic in Ancient Egypt* (Austin, 2010), 134-35.

¹²⁹ Pinch, *Magic in Ancient Egypt*, 134.

¹³⁰ Pinch, *Magic in Ancient Egypt*, 135.

Ancient Egyptian Medical Healing

Religion and magic were incorporated into the treatment of illness and disease in ancient Egypt. Given that religious practices were a part of daily life for the ancient Egyptians, Nunn claims that invoking deities for healing was a first step rather than a last resort.¹³¹ In most of the discussion of ancient Egyptian medicine, the other healers that are not *swnw* are not viewed as seriously. As Zucconi notes, these healers are not viewed as “an integral part of ancient Egypt’s foundational concepts of physiology and disease etiology.”¹³² This section explores how the ancient Egyptian healers blended their knowledge of the human body and disease in order to find the best treatment that combines traditional medicine with religious and magical healing.

It appears that through their methods of treatment, the healers of ancient Egypt combined their methods of religious and magical healing with conventional approaches. The titles that ancient Egyptian healers were given indicate their status and demonstrate how religion, medicine, and magic were used in conjunction. Some of the healers held religious roles as well. Extant titles for religious healers include *khery-hebet* (lector priest), *sau* (magician/protector), and *hekay* (magician; nisbe of *heka*).¹³³ The *sau* and *hekay* are both magicians. We can assume that these healers were available in smaller communities that may not have had access to any *swnw*. However, there may have been some magicians that also worked in association with the *swnw*, as there are also a few cases of double qualification with a *swnw* carrying a magician’s and doctor’s titles.¹³⁴ Through the titles of ancient Egyptian healers, it appears as though this role

¹³¹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 96.

¹³² Laura M. Zucconi, “Medicine and Religion in Ancient Egypt,” in *Religion Compass* (2007), 26.

¹³³ Nunn, *Ancient Egyptian Medicine*, 98.

¹³⁴ Nunn, *Ancient Egyptian Medicine*, 98.

was multifaceted and the healers had to understand religious, magical, and medical methods of healing.

The Metropolitan Museum of Art had an exhibit that showcased the medical artifacts from ancient Egypt. This collection was divided into sections that relate to prevention, birth and infancy, injuries and their treatment, and physicians. This categorization is useful in exploring ancient Egyptian medicine and understanding the combination of practical and magical approaches to healing. In terms of prevention, the ancient Egyptians used amulets that had spells that contained the god Bes whose gruesome figure was used to protect the individual, the household, or elsewhere. Amulets are the most common of all ancient Egyptian artifacts. They are typically made from stone or faience and vary in sizes. The Bes amulets may have been worn by pregnant women and children as Bes was often invoked for protection of these groups.¹³⁵ In the exhibit, there are two Bes objects, cat. No. 6 and cat. No. 7, that holds the kohl that was applied to the eyes which demonstrates the practical and the magical aspects in Egyptian art and medicine.¹³⁶ The eye paint used would repel flies, provide cosmetic value, and protect from the glaring sun; thus, a method used in preventing eye disease and blindness. In this way, arguably, we *do* have instruments of healing and medicine from Pharaonic Egypt, though they may have held other, original functions.¹³⁷

The practices and methods found in ancient Egypt for healing and treating illnesses and disease are similar to the modern day. The ancient Egyptian healer would examine the patient and note their symptoms, then divide the condition into one of three

¹³⁵ James P. Allen, *The Art of Medicine in Ancient Egypt*, (New York, 2005), 23.

¹³⁶ Allen, *The Art of Medicine in Ancient Egypt*, 20.

¹³⁷ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 24.

categories: those he can treat with confidence, those he can “contend with,” and those he cannot treat.¹³⁸

The ancient Egyptians were able to combine their religious and magical practices to medicine for different methods of healing. Not all illnesses could have been treated through practical matters, especially given that the ancient Egyptians did not have the tools like we do in modern medicine that can diagnose and treat. For the ancient world, the Egyptians were advanced in their medical methods and were able to build upon thousands of years of knowledge. During the 26th Dynasty in ancient Egypt, Herodotus visited in 450 BCE. Herodotus noted the Egyptian medical practices and their specialization amongst physicians.¹³⁹ There may have been an influence of ancient Egyptian medicine on Greek medical traditions because this period during the 26th Dynasty coincides with the birth of Greek medical science and natural philosophy.¹⁴⁰ The ancient Egyptian physicians had an international reputation for their healing that was even mentioned by Homer in the *Odyssey*.¹⁴¹ According to Nunn, Greek medicine began to rival Egyptian medicine, and Herodotus stressed that the ancient Egyptians demonstrated great reluctance to adopt foreign medical practices.¹⁴² At a time where information and technology were interchanged, medical practices may have been exchanged as well despite some initial reluctance from either party. The combination of religious and magical practices to medical healing may have influenced nearby regions in attempts to understand the human body and disease.

¹³⁸ Geraldine Pinch, *Magic in Ancient Egypt*, (Austin, 2010), 136.

¹³⁹ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 12.

¹⁴⁰ Nunn, *Ancient Egyptian Medicine*, 206.

¹⁴¹ Nunn, *Ancient Egyptian Medicine*, 131-32.

¹⁴² Nunn, *Ancient Egyptian Medicine*, 206.

Conclusion

Religion, magic, and medicine were used in conjunction by ancient Egyptian healers to treat their patients and create preventative treatments. As Laura Zucconi notes, “the ancient Egyptian healer apparently did not finely distinguish categories of spell, ritual, and prescription but blended them in the process of using *heka*.”¹⁴³ By incorporating *heka* into ancient Egyptian medicine, the Egyptian healers served religious and medical roles. Both roles needed to be understood and utilized in order to treat the patient. Preventative treatment or those that the cause is not easily identified relied on the religious and magical aspects of healing practices.

Previous separation of religion and magic from medicine ignore the worldview of the ancient Egyptians. As evinced by the training and specialization of the *swnw* and other healers, religion was used in conjunction with the “practical” medical approaches and treatment. The titles of ancient Egyptian healers demonstrate the use of religion and magic in medicine (*khery-hebet*, *sau*, and *hekay*). Ancient Egyptian religious concepts were also applied to medicine. *Maat* was the concept of balance and order in the natural world which was applied to understanding health in individuals. An unbalanced person who was ill had to restore their balance within the body thus restoring *maat*. Religion, magic, and medicine were used simultaneously in ancient Egypt to prevent, treat, and cure patients from all levels of society.

¹⁴³ Laura M. Zucconi, “Medicine and Religion in Ancient Egypt,” in *Religion Compass* (2007), 31.

COMPARING HEALTH STATUS AND TREATMENT

When analyzing the healthcare of the ancient world, the numerous challenges and obstacles are apparent. One of the major challenges is that there is limited access to artifacts because of issues of preservation, they often do not survive to modern-day. Additionally, it is next to impossible to know the true inner-workings of ancient civilizations and their medical practices from the beginning of their civilization (not to mention accurately tracking across three millennia). This may be due to the oral and practical training received by healers, the lack of written or archaeological evidence, or a combination of the two factors with others. Due to these challenges, I have attempted to analyze and reconstruct to the best of our modern abilities the structure of the ancient Egyptian medical system and how it functioned, primarily relying on evidence drawn from the Middle and New Kingdoms (i.e. the second millennium BCE). In my previous chapters, I have outlined the foundation of our current knowledge of ancient Egyptian medical beliefs, theory for disease transmission, and examined the evidence of treatment through textual and archaeological evidence. The majority of evidence that has survived dates to the New Kingdom with the earliest medical papyri dating to the Middle Kingdom. We, then, assume that medical traditions were passed down between healers and as the society grew so did its understanding of the human body and how to combat illness and trauma. The archaeological and textual evidence from the New Kingdom demonstrates that there was a solid foundation in the ancient Egyptian medical tradition that could have gone back hundreds of years.

In my research, I have found that the majority of the writings and work of previous scholars stems from a Western, patriarchal, and modern bias. One note that many scholars fail to mention is that the majority of our evidence is that from elite or royal artifacts. This will heavily

skew our understanding of the ancient Egyptian medical system because ancient Egypt was a hierarchical society that benefited its elite classes. The elite had access to elaborate burials with many items that they would carry with them to the afterlife and tended to be mummified. The mummification process allowed for the body to be preserved which provides archaeologists and researchers with access to any trauma or illness to the body that they can identify. Due to the hierarchical and patriarchal society in ancient Egypt, elite males are assumed to have had the best access to healthcare. However, everyone in ancient Egypt was exposed to and at risk of illness or injury.

Ultimately, there is more research to be done in order to fully understand the ancient Egyptian medical practices and traditions. The medical papyri will need to be translated into English and other languages, so that other scholars can study these materials. It is beneficial to provide an updated translation of these texts. Also, the cases that are presented in the medical papyri can be re-examined by professionals trained with some biological or medical backgrounds that have training in ancient Egyptian history or Egyptology. This work can be completed using an interdisciplinary approach or as a collaboration with the sciences. There may also be artifacts that hold medical use that have been misinterpreted or labeled or artifacts that the current field does not know held medical uses. Interdisciplinary approaches to research present an abundance of benefits and further academia. I hope that my research will contribute to the gaps in our knowledge and further the conversation in the history of medicine and ancient Egypt. The ancient world is abundant with materials that it can teach the modern-world and future generations.

The Healers

In any human society, there will be some that inevitably emerge as having superior healing skills through the invocation of gods, employment of magic, or the art and science of conventional medicine. Alternative forms of medicine such as osteopathy and homeopathy will also develop. The healers of ancient Egypt occupied every level of society, from the folk practitioners to the Chief Physicians of the royal and elite families. These healers carried various duties and some even held specializations in certain diseases of the body. The healers of ancient Egypt also demonstrated skill as priests and combined their healing methods with ancient Egyptian religion. There is no record of how the healers of ancient Egypt learned their trade.¹⁴⁴ However, the most likely explanation for how the healers and physicians gained their roles in ancient Egypt is through apprenticeship despite any evidence of a formal education system. Another potential explanation is that the healers were trained as scribes at first, then learned the medical practices. It also appears that the practice of healing was not restricted to a particular gender or social class.¹⁴⁵ The healers of ancient Egypt were physicians and religious figures that could turn to their religion for appeals in their treatment plan. To better understand the healers of ancient Egypt, this section explores the types of healers, their hierarchy, roles, specializations, and methods to diagnose and treat patients.

Healers in ancient Egypt had different titles and roles. The ancient Egyptian word for physician is *swnw*. The *swnw* were in every level of Egyptian society and the most commonly found healers. Some scholars have argued that the writing for female physicians, *swnwt*, was a

¹⁴⁴ Paul Ghalioungui's publication, *The Physicians of Pharaonic Egypt*, is the most comprehensive publication regarding the healers, their social standings, specializations, and compensations, yet there has not been research published on how the physicians were trained. We can only assume that like scribes or priests, the physicians may have been trained on the job or in combination with studying the medical papyri.

¹⁴⁵ Paul Ghalioungui, *The Physicians of Pharaonic Egypt*, (Cairo, 1983), 1.

simple scribal error; however, there is every reason to believe that women could have also been doctors or healers (e.g., there is record of a female physician, Peseshet of the 5th Dynasty).¹⁴⁶ Their medical qualification is found in the Ebers papyrus and other medical papyri. In part of Ebers 188, a portion of the case translates to “... Thou shalt prepare the secret herbal remedy which is made by the *swnw*...” and in Ebers 206, “... Thou shalt prepare for him the secret remedy to the one who is under the *swnw*...”.¹⁴⁷ The *swnw* also had affiliations with the *wab swnw*, priest physicians, or scribe physicians. With some of the titles of the physicians there is a distinction of the *sš swnw*, there may have been separate education for these physician-scribes or they wished to distinguish themselves from illiterate colleagues.¹⁴⁸ There is also evidence in the medical papyri that demonstrates physicians were not the only profession that were exclusively healers. After the 26th Dynasty, the word *swnw* was also used to mean embalmer as well as doctor.¹⁴⁹

The physicians of ancient Egypt appear to have held a sort of hierarchy amongst themselves. The profession of the *swnw* appears to have been one that required some form of literacy because of the medical papyri texts. Modern historians can assume that the *swnw* would have had training to read and write their cases. Another possibility is that scribes were hired to transcribe the cases that the healers encountered, but this fails to consider why the cases were recorded. Perhaps not all of the healers were literate and instead were taught through oral tradition or apprenticeships and the medical papyri were written to have documented common or unusual illnesses and diseases. From the way that most medical papyri are written, it presents the

¹⁴⁶ Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 92.

¹⁴⁷ Ghalioungui, *The Physicians of Pharaonic Egypt*, 2.

¹⁴⁸ Ghalioungui, *The Physicians of Pharaonic Egypt*, 8.

¹⁴⁹ John F. Nunn, *Ancient Egyptian Medicine*, (Norman, 1996), 115.

information in a matter-of-fact manner and how the healer can approach or cure an illness. Nunn affirms that “there can be little doubt that doctors, priests, and magicians were all involved in healing. He pulls an excerpt from the Ebers papyrus that makes this clear:

There are vessels in him to all his limbs. As to these: If any doctor (*swnw*), any *wab* priest of Sekhmet or any magician (*sau*) places his two hands or his fingers on the head, on the back of the head, on the hands, on the place of the heart, on the two arms or on each of the two legs, he measures [or examines] the heart because of its vessels to all his limbs. It speaks from the vessels of all the limbs.¹⁵⁰

There have been attempts to fully understand the hierarchical place of the *swnw* in the highly sophisticated bureaucratic system of ancient Egypt. The titles and specialties amongst ancient Egyptian physicians and other healers suggest that there was a hierarchical system amongst themselves. Healing is a complex event and it is difficult to identify where the *swnw* or other healer would have fallen in the hierarchy of ancient Egypt. The social status of ancient Egyptians, healers included, can be typically determined through the material culture from burials. Theoretically, the richness and cost of burial apparel should run parallel to the wealth and rank of its owner, however there are some obstacles to this thinking. Ghalioungui notes that the negative evidence of burial materials is common in ancient Egyptian artifacts.¹⁵¹ Additionally, he notes that the mention of a person as a simple *swnw* can also be misleading, since this may refer to a high-ranking official whose full titles may have been recorded elsewhere or missing from the records that have survived. I also agree with Ghalioungui that status and rank are not synonymous with wealth. The rural or suburban *swnw* were equal if not more successful than the most prestigious “Chief Physician of the Master of the Two Lands” or

¹⁵⁰ John F. Nunn, *Ancient Egyptian Medicine*, (Norman, 1996), 113.

¹⁵¹ Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 62.

“Chief Physician of Upper and Lower Egypt.”¹⁵² Yet, with this notion in mind, all aspects of the tomb have an archaeological context and are important to study. There is the tendency to separate the text in the tomb from the images that appear with it.

By examining the artifacts and individual scenes along with the text, one can draw new conclusions about the life and career of the tomb owner. One 18th Dynasty tomb reveals a wealth of information about the life of an elite official who was a royal scribe and physician of the king.¹⁵³ The tomb of Nebamun dates to the mid-18th Dynasty during the reign of Amenhotep II or slightly earlier. The tomb scenes depict a Syrian dignitary meeting with Nebamun. The presence of Egyptian physicians in foreign countries is known from textual sources that date from the later 18th Dynasty into the Late Period. They were often requested by foreign kings and sometimes sent to foreign countries by the Egyptian kings.¹⁵⁴ JJ Shirley notes that if Nebamun did accompany the king abroad, then it is possible that he was performing his civil functions in a military setting because of his talents as a physician and a scribe. Additionally, based on the tomb inscriptions, it becomes clear that Nebamun could have been at a Syrian court in his role as physician, unfortunately his tomb artifacts do not corroborate this hypothesis. At the tomb entrance, Nebamun’s titles are clearly displayed and include the physician of the king in Thebes, chief physician and royal scribe in Thebes. The inscriptions and scenes in Nebamun’s tomb display his connection to the city of Thebes and how he wanted to be remembered. Nebamun shows us how physicians in ancient Egypt could be elite officials that held many responsibilities

¹⁵² Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 62.

¹⁵³ JJ Shirley, “The Life and Career of Nebamun, the Physician of the King in Thebes,” in *The Archaeology and Art of Ancient Egypt: Essays in Honor of David B. O’Connor*, Vol. 2, edited by Zahi A. Hawass and Janet Richards, (Publications Du Conseil Suprême Des Antiquités de L’Égypte, 2007), 382.

¹⁵⁴ Shirley, “The Life and Career of Nebamun, the Physician of the King in Thebes,” 385.

and the government utilized their talents. Nebamun is a glimpse into the elite physicians of ancient Egypt, but there is little that we can draw upon for other healers.

Hierarchal Society as a Framework for Inequity

Ancient Egypt was strictly divided into a hierarchy with the king at the top. The king would have been followed by his vizier, members of the royal court, priests and scribes, governors, generals of the military, artists and craftspeople, government overseers at worksites, farmers, and slaves.¹⁵⁵ The concept of *maat* and maintaining universal order is what kept this system for thousands of years. It was believed that the gods created a perfectly balanced world, and there should not be disruption to the social order. In a hierarchical society, the elite or ruling class has most of the power and the benefits that come with this. In ancient Egypt, the royal and elite classes had the most resources, better quality of nutrition, and medical care. When there is a hierarchy in a society, there is typically inequity that will also emerge. Hierarchical society would cause a ripple effect of inequality in ancient Egyptian society and their healthcare system. With the royal and elite families at the top of the hierarchy, these groups would have been treated by presumably the best *swmw* and other healers in the region or throughout Egypt.

The ancient Egyptian health network relied on the hierarchy of physicians. There are no special insignia for physicians, so we rely on the titles that have been given to them.¹⁵⁶ Like many other professions, the state system had a hierarchy which also caused a hierarchy of their own amongst healers. The many titles that are named for physicians and other healers display the rankings in the physician or healer hierarchy. The hierarchy among ancient Egyptian healers

¹⁵⁵ Joshua J. Mark, "Social Structure in Ancient Egypt." World History Encyclopedia. (2017), <https://www.worldhistory.org/article/1123/social-structure-in-ancient-egypt/>.

¹⁵⁶ O.A. Jarman and G.L. Mikirtichan, "The Social Status of Physicians in Ancient Egypt," *Istoriya meditsiny (History of Medicine)*, Vol. 2 No. 1, (2015): 49, DOI: 10.17720/2409-5834.v2.1.2015.05j.

allowed for the best and highly trained *swnw* or priests to care for the king and the royal family. The royal family was well cared for with their diet, housing, and leisure lifestyle. The “Chief Physicians” of ancient Egypt were the highest-ranking physicians that are known. Additional titles include phrases such as “senior doctor”, “master of doctors”, and “physician and scribe”.¹⁵⁷ Most people that were trained as scribes also served in official positions which demanded long training. The physician scribes also indicate that, at least to some extent, the profession required literacy to be able to read and write the medical papyri. There was also a strong connection with the religious and the profane, so it is likely that there was also a connection among priests and physicians. One person could hold multiple priesthood titles such as, “priest of Sekhmet”, “priest of Serket”, “priest of Heka”, “lector-priest”. In the Middle Kingdom and onwards, physicians are in the king’s court and also in the temples as priests of Amun, Ptah, Khnum, and Neit.¹⁵⁸

The hierarchy among healers in ancient Egypt places the *swnw* at the top. Over the course of Egyptian history, there were changes in the hierarchy of healers, but the *swnw* was always in the highest position with other religious or folk healers at the bottom. According to Bardinet, the bottom ranking *swnw* did not have any titles, then they were promoted they became “inspector physicians” that were led by the “head physician” or the “great physician” who was assigned by the king and was in charge of several administrative units.¹⁵⁹ In the Old Kingdom, the main medical center was located in the king’s court and the doctors that worked there were selected from the most outstanding specialists to treat the king, the king’s family, the king’s courtiers and

¹⁵⁷ O.A. Jarman and G.L. Mikirtichan, “The Social Status of Physicians in Ancient Egypt,” *Istoriya meditsiny (History of Medicine)*, Vol. 2 No. 1, (2015): 49, DOI: 10.17720/2409-5834.v2.1.2015.05j.

¹⁵⁸ Jarman and Mikirtichan, “The Social Status of Physicians in Ancient Egypt,” 49-50.

¹⁵⁹ Jarman and Mikirtichan, “The Social Status of Physicians in Ancient Egypt,” 50.

servants. The king's great wife or the queen had her own personal physician as well. By the Middle Kingdom, the hierarchy among physicians changed slightly with the disappearance of the "inspectors" physician and the establishment of "overseer".¹⁶⁰ The physicians also held some level of specialty during the Old Kingdom period, but there is no data of specialization during the Middle and New Kingdom periods.

The details of people's jobs are known from medical reports on the treatment of injuries, tomb inscriptions, artistic representations, letters and other documents from various professionals, and literary works such as the *Satire of Trades* (1950-1900 BCE). Through the combination of these materials and evidence, there is a cohesive view of daily life in ancient Egypt. There seems to have been pride in each profession, but as argued in the *Satire of Trades*, the best profession that was not harsh on the body was to become a scribe. Yet, each occupation had its role and importance in ancient Egyptian society. Most professions did not allow for upward mobility and promotions. There are several tomb inscriptions of some court physicians that describe their distinguished careers and climbing the ladder of the king's physician court.¹⁶¹ The occupation of the physician or priest healers was a male dominated profession much like many other fields. There are few examples of female physicians as early as the Old Kingdom period. One female physician was Peseshet who worked during the 5th Dynasty, 2465-2323 BCE, whose stela was found in Giza.¹⁶² A possibility for the lack of female representation in this medical field is that they served roles centered towards women and childbirth or as a local medicine woman.

¹⁶⁰ O.A. Jarman and G.L. Mikirtichan, "The Social Status of Physicians in Ancient Egypt," *Istoriya meditsiny (History of Medicine)*, Vol. 2 No. 1, (2015): 51, DOI: 10.17720/2409-5834.v2.1.2015.05j.

¹⁶¹ Jarman and Mikirtichan, "The Social Status of Physicians in Ancient Egypt," 51.

¹⁶² Jarman and Mikirtichan, "The Social Status of Physicians in Ancient Egypt," 54.

Due to the social hierarchy in ancient Egypt that also influenced the training of *swmw* and other healers, this affected the accessibility of health care to all Egyptians. Nunn notes that we cannot make any reliable conclusions about the hierarchical and administrative relationships among Egyptian physicians, but I argue that the hierarchy among healers affected access to and the quality of healthcare to the average Egyptian. The royal and elite classes would have the best and easiest access to medical care in ancient Egyptian society. The physicians and healers of these groups would have trained for many years and serve the royal court for most if not all of their careers. Access to sufficient healthcare would have decreased as one goes down the hierarchy of ancient Egyptian society.

Access to Healthcare

Access to healthcare would have looked different in each level of ancient Egyptian society. The elite classes had the most access to physicians and healing priests to turn towards for illness or injury. The next group with good access to healthcare was the workmen's villages like Deir el-Medina that were state funded and operated. The lower one was in social class, the less access that was granted to physicians and healers. Farmers and slaves may have had access to local, trusted healers to care for any medical issues that may arise.

Social class was not the only limiting factor to healthcare access. Throughout the historical and archaeological records, there is an automatic default to the male gender. Much of our understanding of medicine in the ancient world is biased towards the male gender. Gender differences in a patriarchal society are constantly present. In the ancient world, this was no different. Women in ancient Egypt were treated differently than the men. There may have been

reasons for this, but there have been no attempts to address why this occurs. The notion from previous scholars that women could not serve or were not trained as physicians is evidence of the male bias in historical and Egyptological research.

Women in ancient Egypt did not have their own healers, but there was a specialty for women's health. However, "women's health" is not like modern-day gynecology and obstetrics. Instead, women's health dealt with all illnesses and ailments that women would receive. There are several arguments that women could not have been physicians or other healers in ancient Egypt, yet there is evidence that may suggest otherwise. While the idea does remain inconclusive, the female physician Peseshet of the 5th Dynasty could have been the "chief lady overseer of ladies doctors," "the lady overseer of the funerary priests," or "lady overseer of the doctors."¹⁶³ Despite the argument that the titles for female physicians were simply scribal error, however, there is no reason to definitively deny that women could have held physician positions.¹⁶⁴ Peseshet may have come from a family of physicians and was then trained as a scribe and physician herself. Perhaps female physicians cared primarily for the women and children and therefore records of their practice are less common. The following chapter explores women's health and inequity in more detail.

Conclusion

In order to understand and interpret the health inequities in ancient Egypt, it is necessary to address the hierarchy of their society. The hierarchy that dominated the social sector of daily life in ancient Egypt was inescapable in other facets of life. The physicians and healers of ancient

¹⁶³ O.A. Jarman and G.L. Mikirtichan, "The Social Status of Physicians in Ancient Egypt," *Istoriya meditsiny (History of Medicine)*, Vol. 2 No. 1, (2015): 54-55, DOI: 10.17720/2409-5834.v2.1.2015.05j.

¹⁶⁴ Paul Ghalioungui, *The Physicians of Pharaonic Egypt* (Cairo, 1983), 18.

Egypt had their own hierarchical structure. The physicians that served the king and his court were the highest-ranking physicians and presumably the best in all of Egypt. Local healers that were not formally trained have no titles and no solid evidence of their work. Trained physicians were also scribes and literate in order to read and transcribe copies of the medical papyri. The hierarchy of physicians would affect the physicians that were responsible for treating different social classes.

There is still much mystery surrounding the ancient Egyptian physician as we may never know the intricacies of the ancient Egyptian medical and healthcare system and how it operated. There has not been record if there was a shift from informal training/ apprenticeship of *swnw* to the trained medical healers. There is also a mystery of how physicians or other healers found their specialty or religious healing training. It is worth further exploring these areas and re-examining female physicians and healers in ancient Egypt and their level of involvement.

WOMEN'S HEALTH IN ANCIENT EGYPT

Women in ancient Egypt were legally equal to their male counterparts, yet in the cultural practices they were treated less than men.¹⁶⁵ However, there are several medical papyri that center on the health concerns of women. It appears that the health issues women faced in general medicine, pregnancy, childbirth, or other disease were treated differently from the men. Some may argue that women were treated better than men in terms of health and medicine because there is such great evidence for women's healthcare in the medical papyri. Perhaps women's health concerns needed to be documented separately than men because of the different anatomy from men. I argue that women were seen as vessels that could bring life into the world and thus had to have separate texts to document their health, whether or not the medical complaints were related to the womb. Why then, would the subordinate gender in ancient Egypt's patriarchal society have their own set of medical papyri? There are no other doctors that are assigned to only women from what we can generalize over the physicians' titles. Women face health challenges like men, but there are other capacities that men will never have to face in their health or their lives.

The medical text and previous scholarship surrounding the healthcare of women in ancient Egypt tends to center around their reproductive health and child bearing capabilities. There has been extensive research into fertility, spells and incantations to increase fertility, and medical routes that can assist with fertility in men and women. The need to control fertility may have driven women to find methods of contraception and birth control as well as increase their

¹⁶⁵ Gay Robins, *Women in Ancient Egypt*, (Massachusetts, 1993), 127-131.

fertility to conceive. The Kahun papyrus provides an insight into the ancient Egyptian worldview and how women's health was addressed and cared for.

The Kahun Papyrus

The Kahun (Lahun) papyrus is the oldest medical papyrus from ancient Egypt. The papyrus dates to the Middle Kingdom around 1800 BCE. It is currently housed at University College London in London, UK (UCL 32057). This text is often referred to as the “Gynecological Papyrus,” but it includes more than gynecology and obstetrics. A range of medical complaints from issues of the womb to aching teeth and others. The Kahun papyrus is the longest medical text that has survived, and it displays evidence of extensive use because there appears to be some repairs to the papyrus.¹⁶⁶ The papyrus is fragmented, so there are gaps in some of the cases discussed. It was later translated and published by F. Griffiths in 1893.¹⁶⁷

The Kahun papyrus is important because it reveals that female medicine and health was important enough to be documented. The text is divided into 34 paragraphs with each paragraph relating to a different medical problem or complaint. The Ebers and Edwin Smith papyri follow the format that the Kahun papyrus was written. Each new paragraph presents a brief account of the patient's symptoms, the diagnosis (“You should say of it...”), and the corresponding treatment. There are no notes for the prognosis of the patient or alternative treatments listed. The following entry is the format of each case presented (transliteration and translation from University College London), Column 2, 5-7¹⁶⁸:

¹⁶⁶ Lesley Smith, “The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine,” (2011), doi: 10.1136/jfprhc.2010.0019.

¹⁶⁷ Smith, “The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine.”

¹⁶⁸ Transliteration and translation from University College London's Digital Egypt. Red ink is used in the original to indicate the start of new cases and the directions for the healer or physician. <https://www.ucl.ac.uk/museums-static/digitalegypt/med/birthpapyrus.html>. Accessed 12 June 2021.

SsAw st Hr mrt n dwn.s iw.s Hr sdA.f
Dd.xr.k r.s Ammw pw n idt
ir.xr.k r.s rdit swri.s hnw 2 n xAwy rdi qAa.s st Hr-awy

Examination of a woman bed-bound, not stretching when she shakes it
You should say of it 'it is clenches of the womb'.
You should treat it by having her drink 2 *hin* of beverage and have her spew it up
at once

The Kahun papyrus is the beginning of our understanding of women's health concerns in ancient Egypt and how this culture addressed these medical problems. Though the ancient Egyptian physicians had an understanding of the human body's anatomy, there are some concepts that defy logic for their connection. Much of women's medical complaints were believed to be rooted in their womb and could affect the entire body. Descriptions of the "wandering womb," "womb discharge," or "terror of the womb" were all capable of toothaches, issues with the joints, and difficulties with the eyes.¹⁶⁹ Treatments are also varied including fumigation, massage, medicines that are administered through ingestion or application to the skin. Interestingly, there is no mention of surgical intervention for women's medical complaints.

Despite some gaps and fragmentation, the Kahun papyrus is vital to studying healthcare and medicine in ancient Egypt. It exemplifies the structure of how the physicians would examine, diagnose and treat their patients which is evidence that their methods have been passed down for hundreds of years. The documentation of the medical problems may have been used to refer to for help, training, or both. Women's health in ancient Egypt was more than their reproductive health and concerns, but was tied to the belief that their womb was the cause of disease. The Kahun papyrus provides examples of contraception, pregnancy tests, and how to

¹⁶⁹ Lesley Smith, "The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine," (2011), doi: 10.1136/jfprhc.2010.0019.

deal with other body aches and pains. The following sections focus on the reproductive health of women as a form of inequity in ancient Egypt. The focus towards fertility and childbirth in ancient Egypt suggests that the health of women must be tied to their reproductive value to society. Men also had fertility issues, but the medical texts suggest that women held primary responsibility for fertility, pregnancy, childbirth, and children. The ancient Egyptian doctor may have only assisted with women's medical problems as a form of control over their reproductive health and bodies.

Fertility

It is difficult to know who practiced in the fields of gynecology and obstetrics. There are no known words for specialists in these areas, midwives, and no evidence if the *swmw* was involved in childbirth.¹⁷⁰ Several medical papyri contain passages that discuss tests for fertility and pregnancy. The Kahun, Berlin, and the Carlsberg typically introduce the fertility tests in the sense of who will and will not bear a child. It is not easy to determine fertility tests from pregnancy tests in many instances. There are several methods listed in the fertility tests that can include the induction of vomiting and an examination of the eyes. Perhaps the most common test is from the Berlin papyrus that reads:

Another [test] to see [if] a woman will bear a child or [if] she will not bear a child. Emmer (*bedet*) and barley (*it*), the lady should moisten with her urine every day, like dates and like sand in two bags. If they all grow, she will bear a child. If the barley grows it means a male. If the emmer grows, it means a female. If they do not grow, she will not bear a child.¹⁷¹

¹⁷⁰ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 191.

¹⁷¹ Nunn, *Ancient Egyptian Medicine*, 191-92.

This technique was experimented by Ghaliounghui, Khalil and Ammar, who showed no growth of either seed when watered with male or non-pregnant female urine.¹⁷² With forty specimens from pregnant women, there was growth of one or both species in twenty-eight cases, thus this test is a good indicator of pregnancy, but not correct in determining the sex of the fetus.¹⁷³

Birth Control and Contraception

Pre-marital sex was common in ancient Egypt and not as taboo as it is in Western tradition. Pregnancy would have been inevitable, though women were able to exert some control over their bodies by using contraception. Contraception is an area that is not fully explored in ancient Egyptian medicine, but there is evidence for some contraceptive methods used. A common form of contraception was to place various materials or extracts of materials into the vagina. Additionally, all contraceptives are for local application by the woman as Kahun 22 specifies.¹⁷⁴ It was recommended in various medical papyri that different materials could be used as contraceptives such as, applying honey as a spermicide (e.g. Kahun 22), “lint should be placed at the mouth of the uterus” (e.g. Kahun 22), or crocodile excrement (e.g. Kahun 21).¹⁷⁵ The excrement of crocodile may have been burned in incense or used in another method.

There is some evidence that abortion may have been practiced in ancient Egypt. In the London papyrus, there are a few columns that describe enchantments to prevent abundant bleeding from miscarriage or abortion. Evidence of premature or stillbirths include the daughters

¹⁷² Paul Ghalioungui, S.H. Khalil, and A.R. Amar, “On an Ancient Egyptian Method of Diagnosing Pregnancy and Determining Foetal Sex,” *Medical Historian*, no. 7 (1963), 241-6, accessed 6 July 2021, doi: 10.1017/s0025727300028386

¹⁷³ John F. Nunn, *Ancient Egyptian Medicine* (Norman, 1996), 192.

¹⁷⁴ Nunn, *Ancient Egyptian Medicine*, 196.

¹⁷⁵ Kahun Papyrus: 21, 22, 23 (see footnote 62) and Ebers: 783 (see footnote 11)

of Tutankamen that were dead at five and six months of gestation.¹⁷⁶ No matter the form of birth control or contraceptive, magic was involved. It was necessary to cast away any lurking danger with amulets and protect against bad spirits.

Conclusion

The healthcare of women in ancient Egypt is important to study and re-examine for its social context. The Kahun papyrus demonstrates the need to control fertility in women and that women were approached differently in terms of their health. Fertility was important to the ancient Egyptians and they implemented several methods for testing fertility in women. There are no tests for a man's fertility listed in any of the medical papyri. Women were able to gain some control over their reproductive health by using birth control or other contraceptives to prevent unwanted pregnancies.

Women's health in ancient Egypt was centered towards their child-bearing capabilities and held an emphasis on reproduction. Drawing from the medical texts, there are several cases that demonstrate how to help a woman with infertility issues or predicting pregnancy. I suggest that the Kahun papyrus is not a true gynecological text as it deals with other medical problems in women. Scholars should re-evaluate the medical texts and other evidence to gain a better understanding of women's health in ancient Egypt. A medical text that focused on women like the Kahun papyrus indicates that women's health was important to the ancient Egyptians and there may have been healers that specialized in this field.

¹⁷⁶ Paula A. Veiga. "To Prevent, Treat and Cure Love in Ancient Egypt. Aspects of Sexual Medicine and Practice in Ancient Egypt." Proceedings of the II International Congress for Young Egyptologists, Lisboa, November 2009 (Digital Version, ISBN 978-989-8068-07-1, Centro De História, Faculdade De Letras Da Universidade De Lisboa, 2010), 461.

CONCLUSIONS

The primary objective of this thesis is to explore healthcare in ancient Egypt and analyze social and gendered health inequities, primarily in the Middle and New Kingdoms (i.e. the second millennium BCE), while drawing on earlier and later data in a supportive fashion. This serves to deepen current knowledge of the medicine of ancient Egypt and combine interdisciplinary approaches to this scholarship. In this thesis, the social mechanisms are used to explore religious and cultural influences on health and medicine in ancient Egyptian history. This thesis broadens the scholarship in history and Egyptology by providing a methodology for accessing healthcare, shining new light on religious and magical influences in medicine, and providing specific evidence for how medicine was perceived, maintained, and impacted ancient Egypt. The following discussion demonstrates how the specific research presented in the preceding pages contributes to our understanding of health inequities in ancient Egypt, to the broader research of medicine and its history, and to future scholarship on medicine in ancient Egypt.

Implications of this Research for Health in Ancient Egypt

This thesis begins with four central research questions to explain how medicine was used in ancient Egypt:

1. What did the ancient Egyptians believe caused illness, and how did they respond to disease?
2. How was ancient Egyptian medicine intertwined with religion and magic?
3. Who had access to healthcare in ancient Egypt?
4. How were women's health needs addressed in ancient Egypt?

The Introduction and Chapter 2 provide context, historiography and definitions integral to the discussion of medicine in antiquity. The first question is explored in the third and fourth chapters which examine the religious and natural causes of disease and how the Egyptians utilized both preventative and reactionary methods to illness and disease. The causative agents of disease originated from the natural and supernatural worlds which led to religious methods being utilized in medicine. The ancient Egyptian *swnw* used a practical method to examine their patient, diagnose their illness, and prescribe treatment. By first observing and taking the symptoms of the patient, the *swnw* would then examine the patient to find the most probable cause of the disease and then prescribe a remedy. In the documents from the ancient Egyptians, disease was caused by the gods, spirits, demons, or imbalances in the body. The restoration of *ma'at* could cure a person and restore good health.

The second question, which seeks to better understand the relationship between medicine, magic, and religion is also considered in Chapters 3 and 4. Although most scholarship tends to separate religion, magic, and medicine, the ancient Egyptians embraced multiple forms of healing. It is clear that the ancient Egyptians did not have a strict separation between religion, magic, and medicine. Religious and magical methods were often employed along with practical methods for healing if appropriate, or these methods were used independently of each other. *Heka*, the use of magic, was invoked to protect people from spirits or demons that caused disease, often in the form of amulets or spells. Several gods of Egypt were used to invoke protection from illness and disease. One of the most common deities for protection was Bes, often protecting women and children. The gods could both protect and cause disease, so it was vital to appease the gods to help them fight off any health issues.

The last two questions both focus on health inequities. The third question focuses on social inequities and medicine and is the focus of Chapter 5, whereas Chapter 6 looks specifically at women's health. Men and women had to face many of the same ailments or injuries in their environment, yet both of these groups faced their own unique stressors as well. Men worked more hard labor than women and were thus at higher risk for potential injuries and wear on the body. Women bore children and may not survive childbirth or infections. The sixth chapter discusses women and their health needs at length with the use of medical papyri as a main source of information. Women were treated differently than men in medicine with limited access to *swnw* at times. Fortunately, a great deal of medical papyri has survived that can shed some light on the illnesses and injuries that were common in ancient Egypt. However, the hierarchical system in ancient Egypt influenced the hierarchy amongst physicians and healers which caused a domino effect of healthcare across the land. The records or methods of local and rural healers are not as well known or documented as those that have survived. An interesting aspect in ancient Egypt is the level of sophistication and specialty amongst physicians and other types of healers. Over the course of ancient Egyptian history, their medical knowledge grew and left its influence over future medical traditions even to the modern-day.

Relevance to Broader Scholarship on Health in Ancient Egypt

Importantly, the research presented here has broad implications for Egyptological and historical scholarship on medicine. This thesis demonstrates health inequity in ancient Egypt by examining the hierarchical framework of society's influence on the training of *swnw* and other healers and offers a unique, interdisciplinary methodology for approaching medicine and healthcare in antiquity. By first discussing the ancient Egyptian theory of disease transmission, it

is apparent that they employed what we would categorize as both “scientific” and “religious” methods in their healing practices. Thus, any study of ancient Egyptian medicine must integrate theories and methodologies of religious studies and the history of medicine into their approach. Future studies must also acknowledge and reconcile the inequities in our evidence and the inequities of healthcare in antiquity.

Toward a History of Medicine

This research is valuable towards developing a broader historical, archaeological, and Egyptological discussion of medicine in ancient Egypt. The healthcare system of ancient Egypt reflects its diversity and its cultural beliefs. The use of religion and magic in conjunction with medicine denies the previous notions of separating religious forms of healing from the more traditional (in the modern, Western conception) medical approaches.

My research demonstrates the health inequities present in ancient Egypt and pushes for further discussions and a reexamination of historical evidence with this diversity in mind. The healers of ancient Egypt from *swnw* to the priests of Sekhmet all held their own roles and limitations to healing. The social hierarchy in ancient Egypt permeated into the hierarchy among healers which caused different levels of care and access to healthcare. Future work should include translating all of the medical papyri to English, German, French and other languages if applicable, as well as creating online options of the hieroglyphs and transcriptions of the texts. Additionally, this research highlights the need to consider health and healthcare when examining past cultures. Just as in the modern-world, health is important to our daily life. Healthcare is structured by society, as it also structures society. Social networks were reinforced through

taking care of the sick whether they were family members, friends, or neighbors. Indeed, medicine and healthcare are critical in understanding the social mechanisms behind survival.

LITERATURE CITED

- Allen, James P. *The Art of Medicine in Ancient Egypt*. The Metropolitan Museum of Art, New York: Yale University Press, 2005.
- Austin, Anne E. "Contending With Illness in Ancient Egypt: A textual and osteological study of health care at Deir el-Medina." PhD diss., University of California, Los Angeles, 2014.
- Bârsu, Cristian. "History of Medicine between Tradition and Modernity." *Chujul medical* (1957), 90(2), 243–245. <https://doi.org/10.15386/cjmed-794>.
- Breasted, James H. *The Edwin Smith Surgical papyrus (facsimile and hieroglyphic transliteration with translation and commentary, in two volumes)*. Chicago: The University of Chicago Press; 1930.
- Brooklyn Museum. *Fertility Statuette of a Woman*, limestone, pigment, c. 1938-1539 BCE (Dynasty 12 to Dynasty 17), Egyptian, Classical, Ancient Near Eastern Art. Accession Number 48.25. <https://www.brooklynmuseum.org/opencollection/objects/3491>.
- Brooklyn Museum. *Female Figure*, clay, pigment, c. 3500-3400 BCE (Predynastic Period, Naqada 2 Period), Egyptian, Classical, Ancient Near Eastern Art. Accession Number 07.447.505. [https://www.brooklynmuseum.org/opencollection/objects/4225#:~:text=In%20fact%2C%20this%20figurine%20was,Upper%20Egypt%20\(southern%20Egypt\)](https://www.brooklynmuseum.org/opencollection/objects/4225#:~:text=In%20fact%2C%20this%20figurine%20was,Upper%20Egypt%20(southern%20Egypt))
- Duffin, Jacalyn. *History of Medicine: A scandalously short history*. Toronto: Toronto University Press; 2004.
- Dupras, T.L., L.J. Williams, et al. "Evidence of Amputation as Medical Treatment in Ancient Egypt." *International Journal of Osteoarchaeology*, 20: 405-423 (2010).
- Ejsmond, Wojcech. *Journal of Archaeological Science*, <https://doi.org/10.1016/j.jas.2021.105371>.
- Ghalioungui, Paul. *Magic and Medical Science in Ancient Egypt*. Great Britain: Hodder and Stoughton, 1963.
- Ghalioungui, Paul. *The Physicians of Pharaonic Egypt*. Cairo: Al-Ahram Center for Scientific Translations, 1983.
- Ghalioungui, Paul, S.H. Khalil, and A.R. Amar, "On an Ancient Egyptian Method of Diagnosing Pregnancy and Determining Foetal Sex," *Medical Historian*, no. 7 (July 1963), 241-6, accessed 6 July 2021, doi: 10.1017/s0025727300028386

- Gunn, Battiscombe G. *The Instruction of Ptah-Hotep and the Instruction of Ke'Gemni: The Oldest Books in the World*, The Project Gutenberg EBook (Ebook #30508), 2009. Translated from the Egyptian text.
- Hajar, Rachel. "History of Medicine Timeline." *Heart Views: the official journal of the Gulf Heart Association*, vol. 16(1) (Jan-Mar 2015): 43–45. doi: 10.4103/1995-705x.153008
- Hays, J.N. "Introduction." In *The Burdens of Disease*, (New Jersey: Rutgers University Press, 2009), 1-3.
- Jarman, O.A. and G.L. Mikirtichan. "The Social Status of Physicians in Ancient Egypt." *Istoriya meditsiny (History of Medicine)*, Vol. 2 No. 1, (2015): 48-60. DOI: 10.17720/2409-5834.v2.1.2015.05j.
- Larsen, Clark S. "Tales from the Dead: What Bones Tell Us about Our Past, and Why We Should Know." In *Skeletons In Our Closet: Revealing Our Past through Bioarchaeology*, 3-12. Princeton, New Jersey: Princeton University Press, 2000.
- Lucarelli, Rita. "Illness as Divine Punishment: The Nature and Function of the Disease-Carrier Demons in the Ancient Egyptian Magical Texts," in *Demons and Illness from Antiquity to the Early Modern Period*. Brill Publishing, Boston, 2017.
- Mark, Joshua J. "Social Structure in Ancient Egypt." *World History Encyclopedia*. Last modified September 21, 2017. <https://www.worldhistory.org/article/1123/social-structure-in-ancient-egypt/>.
- Nicholson, John. "About the Grand Egyptian Museum." Accessed June 24, 2021. <https://grandegyptianmuseum.org/about/>.
- Nunn, John F. *Ancient Egyptian Medicine*. Norman: University of Oklahoma Press, 1996.
- Parkinson, R. B. *The Tale of Sinuhe*. The Metropolitan Museum of Art's online collection, accessed 3 July 2021: <https://www.metmuseum.org/art/collection/search/591471>. For an annotated translation see *The Tale of Sinuhe and Other Ancient Egyptian Poems 1940–1640 BC* (Oxford World Classics; Oxford: Oxford University Press 1999).
- Pearson, Mike P. "Learning From the Dead." In *The Archaeology of Death and Burial*, 1-20. Texas A&M University Press, 1999.
- Pinch, Geraldine. *Magic in Ancient Egypt*. Austin: University of Texas Press, 2010.
- Podder, Vivek, Valerie Lew, and Sassan Ghassemzadeh. SOAP Notes. <https://www.ncbi.nlm.nih.gov/books/NBK482263/>

- Prates, Carlos, Sandra Sousa, Carlos Oliveira, and Salima Ikram, "Prostate metastatic bone cancer in an Egyptian Ptolemaic mummy, a proposed radiological diagnosis." *Int. J. Paleopathol.* (2011): 98-103, doi: 10.1016/j.ijpp.2011.09.002
- Quirke, Stephen. *The Kahun Papyrus*, Petrie Museum of Egyptian Archaeology, UC 32057, 1-3. The transliteration, sound, and translation are available on the University College London's website (2002) <https://www.ucl.ac.uk/museums-static/digitalegypt/med/birthpapyrus.html>.
- Ritner, Robert K. *The Mechanics of Ancient Egyptian Magical Practice*. Chicago: The Oriental Institute of the University of Chicago, No. 54, 1993.
- Roberts, Charlotte and Keith Manchester. "The Study of Paleopathology." In *The Archaeology of Disease*, third edition, 1-21. Ithaca, New York: Cornell University Press, 2005.
- Robins, Gay. *The Art of Ancient Egypt*. Massachusetts: Harvard University Press, 2008.
- Robins, Gay. *Women in Ancient Egypt*. Massachusetts: Harvard University Press, 1993.
- Shirley, JJ. "The Life and Career of Nebamun, the Physician of the King in Thebes." In *The Archaeology and Art of Ancient Egypt: Essays in Honor of David B. O'Connor*, Vol. 2. edited by Zahi A. Hawass and Janet Richards. 381-401. Publications Du Conseil Suprême Des Antiquités de L'Égypte, 2007.
- Smith, Lesley. "The Kahun Gynaecological Papyrus: ancient Egyptian medicine." *J Fam Plann Reprod Health Care*. 2011 Jan;37(1):54-5. doi: 10.1136/jfprhc.2010.0019. PMID: 21367707.
- Stern, Ludwig Christian. (1875). Ebers, Georg (ed.). *Papyros Ebers: Das hermetische Buch über die Arzneimittel der alten Ägypter in hieratischer Schrift, herausgegeben mit Inhaltsangabe und Einleitung versehen von Georg Ebers, mit Hieroglyphisch-Lateinischem Glossar von Ludwig Stern, mit Unterstützung des Königlich Sächsischen Cultusministerium.*
- Stetter, Cornelius. *The Secret Medicine of the Pharaohs*. Illinois: Edition Q, 1993.
- Strouhal, Eugen, Břetislav Vachala, and Hana Vymazalová, *The Medicine of the Ancient Egyptians: Internal Medicine*, Cairo: The American University in Cairo Press, 2021.
- Sullivan, Richard. "A brief journey into medical care and disease in Ancient Egypt." *Journal of the Royal Society of Medicine*, vol. 88 (March 1995): 141-145.
- Thornton, J L. "The importance of the study of the history of medicine." *Health libraries review* vol. 4,3 (1987): 139-40. doi:10.1046/j.1365-2532.1987.430139.x

- Trimijopulos, Dimitrios. “The Instructions of Any”, Maxim 6 (pBulaq IV, plate 16, lines 1-3), transcriptions, translations, and commentary.
https://www.academia.edu/38972986/_The_Instructions_of_Any_Maxim_No_6.
- University College London. “Healing Titles.” <https://www.ucl.ac.uk/museums-static/digitalegypt/med/healingtitles.html>. Accessed 5 May 2021.
- University College London. “Teaching of Ptahhotep.” <https://www.ucl.ac.uk/museums-static/digitalegypt/literature/ptahhotep.html>. Accessed 2 July 2021.
- Veiga, Paula A. “To Prevent, Treat and Cure Love in Ancient Egypt. Aspects of Sexual Medicine and Practice in Ancient Egypt.” Proceedings of the II International Congress for Young Egyptologists, Lisboa, November 2009 ((Digital Version, ISBN 978-989-8068-07-1, Centro De História, Faculdade De Letras Da Universidade De Lisboa, 2010, 453–65.
- Veiga, Paula A. *Health and Medicine in Ancient Egypt*. Oxford: BAR Publishing, 2016.
- Waldron, Tony. “Introduction and Diagnosis.” In *Paleopathology*, 1-10. Cambridge, New York: Cambridge University Press, 2009.
- Wilkinson, Richard H. *The Complete Gods and Goddesses of Ancient Egypt*. London: Thames & Hudson Ltd., 2003.
- Zimmerman, Michael R. “Studying mummies: Giving life to a dry subject.” In *Paleopathology in Egypt and Nubia: A century in review*, edited by Ryan Metcalfe, Jenefer Cockitt, and Rosalie David, 119-127. Oxford: Archaeopress Egyptology 6, 2012.
- Zucconi, Laura M. “Medicine and Religion in Ancient Egypt,” *Religion Compass* (2007).